



Universal Carrier Module User Guide

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Overview of Universal Carrier Module

Overview of Universal Carrier Module

The Universal Carrier Module (UCM) supports the creation of custom parcel carriers and facilitates implementing carriers. The UCM enables complete embedded compliance (rating and routing files, manifest and label generation) as well as connecting to Web services or external carrier supplied files and software.

UCM Features and Functions

The main features of the UCM Module include the following capabilities:

- Create new UCM carriers.
- Export and import previously created carriers.
- Deploy UCM carriers for use with a shipping system.
- Add services to carriers and define these services.
- Create and add other objects to carriers and services: - Artifacts - Billing types - Charges - End of day (EOD) operations - Events - Geographic codes - Label templates - Packaging types - Rating methods - Routing methods - Sequence numbers - Tracking number generators - UI administrative elements - UI transactional elements - Zoning methods - Index keys
- Configure and add UI administrative and transactional elements.
- Create and apply custom scripts.
- Utilize a set of global scripts.

UCM Sample Carrier

This version of UCM includes a sample UCM carrier definition called Carrier Module (CM) Shipping in the form of a .zip file included with your UCM distribution. You can import this carrier directly into UCM for testing, deploying to a shipping system, or modification as desired. You can also create the CM Shipping carrier from scratch by following the instructions in the [Tutorial - Sample UCM Carrier](#) section of this online Help.

UCM Pre-configured carriers

UCM includes a set of pre-configured, standard "core" carriers. These carriers are displayed in the carrier definition list in the left panel and are automatically deployed in shipping systems where UCM is installed with the shipping system (for example, Parcel). Carrier definitions for these carriers can be altered and the carriers redeployed as required, as well as exported in the form of .zip files like any other UCM carrier definition.

UCM Online Help

See the topic [User Guide and technical documentation](#).

Overview topics

For more information on these features and functions, a good place to start is the following UCM Help Overview topics:

- *Overview of object types*
- *Overview of services*
- *Overview of billing types*
- *Overview of charges*
- *Overview of events*
- *Overview of label templates*
- *Overview of packaging types*
- *Overview of rating methods*
- *Overview of reports*
- *Overview of routing methods*
- *Overview of sequence numbers and tracking numbers*
- *Overview of scripts*
- *Overview of UI administrative elements*
- *Overview of UI transactional elements*
- *Overview of zoning methods*
- *Overview of index keys*

User Guide and technical documentation

UCM includes the following documentation:

- **Help Topics** – This document is the UCM User Guide. It is also available in PDF format by contacting Support. The UCM online help is structured around the workflow involved in creating and configuring a UCM carrier and consists of overview topics, procedural topics, and best practices topics.
- **Native API Reference** – This document describes API-related items on pages that can be accessed via the navigation (top) bar. Click the Help page link on the navigation bar for general descriptions of the contents.
- **JavaScript API Reference** – UCM uses JavaScript for scripting capability. This document contains an API Reference for working with API request values in scripts, as well as a collection of examples that can be copied and pasted into scripts.
- **About** – Popup displays a general description of UCM together with version and copyright information.

To access all the documentation included with UCM:

1. Click the **Help** drop-down list at the top left of the **Actions** pane to display the Help menu.
2. Select the documentation you want from the drop-down list to display it on a separate page from the UCM UI.

Setting up a UCM carrier

UCM carrier setup workflow

Creating a UCM carrier definition can include the following steps:

1. Define a UCM carrier – Create a new carrier or import an existing carrier from a file. (See the Help topic [Create and define a new UCM carrier.](#))
2. Add services to the carrier – Create new services.
3. Create and define other objects for the carrier – These can include the following objects:
 - Artifacts – Import files associated with a specific UCM carrier; for example, carrier-specific help documentation, label graphics, batch files, DLLs, and JAR files.
 - Billing types – Create methods of payment for a shipment or package.
 - Charges – Specify cost for additional fixed or optional costs; for example, Fuel Surcharge, Insurance, and Signature Required.
 - Built-in and custom scripts – Create custom scripts or select built-in scripts and apply them to most UCM objects.
 - EOD operations – Include consolidation of shipments and EOD manifesting.
 - Events – Associate any stage or other action in the processing of a shipment with the carrier level.
 - Label templates – Create label templates, associate a particular label with a service, select printers for use with a label, and edit printer-specific template language.
 - Packaging types – Create packaging types at the carrier level for use with any combination of services belonging to the carrier.
 - Rating methods – Create a rating method at the carrier level and add it to the applicable services.
 - Reports – Import, export, and edit reports.
 - Routing methods – Define a specific origin-destination pair using postal codes, city and state or province information, etc.; add scripts to a routing method and add a routing method to a service.
 - Sequence numbers – Create sequence numbers at the carrier level to define the start and range of a tracking number sequence.

- Tracking numbers – Assign tracking numbers at the service level, optionally including prefix and suffix strings as well as a check digit algorithm.
- UI Administrative and Transactional elements – Create shipping system UI carrier configuration and ship-time options.
- Zoning methods – Create postal code to postal code zones and associate with a service for rating method lookup.
- Index keys – Dynamically define a level for an existing API key for indexing purposes.

Note:

For more information on UCM object types, see the following topic [Overview of object types](#). When you create or import a carrier, UCM displays a full tree of possible objects that can be defined for the carrier. When you add a service to a carrier, the service also appears as a sub-folder of the carrier.

4. Add and configure objects for each service associated with the carrier – These objects can include the following:
 - Artifacts ○ Billing types ○ Charges ○ Events ○ Geographic codes ○ Label templates ○ Packaging types ○ Rating methods ○ Reports ○ Routing methods ○ Scripts ○ Sequence numbers ○ Tracking number generators ○ UI administrative elements ○ UI transactional elements ○ Zoning methods ○ Index keys
5. Create and/or add scripts to existing objects or at the service or carrier level. **Note:** You can carry out this step at any point after creating a carrier, service, or object.
6. Deploy the carrier. **Note:** Deploying a carrier makes it available for use in your shipping system. (See the topic [Deploy, deactivate, remove, or delete a UCM carrier](#).)

Create and define a new UCM carrier

The process of defining a UCM carrier consists of creating or importing a carrier, and then adding, editing, or removing various objects from the carrier, as well as configuring the objects themselves; for example, the services associated with the carrier.


Create a new carrier To create a carrier:

1. In the Actions (topmost) area of the left panel, click **Create a New Carrier** to display the Create Carrier dialog.
2. In the **Carrier Name** field, type the name of the carrier.
3. In the **Carrier Code** field, type the alphanumeric carrier code. **Note:** When you save this information, any lowercase letters are automatically converted to uppercase, so that the carrier code is displayed and stored in the database in all uppercase. Additionally, any scripts that reference a carrier code must use all uppercase letters.
4. Click Create Carrier to create the carrier or click the x in the upper right corner to cancel out of the dialog without creating the carrier. The carrier is displayed as a folder with the carrier name in the left panel Carriers pane.

Notes: When you save this information, any lowercase letters are automatically converted to uppercase, so that the carrier code is displayed and stored in the database in all uppercase. Additionally, any scripts that reference a carrier code must use all uppercase letters.

A database schema is created for the new carrier. This database schema has the following form: `ucm_transactions_Carrier_Code` where the variable *Carrier_Code* equals the Carrier Code entered in step 3. For example: - For the predefined UCM carrier OnTracWS, this schema is named `ucm_transactions_otws`. - For the predefined UCM carrier Deliv0406, this schema is named `ucm_transactions_deliv0406`.

Each UCM carrier database includes a set of tables that records information on shipments performed with this UCM carrier including date. You can also use SQL queries to retrieve shipment-related transactional information from a UCM carrier database, as described in the following Help topics under "SQL for UCM shipment data by date": - [Overview: Using SQL to retrieve UCM transactional data by date](#) - [SQL queries for shipment-related counts relative to date](#) - [SQL queries for shipment-related details relative to date](#)

5. Click the plus sign  next to the carrier folder to display the set of objects that can be added to the carrier itself. Click the carrier folder itself to display the set of buttons and options for the operations that can be performed on the carrier. See the section [Configure a carrier](#).

Import an existing carrier from a file

You can also add a UCM carrier by importing the carrier from a file. See the topic [Export Or Import a UCM carrier](#).

Configure a carrier

The following options are available for configuring a carrier:

- Select time in transit, license plate, and dangerous goods options. See the topic [Specify carrier options](#).
- Configure End of Day operations. See the topic [Specify End of Day operations](#).
- Add a service to the carrier by creating the service. (See the Help topic [Overview of services](#).)
- Add other objects to the carrier; for example, UI administrative or UI transactional elements. (See the Help topic [Overview of Object Types](#).)
- Deploy the carrier. (See the Help topic [Deploy, deactivate, remove, or delete a UCM carrier](#).)

Specify Options, End of Day (EOD) & TinT

Specify Carrier Options

When creating or modifying a carrier, you can enable the following options directly in the carrier pane:

- License Plate
- Dangerous Goods
- Ground Freight functionality
- Standard E-mail
- Customer Charge

You can also configure end-of-day (EOD) manifesting, shipment consolidation, and time in transit. The following sections enable you to specify the following options:

- End of Day – Specify Manifest Sequence Number, shipment consolidation, and shipment grouping. See the topics under "Specify EOD operations."
- Time in Transit – Configure the time in transit method to be used with shipments. See the topic [Configure Time in Transit](#).

To specify carrier options under the Options section:

1. In UCM, select the carrier for which you want to configure options to display the carrier pane.
2. Click the up arrow (^) next to the word "Options" to display the available options.
3. To use a license plate number with the PSHP (pre-shipment) API request select the check box labeled "Use License Plate Number for Pre-shipments." **Note:** A license plate is the paper document or label attached to a package before it is shipped and a shipping label is attached. The license plate contains identifying information such as a license plate number.
4. To enable dangerous goods (hazardous materials) shipments, select the check box labeled "Enable Dangerous Goods."
5. To enable the Freight Class Rated rating method for LTL carriers select the check box labeled "Enable ground freight functionality." **Notes:** An example of using this type of rating method is with NMFC classification.

If you select this option, and then also specify End of Day Consolidation (see [Overview of EOD options](#)) and enter a Manifest Sequence Number, UCM automatically adds the following Voluntary Interindustry Commerce Standards (VICS) bills of lading (BOLs) to the Reports list and selects them for the carrier when you save the configuration: - VICS Bill of Lading - VICS Consolidated Bill of Lading

6. Select Standard E-mail options to automatically create [the following transactional elements](#) for this carrier:

Code	UI Label	Data Type
EMAIL_ON_DELAY	E-mail on Delay	Text
EMAIL_ON_DLVY	E-mail on Delivery	Text
EMAIL_ON_SENT	E-mail on Sent	Text

7. Select Customer charge options checked to automatically create [the following transactional elements](#) for this carrier:

Code	UI Label	Data Type
MARGIN_TYPE	Customer Charge Type	Drop-down

- Fixed
- Percentage

MARGIN_VALUE	Customer Charge	Numeric
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From the Rating Units of Measure drop-down list, select one of the following unit of measure systems as the default for this carrier:

- Metric – Weights are in kilograms (kg), lengths are in centimeters (cm), dimensional factors are in cubic centimeters (cm³), and distances are in Kilometers (km) Metric is the default selection.
 - Imperial – Weights are in pounds (lb), lengths are inches (in), dimensional factors are in cubic inches (in³), and distances are in miles (mi).
 - By default, shipments with a deployed carrier use these units of measure. Units of measure can be changed at the shipment level as needed.
 - If you import a carrier created under an earlier version of UCM without this option, UCM compares the unit of measure systems for the carrier's existing [rating methods](#), and then sets the default equal to what the majority of rating methods use. Any rating method with a different value from the majority has its unit of measure system converted.
- Click Save Changes to save your changes.

Specify EOD Operations

Overview of EOD options

You can specify a number of different combinations for End of Day (EOD) Operations. These combinations are configured around the following items:

- Manifest sequence number
- Shipment consolidation

- Shipment grouping



Note on EOD consolidation and grouping

Grouping is a type of consolidation where no re-rating of packages is carried out. (There is no rate selection or charge modification..) Typically, either standard EOD consolidation or EOD grouping is specified. However, UCM allows you to specify both types of EOD operations for the same carrier. In this case, you can have shipments with both types of operations in a Close operation, but both types cannot apply to the same shipment. If both consolidation and grouping are enabled and a shipment is consolidated, it is not grouped.

The procedures in the [Specify EOD consolidation operations](#) and [Specify EOD grouping operations](#) assume that one or the other of these options is selected.

General procedure

To specify EOD operations:

1. In UCM, [[create a carrier](#) | Create & define a new UCM carrier] or select the carrier for which you want to configure options to display the carrier pane.
2. Click the up arrow (^) next to the phrase "End of Day" to display the available options:
3. To specify a sequence number for the EOD Manifest, in the Manifest Sequence Number field click the Add Existing  to select and add an existing sequence number or click the Create  to create a new sequence number. See the topic [Create, edit, or delete a sequence number](#).
4. Optionally, to allow EOD shipment consolidation, select the check box labeled "Allow Shipment Consolidation." **Note:** Selecting this option displays additional configuration options for EOD consolidation. For the various combinations of scripts and rate splits available when this option is selected, see the topic [Specify consolidation operations](#).
5. Optionally, to allow EOD shipment grouping, select the check box labeled "Allow Shipment Grouping." **Note:** Selecting this option displays additional configuration options for EOD grouping. For a description of these options, see the topic [Specify EOD grouping operations](#).
6. Click Save Changes to save your changes.

Specify EOD Consolidation Operations

EOD shipment consolidation

Note: For simplicity, the illustrations in the following procedure do not show the deselected (cleared) Grouping option. If both consolidation and grouping are selected, all the options for both EOD operations are displayed.

To configure shipment consolidation

- 1. If, in step 4 of the general procedure in the Overview of EOD options topic, you selected the Allow Shipment Consolidation check box, UCM displays the following consolidation options:

▼ End of Day

Manifest Sequence Number :

☒ Allow Shipment Consolidation

☒ Use Built-in Consolidation Selection

☒ Use Built-in Consolidation Rating

Default Rate Split :

Even

☐ Allow Shipment Grouping

Notes: Selecting this

option also adds a UI administrative element named ALLOW_EOD_CONSOLIDATION that enables a user to turn this option on or off at an instance level. This option also displays the following additional options: Use Built-in Consolidation Selection, Use Built in Consolidation Rating, and Allow Shipment Grouping. These options allow you to further configure your EOD operations. For information on the grouping option, see the topic [Specify EOD grouping operations](#). The following options (check boxes) Use Built-in Consolidation Selection and Use Built in Consolidation Rating are selected by default when you select Allow Shipment Consolidation. The following table describes how these various options work:

When the following option...	Is...	The corresponding End of Day operation works as follows...
------------------------------	-------	--

Use Built-in Consolidation Selection	Selected	Shipments are consolidated based on identical Ship To Address, Billing Address, Service, and Service Options. In other words, for shipments to be consolidated, they must have all of these items in common. The values in all three street address fields must also be identical.
	Cleared	The user must provide a consolidation script. Shipments are consolidated based on results returned from the user-specified script.
Use Built-in Consolidation Rating	Selected	All rating methods configured for a given service and all charges for a given service are recomputed with the consolidated shipment data and the lesser of the sum of individual shipment rates or the consolidated rate is used for the rate.
	Cleared	The user must provide a script that sets all the relevant charges on the consolidated shipment.

Note:For Use Built-in Consolidation Rating, the following requirements must be met:
 Check boxes – Must match. Numeric fields and text boxes – Must either contain a value or no value. Values do not have to match. Dropdown items – Must match.



- Optionally, to specify a custom script for Consolidation Selection and/or Consolidation Rating, deselect (clear) one or the other or both of the corresponding "Use" check boxes to display the script selection buttons:

to add an existing script or click the **Create New**

 to create a new script for this purpose. See the Help topic with the



following procedure: [To apply a single script to an item within an object or carrier](#).

Note: A custom Selection Script has certain requirements for the values it

3. Click the Add Existing  returns. Click the Context Help  for information on these requirements.
4. From the Default Rate Split drop-down list, select a value for this item or accept the default. The selections for this field are as follows:
 - Cost – Splits the cost based on the total freight cost, including charges, of the shipment.
 - Even (default) – Each shipment is allotted the same percentage of the total rate.
 - Script – The user-specified script (see following step) controls what percentage each shipment is allotted.
 - Value – The rate split is based on the declared value of each shipment.

Note: If you are using Value for your Default Rate Split, you need to have a UI Transactional Element that the user can use to specify the declared value of the shipment. Further, the code for this UI Transactional must be INSAMT. Weight – Splits rates based on the total weight of the shipment.

5. If you selected Script in step 4, specify a split script. Click the Add Existing 

to add an existing script or click the Create New  to create a new script for this purpose. See the Help topic with the following procedure: [To apply a single script to an item within an object or carrier](#). **Note:** A Split Script has certain requirements for the values it returns. Click the Context Help  for information on these requirements.

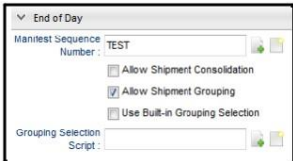
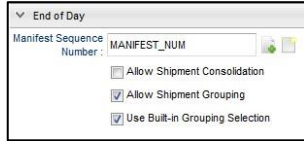
6. If you have completed the initial setting up of the UCM carrier, click Save Changes. Otherwise, return to the appropriate step of the General Procedure.

Specify EOD Grouping Operations

EOD shipment grouping



To configure shipment consolidation

1. If, in step 5 of the general procedure in the Overview of EOD options topic, you selected the Allow Shipment Grouping check box, UCM displays the following grouping options: **Note:** This option also displays the additional option on the page for Use Built-in Grouping Selection. This option enables you further to configure your EOD operations. The following table describes how these options work:

When the following option...	Is...	The corresponding End of Day operation works as follows...
Allow Shipment Grouping 	Selected	Shipments are grouped based either on criteria specified by a Grouping Selection Script (see step 2) or on built-in grouping criteria if this option is additionally selected (see the description for built-in grouping). Note: This option also adds a UI administrative element ("Allow End of Day Shipment Grouping" check box) that enables the carrier definition setting for EOD shipment grouping to be overridden at the instance level. That is, the EOD grouping option can be selected or deselected when configuring a carrier in the shipping system.
	Cleared	Shipments are not grouped.
Use Built-in Grouping Selection 	Selected	Shipments are grouped based on identical Ship To Address, Billing Address, Service, and Service Options. In other words, for shipments to be grouped, they must have all of these items in common. The values in all three street address fields must also be identical.
	Cleared	The user must provide a grouping script (see step2). Shipments are grouped based on results returned from the user-specified script.

2. If the Use Built-in Grouping Selection is deselected (cleared), to specify a custom

script for grouping, click the Add Existing  to add an existing script or click the

Create New  to create a new script for this purpose. See the Help topic with the following procedure: [To apply a single script to an item within an object or carrier](#). **Note:** A custom Selection Script has certain requirements for the values it returns. Click the Context Help  for information on these requirements.

3. Click Save Changes to save the carrier definition options for grouping.

Configure Time in Transit

The Time in Transit section of the UCM carrier pane enables you to specify the following types of time in transit calculation:


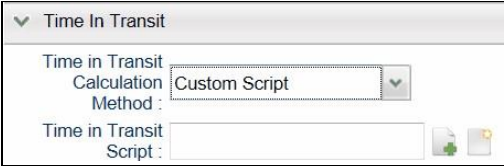
- A built-in method using a script included with UCM.
- Calculation with a user-supplied custom script.
- SMC CarrierConnect Web service.

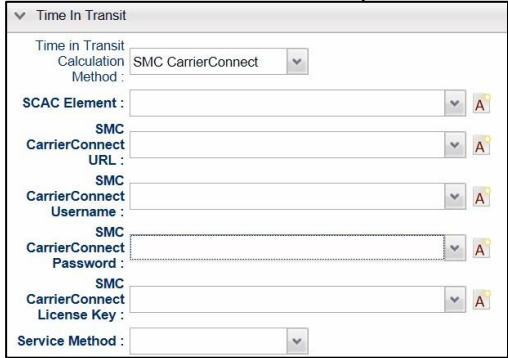
To configure time in transit:

1. In UCM, select the carrier for which you want to configure options to display the carrier pane.

- 2. Click the up arrow (^) next to the phrase "Time in Transit" to display the available options.
- 3. From the Time in Transit Calculation Method drop-down list, select one of the following options:
Built-in Method
Custom Script
SMC CarrierConnect

Configure the option you selected as described in the following table:

For this option:	Carry out these steps:	
Built-in Method		"Built-in Time in Transit" is selected by default. If you retain this selection and import the necessary geographical and transit data, the UCM carrier uses a built-in script to calculate and return time in transit for shipments.
Custom Script		For this option, to the right of the Time in Transit field, click the Add Existing icon to select an existing script for calculating time in transit or click the Create New icon to create a new script for this purpose. See the topics under "Scripts".

SMC CarrierConnect	<p>For this option, shippers can use the SMC CarrierConnect Web service to retrieve transit times for LTL carriers. To use SMC CarrierConnect, you must obtain a license from SMC (trade name for Southern Motor Carriers Freight Conference).</p> <p>Note:</p> <ul style="list-style-type: none"> You must obtain a separate license from SMC for the CarrierConnect service and SMC RateWareXL service. In the following sub-steps, the A icon for creating a UI administrative element is referred to by name without including the icon itself in each substep. <p>For information on creating a UI administrative element, see the topics under "UI Administrative Elements."</p> <p>a. From the SCAC drop</p>  <p>-down list, select an existing UI administrative element for entering the Standard Carrier Alpha Code (SCAC) or click the A icon to create a UI administrative element.</p> <p>Note:</p> <p>The Standard Carrier Alpha Code (SCAC) is a unique code used to identify transportation companies. It is typically two to four alphabetic letters long. It was developed by the National Motor Freight Traffic Association for digital data and records.</p> <p>b. From the SMC CarrierConnect URL drop-down list, select an existing UI administrative element for entering the SMC CarrierConnect URL or click the A icon to create a UI administrative element.</p> <p>c. From the SMC CarrierConnect Username drop-down list, an existing UI administrative element for entering the SMC CarrierConnect user name or click the A icon to create a UI administrative element.</p> <p>d. From the SMC CarrierConnect License Key dropdown list, select an existing UI administrative element for entering the SMC CarrierConnect license key or click the A icon to create a UI administrative element.</p> <p>e. From the Service Method drop-down list, select one of the following options:</p>
For this option:	Carry out these steps:

	--LTL – For a less-than-truckload carrier (LTL) select this option. --TL – For a full truckload carrier (TL) select this option.
--	---

5. Complete any remaining carrier configuration steps as described in the topic [Specify carrier options](#).

Export or Import a UCM carrier

Export a UCM carrier to a file

1. In UCM, select the carrier you want to export, and then, in the right pane, click Export to display the Export Carrier window.

The screenshot shows the 'Export Carrier' dialog box. It has two main sections: 'Basic Information' and 'Export Summary'. Under 'Basic Information', there are three fields: 'Carrier Name' with the value 'Script Test', 'Carrier Code' with the value 'STEST', and 'Export File Name' with the value 'Script_Test_Carrier.zip'. The 'Export Summary' section is currently empty. At the bottom right of the dialog is an 'Export' button.

In the **Export File Name** field, type the name of the export file, and then click Export to display the Windows File Download dialog. Click Save to display the Windows Save As dialog and save the file to the desired location. The Export Summary area of the Export Carrier displays a set of messages indicating the success of the export. You should see an "Export succeeded" message.

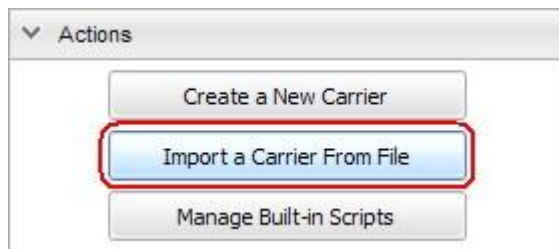
The screenshot shows the 'Export Summary' section of the dialog box. It contains a list of messages indicating the progress of the export process: 'Generating definition file Carrier.xml...', 'Adding Carrier.xml to zip file...', 'Adding Data.xml to zip file...', 'Adding report COMMERCIAL_INVOICE to zip file...', 'Adding report CERTIFICATE_OF_ORIGIN to zip file...', 'Adding report PARCEL_EOD to zip file...', and finally 'Export succeeded.'

Import a UCM carrier from a file

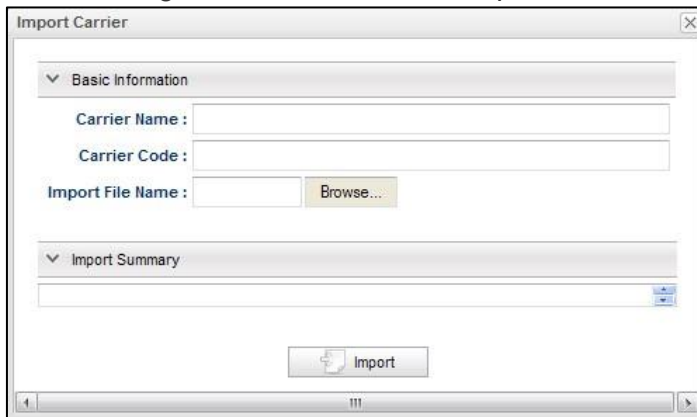
You can import a carrier into UCM. You import the carrier in the form of a .zip file that must be a file for a carrier that was previously exported from UCM. See the section [Export a UCM carrier to a file](#).

To import a carrier from a file:

1. In the UCM left pane under Actions, click \[Import a Carrier From File\] to display the Import Carrier Dialog.



The following illustration shows the Import Carrier dialog:



2. Under Basic Information, do the following:

- a. In the **Carrier Name** field type the name for the carrier.
- b. In the **Carrier Code** field type the code for the carrier.

Notes If the entered code matches an existing carrier code, the Import dialog prompts with two options: - Overwrite the definition that exists with the specified code. - Update existing definition with artifacts in specified definition file. The first option is equivalent to manually deleting the existing carrier, and then importing the new carrier. The second option leaves the existing carrier as-is except for reports. Reports are stored as files separate from the rest of the carrier definition. This update option overwrites those separate report files with the files found in the .zip being imported if they already exist, or copies them from the .zip to the appropriate location on the file system if they do not already exist.

See [Best practices for UCM carrier setup](#).

When you save this information, any lowercase letters are automatically converted to uppercase, so that the carrier code is displayed and stored in all uppercase.

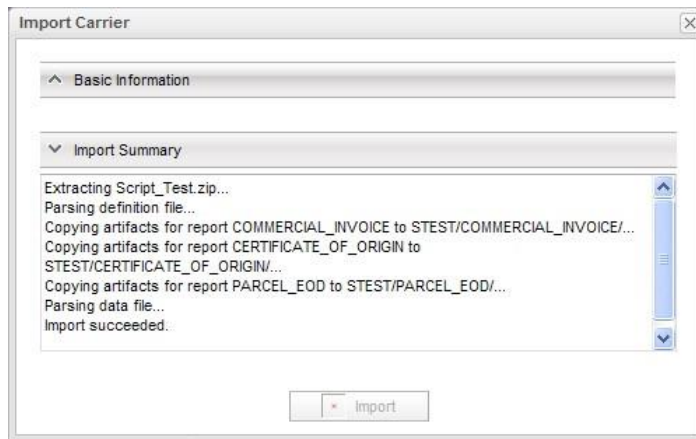
- c. Click Browse to open a Windows Choose File to Upload dialog, select the file to upload, and then click Open.

Caution: If the Import Summary displays the following message at this point:
Import failed:

Error unpacking archive file

And you are using IIS as your Web server, this issue is probably due to the way permissions are set up with IIS. In this case, you can do one of the following:

- Configure the correct permissions for IIS with UCM and retry the import. See the section titled "User Permissions for IIS with UCM" in the *Parcel - Installation Guide*.
 - Use the workaround described in the following section: [Workaround for import failure](#).
3. Click Import to import the file and display the imported carrier in the UCM left panel. Note the messages under Import Summary. You should see an "Import Succeeded" message at the end:



If you select the file to import first, and then enter the Carrier Name and Carrier Code, you need to click the Import twice.

Workaround for import failure

To import the carrier archive (.zip file) in case of the possible failure noted in step 2c of the previous procedure:

1. Copy the carrier .zip file to the following directory on the computer where Parcel is installed.

For the 32-bit version:

..\Program Files\Kewill\Flagship\WebGUI\ucm\UI\uploads **For the 64-bit version:**

..\Program Files(x86)\Kewill\Flagship\WebGUI\ucm\UI\uploads

2. Repeat steps 2c and 3 of the previous procedure.

Note: Carry out step 2c exactly as described, selecting the carrier .zip file on your local machine. This workaround bypasses any problems encountered in the upload phase.

Deploy, version, deactivate, remove, or delete a UCM carrier

After you have created and configured a carrier, you can deploy the carrier to make it available for integration with your shipping system. After a carrier has been added to your shipping system, you can deactivate the carrier to render it temporarily unavailable for shipping with your system. You can also remove a carrier from your shipping system

after it has been deployed, as well as delete a carrier from UCM. The following sections describe these operations.

Deploy a UCM carrier

To deploy a UCM carrier:

1. In UCM, select the carrier to deploy, and then, in the right pane, click **Deploy Carrier** to display the Carrier Deployment confirmation window.
2. Click **Deploy Carrier** <Carrier_Code> to deploy the carrier. After deployment of the carrier, the dialog displays the following message: "Deployment of Carrier Definition <Carrier_Code> was successful." The carrier can now be added to your shipping system.

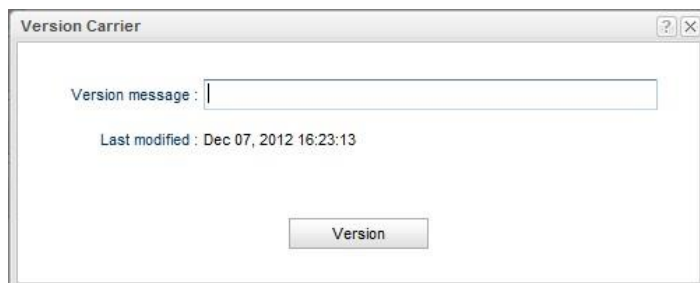
Notes

Some objects and elements of the carrier definition being deployed are verified in relation to those that exist in your shipping system. Warnings or errors may occur at this time; these are displayed in the Carrier Deployment dialog. If there are any errors, you cannot continue with the deployment until the errors are resolved. If there are warnings (no errors), deployment can be continued by clicking [Confirm] on the dialog displaying the warnings. After deployment is successful, the carrier is now available in your shipping system.

Version a carrier

There may be reasons to work with multiple versions of the same carrier. For example, if you want to make modifications for deploying the carrier with different options to multiple shipping systems, you can create and maintain multiple versions of the same carrier. For additional information on how carrier versioning works in UCM, see the following topic: [Best practices for UCM carrier setup - Versioning a carrier](#). **To version a carrier:**

1. Click the carrier folder icon to display the carrier screen.
2. Click Version Carrier to display the Version Carrier dialog as shown in the following illustration, and then enter text in the Version Message field to identify the version.



3. Click **Version** to save this version of the carrier. The carrier screen now displays the following text: "The carrier was versioned as <Carrier_Name> Version <x> on <Date_Time>."

Note

Versioned carriers have a different icon in the carriers pane to distinguish them from unversioned carriers as follows:

- Unversioned carrier

icon: ○ Versioned carrier



icon:

Deactivate/re-activate a UCM carrier To**deactivate a UCM carrier:**

In UCM, select the carrier to deactivate, and then, in the right pane, click Deactivate.

Notes:

- A deactivated carrier does not "disappear" from your shipping system. However, attempting to ship with a deactivated carrier returns an error message.
- The Deactivate toggles between Deactivate and Activate. When you deactivate a carrier, the label on the button changes to Activate (see the following step).

To re-activate a UCM carrier:

In UCM, select the carrier to re-activate, and then, in the right pane, click **Activate**.

Caution: This action activates the carrier and allows shipping to resume. However, it is important to re-deploy the carrier to your shipping system if you have made any changes in the carrier definition.

Remove all instances of a UCM carrier from Parcel

Caution: When you remove a UCM carrier from Parcel, all instances of the carrier are deleted from all locations where they were added. You can subsequently re-add the carrier to your shipping system if desired. Any data related to previous instances of the deleted carrier, as well as all transactional data is also deleted, and this operation is irreversible.

Note: You can delete individual instances of a UCM carrier from a Parcel location just as you would any other carrier without removing the carrier from the Parcel application itself. See the Parcel Help on Carrier Configuration.

To remove a UCM carrier and all its data from Parcel:

1. In UCM, select the carrier to remove from Parcel, and then, in the right pane, click Remove Carrier from Parcel to display the Confirm Removal dialog:

A screenshot of a Windows-style dialog box titled "Confirm Removal from Parcel". The dialog has a standard title bar with a question mark icon and a close button. The main content area contains the text "Enter CONFIRM to confirm removal from Parcel of carrier OTWS". Below this text is a label "Enter 'CONFIRM' :" followed by a text input field. At the bottom center of the dialog is a button labeled "Remove".

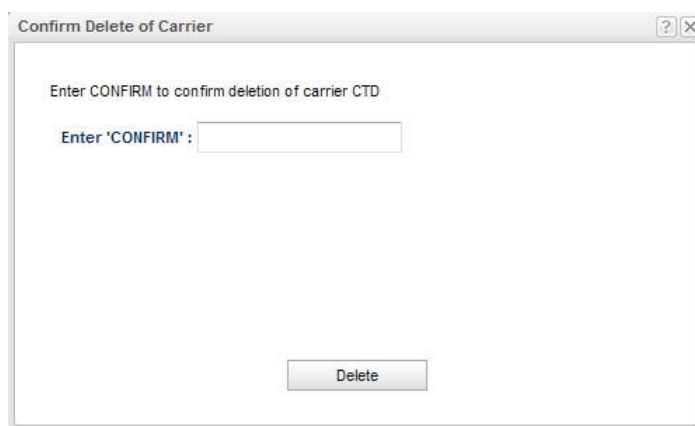
2. In the Enter 'CONFIRM': field, type CONFIRM (all capital letters, no quotation marks), and then click Remove.

Caution: Any previous instances of the carrier under any Parcel locations are no longer displayed and all transactional data is deleted and cannot be recovered. Additionally, this UCM carrier is also removed from the Carrier drop-down list of available carriers in Parcel. To make it available in Parcel again, you must redeploy the carrier.

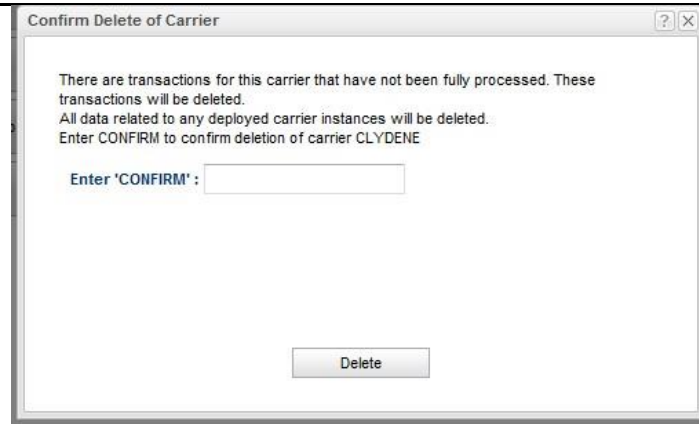
Delete a carrier definition from UCM

Caution: When you delete a UCM carrier definition, there is no undo. All instances, transactional data, and the UCM carrier definition are deleted. **To delete a carrier definition from UCM:**

1. In UCM, select the carrier to delete from Parcel, and then, in the right pane, click Delete Carrier to display one of the Confirm Delete of Carrier dialogs: If no transaction is currently being processed in Parcel:

A screenshot of a Windows-style dialog box titled "Confirm Delete of Carrier". The dialog has a standard title bar with a question mark icon and a close button. The main content area contains the text "Enter CONFIRM to confirm deletion of carrier CTD". Below this text is a label "Enter 'CONFIRM' :" followed by a text input field. At the bottom center of the dialog is a button labeled "Delete".

If a transaction is currently being processed in Parcel:



2. In the Enter 'CONFIRM': field, type CONFIRM (all capital letters, no quotation marks), and then click Delete to delete the carrier from the carrier list in the left pane. **Note:** When a carrier is deleted, the carrier-specific table (schema) is automatically deleted from the UCM database.

Configure objects with a UCM Carrier

Overview of object types

UCM enables you to add the objects described in the following sections as objects to a carrier or service or both. Most object types can be created at the carrier level for use with multiple services. Additionally, after you save a custom script, it generally becomes available for use with any object to which a script can be added. Global scripts can also be applied to most objects. **Artifacts**

Artifacts are files associated with a specific UCM carrier; for example, carrier-specific help documentation, label graphics, batch files, DLLs, JAR files, etc. This feature enables you to upload (import) files into UCM, and list them as a carrier object.

Billing types A billing type is a method of payment for a shipment or package. Examples include Prepaid, Bill Recipient, Bill Third Party, and Promise to Pay. UCM enables you to create a billing type at the carrier level, and then apply it to services belonging to that carrier, as well as attach a custom script to a billing type.

Charges

Charges represent the cost for additional fixed or optional costs. Examples are Fuel Surcharge, Insurance, and Signature Required. You can either add a charge to all services, or select specific services within a carrier to which to add the charge, specify the calculation method for the charge, apply the charge to the package or shipment level, and attach a custom script to the charge.

End of Day (EOD) operations

EOD operations can include consolidation of shipments and EOD manifesting. UCM enables you to configure FTP and email scripts for EOD manifesting.

Events

An event is associated with the carrier level and can be the completion of any stage or other action in the processing of a shipment in pre- or post-event mode. Some examples of events are API-associated events such as rate, ship, close, upload, void, print a report or label, or calculate time in transit. You can add a global script or custom script to an event.

Label templates

Labels are printed from a label template by filling in specific information at ship time or for other events. You can create label templates for printing at various stages of a shipment (preship and ship), associate a particular label with a service, select printers for use with the label, as well as edit printer-specific template language.

Packaging types

A good example of a packaging type is a box of a standard size. UCM enables you to create a packaging type and, if applicable, you can specify length, width, height, and unit of measure. You can also associate a script with a packaging type. You can create packaging types at the carrier level for use with any combination of services belonging to the carrier.

Rating methods

UCM enables you to create a rating method at the carrier level and add it to the applicable services. Examples of possible rating methods are weight rated, dimension rated, mileage rated. You can also create a custom rating methods using scripting.

Reports

UCM enables you to import, export, and edit reports. UCM reports work with JasperReports, an open source reporting library for use with applications based on the Java programming language.

Routing methods

A routing method typically defines a specific origin-destination pair using postal codes, city and state or province information, etc. You can add scripts to a routing method and add a routing method to a service.

Scripts

You can create custom scripts and apply them to most UCM objects (UI elements are an exception). All UCM scripts are in JavaScript, which does not need to be compiled. You can create a custom script, and then apply it directly to an object or apply an existing script. UCM also includes a set of standard, non-editable scripts ("Built-in Scripts") that can be applied to UCM objects.

Sequence numbers and tracking numbers

UCM Tracking number configuration consists of two parts: sequence numbers, which are created at the carrier level and define the start and range of a tracking number sequence, and tracking numbers themselves, which are assigned at the service level and can include prefix and suffix strings as well as a check digit algorithm. Sequence numbers are also used for manifesting.

Services

A service is a mode of transit for a shipment. Examples include truckload, rail, air, and various other specialized transportation methods. When you add a service to a UCM carrier, you can configure the service to include various options, including billing types, charges, labels, packaging types, rating, routing, tracking, and zoning. Additionally, you can attach custom scripts to both a service itself, and to the objects included in the definition of that service.

UI administrative elements

These elements typically apply to shipping system configuration done through the UI.

UI transactional elements

These elements typically apply to shipping system ship-time options displayed on the UI.

Zoning methods

You can create a postal code to postal code zone for rating purposes and associate it with a service. All rating methods associated with the service that need to look up a zone will use this zoning method.

Index keys

The UCM index key object type enables you to dynamically define a level for an existing API key for indexing purposes. With this feature, you can create, edit and delete a new set of keys. The main purpose of specifying these keys is for use in indexing, in order to retrieve key-value pairs from the database.

HTTP Connection Pooling

The HTTP Connection Pooling object type enables you to reuse the connection objects for Web Service communication.

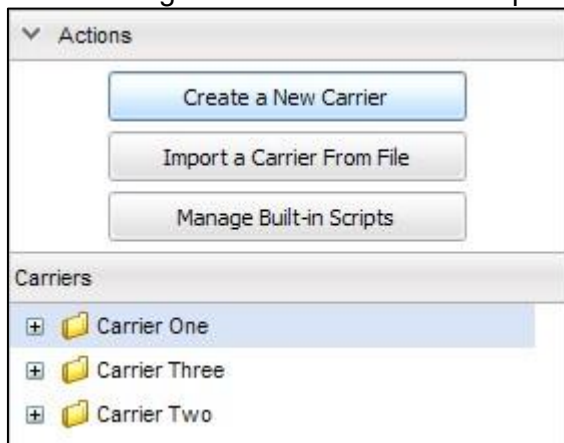
Working with the UCM interface

Primary components

The UCM interface is a Web application. The browser window for the UCM application consists of two panes. The left pane displays the following functions:

- Buttons for creating and importing a carrier and managing built-in scripts.
- A list of current UCM carriers with a hierarchy of objects for these carriers.

The following illustration shows the left pane with carriers displayed:



The buttons under Actions have the following functions:

- **Create a New Carrier** – Opens the Create Carrier dialog enabling you to specify the new carrier name and code. See the topic [Create a new UCM carrier](#).
- **Import a Carrier from File** – Opens the Import Carrier dialog for importing a UCM carrier .zip file. See the topic [Export or Import a UCM carrier](#).
- **Manage Built-in Scripts** – Displays the list of built-in JavaScript scripts that are included with UCM. See the topic [Manage built-in scripts](#).

Selecting a carrier displays the properties and options for that carrier in the right pane:

CM Shipping

Basic Information

Code : CMS

Name : CM Shipping

Description : Canada-based carrier with service to US destinations.

Options

☒ Use Built-in Time in Transit

☐ Use License Plate Number for Pre-shipments

☒ Enable Dangerous Goods

☐ Enable ground freight functionality

☒ Standard E-mail options

☒ Customer charge options

Rating Units of Measure : Imperial

End of Day

Manifest Sequence Number : KCM8Seq

☒ Allow Shipment Consolidation

☒ Use Built-in Consolidation Selection

☒ Use Built-in Consolidation Rating

Default Rate Split : Even

☐ Allow Shipment Grouping

Note: The Options and End of Day areas are shown expanded. To expand these areas, click the up arrow (^) next to Options and End of Day respectively. See the topic [Specify carrier options and End of Day](#).

The active buttons in this pane have the following functions:

- **Save Changes** – Saves changes to the carrier made in this pane; for example, a change to the name or description or the configuration of options and End of Day. Note that after you create a carrier, *you cannot change the code except by exporting and re-importing the carrier.*
- **Create Service** – Creates a service under the selected carrier. See the topic [Add or delete a service](#).
- **Export Carrier** – Exports the selected carrier as a .zip file. See the topic [Export or Import a UCM carrier](#).
- **Deploy Carrier** – Makes the selected carrier available to be incorporated in your shipping system. See the topic [Deploy a UCM carrier](#).
- ***Deactivate*** – If a carrier has been deployed to your shipping system and is deactivated in UCM, it becomes temporarily unavailable for shipping. When Deactivate is clicked, its label changes to **Activate{*}*, which reactivates the carrier when clicked.
- ***Remove from Parcel*** – If the selected carrier has been deployed and added to Parcel, clicking Remove from Parcel removes it from Parcel but retains the carrier in UCM.

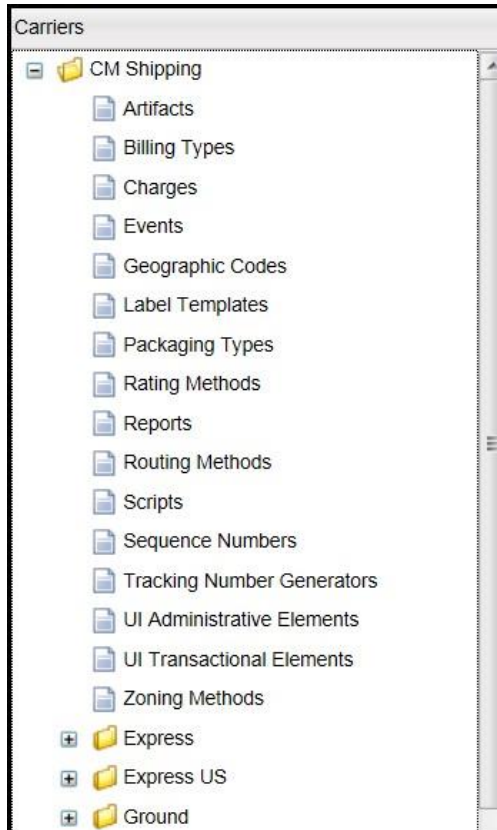
- **Delete Carrier** – Deletes the carrier from UCM and from any shipping systems where it has been deployed.

Carrier and service objects



that can be added to the carrier or directly to the service:

Clicking on the plus sign next to a carrier or service displays the hierarchy of objects



For an overview of UCM UI elements, see the topic [Overview of object types](#). As a general rule, you create an object at the carrier level, and then specify which services the object applies to. For most objects, this can be configured when creating or editing an object (including an option to apply the object to all services). The following section describes common functionality when creating or editing an object.

Create, edit, delete, or remove an object

You create an object for a carrier by clicking the object link under the carrier to display the list of existing objects of that type, and then clicking Create to display the Create Object dialog. To edit an existing object in the list, select the object and click Edit or simply double-click the object to display the Edit Object dialog. In general, Edit Object dialogs are identical to Create Object dialogs except that you cannot change the Object Code in an Edit Object dialog. Create and Edit Object dialogs consist of the following areas:








- **Basic Information** – Enter the Code, Name, and Description for the object.



- **Configuration options** – The fields under these areas (as well as the titles of the areas) vary by object. These areas are where you specify how the object actually operates in the context of the carrier. Configuration options can (but do not necessarily) require special execution scripts distinct from the optional Pre/Post scripts that can be applied to any object.
- **Services** – Use this area to select which services the object is applied to. Typically Create Object and Edit Object dialogs have a check box labeled "Applies to all services" that is selected by default. De-selecting (clearing) this check box displays a Services area that enables you to select only specific services to apply the object to.
- **Scripts** – This area enables you to apply an existing JavaScript to the object or create a new script to apply. In both cases you must also specify Pre and/or Post execution and can optionally specify the order in which scripts are to be executed.

Note: You can also remove an object from a service or delete it from a carrier. Removal of an object from a service is reversible while deletion of an object from a carrier is not.

UCM icons

The following table lists and describes the icons that appear in various contexts in UCM:

Icon	Name	Description
	Help	Clicking this icon next to an item on a screen displays information about the nature and function of the item (Context Help). Clicking this icon in the left pane displays the full UCM Help system. Clicking this icon on a dialog displays the context Help for that dialog or a field on the dialog.
	Missing Required Value or Incorrect Data Type	If you attempt to save an object with the value for a required field missing, UCM displays this icon next to the field and does not allow you to save your changes until a value is filled in for this field. This icon also indicates an incorrect data type in the field; for example, a date must be numeric, etc.
	Up Arrow	Next to a label on a gray bar indicates that an area on a screen or dialog is collapsed (not displayed). Click the up arrow to expand (display) the area under the bar.
	Down Arrow	This icon appears next to a label on a bar on a screen or dialog for an area where the options are displayed below. Click the down arrow to collapse the area to save screen space so that the items it contains are not displayed.
	Filter Funnel	This icon appears to the right of a blank row at the top of a list of objects. This row enables you to filter the list below it. See the topic Sort or filter a list .
	Add Existing	Add or apply an existing object of the specified type to item.
	Create New	Create a new object of the specified type and apply to item.

	Edit with JavaScript Editor	On the Create Script or Edit Script dialog, click the Edit with this icon to open the JavaScript Editor.
Icon	Name	Description
	Add UI Administrative Element	Click this icon next to an object configuration option to open the Create UI Administrative Element dialog to create any UI Administrative Element needed for the option.


Sort or filter a list

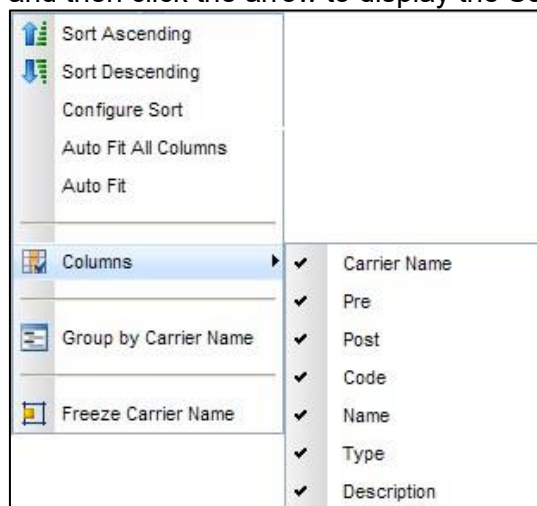
If a list of items or objects (for example a list of scripts or reports) has a blank row at the top with a funnel icon on the right, you can filter or sort the list as follows:

- To filter the list by a particular type of item in the list, type the name of the item in the cell under the appropriate column. This method is particularly useful when applying a built-in or custom script to a context. You can limit the context to a particular carrier by typing the name of carrier in the blank cell at the top of the carrier column:



This method is also helpful when working extended lists of routes and zones.

- To choose a sort method or configure a sort by the items in a column, move the cursor to the right side of the column head to display a drop-down arrow (), and then click the arrow to display the Sort menu:



Use this menu to do the following:

Menu item	Description
Sort Ascending	Sort the list on this column in ascending alphanumeric order.

Menu item	Description
Sort Descending	Sort the list on this column in descending alphanumeric order.
Configure Sort	Displays a Sort configuration dialog with the following options:

- **Add Level** – Adds a sort level so that you can have both a primary sort, a secondary sort, etc. When you add a level, you can use drop-down lists to select the column to sort by and whether the sort is ascending or descending.
- **Delete Level** – Deletes a sort level.
- **Copy Level** – Copies a sort level.
- **Up Arrow** – Moves the selected sort level up.
- **Down Arrow** – Moves the selected sort level down.
- **Apply** – Applies the sort to the list.
- **Cancel** – Cancels the sort.

Note: Sort levels are applied in the order in which they appear in the Sort dialog.

Auto Fit All Columns	Automatically sizes the width of all the columns to fit the longest line of text in each column.
Auto Fit	Automatically sizes the width of the selected column to fit the longest line of text in that column.
Columns	Enables you to select which columns of the list to display with the list. Deselect the column(s) you do not want to display.
Group by <Column> Name	Enables you to group items in the list by criterion represented by the column name.
Freeze <Column> Name	"Freezes" the selected column the primary sort column and allows you to select another column as a secondary sort column.

Best practices for UCM carrier setup

Point of terminology

A UCM carrier as it is displayed and configured in UCM is referred to as the "carrier definition." A UCM carrier that is deployed and incorporated into your shipping system is referred to as a "carrier instance."

Assigning a carrier code

When assigning a carrier code to a carrier, as a best practice keep the following considerations in mind:

- If you plan to use the carrier with a E2open LLC.-based shipping management system, do not duplicate any internal carrier code used by Parcel for an existing carrier.
- If you do specify a code already in use by Parcel, when you attempt to deploy the carrier to Parcel, you receive a message that the carrier code is already in use. If this happens, you can export the carrier and then import it with a new carrier code.
- If you try to import a UCM carrier into a system that already has the carrier code in use, you receive screen prompts with alternative options.

Editing a deployed carrier

If you need to make changes to (edit) a carrier definition after deploying the carrier, E2open LLC.'s best-practice recommendation is that those changes be made and tested

in a test environment and not in your production environment. After satisfactorily verifying the changes in your test environment, you can export the carrier from your test environment, and then import it into your production environment. **Caution:**

- Do not import an updated carrier into a production environment during production hours.
- If you choose not to follow this best-practice recommendation, your UCM carrier definition and the carriers you created in your shipping system using this definition may become desynchronized. Any UI elements you add or change in the carrier definition are not available in the user interface within your shipping system until you re-deploy the carrier definition. However, changes to scripts, default values, etc., are available and used by your shipping system. The following examples illustrate this functionality.

Example 1: You add a new option to be displayed on the carrier's option screen in your shipping system. Until you re-deploy the carrier with this change, the option does not appear on the options screen. However, you can submit a valid API request with this option.

Example 2: You remove a service from a carrier. Until you re-deploy the carrier with this change, the service still appears in your shipping system. However, if you attempt to ship using this service either from the UI or via an API request, your shipping system returns an error that the service is not valid.

Versioning a carrier

The primary use case for versioning is to allow a carrier developer to indicate some milestone of progress or maturity in the carrier development process. For example, when developing carrier XYZ, the first phase of development might be to implement just enough of the carrier to process a shipment with a single service for testing purposes. At this point, the developer could version the carrier as "XYZ – minimum." Carrier XYZ can then be exported and stored as backup, or shared as a starting point for divergent development. Further phases of this carrier can now be developed – adding another service, for example, or updating rates for a new year – and each phase can now be versioned with a meaningful message; for example: "XYZ – now with Express service" or "XYZ – 2013 rates."

It is important to note that after importing a versioned carrier, UCM prominently displays the version message to the user. In the case where a standard "XYZ – v1.0 – All the basics" version of carrier XYZ is being maintained, when this carrier is imported for customization, a user can readily verify from the UI message that the carrier definition is indeed version "XYZ – v1.0 – All the basics." From there, any required customization can be carried out on the carrier and the customized carrier given a new version. Note that when you make changes to a versioned carrier in this way, UCM displays a dialog with a message asking you to confirm the change. This versioning prompt prevents unintentional changes being made to a versioned carrier.

Services

Overview of services

UCM enables you to create as many customized services associated with a UCM carrier as you need. You do so by first adding the service to the carrier, and then customizing the service by configuring a combination of the following objects:

- Billing types
- Charges
- Labels
- Packaging types
- Rating methods
- Routing methods
- Tracking numbers
- UI transactional elements
- Zoning methods

After you deploy a carrier to your integrated shipping system, it functions just like any other carrier that is shipped with this system.


For additional information on configuring services with a UCM carrier, see the following Help topics:

- [Create or delete a service](#)
- [Add or remove objects within a service](#)

Create or delete a service *Create a service*

To create a service:

1. Click the folder for the carrier to which you want to add the service to display the set of buttons for available carrier options, and then click Create Service to



display the Create Service dialog.

2. In the Create Service dialog:
 - a. In the **Service Name** field, type the name that you want the service to have.
 - b. In the **Service Code** field, type the Service Code.

c. Click Create Service to create the service

Note: After you create a service, the service appears as a subfolder with the service name under the carrier folder and you can add or apply objects to the service. See the topic [Add or remove objects within a service](#). For many objects, you can also add the object to a service when configuring the object itself. See the relevant topic on creating and configuring an object.

Delete a service

Caution: If you delete a service from a carrier, you cannot undo the deletion. **To delete a service:**

1. Select the folder with the name of the service you want to delete to display the available options, and then click Delete Service to display the Confirm Service Deletion dialog.




2. In the Enter 'CONFIRM' field, type the word "CONFIRM" (all capital letters, no quotation marks), and then click Delete Service <S{ }service_Code>._ The service subfolder is no longer displayed, and the service name and service code can now be reused.

Add or remove objects within a service

You can apply, configure, or remove the following objects from within a service:

- Billing types
- Dangerous Goods
- Packaging types
- Charges
- Label templates
- Routing Method
- Tracking number generator
- UI transactional elements
- Scripts
- Zoning method

To apply objects to a service:

1. In UCM, click the plus sign  next to the carrier with the service you want to configure, and then select the service to display the service pane with the configuration options for that service.

The "Use all" check boxes for the following objects are selected if, when creating an object, you make it available for all services:

<input checked="" type="checkbox"/>	Use all Billing Types
<input checked="" type="checkbox"/>	Use all Packaging Types
<input checked="" type="checkbox"/>	Use all Charges
<input checked="" type="checkbox"/>	Use all Label Templates
<input checked="" type="checkbox"/>	Use all UI Transactional Elements

- Optionally, to specify only a subset of any of these objects to be used with a service, deselect (clear) the "Use all" check box for that object to display the list of items for the object. Billing types can serve as an example, since all the available objects use the same procedure:

Clearing the Use all Billing Types check box displays a list of billing types for the carrier:

Billing Types		
<input type="checkbox"/>	Code	Name
<input type="checkbox"/>	3P	Third Party Billing Third Party billing type
<input type="checkbox"/>	REC	Recipient Recipient pays charges
<input type="checkbox"/>	s	Prepaid

Select the check boxes next to the billing types you want to use with this service. See the topics under "Billing Types."

Note: To remove an item in the list of any of the previous objects from the service, simply leave the check box next to the item cleared (unselected):.


- Under Options, carry out the following actions on the fields under this area:

Options	
Tracking Number Generator :	<input type="text"/>
Routing Method :	<input type="text"/>
Zoning Method :	<input type="text"/>
Label Text :	<input type="text"/>
EDI Text :	<input type="text"/>
Report Text :	<input type="text"/>
Scripts (Drag to Reorder)	

- Optionally, in the **Tracking Number Generator** field, from the drop-down list, select a tracking number generator for the service. See the topics under "Sequence and Tracking Numbers."
- Optionally, in the **Routing Method** field, from the drop-down list, select a routing method for the service. See the topics under "Routing Methods."
- Optionally, in the **Zoning Method** field, from the drop-down list, select a zoning method for the service. See the topics under "Zoning Methods."
- To enable processing of Dangerous Goods, select the **Enable Dangerous Goods** check box.

8. Optionally, in the **Label Text** field, enter an alternate service name to be printed on the label.
9. Optionally, in the **EDI Text** field, enter an alternate service name to be printed in the EDI Manifest.
10. Optionally, in the **Report Text** field, enter an alternate service name to be printed in a Report.
Note: To remove one of the previous objects from the service, choose the blank row in the associated drop-down list or deselect (clear) the check box.
11. Click the up arrow (^) next to Scripts to display the list of scripts currently applied to the object and add any additional scripts that are required by using the Add Existing or Create New:
Note: See the topics under "Scripts."
12. Click Save Changes to save your changes.

Remove objects from a service **To
remove an object from a service:**

1. In UCM, click the plus sign  next to the carrier with the service, and then select the service to display the service pane with the configuration options for that service.
2. In steps 2-4 of the previous procedure, deselect (clear) the check boxes for the objects you want to remove from the service or, in the case of an option with a drop-down list, choose the blank row in the associated drop-down list.
3. Click Save Changes to save your changes.

Artifacts

Overview of artifacts


Artifacts are files associated with a specific UCM carrier; for example, carrier-specific help documentation, label graphics, batch files, DLLs, JAR files, etc. This feature enables you to upload (import) files into UCM, and list them as a carrier object. UCM artifacts functionality enables you to carry out the following tasks:

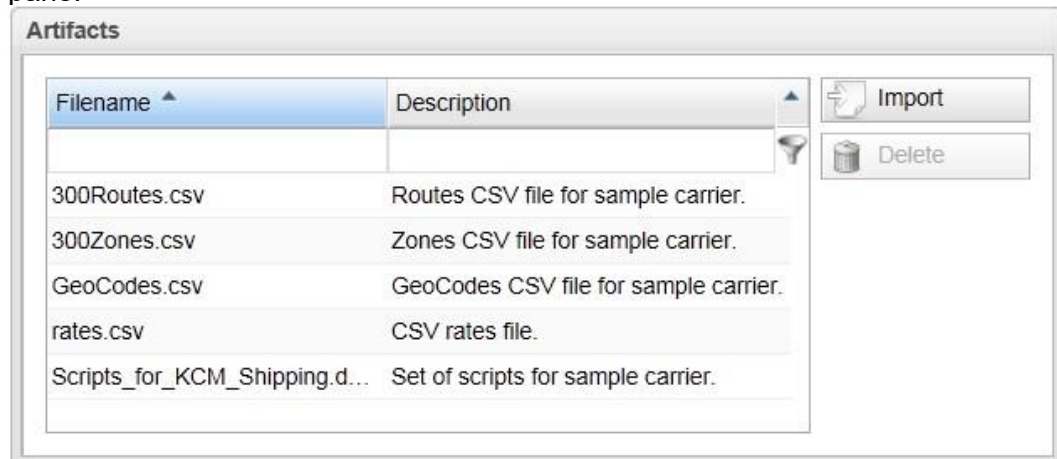
- Upload files to UCM and have them stored in the UCM database as artifacts.
- Retrieve an artifact from the UCM database as part of a custom script.
- Reconstruct an artifact from the database into a cache on the file system.
- Import and export artifacts as integral components of a carrier.
- Delete artifacts from a carrier.

Note: After you import an artifact, it remains attached to the carrier unless/until you delete the artifact. This association includes deployment of the carrier.

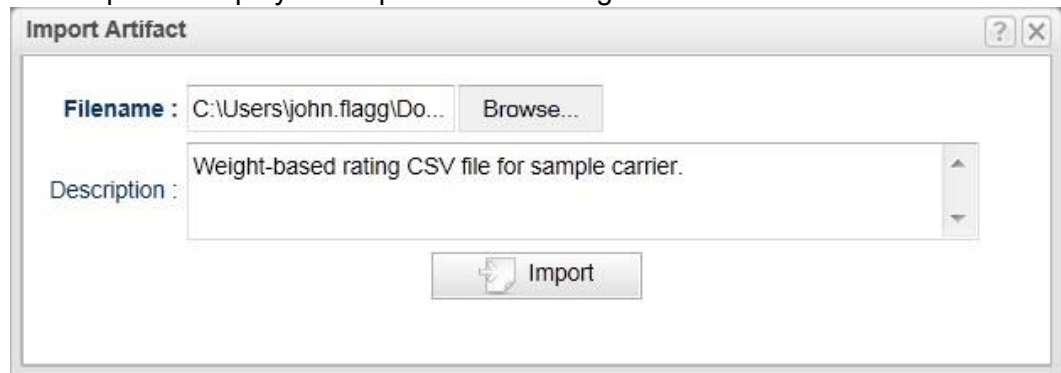
Importing an artifact

To import an artifact:

1. Click the plus sign  next to the folder icon of the carrier you want to add the artifact to, and then click the artifact link to display the Artifact list in the right pane:




2. Click Import to display the Import Artifact dialog:



3. Click Browse to open the Windows file selection dialog, and then select the artifact file and click Open.
4. Optionally, type a description of the artifact in the Description text box, and then click Import to add the file to the list of artifact files.

Deleting an artifact

To delete an artifact

1. Click the plus sign  next to the folder icon of the carrier you want to add the artifact to, and then click the artifact link to display the Artifact list in the right pane.
2. Select the artifact, and then click Delete.
3. Click Yes on the confirm delete dialog to complete the deletion.

Billing Types

Overview of billing types

The term "billing type" refers to the method by which a shipment is paid for. Some common examples of billing types are as follows:

- **Prepaid** – The shipper pays shipping charges, and then collects them from the responsible party.
- **Consignee** – The shipper bills shipping charges directly to the recipient's account.
- **Third Party** – The shipper bills shipping charges to a party other than the shipper or the recipient.

Caution: You need to include at least one billing type with a carrier in order to deploy the carrier.

Note: Prepaid is included with your UCM system as a default billing type. While you can delete this billing type from your UCM system, this is not recommended if you plan to use a rate shop with UCM carriers.


In general, shipping systems provide a method for selecting a billing type when configuring a shipment, and then entering account and address information if applicable. When you create a billing type in UCM at the carrier level, you can then associate this billing type with a specific service or combination of services for that carrier. The following Help topics describe how to work with UCM billing types:

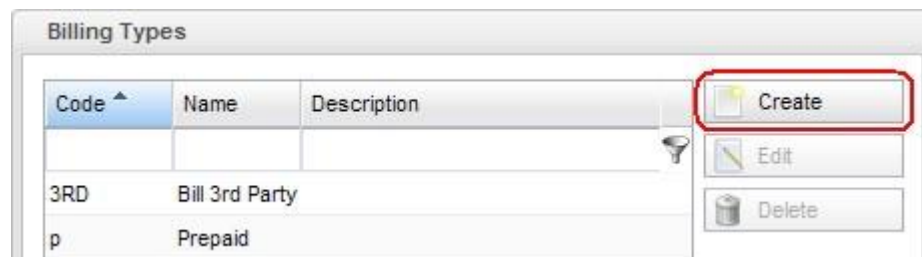
- [Create a new billing type](#)
- [Add, edit, remove, or delete a billing type](#)

Create a billing type

You create a billing type at the carrier level. After you create a billing type, it then becomes available to add to any combination of services associated with the carrier.

See the topic: [Add, edit, remove, or delete a billing type](#). **To create a billing type:**

1. Click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Billing Types link under the carrier folder to display the Billing Types pane, and then click Create in the upper right portion of the panel to display the Create Billing Type dialog.



The following illustration shows the Create Billing Type dialog:

The following table lists the basic information for the fields on the this dialog

Field	Max. Length (No. of chars.)	Required
Code	64	Yes
Name	255	Yes
Description	255	No

3. In the Create Billing Type dialog, carry out the following steps:
4. Under Basic Information, in the **Code** field, type the code for the billing type; for example: B3P

5. Under Basic Information, in the **Name** field, type the name of the billing type; for example: Bill Third Party
6. Under Basic Information, in the **Description** text box, optionally type a description for the billing type; for example: Third party pays shipping charges.
7. Under Options, select the appropriate check boxes as follows:
Enable Billing Address Entry
Enable Billing Account Number Entry
Optionally, in the **Label Text** field, enter an alternate billing type name to be printed on the label.
Optionally, in the **EDI Text** field, enter an alternate billing type name to be printed in the EDI Manifest.
Optionally, in the **Report Text** field, enter an alternate service name to be printed in a Report.
Optionally, to add a script to the billing type, click the up arrow (^) next to the word "Scripts" to display the following options for adding a script:
Add Existing – Click Add Existing to display the Select Existing Scripts dialog with a list of available scripts. Select (check) the check box or boxes next to the script(s) you want to add to the billing type, and then click Select to display the selected scripts in the Scripts table on the Create Billing Type dialog.
8. Create New – Click Create New to display the Create Script dialog. See the topics under "Create, test, and debug a script." Click Save Changes to display the new script in the Scripts table on the Create Billing Type dialog. Select a combination of check boxes in the Pre and Post columns to indicate whether the script should run prior to an event related to applying the billing type to a shipment or after the event. For example, you might add a script to validate third party billing before processing the charge (Pre), and then another script to actually process the charge (Post). (See the following section "Example of billing type with script.")
Caution: You do not select at least one check box in the Pre or Post columns next to a script, when you save the billing type, the script is no longer associated with it and does not appear in the list of scripts if you edit this billing type.
9. Click Save Changes to add the rating method to the set of available billing types for the carrier.

Example of billing type with script

For shipments using Third Party Billing, you might want to apply this billing type to domestic shipments only. In this case, you could attach the UCM global script that validates that the shipment is domestic. **To do so:**

1. Click Add Existing to display the list of available scripts, and then select the check box for the global script named "Domestic shipment validation."

2. Click Save Changes to return to the Create Billing Type dialog. Under Scripts, the selected script now appears in the list of scripts added to the Third Party billing type.
3. Select the **Pre** check box, so that in processing a shipment with this UCM carrier, the validation is performed before a shipment with a Third Party billing type is processed.

In this case, the script validates that the ship to (destination) country matches the ship from (origin) country. If this is not true, a message is displayed indicating that the shipment cannot be processed.

Add, edit, remove, or delete a billing type

You can add a billing type to a service in the following ways:

- Create a new billing type, and then add it to the service. See the topic: [Create a new billing type](#).
- Add an existing billing type to the service.

Note: When you create a new billing type, one of the following conditions applies:

- If a service is set up to use all billing types (the default – see following section), then the billing type is automatically added to that service.
- If a service is not set up to use all billing types, then the new billing type is added to the list of available billing types but you must still add it to a service as a separate operation.

Set up a service to use all billing types

When you create a service, the service is configured by default to use all billing types available within the carrier. If an existing service has been configured to use only a subset of possible billing types, you can reconfigure the service to use all billing types with the following procedure. See the topic [Add or remove objects within a service](#). **To set up a service to use all available billing types:**

Click on the service to select it, select the Use all Billing Types check box, and then click Save Changes.

Notes: All available billing types are added to the service and any new billing type is now automatically added to this service when you create it.

When you select the Use all billing types check box, the list of billing types is no longer displayed.

Add an existing billing type to a service


Note: This procedure assumes that the service is not set up to use all billing types. (See the previous procedure.)

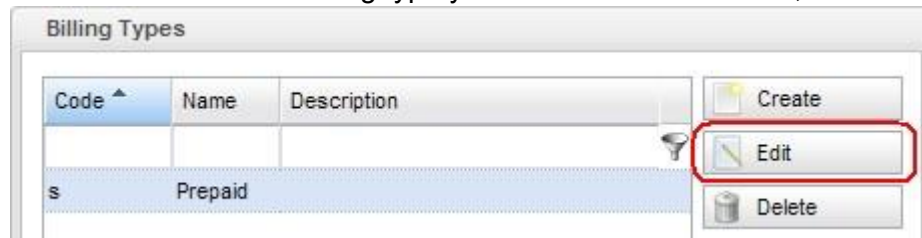
To add a billing type to a service:

1. Carry out one of the following steps:
In the Create Billing Type or Edit Billing Type dialog, if you want to apply the billing type to all services, select the Applies to All Services check box. If the Applies to All Services check box is cleared (deselected) then, in the list of services under the Services area, select the service or services you want to add the billing type to.
2. Click Save Changes to add the selected billing type to the billing types associated with the service or services.

Edit a billing type

Note: UCM requires you to edit a billing type at the carrier level, so that the edited billing type applies to any service it is associated with. **To edit a billing type:**

1. Click the plus sign  next to the carrier folder to display the set of available objects, and then select Billing Types to display the Billing Types pane.
2. In the Billing Types list, carry out one of the following actions to display the Edit Billing Type dialog:
Double-click on the row with the billing type you want to edit.
Click on the row of the billing type you want to edit to select it, and then click Edit.



3. Make any desired changes to the values and selections for configuring the billing type, and then click Save Changes. See steps 1-2 of the topic Make any desired changes to the values and selections for configuring the billing type, and then click Save Changes. See steps 1-2 of the topic Create a new billing type for details on these fields. (The fields and selections on the Edit Billing Type dialog are identical to those on the Create Billing Type dialog.)

Note: To remove a script from a billing type, click the up arrow (^) next to Scripts to display the list of scripts currently applied to the billing type, and then deselect (clear) all check boxes in the Pre and Post columns next to the script you want to remove. When you save your changes any deselected scripts are automatically removed from the billing type. They remain in the list of available scripts.

4. Click Save Changes.

Remove or delete a billing type


You can remove a billing type from a service and it still remains available for other services under the same carrier. See the topic [Add or remove objects within a service](#).

However, when you delete a billing type from a carrier, it is no longer available. **To remove a billing type from a service:**

1. Click on the service to select it, and then deselect the Use all Billing Types check box (if selected) to display the Billing types area with a list of available billing types or click the up arrow (^) next to Billing Types. The billing types associated with a service have the check boxes next to them selected.
Note: If the Use all Billing Types check box is selected, you cannot remove a single billing type or combination of billing types from the service. You must first deselect this check box to display the Billing Types list.
2. In the Billing Types list, deselect (clear) the check box next to the billing type you want to remove from the service, and then click Save Changes. .

To delete a billing type from a carrier:

Caution: After you delete a billing type, you cannot undo the operation.

1. Click the plus sign  next to the carrier folder to display the set of available objects, and then select Billing Types to display the Billing Types pane with a list of currently available billing types.
2. In the Billing Types list, click on the row of the billing type you want to delete to select it, and then click Delete to display the Confirm Delete dialog.

Note: To select multiple billing types to delete, hold down the Ctrl key while selecting the billing types. (This action also disables the Edit)

3. Click OK to confirm the deletion and remove the billing type from the list of available billing types.

Charges

Overview of charges

You configure a charge at the carrier level and apply it either to all services (the default) or a specific subset of services. A charge of this type is typically a surcharge added to the base rate for a special or additional service, for example Saturday Delivery. You can specify this charge at the package or shipment level either as an absolute value in the default currency, as a percentage of a source charge, for example the base rate for the shipment or package, or as a charge returned by a custom script. Additionally, you can configure API keys, UI elements, and scripts to work with a charge.

Note: For package level charges, each charge is calculated independently after the base rate for the package is calculated.

The following topics describe how to work with charges:

- [Create a charge](#)
- [Edit, delete, or remove a charge](#)
- Best practices for working with charges - [Example of Extended Area Surcharge](#) - [Example of Delivery Confirmation Charges](#) - [How to set up Fuel Surcharge](#)

Create a charge

The UCM Charges object enables you to configure charges for value-added services and transactional surcharges. You can do so using one of the following calculation methods to create a charge at the shipment or package level:


- Fixed Amount – Adds a fixed charge to the shipment or package as appropriate.

- Percent of a Value – Multiplies the charge source (for example, the base rate) by the charge percentage to obtain the charge. Percent charges also include a userdefined minimum and maximum value.
- Script – Adds the value returned by a script to the base rate for the shipment or package.

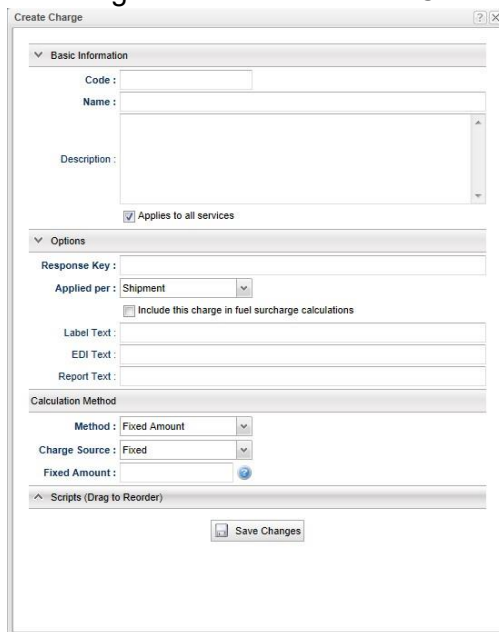
Create a charge

General Procedure

To create a package-level or shipment-level charge:

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Charges link under the carrier folder to display the Charges pane, and then click Create in the upper right portion of the panel to display the Create Charge dialog.

The following illustration shows the Create Charge dialog:





The following table lists the basic information for the fields on this dialog:

Field	Max. Length (No. of chars.)	Required
Code	64	Yes
Name	255	Yes
Description	255	No

3. To apply the charge to all services for this carrier, leave the Applies to all services check box selected. Otherwise, to select specific services to apply the charge to, deselect (clear) the check box.

Note: Clearing this check box displays the Services list. Select the check boxes next to the services you want to apply the charge to.

4. Under Options, configure the following options:
 5. In the **Response Key** field, type the name of the API response key to be used for returning the amount of the charge; for example, SAT_DELIV_CHG.
 6. From the Applied per drop-down list, select whether the charge is to be applied per package or per shipment.

Note: Selecting Package displays the Package Criteria field. Use the buttons to the right of this field to specify an existing script () or create a new script () for this purpose. Click the Context Help  for additional information and see the Help topics under "Scripts" for information on creating scripts. Note also that, for this script, you do not specify Pre or Post execution. This script automatically executes at the appropriate point in the shipping process.
 7. To include the charge in fuel surcharge calculations select the check box labeled "Include this charge in fuel surcharge calculations." **Note:** This check box is deselected (cleared) by default.
 8. Optionally, in the **Label Text** field, enter an alternate charge name to be printed on the label.
 9. Optionally, in the **EDI Text** field, enter an alternate charge name to be printed in the EDI Manifest.
 10. Optionally, in the **Report Text** field, enter an alternate charge name to be printed in a Report.
 11. Under Calculation Method, configure, from the Method drop-down list, select one of the following methods:
 - Fixed Amount
 - Percent of a Value
 - Script
 12. Configure the specific Calculation Method according to the following procedure:
[Configure a Calculation method.](#)
 13. Optionally, to apply Pre or Post scripts to the charge, click the up arrow (^) next to the word "Scripts" for the following options:
 - Add Existing – Click Add Existing to display the Select Existing Scripts dialog with a list of available scripts. Select (check) the check box or boxes next to the script(s) you want to add to the routing method, and then click Select to display the selected scripts in the Scripts table on the Create Charge dialog.
 14. Create New – Click Create New to display the Create Script dialog. See the topics under "Create, test, and debug a script." Click Select to display the new script in the Scripts table on the Create Charge dialog.
- If, in step 7, you added one or more scripts, select Pre or Post for each of these scripts to indicate whether the script is to run before or after the routing method is applied.
- * **Caution:** * If you fail to make this selection, the script is not saved when you click Save Changes.

Click Save Changes to save the Charge and display it in the list of Charges.

Configure calculation method

To configure a calculation method:

- At step 6 of the General Procedure, carry out one of the following sets of substeps depending on your choice of calculation method:
For the *Fixed Amount* and *Percent of a Value* calculation methods, carry out one of the following procedures:
- Depending on your choice of options, carry out the appropriate actions described in the following table:

For this Charge Source...	With the Fixed Amount calculation method, do this...	With the Percent of a Value calculation method, do this...
Fixed	1. Enter the fixed amount for the charge in the Fixed Amount field. Use default currency units without the currency symbol; for example, for 2 Euros, enter 2.00.	

- Return to General Procedure, step 7.|# Enter the decimal percent for the charge in the Fixed Amount field; for example, 0.10 for 10%.
- To select the transactional basis for the charge calculation, go to step 1b.|


UI Element	1. From the UI Element dropdown list, select the UI administrative element or UI transactional element to use for entering this charge. See the topics under "UI Administrative Elements" and "UI Transactional Elements." For example, for a Saturday Delivery Charge, if you set up a Saturday Delivery Charge numeric field as a UI transactional element, select this transactional element from the drop-down list.
-------------------	--

- Return to General Procedure, step 7.|# From the UI Element drop-down list, select the UI administrative element or UI transactional element to use for

entering this charge. See the topics under "UI Administrative Elements" and "UI Transactional Elements." For example, for a Saturday Delivery Charge, if you set up a Saturday Delivery Charge numeric field as a UI transactional element, select this transactional element from the drop-down list.

6. To select the transactional basis for the charge calculation, go to step 1b.)

Request Key	1. If you select this option, type the name of the API Request Key to use for submitting the value of the charge in an API request; for example, if you use SAT_DELIV_CHG for this key, the request API string can include the substring SAT_DELIV_CHG 2.00 if the default currency is the Euro and the charge is 2 Euros.
--------------------	---

7. Return to General Procedure, step 7|# Selecting Request Key, displays the Request Key field. Type the name of the API Request Key to use for submitting the value of the charge in an API request; for example, if you use SAT_DELIV_CHG for this key, the request API string can include the key-value pair SAT_DELIV_CHG|0.10| if the charge is 10% of the base rate.
8. To select the transactional basis for the charge calculation, go to step 1b.)
9. If, in step 1-a, you are using Percent of a Value as the calculation method, from the Request Source drop-down list, select one of the following options as the transactional basis for the charge calculation (otherwise, go to step 1-c): Base Rate – Selecting Base Rate uses the base rate for the shipment or package as the basis for the calculation. For example, for a 10% charge applied to a shipment, if the base rate for the shipment is 10.00 Euros, the charge would be 1.00 Euro.
- Request Key – Selecting Request Key displays the Request Key field. Type the name of the API Request Key to use for retrieving the charge source. For example, if you use CHG_SOURCE for this key, the request API string can include the key-value pair CHG_SOURCE|<base_rate>| if the charge source is the base rate.
10. If, in step 1-a, you are using Percent of a Value as the calculation method, optionally type the minimum charge in the Charge Min field and the maximum charge in the Charge Max field. These are absolute values that ensure the following conditions. If the calculated charge falls below the minimum charge, then the minimum charge is returned; if the calculated charge is above the maximum charge, then the maximum charge is returned. Use absolute values of the default currency without the currency symbol for these fields; for example for a charge if the range for this charge is 1 - 10 Euros, use 1.00 as the value for Charge Min and 10.00 as the value for Charge Max (assuming the Euro is the default currency).
- For the Script calculation method, use the buttons to the right of this field to specify an existing script () or create a new script () for this purpose. Click the Context Help  for additional information and see the Help topics under "Scripts" for information on creating scripts. Note also that, for this script, you do

not specify Pre or Post execution. This script automatically executes at the appropriate point in the shipping process.


Note: The value returned by this script is the value assigned to the charge. If this charge is applied at the package level, the script runs for each package in the shipment. In this case, the package is represented in the JavaScript code as the local variable `PACKAGE`.

11. Return to General Procedure, step 7.

Edit, delete, or remove a charge

Edit a charge **To**


edit a charge:

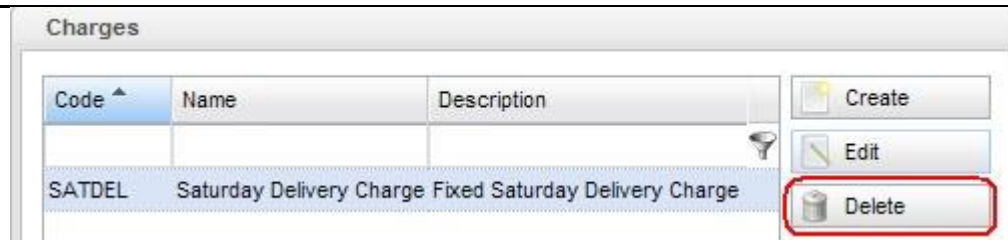
1. In UCM, click the plus sign  next to the carrier to display the set of objects associated with the carrier.
2. Click the Charges link to display the list of charges associated with the carrier.
3. Carry out one of the following actions:
Double-click the charge you want to edit to display the Edit Charge dialog. Select the charge you want to edit, and then click Edit to display the Edit charge dialog.
4. Modify any parameters, scripts, or script ordering that need changing. For more information, see the topic [Create a charge](#).
Note: The fields and buttons on the Edit Charge dialog are identical to those on the Create Charge dialog. However, *you cannot modify the value for Code*.
5. Click Save Changes to save your changes to the charge.

Note: When you save changes to a charge, every instance of this charge associated with a service automatically incorporates these changes.

Delete or remove a charge

You can delete a charge from a carrier. When you delete a charge from a carrier, that charge is removed from all services with which it is associated and is no longer available for adding to any services belonging to the carrier. You can also remove a charge from a specific service without deleting the charge. **To delete a charge from a carrier:**

1. In UCM, click the plus sign  next to the carrier to display the set of objects associated with the carrier.
2. Click the Charges link to display the charges pane with the list of charges belonging to the carrier.
3. Select the charge to delete, and then click Delete to display the Confirm dialog.




Note: To select multiple charges to remove, press CTRL when selecting the rows.

4. Click OK to permanently delete the charge from the carrier or click Cancel to exit the dialog without deleting the charge.

Caution: There is no undo for this operation. Additionally, if a deleted charge is associated with a service it is automatically removed from the service when you delete it from the carrier.

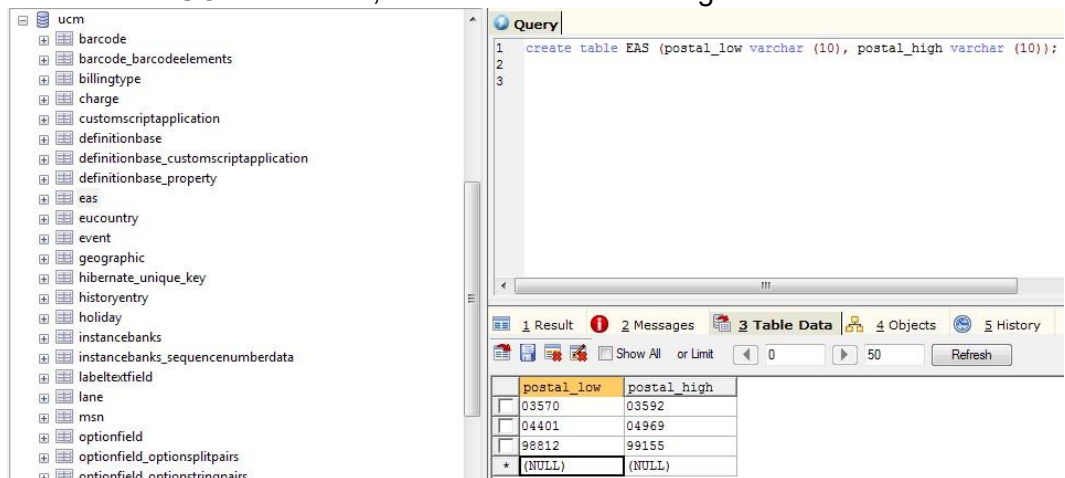
To remove a charge from a service:

1. In UCM, click the plus sign  next to the carrier to display the set of objects associated with the carrier.
2. Click the Charges link to display the list of charges associated with the carrier.
3. Carry out one of the following actions:
Double-click the charge you want to remove to display the Edit Charge dialog. Select the charge you want to remove, and then click Edit to display the Edit charge dialog.
4. In the Edit Charge dialog, carry out one of the following actions:
If the check box labeled "Applies to all services" is selected, deselect (clear) this check box to display the list of services associated with the carrier. In the Services list, manually select the services you want the charge applied to but leave the check box next to the service you want the charge removed from deselected (cleared).
If the check box labeled "Applies to all services" is deselected (cleared), in the Services list deselect the check box next to the service you want to remove the charge from.
5. Click Save Changes to save your changes to the charge.

Best practices for working with charges Examples of Extended Area Surcharge

Example 1: Extended Area Surcharge where charge is single fixed amount *To set up this type of surcharge:*

1. Move the database table with the Extended Area Postal Code ranges to the same server as the UCM database, as shown in the following illustration:



The screenshot displays a database management interface. On the left, a tree view shows the database structure with tables like 'barcode', 'charge', 'eas', etc. The 'eas' table is selected. On the right, a 'Query' window shows the SQL command: `create table EAS (postal_low varchar (10), postal_high varchar (10));`. Below the query window, a 'Table Data' view shows the contents of the 'EAS' table. The table has two columns: 'postal_low' and 'postal_high'. The data rows are as follows:

postal_low	postal_high
03570	03592
04401	04969
98812	99155
(NULL)	(NULL)

- Note:** For this example, the table belongs to the UCM database and is called EAS.
2. Create a UCM script to determine whether the charge should be calculated.

The screenshot shows a 'Create script' window. Under the 'Basic Information' tab, the 'Code' field contains 'EASSelect', the 'Name' field contains 'Extended Area Surcharge Selection', and the 'Description' field contains 'This script will be used to decide if an extended surcharge should be calculated on a shipment.'. The 'JavaScript Code' section is visible at the bottom, and the 'Type' dropdown is set to 'Advanced'.

```
var query = "select count(postal_low) from UCM.eas where postal_low <= ?
and postal_high >= ?";
var postalCode = getAPIValue ("S2Pcode");
var results = executeQuery (query, postalCode, postalCode); for(var
i=0;i<getNumRows(results);i++)
{
<ac:structured-macro ac:name="unmigrated-wiki-markup"
ac:schemaversion="1" ac:macro-id="b99219d6-56a2-4761-b030-
787a494e9382"><ac:plain-text-body><![CDATA[if (results[i] .toString() == "0")
]]></ac:plain-text-body></ac:structured-macro>
{
setNotApplicable();
}
}
```

3. Create a UI Administrative Element for the fixed EAS charge amount.

4. Create a Charge that will calculate the amount to be charged.

Example 2: Extended Area Surcharge where the charge is one of three possible charges

Note: The three charges in this example are EAS1 (low), EAS2 (medium) or EAS3 (high).

To set up this type of surcharge:

5. Move the database table with the Extended Area Postal Code ranges to the same server as the UCM database.



Note: For this example, the table belongs to the UCM database and is called EAS.

- Using the Create Script dialog, create two scripts within UCM. The first script determines whether the charge should be calculated, as well as get EAS zone. The second script matches the EAS zone to the Administrative Element for that zone to determine the charge amount.

Example Script 1: Create Script dialog parameters

Code name: EASSelect

Name: Select which zone to charge for EAS based on zip code.

Type: Advanced

<pre>var query = "select charge_zone from UCM.eas where postal_low<= ? and postal_high >= ?"; var postalCode = getAPIValue ("S2Pcode"); var results = executeQuery (query, postalCode, postalCode); if(getNumRows(results) < 1) setNotApplicable(); else <ac:structured-macro ac:name="unmigrated-wiki- markup" ac:schema-version="1" ac:macro- id="38de8e20-e65b- 4f02-b2a3-a1038ebcc45c"><ac:plain- textbody><![CDATA[setAPIValue("EAS_CODE", results[0].toString());</pre>	<pre>]]></ac:plain- textbody></ac:structuredmacro></pre>
---	---

Example Script 2: Create Script dialog parameters

Code name: EASCharge

Name: Match the EAS zone to the appropriate EAS Administrative Element to get the actual charge amount.

Type: Advanced

```
getAdminValue(getAPIValue("EAS_CODE"));
```

- Create three UI Administrative Elements for the fixed EAS1 – EAS3 fixed charge amounts, as shown in the following illustrations.

The screenshot shows a window titled "Edit UI Administrative Element" with a standard Windows-style title bar (minimize, maximize, close buttons). The window contains three main sections, each with a collapsed header:

- Basic Information:** Contains a "Code" field with the value "EAS1", a "Name" field with the value "Low EAS Charge Amount", and a "Description" field which is currently empty.
- UI Screen Location:** Contains a "UI Administrative Label" field with the value "Low EAS Charge Amount".
- Data Description:** Contains a "Data type" dropdown menu set to "Numeric" and a "Default value" field with the value "1.11".

At the bottom center of the window is a button labeled "Save Changes" with a floppy disk icon.

Edit UI Administrative Element

Basic Information

Code : EAS2

Name : Med EAS Charge Amount

Description :


UI Screen Location

UI Administrative Label : Med EAS Charge Amount

Data Description

Data type : Numeric

Default value : 2.22

 Save Changes

Edit UI Administrative Element

Basic Information

Code : EAS3

Name : High EAS Charge Amount

Description :


UI Screen Location

UI Administrative Label : High EAS Charge Amount

Data Description

Data type : Numeric

Default value : 3.33

 Save Changes

2. Create a Charge that will calculate the amount to be charged.

Edit Charge

Basic Information

Code : EAS

Name : Extended Area Surcharge

Description :

☒ Applies to all services

Options

Response Key : EAS

Applied per : Shipment

☐ Include this charge in fuel surcharge calculations

☐ This charge has associated label text

Calculation Method

Method : Script

Script : EASCharge

Scripts (Drag to Reorder)

Pre	Post	Name	Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Select which zone to charge for EAS based on zip code	

Example 3: Extended Area Surcharge where charge amount exists in table and changes with postal range *To set up this type of surcharge:*

3. Move the database table with the Extended Area Postal Code ranges to the same server as the UCM database.

Query

1 Result 2 Messages 3 Table Data 4 Objects 5 History

Show All or Limit 0 50 Refresh

postal_low	postal_high	charge_amt
03570	03592	1.11
04401	04969	2.22
98812	99155	3.33
(NULL)	(NULL)	(NULL)

Note: For this example, the table belongs to the UCM database and is called EAS.

- 4. Create two scripts. The first script determines whether the charge should be calculated, as well as determining the EAS charge amount. The second script is used on the charge setup to bring in the charge value.

Example Script 1: Create Script dialog parameters

Code name: EASSelect

Name: Select which zone to charge for EAS based on zip code.

Type: Advanced

<pre>var query = "select charge_amt from UCM.eas where postal_low<= ? and postal_high >= ?"; var postalCode = getAPIValue ("S2Pcode"); var results = executeQuery (query, postalCode, postalCode); if(getNumRows(results) < 1) setNotApplicable(); else <ac:structured-macro ac:name="unmigrated-wiki- markup" ac:schema-version="1" ac:macro- id="31050fb5-8362- 430a-b8c2-a9de68c0e602"><ac:plain- textbody><![CDATA[setAPIValue("EAS_CHG_AMT", results[0].toString());</pre>	<pre>]]></ac:plain- textbody></ac:structuredmacro></pre>
---	---

Example Script 2: Create Script dialog parameters

Code name: EASCharge

Name: Match the EAS zone to the appropriate EAS Administrative Element to get the actual charge amount.

Type: Advanced `getAPIValue("EAS_CHG_AMT");`

- 1. Create a Charge that will calculate the amount to be charged.

Edit Charge

▼ Basic Information

Code : EAS

Name : Extended Area Surcharge

Description :

☒ Applies to all services

▼ Options

Response Key : EAS

Applied per : Shipment

☐ Include this charge in fuel surcharge calculations

☐ This charge has associated label text

Calculation Method

Method : Script

Script : EASCharge

▼ Scripts (Drag to Reorder)

Pre	Post	Name	Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Select which zone to charge for EAS based on zip code	

Example of Delivery Confirmation Charges

The following example shows how to setup Delivery Confirmation charges in UCM. **To set up Delivery Confirmation charges:**

1. Create numeric UI administrative elements for each of the Delivery Confirmation Charge amounts (three in this example):

Edit UI Administrative Element

Basic Information

Code : NSRAMOUNT

Name : Delivery Confirmation No Signature Required Charge Amount

Description : Flat fee that will be charged for all shipments that are flagged for No Signature Required.

UI Screen Location

UI Administrative Label : No Signature Required Charge Amount

Data Description

Data type : Numeric

Default value : 2.00

Save Changes

Edit UI Administrative Element

Basic Information

Code : SRAMOUNT

Name : Delivery Confirmation Signature Required

Description : Flat fee that will be charged for any shipment that is flagged as Signature Required.

UI Screen Location

UI Administrative Label : Signature Required Charge Amount

Data Description

Data type : Numeric

Default value : 4.25

Save Changes

The screenshot shows a window titled "Edit UI Administrative Element" with a standard Windows-style title bar (minimize, maximize, close buttons). The window is divided into three main sections, each with a collapsed header:

- Basic Information:** This section contains a "Code" field with the value "ASRAMOUNT", a "Name" field with the value "Delivery confirmation Adult Signature Required charge amount", and a "Description" field with the text "Flat fee that will be charged for any shipment that is flagged for Adult Signature Required.".
- UI Screen Location:** This section contains a "UI Administrative Label" field with the value "Adult Signature Required Charge Amount".
- Data Description:** This section contains a "Data type" dropdown menu set to "Numeric" and a "Default value" field with the value "5.25".

At the bottom right of the window is a "Save Changes" button with a floppy disk icon.

2. Create a UI transactional element (drop-down list) for the Delivery Confirmation Charge types:

Edit UI Transactional Element

Basic Information

Code : DELIVERYCONFIRMATION

Name : Delivery Confirmation

Description :

☒ Applies to all services

UI Screen Location

UI Transactional Label : Delivery Confirmation

Data Description

Data type : Dropdown

Default value : NSR

Value	Name
SR	Signature Required
ASR	Adult Signature Required
NSR	No Signature Required

Create Edit Set as Default Delete

Save Changes

3. Create a scripts for each of the Delivery Confirmation Charges:

?

✕

▼ Basic Information

Code : NSRSelection

Name :

No signature required delivery confirmation

Description :

Script to used to only charge NSRSurcharge if Delivery Confirmation is equal to No Signature Required.

JavaScript Code

Type : Advanced ▼

Script :

```
dc=getAPIValue("DELIVERYCONFIRMATION");
if(dc!="NSR")
{
    setNotApplicable();
}
```

⏏ Edit

✓ Validate

☐ Debug

💾 Save Changes

?

✕

▼ Basic Information

Code : SRSelection

Name : Signature Required

This script will allow this charge to calculate if the Delivery Confirmation is Signature Required.

Description :

JavaScript Code

Type : Advanced ▼

Script :

```
dc=getAPIValue("DELIVERYCONFIRMATION");
if(dc!="SR")
{
    setNotApplicable();
}
```

✎ Edit

✔ Validate

☐ Debug

💾 Save Changes

The screenshot shows a web-based interface for editing a script. The window is titled "Edit script" and has a close button. It is divided into two main sections: "Basic Information" and "JavaScript Code".

Basic Information:

- Code :** ASRSelection
- Name :** Adult Signature Required
- Description :** This script selects the charge to be calculated if the Delivery Confirmation is Adult Signature Required

JavaScript Code:

- Type :** Advanced
- Script :**

```
dc=getAPIValue("DELIVERYCONFIRMATION");
if(dc!="ASR")
{
  setNotApplicable();
}
```

At the bottom right, there are two buttons: "Edit" and "Validate". At the bottom center, there is a "Debug" checkbox and a "Save Changes" button.

4. Create the Delivery Confirmation Charges.

Edit Charge

▼ Basic Information

Code : NSRSurcharge

Name : Delivery Confirmation Surcharge

Description : Standard flat charge for no signature required.

☒ Applies to all services

▼ Options

Response Key : NSR

Applied per : Shipment

☐ Include this charge in fuel surcharge calculations

☒ This charge has associated label text

Label Text : No Signature Required

Calculation Method

Method : Fixed Amount



Charge Source : UI Element

UI Element : Delivery Confirmation No Signature Required Charge Amount

▼ Scripts (Drag to Reorder)

Pre	Post	Name	Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	No signature required delivery confirmation	Script to used to only charge NSRS

1 111

 Add Existing  Create New

?

X

Edit Charge

▼ Basic Information

Code : SRSurcharge

Name : Signature Required Surcharge

Description :

☒ Applies to all services

▼ Options

Response Key : SRSurcharge

Applied per : Shipment

☐ Include this charge in fuel surcharge calculations

☒ This charge has associated label text

Label Text : Signature Required

Calculation Method

Method : Fixed Amount

Charge Source : UI Element

UI Element : Delivery Confirmation Signature Required

▼ Scripts (Drag to Reorder)

Pre	Post	Name	Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Signature Required	This script will allow this charge to calculate if the Delivery

111

Add Existing Create New

Edit Charge

Basic Information

Code : ASRSurcharge

Name : Adult Signature Required Surcharge

Description :

☒ Applies to all services

Options

Response Key : ASRSurcharge

Applied per : Shipment

☐ Include this charge in fuel surcharge calculations

☒ This charge has associated label text

Label Text : Adult Signature Required

Calculation Method

Method : Fixed Amount

Charge Source : UI Element

UI Element : Delivery confirmation Adult Signature Required charge an

Scripts (Drag to Reorder)

Pre	Post	Name	Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Adult Signature Required	This script selects the charge to be calculated if the D

Note: These not only charge the value but determine what to print on the label.

How to set up Fuel Surcharge

To set up a fuel surcharge:

1. Create a script:

The screenshot shows the 'Edit script' window with the following details:

- Basic Information:**
 - Code:** FuelSurcharge
 - Name:** Fuel Surcharge
 - Description:** (Empty text area)
- JavaScript Code:**
 - Type:** Advanced
 - Script:**

```
fsa=getAdminValue("FUELSURCHARGEAMOUNT");
var amount = CURRENT_SHIPMENT.getCharge("FuelSurchargeableAmount").getCharge();
amount = amount * fsa;

var charge = new java.math.BigDecimal(amount.toString());
charge = charge.setScale(2, java.math.RoundingMode.CEILING);

CURRENT_SHIPMENT.setCharge("FUELCHG", charge);
CURRENT_SHIPMENT.setCharge("Total_Freight", charge);
```
- Buttons:** Edit, Validate, Debug, Save Changes

```
fsa=getAdminValue("FUELSURCHARGEAMOUNT"); var
amount =
CURRENT_SHIPMENT.getCharge("FuelSurchargeableAmount").getCharge();
amount = amount * fsa;

var charge = new java.math.BigDecimal(amount.toString()); charge
= charge.setScale(2, java.math.RoundingMode.CEILING);

CURRENT_SHIPMENT.setCharge("FUELCHG", charge);
CURRENT_SHIPMENT.setCharge("Total_Freight", charge);
```

2. Create an event:

The screenshot shows a window titled "Events". It contains a section "Available Events" with a dropdown menu currently set to "Charges". Below this is a section "Applied Scripts (Drag to Reorder)". A table lists the applied scripts:

Pre	Post	Name	Description
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Fuel Surcharge	

3. Create a UI administrative element:

The screenshot shows a window titled "Edit UI Administrative Element". It contains several sections:

- Basic Information:**
 - Code: FUELSURCHARGEAMOUNT
 - Name: Fuel Surcharge calculation percentage
 - Description: Enter the value you want the charge reference to be multiplied by. For example, enter 0.15 for a 15% charge.
- UI Screen Location:**
 - UI Administrative Label: Fuel Surcharge Amount
- Data Description:**
 - Data type: Numeric
 - Default value: .15

At the bottom right, there is a "Save Changes" button.

Events

Overview of events

Events enable the UCM user to specify scripts to run before or after a given event such as Rating. This feature provides the flexibility of enabling the user to modify requests at many different points in the system. Scripted events differ from scripts applied to specific objects or elements such as Packaging Types in that scripted events apply to built-in objects such as API calls, as well as before and after groups of objects such as all rating methods.

For example, the most efficient way to compare actual weight vs. dimensional weight rates for a package might work as follows. To rate the package according to each type of weight, and then take the less expensive of the two, configure a post-rating event to

make the make the comparison, and then set the RATE API to the appropriate value. Additionally, you can create custom scripts to apply to an event or you can apply existing

scripts.

The following events are available for applying scripts to:

- Charges
- Rating
- Routing
- Zoning
- API request/transaction types: - CLOS - CSHP - DPRN - LABL - PSHP - RATE - RUPD - SHIP - UPLD - VOID


The following topics describe in detail how to apply scripts to events:

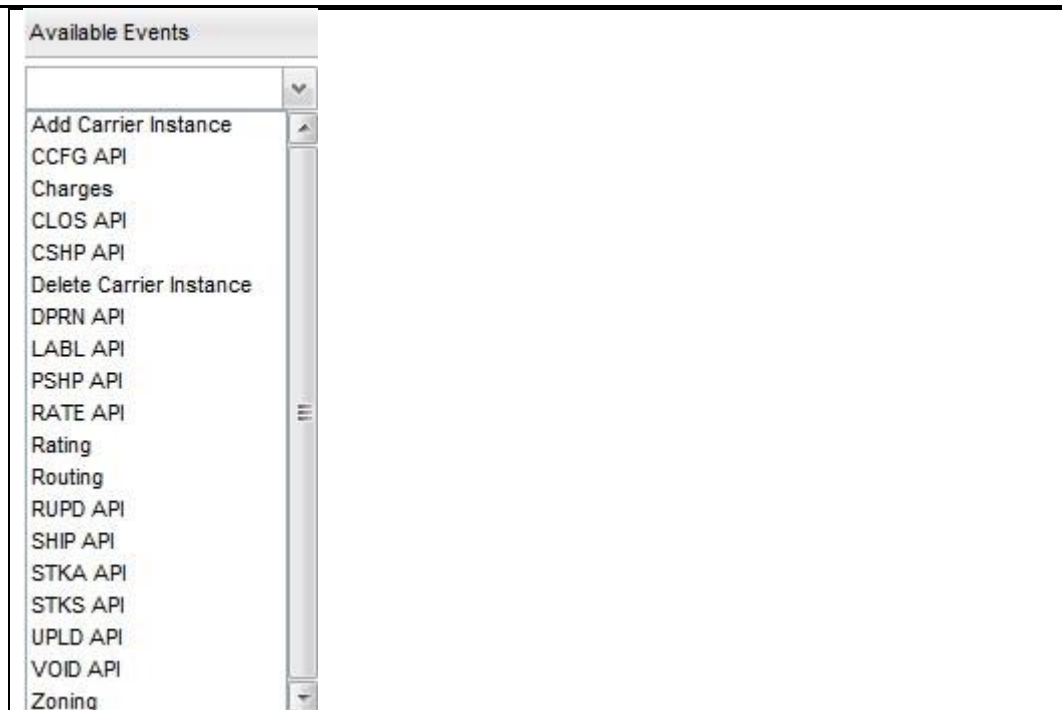
- [Apply scripts to an event](#)
- [Modify an event or remove scripts](#)
- [Best practices for working with events](#)

Apply scripts to an event

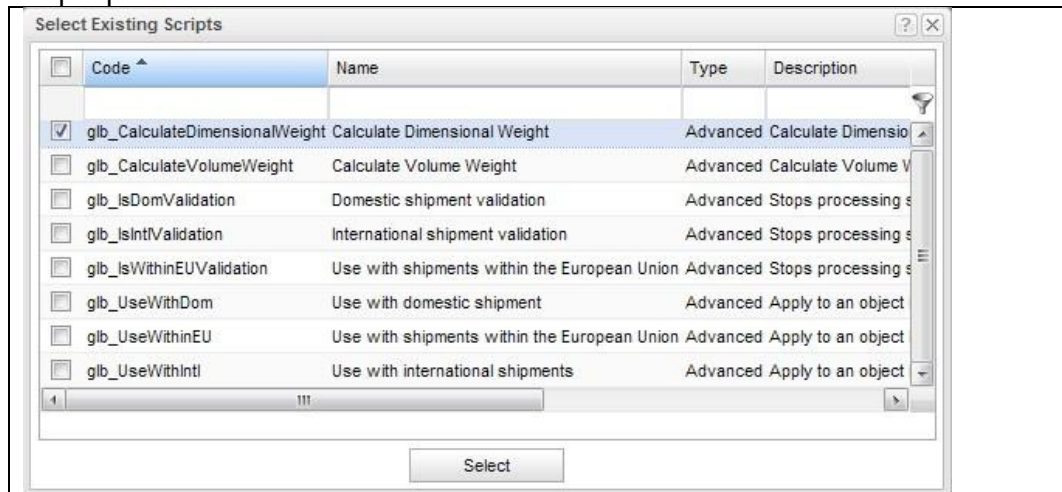
When you select an event, you specify one or more scripts to run in conjunction with a specific process ("event"); for example, Rating. You first select the event, add the script or scripts, and then specify whether the scripts are to run before or after the process. An event executes scripts for all services belonging to a carrier when the specified process is executed. The following procedure describes how to apply a script an event in UCM.

To apply an existing script or scripts to an event:

1. In UCM, click the plus sign  next to the carrier to display the set of available objects.
2. Select Events to display the Events pane on the right side of the screen.
3. From the **Available Events** drop-down list, select the event you want to add a script or scripts to. (See Overview of Events.)



4. Click Add Existing to display a list of available scripts or click Create New to create a new script for the event. (See the following procedure and the topics under "Scripts.")
5. Select the check boxes to the left of the rows with the scripts you want to add to the event, and then click Save Changes to display the scripts in the Applied Scripts pane.



6. In the Applied Scripts pane select the check boxes in the Pre and Post columns next to the scripts you want to apply according to the following criteria: Select the check box in the Pre column for the script to run immediately prior to the selected event being processed.
Select the check box in the Post column for the script to run immediately following the selected event being processed.

Overview of Universal Carrier Module

The screenshot shows the 'Events' configuration window. It has a title bar 'Events'. Inside, there's a section 'Available Events' with a 'Rating' dropdown menu. Below that is a section 'Applied Scripts (Drag to Reorder)'. This section contains a table with four columns: 'Pre', 'Post', 'Name', and 'Description'. The first row of the table has a checked checkbox in the 'Post' column, the name 'Calculate Dimensional Weight', and a partially visible description 'Calculate Dimensional Weight (Lengt'. Below the table is a scrollbar. At the bottom of the window are three buttons: 'Add Existing', 'Create New', and 'Save Changes'.

Caution: If you do not select either check box, the script is removed from the Applied Scripts list when you save the event.

Note: You can select both check boxes to run the script before and after the event is processed.

7. Click Save Changes to apply the scripts.

To create a new script and apply it to an event:

1. Carry out steps 1-3 of the previous procedure.
2. Click Create New to display the Create Script dialog.
3. Carry out the following steps:
4. In the Code field, type the code for the script.
5. In the Name field, type the name of the script
6. In the Description text box, type a description of the script.
7. From the Type drop-down list, select the type of script you want to create. This action displays the combination of objects you need to configure with the script. For more information, see the topics under "Create, test, and debug a script."
8. Create and test the script, and then click Save Changes.
9. In the Applied Scripts pane select the check boxes in the Pre and Post columns next to the script you created according to the following criteria: Select the check box in the Pre column for the script you created to run immediately prior to the selected event being processed. Select the check box in the Post column for the script you created to run immediately following the selected event being processed.

Caution: If you do not select either check box, the script is removed from the Applied Scripts list when you save the event.

Note: You can select both check boxes to run the script before and after the event is processed.

10. Click Save Changes to apply the script.

Note: For an example of applying a script to an event, see the topic Best practices for working with events.

Modify an event or remove scripts


You can apply additional scripts to an existing event or remove scripts from that event.

Modify an event

Note: You can create a new script but you cannot edit an existing script from the Events panel. To edit a script, you must select the Custom Scripts link, select the script from the Existing Custom Scripts list, and then click Edit. For more information, see the following topic:

Edit or delete a custom script.

To apply additional scripts to an event:

1. In UCM, click the plus sign  next to the carrier to display the set of available objects.
2. Select Events to display the Events pane on the right side of the screen.
3. From the Available Events drop-down list, select the event you want to add scripts to or remove scripts from. This displays the list of Applied scripts for that event. See the topic Apply scripts to an event.
4. Optionally, do one of the following:
Click Add Existing to display a list of available scripts, and then select the scripts to add and click Select to display the additional scripts in the Applied Scripts pane.
5. Click Create New to display the Create Script dialog, create the script, and then click Save Changes to display the additional new script in the Applied Scripts pane.
6. In the Applied Scripts pane select the check boxes in the Pre and Post columns next to the scripts you want to apply according to the following criteria: Select the check box in the Pre column for the script to run immediately prior to the selected event being processed.
Select the check box in the Post column for the script to run immediately following the selected event being processed.
Note: You can select both check boxes to run the script before and after the event is processed.
7. Click Save Changes to apply the scripts.

Remove a script from an event ***To remove a script from an event:***

Deselect the Pre and Post check boxes next to the name of the script, and then click Save Changes. The script no longer appears in the Applied Scripts list.

Notes:

- You can remove multiple scripts from the Applied Scripts list in a single operation.
- Removing a script from the Applied Scripts list for an event does not delete the script from the list of available scripts.

Best practices for working with events Example of applying a script to an event

Many carriers apply a fuel surcharge to their shipments. To accomplish this, you need to create a UI administrative element that enables the user to maintain the fee as well as a script to calculate the surcharge. After the script is created, you then need to apply the script to the Charges event.

1. Create the required UI Administrative Element. See the topic [Create a UI Administrative element](#).
2. Create a script to calculate the fuel surcharge. See the topics under "Create, test, and debug a script."
3. Carry out steps 1 – 4 of the [procedure for applying an existing script](#).
4. In the Select Existing Custom Scripts dialog, select the check box next to the script you created for fuel surcharge.
5. In the Applied Scripts pane, select the Post check box next to the fuel surcharge script, and then click Save Changes.

Sample Advanced script that uses a value stored in a UI Administrative Element in the fuel surcharge calculation

```
fsa=getAdminValue("FUELSURCHARGEAMOUNT"); var  
amount =  
CURRENT_SHIPMENT.getCharge("FuelSurchargeableAmount").getCharge();  
amount = amount * fsa;  
var charge = new java.math.BigDecimal(amount.toString()); charge  
= charge.setScale(2, java.math.RoundingMode.CEILING);  
  
CURRENT_SHIPMENT.setCharge("FUELCHG", charge);  
CURRENT_SHIPMENT.setCharge("Total_Freight", charge);
```

Geographic Codes**Create, edit, or delete a geographic code****Overview**

A geographic code is used to identify a particular origin or destination and can range from very specific (for example, a single postal code) to very general (for example, an entire country). Geographic codes can be used for processes involving routing, zone lookup, and time in transit. **Notes:**

- A geographic code in itself is not origin or destination specific. It may be used as either an origin or destination geographic code for a route or zone. A geographic code created or imported at the UCM carrier definition level does not apply to


time in transit (TinT) calculations in Parcel. You need to set up geographic codes for TinT in Parcel.

- Geographic codes created in a UCM carrier definition are not editable at the instance level when the carrier is deployed. If a carrier instance requires its own set of geographic codes, you can import them at the instance level, and these imported geographical codes will override the ones created at the definition level.

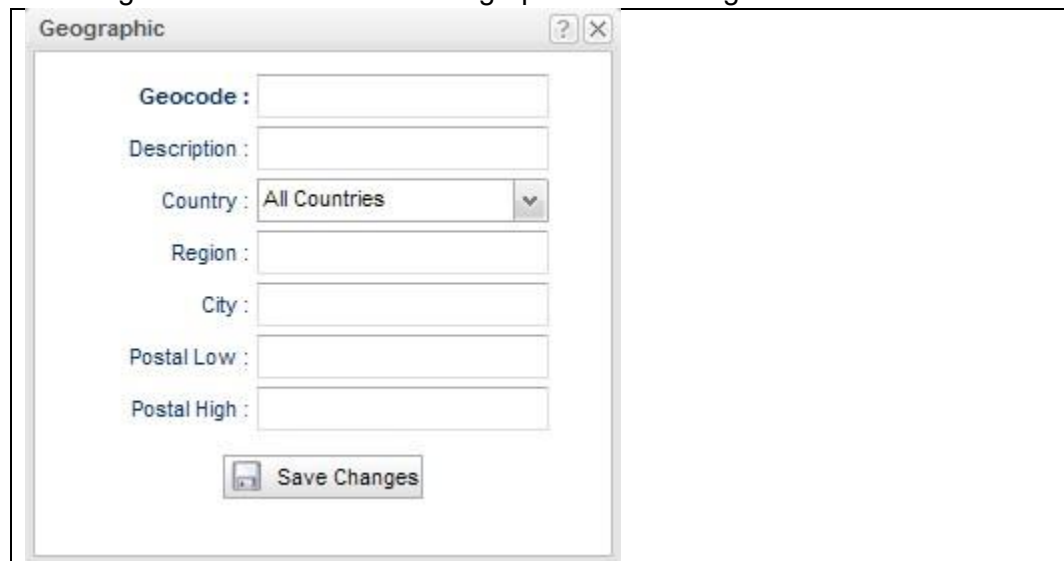
In UCM, you can create, edit, delete, and import geographic codes at the carrier level.

Create a geographic code

To create a geographic code:

- In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
- Click the Geographic Codes link under the carrier folder to display the Geographic Codes pane, and then click Create in the upper right portion of the panel to display the Geographic Code dialog.

The following illustration shows the Geographic Code dialog:



The following table lists the basic information for the fields on this dialog:

Field	Max. Length (No. of chars.)	Required
Geocode	64	Yes
Description	255	No
Country	255	No
Region	255	No
City	255	No
Postal Low	255	No
Postal High	255	No

- In the Geographic Code dialog, enter values for the following fields:


In this field...	Do this...
------------------	------------

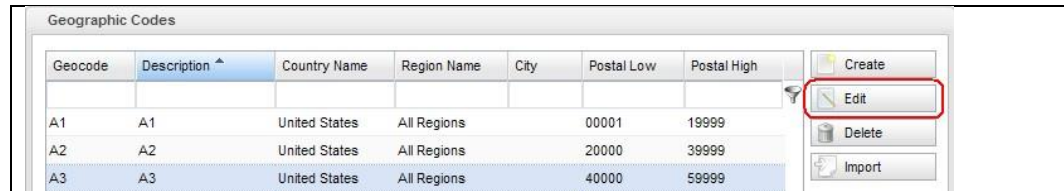
Geocode	Enter the geographic code; for example, METFRADEU for Metropolitan Frankfurt, Germany.
Description	Enter the geographic code description; for example: "Metropolitan Frankfurt, Germany" (without quotation marks).
Country	From the drop-list, select the country for which the geographic code applies; for example: Germany
Region	Enter the state, province, or other region containing the postal code range; for example: Hesse Note: Use the form that is applicable to your shipping system. This may be a state/province code or the state, province, or other region spelled out.
City	Enter the name of the city; for example: Frankfurt or Frankfurt am Mein. Note: Use the form that is applicable to your shipping system. It is important that this entry be spelled in exactly the form that your shipping system recognizes.
Postal Low	Enter the lowest postal code for the area included in the geographic code; for example: 60001
Postal High	Enter the highest postal code for the area included in the geographic code; for example: 60599

Note: None of the location fields in the Geographic Code dialog except Geocode is required, allowing you to make a geographic code as general or specific as you wish, subject to the criterion that it must contain sufficient information for your shipping system to process it. For example, if you want specify an entire city as a geographic code, you do not need to include values for postal codes but you must also specify the country and region where the city is located. For more information, see Best practices for working with geographic codes.

4. Click Save Changes to save the geographic code and display it in the list of geographic codes in the geographic codes pane.

Edit a geographic code **To**
edit a geographic code:

1. In UCM, click the plus sign  next to the carrier you want to edit a geographic code for, and then, in the objects list, select geographic code to display the Geographic Codes pane.



Geocode	Description	Country Name	Region Name	City	Postal Low	Postal High
A1	A1	United States	All Regions		00001	19999
A2	A2	United States	All Regions		20000	39999
A3	A3	United States	All Regions		40000	59999

- In the Geographic Codes list carry out one of the following actions: Double-click the geographic code you want to edit to display the Geographic Code dialog. Select a geographic code to edit, and then click **Edit** to display the Geographic Code dialog.
- In the Geographic Code dialog, modify any values you need to change. (See step 3 of the previous procedure.)
Note: The dialog for editing a geographic code is identical to the dialog for creating a geographic code. You can modify the value of every field except the Geocode field.
- Click Save Changes to save your modifications to the geographic code.

Delete a geographic code **To delete a geographic code:**

- In the Geographic Codes list, select a geographic code to delete, and then click Delete.
Note: Press CTRL to select multiple geographic codes.
- In the Confirm popup dialog, click OK to confirm the deletion or click Cancel to cancel the deletion.

Import a geographic code

You can import Geographic codes into UCM. To do so, the file that you import must be in Comma Separated format (CSV file) as described in the following section.

Geographic code file format

The following file format is supported for import of geographic code information. The file must contain the following columns headers on the first row:


geo_code,geo_code_desc,country_code,state_code,city,zip_low,zip_high **Note:** To leave out a value for any of these headers, simply type an extra comma without a value between commas (see the following example).

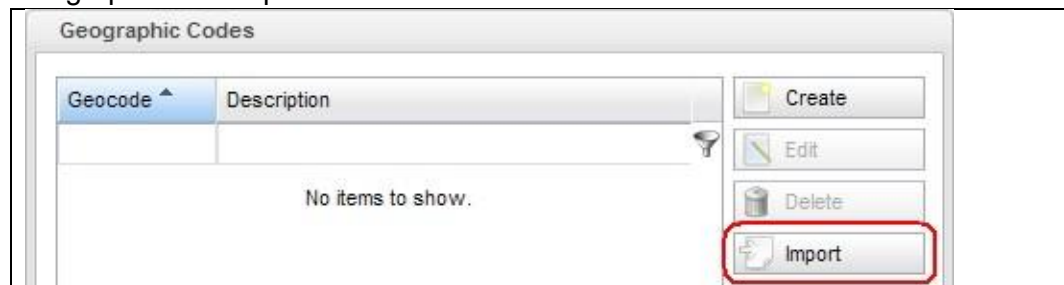
Sample Geographic File

```
geo_code,geo_code_desc,country_code,state_code,city,zip_low,zip_high
A1,A1,US,ALL,,00001,19999
A2,A2,US,ALL,,20000,39999
A3,A3,US,ALL,,40000,59999
A4,A4,US,ALL,,60000,79999
A5,A5,US,ALL,,80000,99999
CHELM,Chelmsford,US,MA,Chelmsford,,
SAND,San Diego,US,CA,San Diego,,
```

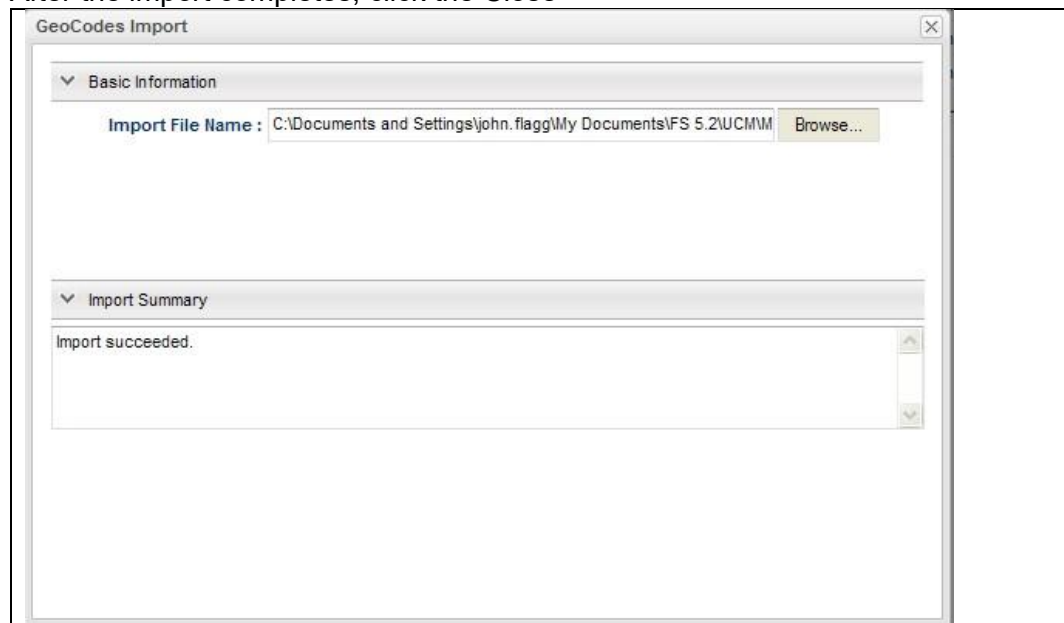
Import a geographic file


Caution: When you import a geographic file, the geocodes it contains replace any geocodes that were previously displayed in the geographic codes list. Therefore, to add geocodes to the list, you can carry out one of the following actions:

- Edit your geocodes CSV file, make any additions in the file itself, and then reimport the file.
 - Add the geocodes directly to the geographic codes list using the Create function. See Create, edit, or delete a geographic code. * _To import a geographic file:_ *
1. In UCM, click the plus sign  next to the carrier for which you want to import geographic codes, and then click the Geographic Codes link to display the Geographic Codes pane:



2. Click Import to display the Geographic Codes Import dialog; click Browse to open a Windows File Upload dialog, select the geographic code file to import, click Open, and then click Import. View the message in the Import Summary to determine the success of the import:
3. After the import completes, click the Close



 in the upper right corner of the Geocodes Import dialog. UCM displays the contents of the geographic code in the Geographic Codes list.

Best practices for working with geographic codes

E2open LLC. recommends the following practices when creating a geographic code. Since, in the Geographic popup dialog, only the Geocode field is required, keep the following considerations in mind:

- You must furnish sufficient information for your shipping system to process the geographic code. Typically, this involves the following hierarchy of information.

Field	Recommend values
Description	This field serves to help users identify a geographic code when specifying it for a route or zone.
Country	Include <u>only</u> this value if you want to use the entire country for a geographic code.

- Include this value if you are also specifying more specific locations in the following fields.

Region	Include <u>only</u> a value for Country plus this value if you want to use an entire region for a geographic code.
---------------	--

- Include this value if you are also specifying more specific locations in the following fields.

City	Include <u>only</u> values for Country and Region <u>plus</u> this value if you want to use an entire city for a geographic code.
Postal Low	Include values for Country, Region, and City, plus this value if you are specifying a single postal code or a range of postal codes.
Postal High	Include values for Country, Region, City, and Postal Low plus this value if you are specifying a range of postal codes.

For example, at a minimum, you might enter a country and a range of postal codes.

Caution: It is critical for the Region and City fields that you spell these entities exactly the way they are spelled in your shipping system. Otherwise, your shipping system will fail to process them.

Label Templates

Overview of label templates

You can use a UCM label template to define the name and style for labels. In addition, each label template is associated with a set of printer-specific templates that are coded in the printer language. You can specify whether to print the label using that template for a pre-ship operation or when a shipment is processed. You can also specify which label templates to use with specific services.

Caution: Templates designated as license plate templates are used only when the carrier level option "Use License Plate Number for Pre-shipment" is selected. The process of implementing a UCM label template consists of the following steps:

1. Create a UCM label template object for a specific type of label that can be selected when performing an operation in your shipping system.
2. Enable support for a specific printer type (for example, Eltron, Zebra, etc.) to print the label. Do so by rendering the template in the appropriate printer language; that is, by creating what is, in effect, a printer template. (Thus a single, UCM label template object can include multiple printer templates.)
3. Optionally, export a label template for editing, and then import the edited template.

UCM includes the following standard label templates with each carrier you create:


Label Template Name	UCM Code	Label Type	Description
Standard Preship template	UCM_LicensePlate	License	Standard preship (API PSHP) label template. This template has all standard printers enabled by default. Note: A license plate preship label is a label attached to a package before it is shipped and a carrier-compliant label is attached. The license plate contains identifying information such as a tracking number or bar code.
Standard Shipping template	UCM_Ship	Ship	Standard shipping label template. This template has all standard printers enabled by default.

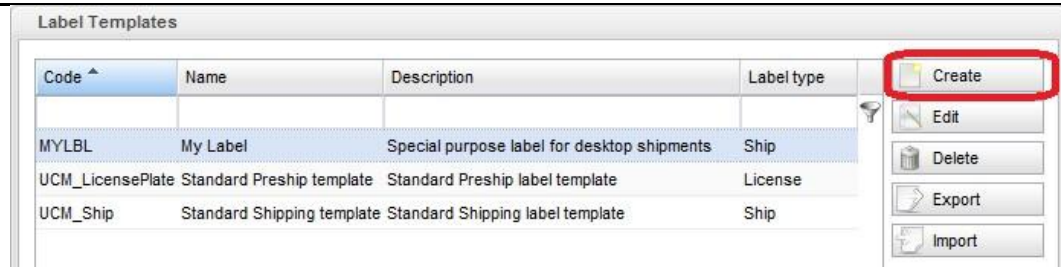
Note: For a list of supported printers, see the topic [Edit a template for printer support](#). The following topics describe how to work with UCM label templates:

- [Create a label template](#)
- [Edit or delete a label template](#)
- [Export and import a label template](#)
- Best practices for working with label templates - [Creating and editing label templates](#) - [Label scripting](#)

Create a label template

Before you can configure printer support for a label template, you need to create the label template. You create a label template first, and then edit the template to configure (code) it in a specific printer language. Create a label template **To create a label template:**

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Label Templates link under the carrier folder to display the Label Templates pane, and then click Create in the upper-right portion of the panel to display the Create Label Templates dialog.



3. The following illustration shows the Create Label Templates dialog:

Create Label Template

Basic Information

Code :

Name :

Description :

☒ Applies to all services

Label Template Specifications

Label type :

Print order :

UI Element specifying the number of labels to print :

Default number of labels to print :

Scripts (Drag to Reorder)

4. The following table lists the basic information for the fields on the this dialog

Field	Max. Length (No. of chars.)	Required
Code	64	Y
Name	255	Y
Description	255	N

- In the Create Label Template dialog under Basic Information, carry out the following steps:
- Under Basic Information, in the **Code** field, type the code for the label template; for example: EXP_Label1
- Under Basic Information, in the **Name** field, type the name of the label template; for example: Express Shipping Label One
- Under Basic Information, in the **Description** text box, optionally type a description for the label template; for example: Express label with PNG and Zebra printers.

9. Carry out one of the following steps:
 If you want the label template applied to all services, leave the Applies to all services check box selected.
 If you want to apply the label template to specific services only, deselect (clear) the Applies to all services check box. This action displays the Services list (see step 6).
10. Under Label Template Specifications, specify the appropriate values as follows:
 From the **Label Type** drop-down list, select one of the following label types:
 Shipment
 Pre/Post TemplateLicense Plate

If you select this label type...	Assign values or objects in the following fields....
Shipment or License Plate	a. From the Print Order drop-down list, select one of the following options: <ul style="list-style-type: none"> • Print normal (default) – If the label does not need to be printed in any particular order. • Print first – Print the label first before any other labels. • Print last – Print the label last after all other labels. • Optionally, from the drop-down list labeled "UI Element determining the number of labels to print," select the UI element (if any) where the user can specify how many labels to print if this is different from the default. • In the field labeled "Default number of labels to print," enter the default number of labels you want printed or accept the default of 1. Note that the value (if any) entered in the UI administrative element specified in step 5c overrides the value entered in this field.
Pre/Post Template	None. No actions in this area are required for this selection. This type of template is included as part of a SHIP or LICENSE template.

Note: For the standard label templates provided by UCM, you can configure additional label template specifications (for example, Tracking Barcode Type) using the Edit Label Templates dialog. See the procedure [To edit a standard label template for printer support](#).

1. The check box labeled "This Label Template is available in all Services" is selected (checked) by default. Accept the default or, optionally, to display the list of services and select only specific services to make the label template available for, deselect (clear) the check box:

<input type="checkbox"/>	Code	Name	Description
<input type="checkbox"/>	AE1	Air Express One	Air express service for carrier
<input type="checkbox"/>	BG1	Basic Ground One	Basic Ground service for carrier
<input type="checkbox"/>	BG2	Basic Ground Two	Alternate Ground service for carrier.

2. Select (check) the check boxes next to the services you want to make the label template available for.
3. Click the up arrow (^) next to Scripts to display the Scripts options:

Pre	Post	Name	Description
No items to show.			

4. Optionally, carry out the following steps:
 - Add Existing – Click Add Existing to display the Select Existing Scripts dialog with a list of available scripts. Select (check) the check box or boxes next to the script(s) you want to add to the label template, and then click Select to display the selected scripts in the Scripts table on the Create Label Template dialog.
5. Create New – Click Create New to display the Create Script dialog. See the topics under Create, test, and debug a script. Click Save Changes to display the new script in the Scripts table on the Create label template dialog.
 - Select the checkbox in the Pre column to run this script immediately before the label is printed for each package. This script can control what is displayed on the label, as well as whether a label should print for a specific package. For example, if you want a COD label to print only for the first package in a shipment, you can create a script that checks the package number and prints the label only if the package number equals 1.
 - Select the checkbox in the post column to run this script just after the label has been printed for each package.

Caution: If you do not select at least one check box in the Pre or Post columns next to a script, when you save the label template, the script is no longer associated with it and does not appear in the list of scripts if you edit this label template.
 - Click Save Changes to add the label template to the set of available label templates for the carrier.

Note: A single, high-level template that you create with the previous procedure can have multiple "instances" in different printer languages, depending on the printers that you enable for it using the Edit Label Template dialog. See the topic [Edit a template for printer support](#).

Edit or delete a label template

UCM enables you to code a label template in the printer language used with a specific type of printer. To enable printer support for a label template, you need to code the

template in the appropriate printer language. UCM supports the following printer types and languages:

Printer Type	Printer Language	File Extension
Eltron	EPL II	.etn
Intermec	IPL	.ipl
Monarch	MPCL II	.fmt
PNG	Image	.pngt
ProdigyMax	DPL	.dmx
SATO	CLPL	.sat
Zebra	ZPL II	.zpl

To provide the code for a label template object, you first need to create and save the template, and then open the template in edit mode. (See the following procedure.)

Caution: If you are using a SATO printer, note that PDF417 barcodes cannot contain as much data as when used with the other printers.

Note: You can also use the Edit Label Template dialog to make other modifications to the label template as well. For example, for user-created templates you can change the name, description, specifications, availability to services, and script application. (You cannot change the Code.) Except for the Printer Support section, the Edit Label Template dialog and the Create Label Template dialog are identical. See the topic [Create or delete a label template](#) for information on the other sections of this dialog. Also note, however, that you cannot change the code, name, description, and label type of the standard labels included with UCM.


Edit a label template for printer support

You can perform the following types of label template editing:

- Edit a user-created label
- Edit a standard label provided by UCM (Standard Preship label, Standard Shipping template).

The options for editing these types of label differ according to the following procedures.

To edit a user-created label template for printer support:

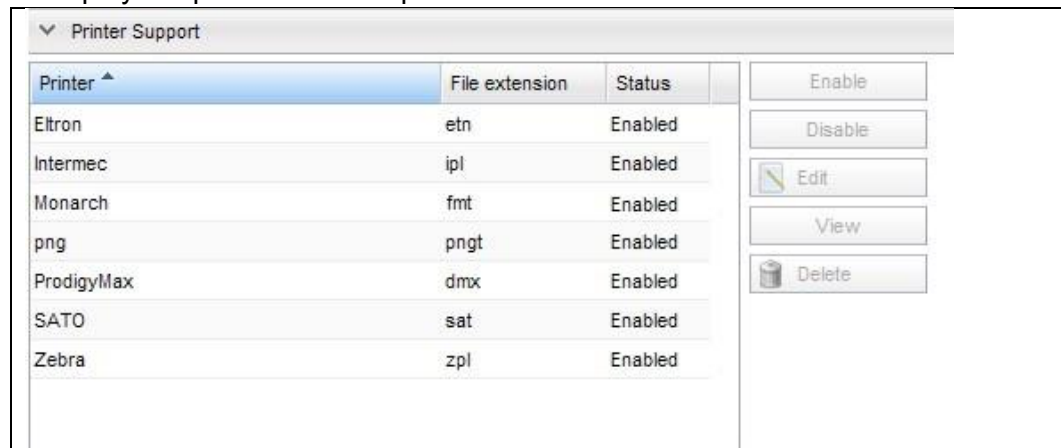
1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Label Templates link under the carrier folder to display the Label Templates pane, and then click Edit in the upper right portion of the panel to display the Edit Label Templates dialog:



3. Make any desired changes to the values in the Basic Information, Label Template Specifications, or Scripts areas on this dialog.


Notes: For a user-created label template, these areas are identical to the corresponding areas on the Create Label Template dialog. For a standard label template provided with UCM, the Label Templates Specifications area provides additional configuration options. See the following procedure. For a user-

created label template, you can change any values or other specifications except the value of the Code field. Click the up arrow (^) next to Printer Support to display the printer list and options:



4. Use the following buttons for the following functions:
 Enable *—* After you code the template in the selected printer language using the Edit function, click the printer type to select it, and then click Enable to enable the selected printer type with the label template. (See description of Edit.)
 Disable – To disable the template for a printer type with the status Enabled, click the printer type to select it, and then click Disable. Note that this action retains the printer language code for this printer type. (See description of Delete) Edit – Use the Edit to enter code in a printer language for the template. Select a printer type, and then click Edit to display the template editor. Code the template in the printer language, and then click Save Changes. (If you are creating a new printer template, this action activates the Enable. See description of this button.) You can also use this edit function to modify existing code for a printer template. View – Select an enabled or disabled printer type, and then click View to view the code for the template. (This option is available only if you are working with a standard template.)
 Delete – For a user-created template, select a printer type with a status of Enabled or Disabled, and then click Delete to delete all the code for that printer type. This causes the printer Status to revert to Not found. However, the label template object itself remains in the main list.
5. Click Save Changes to save the changes to the edited label template.

To edit a standard label template for printer support:

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Label Templates link under the carrier folder to display the Label Templates pane, and then click Edit in the upper right portion of the panel to display the Edit Label Templates dialog.

3. Make any desired changes to the values in the Scripts areas on this dialog. (You cannot change the information in the Basic Information area.) The scripts area is identical to the scripts area on the Create Label Template dialog.

The Label Templates Specifications area provides configuration options: For the Standard Preship template:

The screenshot shows the 'Label Template Specifications' dialog for the 'Standard Preship' template. The 'Label type' is set to 'License Plate'. The 'Print order' is set to 'Print first'. The 'UI Element specifying the number of labels to print' is set to '1'. The 'Default number of labels to print' is also set to '1'.

For the Standard Shipping template:

The screenshot shows the 'Label Template Specifications' dialog for the 'Standard Shipping' template. The 'Label type' is set to 'Shipment'. The 'Print order' is set to 'Print first'. The 'UI Element specifying the number of labels to print' is set to '1'. The 'Default number of labels to print' is also set to '1'. The 'Tracking Barcode type' is set to 'Code 128'. The 'Readable text' is set to 'Text below barcode'. The 'Second Barcode' is set to 'Routing Code'. The 'Second Barcode type' is set to 'Code 128'. The 'Readable text' is set to 'Text below barcode'. The 'Large text routing code' checkbox is checked.


4. If you are editing the Standard Shipping template, under Label Template Specifications modify values for the additional fields for (those not under the corresponding area of the Create Label Template dialog) as follows:
5. From the Tracking Barcode drop-down list, select one of the following standard barcode types:
Code 39
Code 128 (the default)
PDF417
Caution: Code 39 must be used only if the information contains uppercase alphanumeric characters or the following special characters: - . \$ / + % and space. It does not work with lowercase characters or other special characters.
Note: Code 128 automatically switches between 128B and 128C based on the information in the barcode.
6. From the Readable Text drop-down list, select one of the following positions for the barcode human readable text or select no text:

- Text above barcode
 - Text below barcode (the default)
 - Do not print text
7. From the Second Barcode drop-down list, select one of the following code types:
 - Routing Code (the default) Define barcode contents...
 - No second barcode
 8. If, in step 4c, you selected Routing Code or Define barcode contents, then, from the Second Barcode type drop-down list, select one of the following standard barcode types:
 - Code 39
 - Code 128 (the default) PDF417

Note: See the Caution and Note in step 4a.
 9. If, in step 4c, you selected Routing Code or Define barcode contents, from the Readable Text drop-down list, select one of the following positions for the second barcode human readable text or select no text:
 - Text above barcode
 - Text below barcode (the default)
 - Do not print text
 10. Carry out one of the following steps:
 - If, in step 4c, you selected Routing Code, select the check box labeled "Large text routing code" to print the routing code in large text on the right side of the label.
 - If, in step 4c, you selected Define barcode contents, enter the API key for the barcode value in the field labeled "Key for barcode value." Complete steps 5-6 of the previous procedure.

Delete a label template

Note: You cannot delete either of the standard templates included with UCM. **To delete a label template from a carrier:**

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Label Templates link under the carrier folder to display the Label Templates pane.
3. In the Label Templates list, select the templates you want to delete, and then click Delete.

Notes: Use the blank filter row at the top (funnel icon) to filter the list of label templates. Click a column heading to sort the list by that column. Type a label template code, name or description in the appropriate blank cell to filter the list by that entry.

Press the CTRL key when making selections to select multiple templates.
4. In the Confirm dialog, click OK to confirm the deletion or click Cancel to cancel the deletion.


Caution: There is no undo for this delete operation.

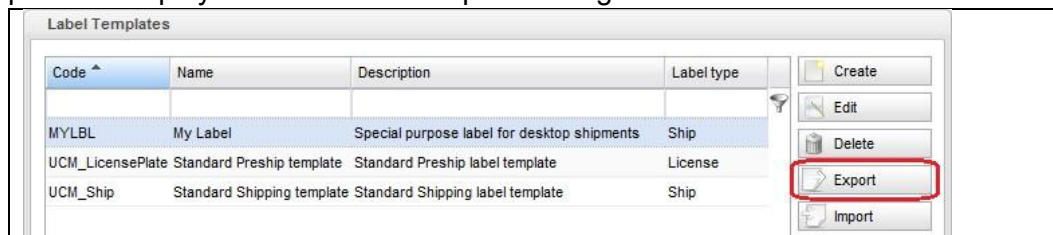
Export and import a label template

You can export user-created label templates for updating with a text editor and/or for importing into another carrier. These files can also be directly submitted to label printers for test purposes. You can also import a template that has been created outside of UCM, provided the .zip file containing the printer language files is correctly constructed.

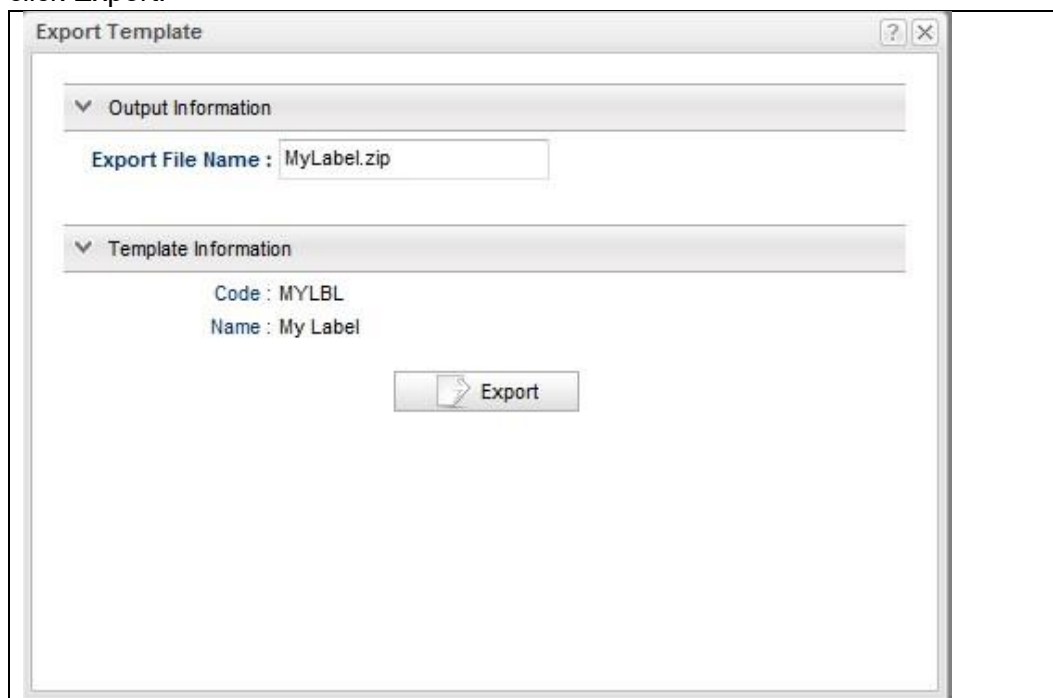
Note: You cannot export either of the standard templates included with UCM.

Export a label template **To export a label template:**

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Label Templates link under the carrier folder to display the Label Templates pane to display the list of label templates.
3. Select a user-created label, and then click Export in the upper right portion of the panel to display the Edit Label Template dialog:



4. In the *Export File Name* field, enter a filename for the label template, and then click Export:




Note: UCM creates a .zip file when exporting the label template. You do not need to add the .zip extension.

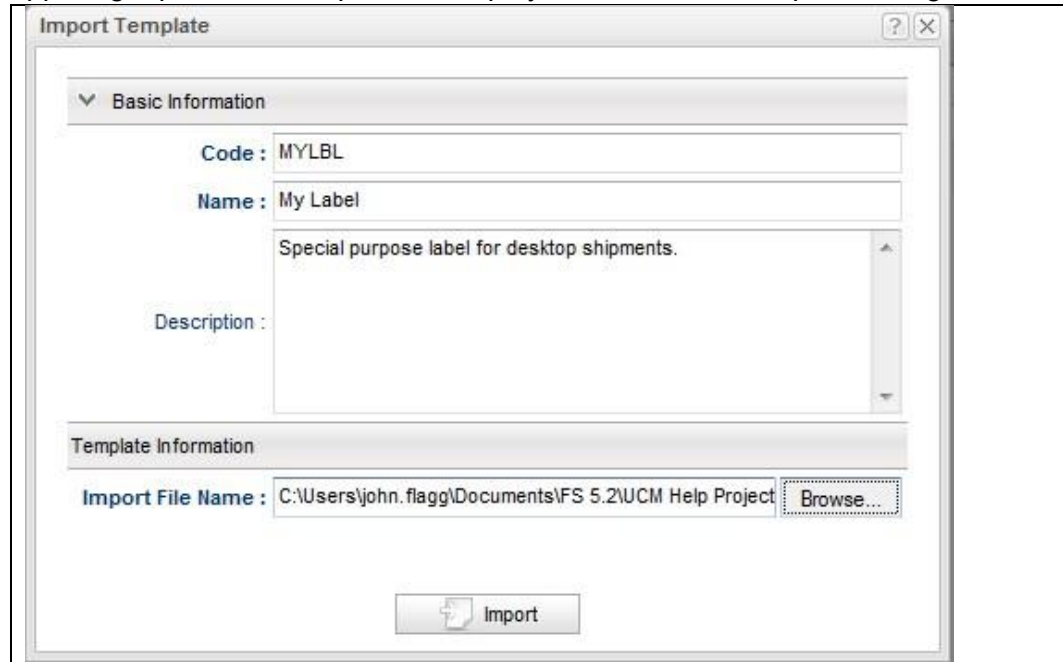
5. In the Windows Save As dialog, select the location where you want to save the file, and then click Save.

UCM creates a zip file containing files with the printer language code for each enabled printer types associated with the template. For example, the My Label template has the Eltron (ETN) and Intermec (IPL) printer types enabled for it, and so the .zip file exported looks like this:

Name	Type	Modified	Size	Ratio	Packed	Path
<input type="checkbox"/> MYLBL_My Label.ETN	ETN File	10/30/2012 3:30 PM	778	48%	408	
<input type="checkbox"/> MYLBL_My Label.IPL	IPL File	10/30/2012 3:30 PM	5,767	80%	1,147	

Import a label template *To import a label template:*

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Label Templates link under the carrier folder to display the Label Templates pane to display the list of label templates, and then click Import in the upper right portion of the panel to display the Edit Label Template dialog:



3. Under Basic Information, fill in the Code, Name, and optionally the Description for the label template, and then click Browse to display the Windows Choose File to Upload dialog.
4. Select the label template .zip file you want to import, and then click Open.
5. If the import is successful, the label template appears in the list of label template for the carrier.

Best practices for working with labels *Creating and editing label templates*

General notes

Keep the following considerations in mind when working with label templates:

- If there is a special service that should be shown on the label, but no charge is associated with it, create a "fixed" type charge with a charge value of zero, and then check the box for label text within that charge.
- Back up a copy of your label template code on your local machine. If the entire label template is deleted on the UCM server for any reason, the template code is also deleted.
- Any changes made to API keys in a script remain in effect throughout the rest of the processing of a label template.

Standard label templates and scripting

The standard templates that UCM provides (built-in templates) use a series of API keys to determine which barcode will print, where the text will print, etc. These keys are set

before Pre scripts are run, so that the Pre scripts can change these settings dynamically.

Example 1 – Using a standard template, the first package can have a routing barcode, and the second can have a user-defined barcode.

Example 2 - You can specify a package label to print the right-side routing text in large font *if* the text contains fewer than eight characters.

Note: View the standard template code to see details of these keys.

Advanced information for label templates

API key identifiers for use with labels

Caution: When you create a custom label template that references Flex Fields, you must use the following API key identifiers for these fields in the template:

- For Shipment-Level Flex fields: FLEX1 to FLEX20
- For Package-Level Flex fields: PFLEX1-P to PFLEX20-P The following additional keys are used with label templates:
- SERVICENAME – holds the name of the service for a shipment/package.
- PKGNUM – holds the actual number of this package within a shipment.

Example

{PKGNUM} of {PKGCNT}

Prints 1 of 3 for the first package of a three-package shipment.

{VALUEADDED1} through {VALUEADDEDx} Each of these applies a string of the text that was entered as part of the charge, if the charge 'use on label' text box was checked, if that charge is applicable to this label. Package services will be printed before shipment services. Ordering within package or service is non-determinant as there is no 'order' among the charges.

{ SHIPFROM_XY1} through { SHIPFROM_XY4} and { SHIPTO_XY1} through {SHIPTO_XY5}

These keys allow you to easily 'crunch' the multi-line address field, eliminating blank lines in the address field.

Example

You have a company name, and attention to, and one street address line. If you want to eliminate the blank lines, use the above keys in your template.

In the FROM – the SHIPFROM_XY1 through 4 uses the fields SFCOMPANY, SFADDRESS1, SFADDRESS2, SFADDRESS3.

In the TO – the SHIPTO_XY1 through 5 uses the fields S2NAME, TO_ATTENTION, S2ADD1, S2ADD2, S2ADD3.

A template having the original fields will have blank lines if there is no address2, or 3, for example.

{S2NAME}

{TO_ATTENTION}

{S2ADD1}

{S2ADD2}

{S2ADD3}

A template with {SHIPTO_XY1} through {SHIPTO_XY5} will have the lines shifted down to eliminate blank space. **Label template logic language**

Metatags for logic

Syntax: {# metatag (TRUE | FALSE) #} UCM

supports the following logical operators:

- IF

- IF NOT
- ELSE
- ELSEIF (or ELSE IF)
- ELSEIF NOT (or ELSE IF NOT)
- ENDIF (or END IF)

These can be nested to any level.

They can be mixed case (i.e. If Not works exactly as does IF NOT).

Spaces may be included between metatag and the open / close parens.

Spaces may be included between the parens and the TRUE or FALSE value.

Spaces may NOT be included between the {# or the #}.

The value within the parentheses must be a key that exists and will resolve to either True or False (case does not matter).

If the key does not exist or does not resolve to True / False, it will default to False.

Data-messaging metatags Syntax:

{ {Key:Value} TAGNAME }

Spaces are allowed. Multiple Key:value pairs may be entered, separated by commas.

LEN:xxx

Any numeric value ≥ 0 . The associated field is truncated to this number of characters.

Case:Upper - field is printed in upper case.

Case:Lower - field is printed in lower case. **Examples**

{ {LEN: 23 } ADDR1 } - truncates addr1 to 23 characters.

{ { Len: 15, Case:Upper } CITY } Changes city to upper case, truncates it to 15 characters.

PREFIXSIZE:xx

The SATO printer requires the size of the data prior to a PDF417 barcode. Use this tag to add the length prior to the data field. The xx gives the length of the numeric field (Sato requires a field length of 4).

Example

{{PREFIXSIZE:04 } MYDATAKEY } where MYDATAKEY is set to 'here is my data' will resolve to 0015here is my data.

{{TO128BAR} ROUTING_CODE} - TO128BAR is only applicable in a tag which specifies a barcode. It is used to indicate that the 128 barcode should auto-switch between A, B and C subtypes as appropriate for the data.

Including templates from UCM or from the file system

Any template that is on the file system, and any template defined as Pre/Post template in the UCM configuration can be included in any other template.

UCM configuration includes the location of a directory so that printer-language specific template code may be stored on the file system and used directly from the file system when printing labels. Special keys are available as short-cuts for these.

Shortcut keys:

TEMPLATE_NAME3

In your ship or license template, put tag {pretemplate}.

Define a key TEMPLATE_NAME3

Give the key a value that is the name of a file containing the printer template code to be included. The file name should not include a directory or an extension. It must be located in the directory indicated by the UCM configuration specification (currently 'template').

TEMPLATE_NAME2

In your ship or license template, put tag {posttemplate}.

Define a key TEMPLATE_NAME2

Give the key a value that is the name of a file containing the printer template code to be included. The file name should not include a directory or an extension. It must be located in the directory indicated by the UCM configuration specification (currently 'template').

TEMPLATE_NAME1

This key specifies a license or ship template that is stored on the file system rather than within UCM. If this API key has a value, UCM looks in the template directory for a file of this name, with the extension of the printer currently in use. i.e. if you are using an Eltron printer, and TEMPLATE_NAME1 contains myCODTemplate, UCM looks in the template directory for myCODTemplate.etn, and uses that. This is in ADDITION to any templates that are used from UCM. In this example, a SHIP template from UCM, if enabled for this service and for etn, will also be printed.

Including any template from the file system:

Use the metatag include with the API key that specifies the file name.

Example – your template needs to include a template on the file system that contains a company logo, called thisLogo.etn.

In your template, just add the tag

```
{ { Include:File } LOGOKEY }
```

Assign LOGOKEY a value of thisLogo.

Including any template that is defined as a pre/post template within UCM: Use the metatag include with the API key that specifies the CODE of the UCM pre/post template.

Example: Your template needs to include a template in UCM with the Code of LIFELOGO

In your template, just add the tag:

```
{ { Include:Template } LOGOKEY }
```

Assign LOGOKEY a value of LIFELOGO.

Note that the pre/ post template included in this way must be enabled for this printer and this service in order to be used. Scripts will be run for the pre/post template at the time that it is included during the printing of the label. (see processing order section).

Note:

{pretemplate} is functionally identical to { {include:file } TEMPLATE_NAME3} There are no limits to the number or location of templates which may be integrated.

Example:

{{include:template} APITEMPLATE} **Processing order:**

Event-level 'pre label' scripts will be run. (defined within the Event left-side choice, under Labl API).

If 'setNotApplicable()' is set, no labels are printed. The Event-level 'post label' scripts will be run.

If labels are applicable – For each package –

For each template active for this service, printer and status-type (SHIP / LICENSE)

- Run any pre-template scripts. (honor the not applicable flag).
- Handle the 'if – else' logic tags (see Advanced details of the template logic language section).
- Integrate any pre / post templates that are embedded within the active template.
- Load the template from the file system or the UCM database.
- Run the pre-template scripts
- Handle the 'if –else' logic tags.
- Repeat for any integrated templates found in this one.
- Print the label
- Run any post-template scripts for the included templates
- Run any post-template scripts for the main template.

Event-level 'post label' scripts will be run.

Label scripting

Label Scripting

UCM features the ability to script behavior directly on a label template by including JavaScript code between delimiters. For example:

{* getAPIValue("TRACKNUM"); *} is equivalent to {TRACKNUM}

However, with the faculties of JavaScript, it is also possible to manipulate the value: {* getAPIValue("TRACKNUM").substr(6, 19); *} And store the manipulated value for later:

```
{* var cn = getAPIValue("TRACKNUM").substr(6, 19); *}
```

```
^FO040,0110^A0N,25,30^FR^FDC/N:^FS
```

```
^FO095,0100^A0N,55,55^FR^FD{* cn; *}^FS
```

You can also perform computations as part of the label template itself:

```
{*
var h = getAPIValue ("Height-" + CURRENT_PKGNUM);
var l = getAPIValue ("Length-" + CURRENT_PKGNUM); var
w = getAPIValue ("Width-" + CURRENT_PKGNUM); var
volume = l * w * h;
*}
^FO500,0080^A0N,21,18^FDVolume: {* volume.toFixed(2); *}^FS
```

Additionally, you can perform differing actions based on an API value without populating API keys:

```
{*
var serviceCode = getAPIValue("SERVICE");
var serviceName; if(serviceCode ==
"PCON") serviceName = "Toll IPEC Priority";
else if(serviceCode == "RDEX")
serviceName = "Toll IPEC Road Express";
*}
^FO025,0035^A0N,55,55^FR^FD{* serviceName; *}^FS;
^FO040,0110^A0N,25,30^FR^FDC/N:^FS
^FO095,0100^A0N,55,55^FR^FD{* cn; *}^FS
```

As the interpretation of standard keys (i.e {TRACKNUM}) happens after each scriptlet on the label template is run, you can also use JavaScript to determine which key to use for a certain field:

```
^FO095,0130^A0N,25,30^FR^FD{*
if(serviceCode == "PCON")
"{PCON_API_KEY}"; else
if(serviceCode == "RDEX")
"{RDEX_API_KEY}";
*}^FS
```

Limitations

When using template scripting, each scriptlet can only return a single value. To return multiple lines of output, you must first concatenate them into a single string. For example:

```
{* if(serviceCode == "PCON") {
"^FO025,025";
"^GB690,140,140";
"^FS"; // returns only this line
} *}
Versus:
{* if(serviceCode == "PCON")
"^FO025,025" + "^GB690,140,140" + "^FS"; *} // returns correctly
```

Packaging Types

Overview of packaging types

Carriers typically use packaging types as sources of additional information for rating purposes. UCM gives you the capability to configure carrier-specific packaging types that are either regular (dimensioned, for example, boxes) or irregular (non-dimensioned, for example bags or other "user packaging" types).

Note: A carrier definition needs at least one packaging type. By default, UCM provides a packaging type of User Packaging.


The following topics describe how to create and work with packaging types:

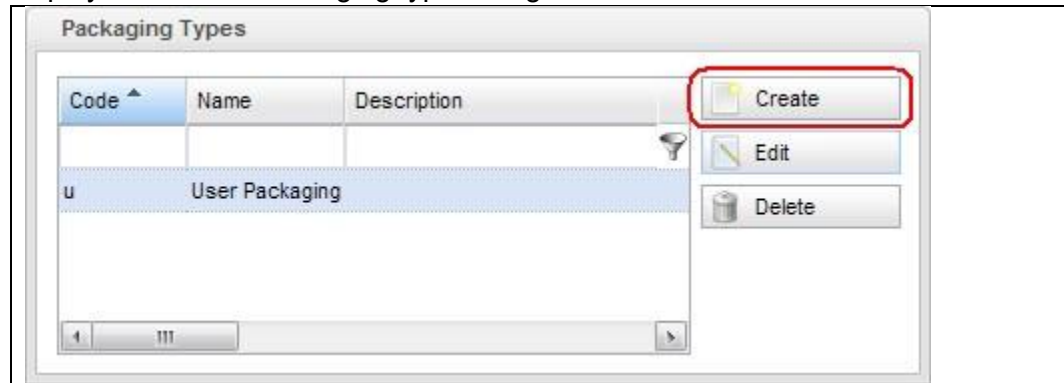
- [Create a packaging type](#)
- [Edit or delete a packaging type](#)

Create a packaging type

Create a packaging type

To create a carrier-level packaging type:

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Packaging Types link under the carrier folder to display the Packaging Types pane, and then click Create in the upper right portion of the panel to display the Create Packaging type dialog.



The following illustration shows the Create packaging type dialog:

Create Packaging Type

Basic Information

Code :

Name :

Description :

☒ Applies to all services

Default Dimensions

Length :

Width :

Height :

Units of Measure :

☐ Conveyable

Options

Label Text :

EDI Text :

Report Text :

Scripts (Drag to Reorder)

Pre	Post	Name	Description
No items to show.			

The following table lists the basic information for the fields on the this dialog:

Field	Max. Length (No. of chars.)	Required
Code	64	Y
Name	255	Y
Description	255	N

- In the Create Packaging Type dialog under Basic Information, carry out the following steps:
 - In the **Code** field, type the code for the packaging type; for example: LB1
 - In the **Name** field, type the name of the packaging type; for example: Large Box
 - In the **Description** text box, optionally type a description for the packaging type; for example: Large box for this carrier.
- Under Default Dimensions, optionally carry out the following actions:


8. Type the Length, Width, and Height of the packaging type in the appropriate fields using the default unit of measure. Do not include the unit of measure itself; for example, if the unit of measure is centimeters, type 18.00 for 18 cm.
9. From the **Units of Measure** drop-down list, select one of the following units of measure: Centimeters
Inches
10. Optionally, if the box type is conveyable or "machinable," that is, can be passed through an automatic conveyor/scanner system, select the Conveyable check box. To indicate that the packaging type cannot be conveyed in this manner, leave the check box cleared (deselected) – the default. Note that a UCM carrier does not use this information for any specific purpose. However, you can incorporate the information in this field into custom scripts.

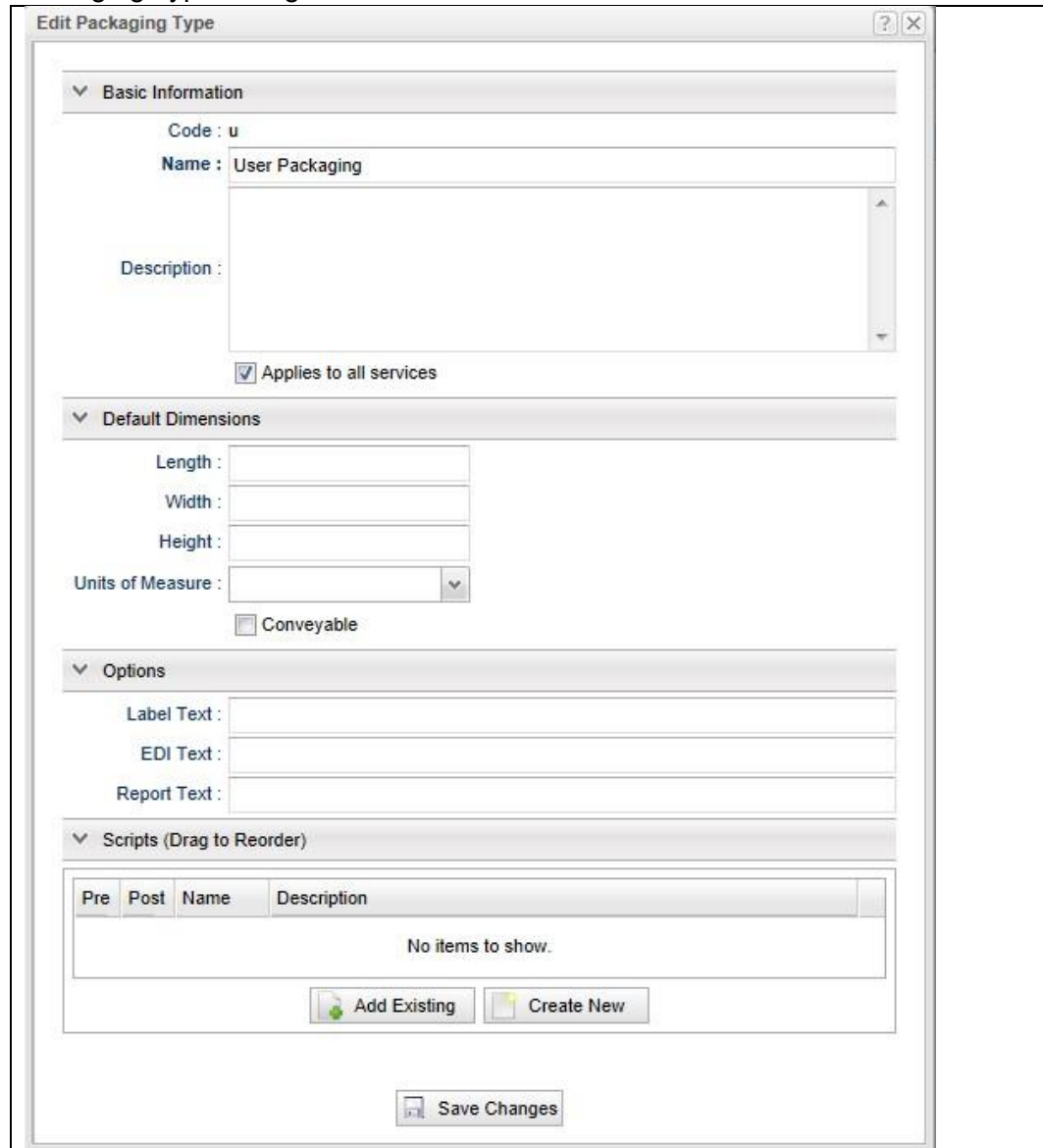
Note: The fields under Default Dimensions are not required, allowing you to create an "irregular" packaging type, for example, a "bag." (The built-in packaging type, User Packaging, is another example of a "non-dimensioned" packaging type.) You typically use the Default Dimensions fields for standard boxes.

1. Under Options, carry out the following actions:
2. Optionally, in the **Label Text** field, enter an alternate packaging type name to be printed on the label.
3. Optionally, in the **EDI Text** field, enter an alternate packaging type name to be printed in the EDI Manifest.
4. Optionally, in the **Report Text** field, enter an alternate packaging type name to be printed in a Report.
5. Optionally, to add a script to the packaging type, click the up arrow (^) next to the word "Scripts" for the following options:
Add Existing – Click Add Existing to display the Select Existing Scripts dialog with a list of available scripts. Select (check) the check box or boxes next to the script(s) you want to add to the packaging type, and then click Select to display the selected scripts in the Scripts table on the Create packaging type dialog.
Create New – Click Create New to display the Create Script dialog. See the topics under "Create, test, and debug a script." Click Select to display the new script in the Scripts table on the Create packaging type dialog.
6. If you added one or more scripts, select Pre or Post for each of these scripts to indicate whether the script is to run before or after the packaging type is applied.
Caution: If you fail to make this selection, the script is not saved when you click Save Changes.
7. If you added more than one script, arrange the scripts in the list in the order you want them to run. To do so, drag a script to the desired position.
Note: For information on working with scripts, see the topics under "Scripts."
8. Click Save Changes to save the packaging type.

Edit or delete a packaging type

You must edit a packaging type at the carrier level. You can also delete a packaging type from a carrier, in which case it is no longer available to apply to any service. To add or remove a packaging type from a service without deleting it from the carrier, see the topic [Add or remove objects with a service](#). Edit a packaging type **To edit a packaging type:**

1. In UCM, click the plus sign  next to the carrier to display the set of objects associated with the carrier.
2. Click the Packaging Types link to display the list of packaging types associated with the carrier.
3. Carry out one of the following actions:
Double-click the packaging type you want to edit to display the Edit Packaging Type dialog.
Select the packaging type you want to edit, and then click Edit to display the Edit Packaging Type dialog.



Edit Packaging Type

Basic Information

Code : u

Name : User Packaging

Description :

☒ Applies to all services

Default Dimensions

Length :

Width :

Height :

Units of Measure :

☐ Conveyable

Options

Label Text :

EDI Text :

Report Text :

Scripts (Drag to Reorder)

Pre	Post	Name	Description
No items to show.			


4. Modify any parameters that need changing. For more information, see the following topic: Create a packaging type.
Note: The fields and buttons on the Edit Packaging Type dialog are identical to those on the Create Packaging Type dialog. However, you cannot modify the value for Code.
5. Click Save Changes to save your changes to the packaging type.

Note: When you save changes to a packaging type, every occurrence of this packaging type associated with a service automatically incorporates these changes.

Delete a packaging type

When you delete a packaging type from a carrier, that packaging type is removed from all services with which it is associated and is no longer available for adding to any services belonging to the carrier.

To delete a packaging type from a carrier:

1. In UCM, click the plus sign  next to the carrier to display the set of objects associated with the carrier.
2. Click the packaging types link to display the packaging types pane with the list of packaging types belonging to the carrier.
3. Select the packaging type to delete, and then click Delete to display the Confirm dialog.



Note: To select multiple packaging types to remove, press CTRL when selecting the rows.

4. Click OK to permanently delete the packaging type from the carrier or click Cancel to exit the dialog without deleting the packaging type.

Caution: There is no undo for this operation. Additionally, if a deleted packaging type is associated with a service it is automatically removed from the service when you delete it from the carrier.

Rating Methods

Overview of rating methods

UCM Rating Methods fall into the following categories:

- Carrier Rating Methods – The implementation of a UCM carrier's complete rating functionality, including the application of any scripts to specific rating methods.
- Service Rating Methods – The subset of rating methods associated with a specific service, including the order they are executed in.

Additionally, Rating and RATE API events can be configured to further refine the implementation. For more information, see the topic: [Overview of events](#).

In UCM, you can create and apply the following types of rating methods:

- Custom – Uses a script for rating. The script implements all the functionality required.
- Distance Rated – Uses a Request API Key to specify the distance for the rate lookup.
- Flat Rated – Returns a flat rate charge based on the weight of a package or shipment.
- Freight Class Rated – Returns a weight break rate based on freight class (for example, NMFC materials classification).
- Non Rated – Performs the rating operation but returns a 0.00 charge.
- Piece Count Rated – Uses the number of pieces in the shipment for the rate lookup.
- SMC RateWareXL – Rates are returned from the SMC RateWare Web Service.
- Spot Rated – Enables a Request API key to be used to specify a quoted amount to be charged for the shipment. (The charge is evenly divided among all packages in a shipment.)
- Volume Rated – Returns a rate based on the volume weight of a package. This rating method allows the application of a volume weight script to calculate the volume weight for each package with dimensions. UCM provides a standard formula with a default script; user-created scripts can also apply other formulas.
- Weight Break Rated – Allows weight breaks to be used for the rate lookup. After the rate break has been found, an increment value is used to actually calculate the rate.

Note:

- Rates included in a carrier definition cannot be viewed or managed at the carrier instance level. If necessary, you can create or import rates at the instance level. Instance level rates always take precedence over definition level rates.
- UCM does not include a separate dimensional rating method but you can configure dimensional rating with the Flat Rate and Weight Break Rate rating methods. See [Specific rating methods](#).

Rating methods topics


You can create and manage (add specific rates to) a rating method at both the carrier and service level. The following topics describe these procedures, as well as procedures for editing, removing, and deleting rating methods:

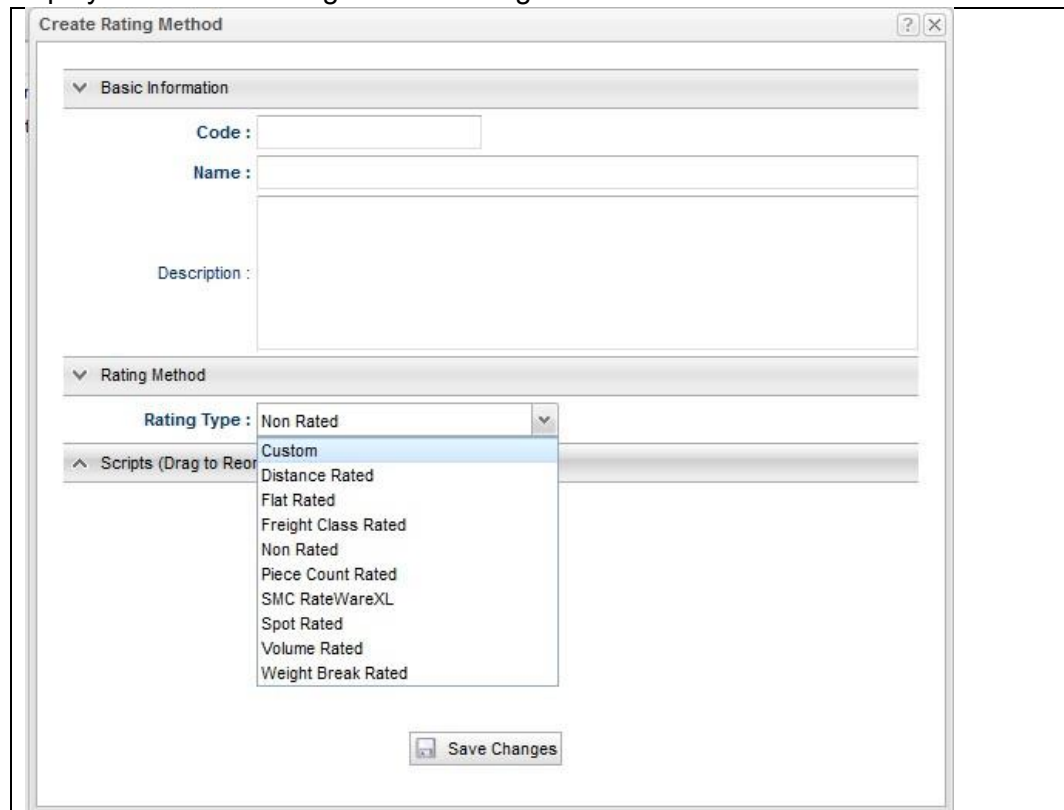
- To create a rating method see the following topic: [General procedure](#)
- For the Freight Class Rated rating method, see the following topics under "Freight Class Rated rating method": - [Configuring Freight Class Rated](#) - [Freight Class Rated use cases](#)
- See the appropriate individual topics for descriptions of the following rating methods: - [Distance Rated rating method](#) - [Flat Rated rating method](#) - [SMC RateWareXL rating method](#)

- See the [Other rating methods](#) topic for descriptions of the following rating methods: - [Custom](#) - [Non Rated](#) - [Piece Count Rated](#) - [Spot Rated](#) - [Volume Rated](#) - [Weight Break Rated](#)
- For managing and importing rates using the Rates Editor, see the following topics: - [Rates Editor](#) - [Rate file formats](#)
- For working with existing rating methods, see the following topics: - [Add a rating method to a service](#) - [Edit, remove, or delete a rating method](#)

Create a Rating Method General Procedure

You can create various types of rating methods. The general procedure for creating a rating method is the same for all these types. The options available for each type differ depending on the rating method. See the topic [Specific rating methods](#). **To create a carrier-level rating method:**

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Rating Methods link under the carrier folder to display the Rating Methods pane, and then click Create in the upper right portion of the panel to display the Create Rating Method dialog:



The following table lists the basic information for the fields on the this dialog

Field	Max. Length (No. of chars.)	Required
Code	64	Yes
Name	255	Yes
Description	255	No

3. In the Create Rating Method dialog, carry out the following steps:
4. Under Basic Information, in the **Code** field, type the code for the rating method; for example: CFR
5. Under Basic Information, in the **Name** field, type the name of the rating method; for example: Carrier Flat Rate
6. Under Basic Information, in the **Description** text box, optionally type a description for the rating method; for example: Flat rate for this carrier.
7. Under Rating Method, from the Rating Type drop-down list, select a rating type to display the configuration options for that rating type. (For more information on rating types, see the topic: [Overview of rating methods](#).)
8. Configure the rating method. (For configuration options for specific rating method type, see the topic [Specific rating methods](#).)
9. Optionally, to add a script to the rating method, click the up arrow (^) next to the word "Scripts" for the following options:
Add Existing – Click Add Existing to display the Select Existing Scripts dialog with a list of available scripts. Select (check) the check box or boxes next to the script(s) you want to add to the rating method, and then click Select to display the selected scripts in the Scripts table on the Create Rating Method dialog. Create New – Click Create New to display the Create Script dialog. See the topics under "Create, test, and debug a script." Click Select to display the new script in the Scripts table on the Create Rating Method dialog.
10. If you completed step 3f, select a combination of check boxes in the Pre and Post columns to indicate whether the script should run prior to executing the rating method or after.
Caution: If you do not select at least one check box in the Pre or Post columns next to a script, when you save the rating method, the script is no longer associated with it and does not appear in the list of scripts if you edit this rating method.
Note: Some types of rating methods require a script as part of the rating method itself. Adding this "intrinsic" script is part of step 3e. If you are applying multiple scripts to this rating method, configure the order in which you want these scripts to run. To do so, drag a script to the position where you want it.
11. Click Save Changes to add the Rating Method to the UCM carrier.

Freight Class Rated rating method

Configuring Freight Class Rated

The Freight Class Rated rating method returns a weight break rate based on freight class (for example, in the US, NMFC materials classification). For more information see the topic [Freight Class Rated use cases](#). **To create a freight class rated rating method:**

1. Follow steps 1 - 2d of the [General Procedure](#).
2. Under Rating Method, from the drop-down list, select Freight Class Rated to display the configuration options for this rating method.

Rating Method

Rating Type : Freight Class Rated

Response Key : FCR_CHARGE

☒ Dimensional Weighting

☐ Include Zone

Weight Increment : 100

3. Configure the following options for Freight Class Rated:

To configure this option...	Do this...
Response Key	Type the name of the API key you want to use to return a value for this rating method. UCM creates this API key when you save the rating method.
Dimensional Weighting	To enable rating by dimensional weight, select this check box. Selecting this check box displays the following additional fields:
<div><div>Dimensional Weighting</div><div><div>Factor Source Type : Fixed Value</div><div>Dim. Factor : </div><div>Calculation Method : Simple</div></div></div>	


4. From the Factor Source Type drop-down list, select one of the following options:
Fixed Value
UI Element
5. Carry out one of the following steps:
If, in step a, you selected Fixed Value, use the up arrow (^) next to the Dim. Factor field to specify a whole number value for the dimensional factor (1, 2, 3, etc.) See step 3c.


If in step a, you selected UI Element, UCM displays the following field:

UI Administrative Element


Enter Name (up to 255 characters)


255

- From the Dim. Factor Source drop-down list, select a UI administrative element from the list or create a new UI Administrative element for this purpose. This is the field where the dimensional factor can be configured in your shipping system. To create a UI administrative element for this purpose, click the  to display the Create UI Administrative Element dialog. See the topic [Create a UI administrative element](#).
6. From the Calculation Method drop-down list, select one of the following options:
Simple – This option uses the formula: (Length x Width x Height)/Dim Factor
Script – Selecting this option displays the Calculation Script field, enabling you to specify a script for calculating dimensional weight.

to select an existing script for this purpose or click the  to display the Create Script dialog. See the topics under "Scripts."

Caution: If you are using a script for the dimensional weight calculation, it is strongly recommended that

7. Click the Add Existing  Create 

you click the Help  to display information on scripting this calculation, including which JavaScript variables are allowed.

Include Zone	To include a zoning method, select this check box. See the topic: Overview of zoning methods . If you select this check box, the rates file format for Freight Class Rated must include a zone column. See the topic Rate file formats for examples of this type of rate file with and without zones.
Weight Increment	Enter an amount for the weight-break increment or accept the default of 100 (see Freight Class Rated use cases). This increment is in the default unit of measure for weight for this carrier.

To add a specific flat rate, click Save Changes and Manage Rates to display the Rates Editor dialog.

1. Optionally, in the Rates Editor dialog, carry out one of the following actions, and then click Save Changes to save the rates for Freight Class Rated.
 2. Click Add Rate to manually add a rate, and then fill in the information for the rate.
 3. Click Import Rates to display the Import Rates dialog, specify a rate file to import, and then click Import to import the file.

Note:For more information on adding, importing, exporting, and deleting rates, as well as formatting rate files, see the following topics under Manage rates: - [Rates Editor](#) - [Rate file formats](#)

You can access the Rates Editor to add or import additional rates by editing the rating method. See the topic: [Edit, delete, or remove a rating method](#). Complete steps 2f - 4 of the [General Procedure](#).

Freight Class Rated use cases Overview

For commodities being transported within the United States, the National Motor Freight ClassificationTM (NMFC[®]) provides a standard for specifying a commodity's "transportability." The NMFC groups commodities into 18 classes from 50 to 500 based on an evaluation of the following transportation characteristics: density, stowability, handling and liability. In shipping systems, NMFC classes are typically used for freight carriers with less than truckload (LTL) or truckload (TL) shipments (mostly the former).

Note: In general, the denser a material is, the lower its NMFC class number is except hazardous materials/dangerous goods, which have high NMFC class numbers regardless of other characteristics. The lower the NMFC class number, the less expensive the commodity is to ship.

The Freight Class Rated rating method enables you to configure carriers using freight classes for rating purposes. The following section describes one type of use case where this rating type can be applied.

LTL Multi-class example

LTL multi-class rating is a way to accurately calculate shipping costs for a shipment containing multiple packages with contents belonging to different classes. The following example illustrates this kind of calculation for a shipment of three packages with the same weight (500 lbs.) but belonging to different classes.

Package Number	Package Weight	NMFC Class
1	500	50
2	500	77.5
3	500	80

Multi-class rating is based on total shipment weight. The following table lists the multiclass weight breaks for these classes for a single, specific zone. Rates are rates per 100 lbs.

NMFC Freight Class	< 500 lbs	<1000 lbs	<2000 lbs	<5000lbs
50	50.00	45.00	40.00	35.00
77.5	61.00	56.00	51.00	46.00
80	72.00	67.00	62.00	57.00

The following illustration shows how this set of rates can be set up using the UCM rates editor with the Freight Class Rated rating type. For details on setting up a set of rates, see the topics under "Manage rates."

The screenshot shows the 'Rates Editor' window with a table of rates. The table has columns for Effective Date, Zone, Weight, Freight Class, Rate, and Minimum Charge. The data is organized by weight classes (500, 1000, 2000, 5000 lbs) and freight classes (50, 77.5, 80). The rates are per 100 lbs. The Minimum Charge is 10 for weights up to 2000 lbs and 30 for weights up to 5000 lbs.

Effective Date	Zone	Weight	Freight Class	Rate	Minimum Charge
2014/01/30	1	500	50	50	10
2014/01/30	1	1000	50	45	10
2014/01/30	1	2000	50	40	10
2014/01/30	1	5000	50	35	10
2014/01/30	1	500	77.5	61	20
2014/01/30	1	1000	77.5	56	20
2014/01/30	1	2000	77.5	51	20
2014/01/30	1	5000	77.5	46	20
2014/01/30	1	500	80	72	30
2014/01/30	1	1000	80	67	30
2014/01/30	1	2000	80	62	30
2014/01/30	1	5000	80	57	30

Buttons: Add Rate, Delete Rate, Import Rates, Save Changes

In this example, the total shipment weight is 1500 lbs. Based on this weight, the <2000 column in the previous table is used to calculate the shipping charges shown in the following table:

Package Number	Weight	Class	Rate per 100 lbs.	Charge
1	500	50	40	5 x 40 = 200
2	500	77.5	51	5 x 51 = 255
3	500	80	62	5 x 62 = 310

Totals	1500	N/A	N/A	765
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LTL deficit weight rating example

If shipment weight is close to the next higher weight break, shippers can sometimes cut cost by claiming that a shipment weighs more than it actually does. They can do this by adding enough weight to bring the total shipment weight up to the next weight break.

This tactic is known as deficit rating as shown in this example.

Note: This example uses the same rates defined in the weight break table in the previous (multi-class) example.

Package Number	Package Weight	NMFC Class
1	500	50
2	500	77.5
3	900	80

Before applying deficit rating, the cost breakdown for the shipment listed in the previous table is as follows:

Package Number	Weight	Class	Rate per 100 lbs.	Charge
1	500	50	40	5 x 40 = 200
2	500	77.5	51	5 x 51 = 255
3	900	80	62	9 x 62 = 558
Totals	1900	N/A	N/A	1013

In this example, the next higher weight break is 2000 lbs, so the deficit weight rating method needs to add enough weight to the shipment to bring the total shipment weight up to this amount. Since the actual shipment weight is 1900 lbs., 100 lbs. needs to be added. This additional weight is added to the package belonging to the lowest NMFC class (50), which has the least expensive charge. Note that when this is done, the total charge for the "deficit package" is slightly higher but the charges for the other packages are reduced by amounts that more than compensate for this increase, as shown in the following table:

Package Number	Weight	Class	Rate per 100 lbs.	Charge
1	600	50	35	6 x 35 = 210
2	500	77.5	46	5 x 46 = 230
3	900	80	57	9 x 57 = 513
Totals	2000	N/A	N/A	953

Thus, by adding 100 lbs. to package #1, the shipper saves a total of \$60 on the entire shipment.

Deficit rating with a UCM carrier

In a shipping system that uses a UCM carrier, deficit rating is an option that can be enabled when the carrier is configured in the shipping system. When you select "Enable ground freight functionality" as an option when setting up a carrier in UCM, UCM

automatically creates a UI administrative element in the form of a check box for deficit rating. This UI administrative element appears in the list of UI administrative elements:

Code	Name	UI Administrative Label	Data Type	Description
FWBR_DEFICIT_RATE	Enable deficit rating	Enable deficit rating	Checkbox	If the next weight break calculates to be less expensive, pad the lowest cost class to meet the next weight break.

Distance Rated rating method

Distance rated rating methods use a Request API Key and a Distance UOM API key to specify the distance for the rate lookup.

To create a Distance Rated rating method:

1. Follow steps 1 - 2d of the General Procedure.
2. Under Rating Method, from the drop-down list, select Distance Rated to display the configuration options for this rating method.

▼
Rating Method

Rating Type :
Distance Rated
▼

Request Key :

Response Key :

Distance UOM API Key :

3. Configure the following options for Distance Rating:

To configure this option...	Do this...
-----------------------------	------------

Request Key	<p>Type the name of the API key you want to use to specify the distance for the rate lookup when submitting the API transaction for this rating method. The recommended key name is DISTANCE.</p> <p>Note: You also need to create the associated UI transactional element for this key. See the topic Create a UI Transactional Element. Select Numeric as the Data Type. This key appears in the location in your shipping system where this UI transactional element is placed, enabling you to enter a distance value for it from the UI.</p> <p>Caution: When creating the UI transactional element for the distance rating request key, <u>you must also enter the key name you entered in this field in the Code field on the Create UI Transactional Element dialog.</u></p>
Response Key	<p>Type the name of the API key you want to use to return a value for this rating method. UCM creates this API key when you save the rating method.</p> <p>Note: This key returns the rate calculated when distance rated is used to rate a shipment.</p>
Distance UOM API Key	<p>Type the name of the request API key you want to use for submitting the distance unit of measure (UOM) if different from the default entered for this rating method. The recommended key name for this API key is DISTANCE_UOM. You also need to create the associated UI transactional element for this key. See the topic Create a UI Transactional Element.</p> <p>Carry out the following steps:</p>

4. In the Code field on the Create UI Transactional Element dialog, enter the name of the distance UOM API key as entered in the Distance UOM API Key field on the Create Rating Method dialog.
5. Enter a name and, optionally, a description for the key.
6. From the **Data Type** drop-down list, select Drop-down.
7. Enter a value for UI label, and then click Create to enter the drop-down list values for this UI transactional element.
8. In the Drop-down Text dialog, enter the following value in the Value field: mile
Caution: Enter this value exactly as shown. This value is case-sensitive.

9. Enter the Name for this value as you want it to appear in the drop-down list on your shipping system UI, and then click Save and Create New to add the second value.
10. In the Drop-down Text dialog, enter the following value in the Value field: km
Caution: Enter this value exactly as shown. This value is case-sensitive.
11. Enter the Name for this value as you want it to appear in the drop-down list on your shipping system UI, and then click Save Changes.
12. The Data Description section of the Create UI Transactional Element should look like the following illustration:

The screenshot shows a 'Data Description' dialog box. It has a 'Data Type' field set to 'Drop-down' and a 'UI Label' field set to 'Distance UOM'. Below these is a table with two columns: 'Value' and 'Name'. The table contains two rows: one with 'mile' and 'Mile', and another with 'km' and 'Kilometer'. The 'km' row is highlighted in blue. At the bottom of the dialog are three buttons: 'Create', 'Edit', and 'Delete'.

Value	Name
mile	Mile
km	Kilometer

13. Select the location for the UI transactional element in your shipping system, and then click Save Changes to add the UI transactional element for distance UOM.]
14. Optionally, to add a specific distance rate, click Save Changes and Manage Rates to display the Rates Editor dialog. In the Rates Editor dialog, carry out one of the following actions, and then click Save Changes to save the rates for distance rating.
15. Click Add Rate to manually add a rate, and then fill in the information for the rate.
16. Click Import Rates to display the Import Rates dialog, specify a rate file to import, and then click Import to import the file.
Note:For more information on adding, importing, exporting, and deleting rates, as well as formatting rate files, see the following topics under Manage Rates: - [Rates Editor](#) - [Rate file formats](#)
17. You can access the Rates Editor to add or import additional rates by editing the rating method. See the topic: [Edit, delete, or remove a rating method](#).
18. Complete steps 2f - 4 of the General Procedure.

Flat Rated rating method

A Flat Rated rating method returns a flat rate charge based on the weight of a package or shipment.

To create a flat rated rating method:

1. Follow steps 1 - 2d of the General Procedure.
2. Under Rating Method, from the drop-down list, select Flat Rated to display the configuration options for this rating method.

Rating Method

Rating Type : Flat Rated

Response Key :

☒ Package Level Rating

☐ Dimensional Weighting

☐ Include Zone

3. Configure the following options for Flat Rate Rating:

To configure this option...	Do this...
Response Key	Type the name of the API key you want to use to return a value for this rating method. UCM creates this API key when you save the rating method.
Package Level Rating	To enable rating at the package level, accept the default selection of this check box. To enable rating at the shipment level, deselect (clear) this check box. Doing so displays the Rate Split field as follows:
<div> <div>Rating Method</div> <div> Rating Type : Flat Rated </div> <div> Response Key : </div> <div> <input type="checkbox"/> Package Level Rating </div> <div> <input type="checkbox"/> Dimensional Weighting </div> <div> <input type="checkbox"/> Include Zone </div> <div> Rate Split : Even </div> </div>	

From the drop-down list, select the method by which to divide the rate among packages in a shipment:

- Even – Divides the rate for the shipment evenly among number of the packages. For example, if the rate for a shipment is \$20.00 and it contains 10 packages, the rate for each package is \$2.00.
- Weight Percent – Divides the rate for the shipment among the packages in the shipment proportionally to the weight of each package. For example, if the rate for a shipment is \$24.00, and it contains three packages: Package A (2 lbs.), Package B (4 lbs.), and Package C (6 lbs.), the rates are as follows: Package A \$4.00, Package B \$8.00, and Package C \$12.00.

Dimensional Weighting	To enable rating by dimensional weight, select this check box. Selecting this check box displays the following additional fields:
<div> <div>Dimensional Weighting</div> <div> Factor Source Type : Fixed Value </div> <div> Dim. Factor : </div> <div> Calculation Method : Simple </div> </div>	


1. From the **Factor Source Type** drop-down list, select one of the following options or type in a value: ○ Fixed Value ○ UI Element
2. Carry out one of the following steps:
 - If, in step a, you selected Fixed Value, use the up arrow (^) next to the Dim. Factor field to specify a whole number value for the dimensional factor (1, 2, 3, etc.) See step 3c
 - If in step a, you selected UI Element, UCM displays the following field:


The screenshot shows the 'Dimensional Weighting' section of a configuration form. The 'Factor Source Type' is set to 'UI Element'. The 'Dim. Factor Source' field is highlighted with an orange border and contains a dropdown arrow and a small 'A' icon. The 'Calculation Method' is set to 'Simple'.

From the **Dim. Factor Source** drop-down list, select a UI administrative element from the list. This is the field where the dimensional factor can be configured in your shipping system. Select an existing UI administrative element from the dropdown list or click the **A** to display the Create UI Administrative Element dialog and create a UI administrative element for this purpose. See the topic [Create a UI administrative element](#).

1. From the **Calculation Method** drop-down list, select one of the following options:
2. Simple – This option uses the formula: (Length x Width x Height)/Dim Factor
3. Script – Selecting this option displays the Calculation Script field, enabling you to specify a script for calculating dimensional weight.

The screenshot shows the 'Dimensional Weighting' section of a configuration form. The 'Factor Source Type' is set to 'Fixed Value'. The 'Dim. Factor' is set to '1'. The 'Calculation Method' is set to 'Script'. The 'Calculation Script' field is highlighted with an orange border and contains icons for 'Add Existing', 'Create', and 'Help'.

Click the Add Existing  to select an existing script for this purpose or click the **Create** to display the Create Script dialog. See the topics under "Scripts."

Caution: If you are using a script for the dimensional weight calculation, it is strongly recommended that you click the Help  to display information on scripting this calculation, including which JavaScript variables are allowed.

Note: The dimensional factor for this type of rating depends on carrier and shipment type. Some examples of dim weight formula values for Imperial units of measure (inches and pounds) are as follows

4. FedEx Express and UPS – (L in x W in x H in)/166 (domestic) or /139 (international)

5. FedEx Ground & UPS Ground – (L in x W in x H in)/166 (domestic) or /139 (international) if the package measures 5,184 cubic inches or more. See the online dim weight calculator that many carriers provide.]

Include Zone	To include a zoning method, select this check box. See the topic: Overview of zoning methods .
Weight UOM	From the drop-down list, select one of the following units of measure (UOM):

6. Kilogram
7. Pound
8. To add a specific flat rate, click Save Changes and Manage Rates to display the Rates Editor dialog.
9. Optionally, in the Rates Editor dialog, carry out one of the following actions, and then click Save Changes to save the rates for flat rating.
10. Click Add Rate to manually add a rate, and then fill in the information for the rate.
11. Click Import Rates to display the Import Rates dialog, specify a rate file to import, and then click Import to import the file.

Notes:

For more information on adding, importing, exporting, and deleting rates, as well as formatting rate files, see the following topics under Manage rates: - Rates Editor - Rate file formats

- You can access the Rates Editor to add or import additional rates by editing the rating method. See the topic: [Edit, delete, or remove a rating method](#).
- Complete steps 2f - 4 of the [General Procedure](#).

SMC RateWareXL Rated rating method

The SMC RateWareXL Web service is a transportation rating engine that provides pricing information for less-than-truckload (LTL) density and mileage rating. It accesses the SMC3 transportation pricing library of data modules, density, and other pricing benchmarks, as well as a set of individual carrier price lists. **Notes:**

- The SMC RateWareXL Web service requires login information. Fields for entering this information must be added as UI Administrative elements.
- Rates are referred to as "tariffs" in the SMC RateWareXL system.

To configure an SMC RateWareXL rating method:

1. Follow steps 1 - 2d of the [General Procedure](#).
2. Under Rating Method, from the **Rating Type** drop-down list, select SMC RateWareXL to display the configuration options for this rating method.

Rating Method

Rating Type : SMC RateWareXL

Response Key : SMC

RateWareXL Method : Weight Rated

Tariff Name Source : Fixed

Tariff Name : SMC Demo

Tariff Effective Date : 2016/07/21

Minimum Charge Source : Fixed

Minimum Charge : 100

Maximum Charge Source : Fixed

Maximum Charge : 500

RateWareXL Username : Username

RateWareXL Password : Password

RateWareXL License Key : License Key


RateWareXL URL : URL

3. Carry out the following sub-steps:
4. In the **Response Key** field, enter the name of the API key you want to use to return a value for this rating method. UCM creates this API key when you save the rating method.
5. From the **RateWareXL Method** drop-down list select one of the following options:
6. Weight Rated (the default) – Basic rating according to pallet weight. Density Rated – Rating is based on pallet weight divided by volume. Note that SMC uses a proprietary formula for this type of rating.
7. From the **Tariff Name Source** drop-down list, select one of the following sources:
 - Fixed
 - UI Element

Configure the Tariff Name Source according to the following table:





If your choice is:	Description
Fixed (the default)	Enter a name for the tariff (rate) in the Tariff Name field.

Note: Tariff Name is the name of the data module or one of the data modules that SMC provides access to when you complete the license agreement for RateWareXL. SMC provides the list of tariff names for these modules. If you are using a single data module for the UCM carrier, select Fixed and enter the name of the data module.

UI Element	From the Tariff Name Element drop-down list, select an existing UI administrative element to use for entering the tariff name or click the  to display the Create UI Administrative Element dialog and use this dialog to create the UI administrative element where the tariff name can be entered. See the topics under "UI Administrative Elements."

Note: If you want to enable a user to enter or select the name of a particular RateWareXL tariff name/data module from among the set of accessible data modules provided by SMC, use this option. (See previous Note for a description of Tariff Name.)

1. Specify the Effective Date as follows:


If your choice is:	Description
Fixed (the default)	Use the calendar  next to the Tariff Effective Date field to specify the date on which the SMC RateWareXL tariff becomes effective.
UI Element	<p>If, in the previous step, you selected UI Element from the Tariff Name Source drop-down list, UCM displays the following field to specify the Tariff Effective Date:</p> <p>Tariff Effective Date Element : <input type="text"/> </p> <p>From the Tariff Effective Date Element drop-down list, select an existing UI administrative element to use for entering the Tariff Effective  Date or</p> <p>click the  to display the Create UI Administrative Element dialog and use this dialog to create the UI administrative element where the effective date of the tariff can be entered. See the topics under "UI Administrative Elements."</p>

Note: Leaving the Tariff Effective Date field blank for either option (Fixed or UI Element) causes the Ship Date to be used for the Tariff Effective Date.


1. From the **Minimum Charge Source** drop-down list, select one of the following options, and then configure this option according to the following table:

- Fixed (the default)
- UI Element

If your choice is:	Description
Fixed (the default)	In the Minimum Charge field, enter the full dollar amount for the Minimum Charge; for example: 100

If your choice is:	Description
UI Element	<p>If you select UI Element from the Minimum Charge Source drop-down list, UCM displays the following field:</p>  <p>From the Minimum Charge Element drop-down list, select an existing UI administrative element to use for entering the Minimum Charge or click the A icon to display the Create UI Administrative Element dialog and use this dialog to create the UI administrative element where the minimum charge for the tariff can be entered. See the topics under "UI Administrative Elements."</p>

1. From the **Maximum Charge Source** drop-down list, select one of the following options, and then configure this option according to the following table:
2. Fixed (the default)
3. UI Element

If your choice is:	Description
Fixed (the default)	In the Maximum Charge field, enter the full dollar amount for the Minimum Charge; for example: 500
UI Element	<p>If you select UI Element from the Maximum Charge Source drop-down list, UCM displays the following field:</p>  <p>From the Maximum Charge Element drop-down list, select an existing UI administrative element to use for entering the Maximum Charge or click the A icon to display the Create UI Administrative Element dialog and use this dialog to create the UI administrative element where the maximum charge for the tariff can be entered. See the topics under "UI Administrative Elements."</p>

From the **RateWareXL Username** drop-down list, select an existing UI administrative element to use for entering the *username* for the RateWareXL Web service or click the A icon to display the Create UI Administrative Element dialog and use this dialog to create the UI administrative element for this value.

1. From the **RateWareXL Password** drop-down list, select an existing UI administrative element to use for entering the *password* for the RateWareXL Web service or click the A icon to display the Create UI Administrative Element dialog and use this dialog to create the UI administrative element for this value.
2. From the **RateWareXL License Key** drop-down list, select an existing UI administrative element to use for entering the *license key* for the RateWareXL

Web service or click the A icon to display the Create UI Administrative Element dialog and use this dialog to create the UI administrative element for this value.

3. From the **RateWareXL URL** drop-down list, select an existing UI administrative element to use for entering the *URL* for the RateWareXL Web service or click the A icon (to display the Create UI Administrative Element dialog and use this dialog to create the UI administrative element for this value.

Note: For additional information on fields, click the Help  next to these fields.

1. Complete steps 2f - 4 of the General Procedure.

Other rating methods

Overview



The following sections of this topic include procedures for creating other rating methods for a UCM carrier:

- Custom
- Non Rated
- Piece Count Rated
- Spot Rated
- Volume Rated
- Weight Break Rated **Notes:**
 - For the Freight Class Rated rating method, see the topics under "Freight Class Rated rating method": - Configuring Freight Class Rated - Freight Class Rated use cases
 - See the appropriate individual topics for descriptions of the following rating methods: - Distance Rated rating method - Flat Rated rating method - SMC RateWareXL rating method

Custom

This rating method uses a rating script for rating that implements all the functionality required.

To create a Custom method:

1. Follow steps 1 - 2d of the General Procedure.
2. Under Rating Method, from the drop-down list, select Custom to display the Custom Rate Script selection field.
3. Carry out one of the following steps:
 - To create a new custom rate script, click the Create  to display the Create Script dialog See the topics under "Create, test, and debug a script." Create the script and add it to the list of scripts. Select the script in the list of scripts, and then click Select to display the code for the script in the Custom Rate Script field.
 - To add an existing custom rate script, click the Add Existing  to display the Select Existing Custom Scripts dialog. Select a script, and then click Select to display the code for the script in the Custom Rate Script field.

Note: Keep the following considerations in mind:

You can only apply a single script to a Custom rating method.

In contrast to optional scripts applied to objects, the Custom Rate Script does not require specification of Pre or Post event execution. It automatically runs at the appropriate point in the shipment process.

- Complete steps 2f - 4 of the General Procedure.

Non Rated

A Non Rated rating method performs the rating operation *pro forma* but returns a 0.00 charge. **Notes:**

- There are no configuration options with this type of rating method.
- You can add optional scripts to a Non Rated rating method.

To create a Non Rated rating method:

1. Follow steps 1 - 2d of the General Procedure.
2. Under Rating Method, from the drop-down list, select Non Rated, and then click Save Changes to list the rating method in the Rating Methods pane.

Piece Count Rated

A piece count rating method uses the number of pieces in the shipment for the rate lookup.

To create a piece count rating method:

1. Follow steps 1 - 2d of the General Procedure.
2. Under Rating Method, from the **Rating Type** drop-down list, select Piece Count Rated to display the configuration options for this rating method.

3. Configure the following options for Piece Count Rating:

To configure this option...	Do this...
Response Key	Type the name of the API key you want to use to return a value for this rating method. UCM creates this API key when you save the rating method.
Include Zone	To include a zoning method, select this check box. See the topic: Overview of zoning methods .

4. To add a specific piece count rate, click Save Changes and Manage Rates to display the Rates Editor dialog.
5. Optionally, in the Rates Editor dialog, carry out one of the following actions, and then click Save Changes to save the rates for piece count rating.
6. Click Add Rate to manually add a rate, and then fill in the information for the rate.
7. Click Import Rates to display the Import Rates dialog, specify a rate file to import, and then click Import to import the file.

Notes: For more information on adding, importing, exporting, and deleting rates, as well as formatting rate files, see the following topics under Manage rates: -

Rates Editor - Rate file formats

You can access the Rates Editor to add or import additional rates by editing the rating method. See the topic: Edit, delete, or remove a rating method.

- Complete steps 2f - 4 of the General Procedure.

Spot Rated

This rating method creates a Request API key that enables a user to specify a spot rate (custom amount) to be charged for the shipment. (The charge is evenly divided among all packages in a shipment.)

To create a spot rated rating method:

- Follow steps 1 - 2d of the General Procedure.
- Under Rating Method, from the **Rating Type** drop-down list, select Spot Rated to display the configuration options for this rating method.

The screenshot shows a web interface for configuring a rating method. A dropdown menu labeled 'Rating Method' is open, showing 'Spot Rated' as the selected option. Below the dropdown, there are two input fields: 'Request Key' and 'Response Key', both of which are currently empty.

- Configure the following options for Mileage Rating:

To configure this option...	Do this...
Request Key	Type the name of the API key you want to use to specify the spot rate when submitting the API transaction for this rating method. Note: You also need to create the associated UI transactional element for this key. See the procedure for this in the table for the <u>Distance Rated rating method</u> . <u>Note that for this key, you select Numeric for the Data Type instead of Drop-down.</u>
Response Key	Type the name of the API key you want to use to return a value for this rating method. UCM creates this API key when you save the rating method.

- Complete steps 2f - 4 of the General Procedure.

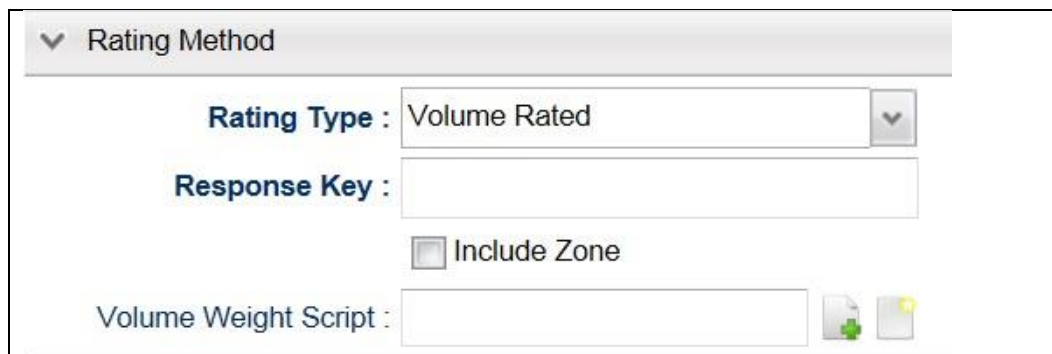
Volume Rated

This rating method returns a volume rate based on the Volume Weight of a package. (The volume weight of a shipment reflects the density of a package. A less dense item generally occupies a greater volume for a given weight.) This rating method allows the application of a Volume Weight script to calculate the volume weight for each package with dimensions. UCM provides a standard formula with a default script; user-created scripts can also apply other formulas.

To create a volume rated rating method:

- Follow steps 1 - 2d of the General Procedure.

2. Under Rating Method, from the **Rating Type** drop-down list, select Volume Rated to display the configuration options for this rating method.





Rating Method

Rating Type : Volume Rated

Response Key :

☐ Include Zone

Volume Weight Script :

3. Configure the following options for Volume Rated Rating:
4. To create a new volume weight script, click the Create  to display the Create Script dialog. See the topics under "Create, test, and debug a script." When you save the script, it is applied to the rating method automatically.
5. To add an existing volume weight script, click the Add Existing .
6. to display the Select Existing Custom Scripts dialog. Select a script, and then click Select to display the script Code in the Volume Weight Script field. **Note:** In contrast to optional scripts applied to objects, the Volume Weight Script does not require specification of Pre or Post event execution. It automatically executes at the appropriate point in the shipment process.
7. To add a specific volume rate, click
8. Manage Rates to display the Rates Editor dialog.
9. Optionally, in the Rates Editor dialog, carry out one of the following actions, and then click Save Changes to save the rates for volume rating.
10. Click Add Rate to manually add a rate, and then fill in the information for the rate.
11. Click Import Rates to display the Import Rates dialog, specify a rate file to import, and then click Import to import the file.

Notes:

- For more information adding, importing, exporting, and deleting rates, as well as formatting rate files, see the topic: [Manage rates](#).
- You can access the Rates Editor to add or import additional rates by editing the rating method. See the topic: [Edit, delete, or remove a rating method](#).
- Complete steps 2f - 4 of the General Procedure.

Weight break rated

This rating method allows weight breaks to be used for the rate lookup. Once the rate break has been found, an increment value is used to actually calculate the rate. **To create a weight break rated rating method:**

1. Follow steps 1 - 2d of the General Procedure.
2. Under Rating Method, from the drop-down list, select Weight Break Rated to display the configuration options for this rating method.

Rating Method

Rating Type : Weight Break Rated

Response Key :

☒ Package Level Rating

☐ Dimensional Weighting

☒ Include Zone

Weight Increment : 100

3. Configure the following options for weight break rated rating:

To configure this option...	Do this...
Response Key	Type the name of the API key you want to use to return a value for this rating method. UCM creates this API key when you save the rating method.
Package Level Rating	To enable rating at the package level, accept the default selection of this check box. To enable rating at the shipment level, deselect (clear) this check box. Doing so displays the Rate Split drop-down list. The options for this list are identical to those for the corresponding shipment level rating Rate Split drop-down list for Flat Rated .
Dimensional Weighting	To enable rating by dimensional weight, select this check box to display additional fields for Dimensional Weighting configuration. These fields are identical to the corresponding fields for Dimensional Weighting for Flat Rated .
Include Zone	To include a zoning method, select this check box. See the topic: Overview of zoning methods .
Weight UOM	From the drop-down list, select one of the following units of measure (UOM): <ul style="list-style-type: none"> Kilogram Pound
Weight Increment	Type the weight increment to be used in determining the weight break.

4. To add a specific weight break rate, click **Manage Rates** to display the Rates Editor dialog.
5. Optionally, in the Rates Editor dialog, carry out one of the following

actions, and then click Save Changes to save the rates for weight break rating. 6. Click Add Rate to manually add a rate, and then fill in the information for the rate. 7. Click Import Rates to display the Import Rates dialog, specify a rate file to import, and then click Import to import the file.

Notes:

- For more information adding, importing, exporting, and deleting rates, as well as formatting rate files, see the topic: [Manage rates](#).
- You can access the Rates Editor to add or import additional rates by editing the rating method. See the topic: [Edit, delete, or remove a rating method](#).
- Complete steps 2f - 4 of the General Procedure.

Manage Rates Rates Editor

The following types of rating methods allow you to add, edit, and delete rates manually, as well as import rate files. Additionally, there is a rate file format associated with each type of rating method:


- Distance Rated
- Flat Rated
- Piece Count Rated
- Volume Rated
- Weight Break Rated

Note: For information on rate file formats, see the topic Rate file formats.

You manage the data for these rating methods using the Rates Editor. With the Rates Editor, you can carry out the following tasks:

- Add a new rate
- Edit an existing rate
- Import a rate file
- Delete rates

To access the Rates Editor:

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Rating Methods link under the carrier folder to display the Rating Methods pane, and then do one of the following:
 - To manage rates for a new rating method, first create the rating method in the Create Rating Method dialog (see the topics under "Create a Rating Method"), and then click Save Changes and Manage Rates to display the Rates Editor.

- To add rates to an existing rating method, access the Edit Rating Method dialog (see the topic Edit, remove, or delete a rating method), and then click Save Changes and Manage Rates to display the Rates Editor.

Effective Date	Zone	Weight	Rate
07/05/2012		70	117.6
07/05/2012		65	116.5
07/05/2012		60	115.4
07/05/2012		55	114.3
07/05/2012		50	113.2
07/05/2012		5	14.4
07/05/2012		40	112.1
07/05/2012		35	111
07/05/2012		30	19.9
07/05/2012		25	18.8
07/05/2012		20	17.7
07/05/2012		15	16.6
07/05/2012		10	15.5

- Carry out one of the following procedures, and then click Save Changes.

Add or edit a rate

To manually add a rate or edit an existing rate:

- In the Rates Editor, fill in or modify the values for each of the columns for a rate.
- Optionally, to filter for a subset of rates, type the filter criteria in the row at the top with the funnel icon on the right. You can also select a date filter using the calendar icon. As your criteria are entered, the rates are automatically filtered.
- Optionally, to add a row for an additional rate, click Add Rate.

Note: For descriptions of the values for columns for specific rating methods, see the following topic: Rate file formats. The columns in a rate file are identical to those in the rates list for a particular rating type.

- Click the calendar icon to display the calendar and select an effective date.
- When you are finished adding or updating rates, click Save Changes to save the rates.

Import rates

Rate files are CSV files containing a set of rates. For the correct formatting of these files by rating method type, see the topic Rate file formats.

* To import a rate file: *

- In the Rates Editor, click Import Rates to display the Rate Import dialog.

The screenshot shows a 'Rate Import' dialog box. It has a title bar with a question mark and a close button. The dialog is divided into two main sections. The first section, 'Basic Information', contains two fields: 'Effective Date' with a calendar icon to its right, and 'Import File Name' with a 'Browse...' button to its right. The second section, 'Import Summary', is currently empty. At the bottom center of the dialog is an 'Import' button.

2. Click the calendar icon to specify the date when the rates go into effect.
3. Click Browse to display the Windows file dialog, select the rates file to import, and then click Open.
4. Click Import to import the rates and display them in the rates list of the Rates Editor for this rating method.
5. Click the calendar icon to display the calendar and select an effective date. (See step 4 of the previous procedure.)
6. Click Save Changes to save the rates.

Delete rates **To delete a rate:**

Select the rate and then click Delete. To delete multiple rates, hold down the CTRL key when selecting rates to delete. Click Save Changes to save the updated rates.

Rate file formats

The following file formats are currently supported for import of Rate information. This list will be expanded as the need arises for other formats. **Notes:**

- The rate file itself does not include Effective Date. You specify Effective Date for all rates in the file when importing the file in the Rate Import dialog.
- Note that for all CSV files, for each row, a value in every column must be included. However, this can be a null value (indicating no value), provided it is marked by a leading comma, so that the number of commas in the row equals the number of commas in the header. See the sample weight break based rate file.

Flat Rate based rating

This type of rate file is used with the Flat Rated rating method. The file must be Comma Separated format (CSV) and contain the following columns headers on the first row:
zone,weight,rate

Note: This file format is identical to the format for weight-based rating. See the section "Weight based rating" for an example.

Freight Class based Rating

This type of rating is used with freight carriers (LTL and TL) using freight-class rating based on weight breaks. You define the weight range and corresponding rate in the Rates and Weight Break tables.

A freight-class based rate file has a Comma Separated format (CSV) and contains the following columns headers on the first row: zone,weight,rate,freight_class,mincharge

Note: The zone and mincharge (minimum charge) columns are optional. The following example includes zone and mincharge.

Sample freight class based rate file with zone and mincharge

```
zone,weight,rate,freight_class,mincharge
1,500,50,50,10.00
2,1000,45,50,7.50
3,2000,40,50,7.50
4,5000,35,50,5.00
5,500,61,77.5,12.50
6,1000,56,77.5,10.00
7,2000,51,77.5,15.00
8,5000,46,77.5,20.00
9,500,72,80,15.00
10,1000,67,80,17.50
11,2000,62,80,20.00
12,5000,57,80,25.00
```

Volume based rating

This type of rate file is used with the Volume-based rating method. The file must be Comma Separated format (CSV) and the column names must be formatted as follows:
zone,weight,rate

Note that the zone column does need to be included (as a leading comma) even if you do not use zones with this rating method.

Note: This file format is identical to the format for weight-based rating. See the following section for an example. Weight Break based rating

This type of rate file is used with the Weight Break Rated rating method. The file must be Comma Separated format (CSV) and contain the following columns headers on the first row:

zone,weight,rate

Note that the zone column does need to be included (leading comma) even if you do not have zones for the rating method (see the following example).

Sample Weight Break based rate file

```
zone,weight,rate
,5,4.40
,10,5.50
,15,6.60
,20,7.70
,25,8.80
,30,9.90
```

```
,35,11.00
,40,12.10
,50,13.20
,55,14.30
,60,15.40
,65,16.50
,70,17.60
```

Piece Count based rating

This file format is used with the Piece Count Rated rating method. The "unit" column contains the number of pieces. The file must be Comma Separated format (CSV) and contain the following columns headers on the first row. zone,unit,rate

Note that the zone column does need to be included (leading comma) even if you do not have zones for the rating method (see the following example). **Sample Unit Based rate file**

```
zone,unit,rate
,10,1.40
,20,1.50
,30,1.60
,40,1.70
,50,1.80
,60,1.90
,70,2.10
,80,2.20
,90,2.30
,100,2.40
```

Note: For Piece Count rating, the value for unit is the number of packages.

Distance based rating

This file format is used with the Distance Rated rating method. The file must be Comma Separated format (CSV) and contain the following columns headers on the first row:

unit,weight,rate

Sample Distance Based rate file

```
unit,weight,rate 10,100,24.40
20,100,25.50
30,100,26.60
40,100,27.70
50,100,28.80
```


Note: For Distance Rating, the value for unit is the distance in the specified UOM (miles or kilometers).

Add a rating method to a service

You can add a rating method to a service in the following ways:

- Add an existing rating method to a service.
- Create a new rating method from within a service.

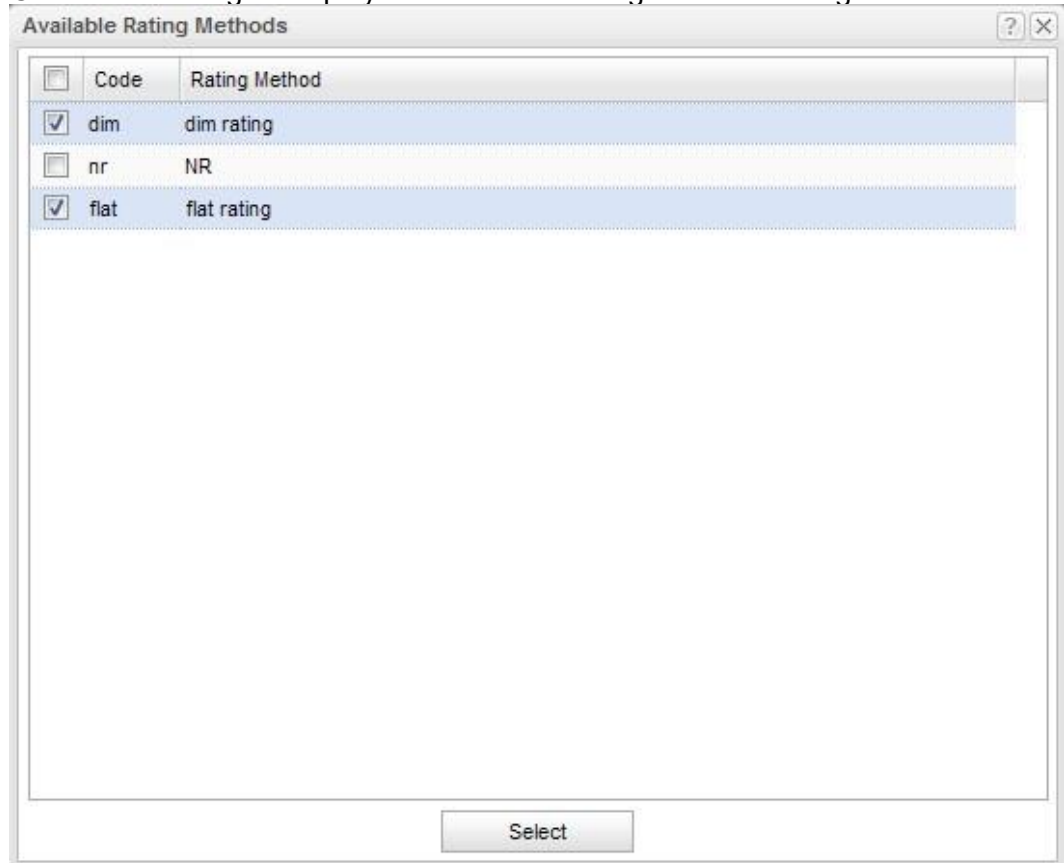
To add an existing rating method to a service:

1. In UCM, click the plus sign  next to the carrier, and then click the plus sign next to the service you want to add the rating method to.

2. Under the service, click the Rating Methods link to display the Rating Methods pane.




3. Click Add Existing to display the Available Rating Methods dialog.



4. Select the check box next to rating methods you want to add, and then click Select to display the rating methods in the Rating Methods list for the service.
Note: You can select multiple rating methods.
5. Select the order in which you want the rating methods to run for comparison purposes. To do so, drag a rating method to the position in the list where you want it.
Note: Rating methods run in same order as they appear on the Rating Methods list.
6. From the Rate Selection drop-down list, select a criterion for choosing a rate, and then click Save Changes.
 - Cheapest
 - Most Expensive
 - Custom

Caution: If you add an existing rating method to the list for a service but do not click Save Changes in the Rating Methods pane, the Rating Method is not added to the service.

To create a new rating method from within a service:

1. In UCM, click the plus sign  next to the carrier, and then click the plus sign next to the service you want to add the rating method to.
2. Under the service, click the Rating Methods link to display the Rating Methods pane.
3. Click Create New to display the Create Rating Method dialog.
4. Create the rating method and optionally add rates according to the procedures under "Create a rating method," and then click Save Changes to add the rating method directly to the list of rating methods available with the service.
5. Select the order in which you want the rating methods to run for comparison purposes. To do so, drag a rating method to the position in the list where you want it.

Note: Rating methods run in same order as they appear on the Rating Methods list.

1. From the Rate Selection drop-down list, select a criterion for choosing a rate, and then click Save Changes.
2. Cheapest
3. Most Expensive
4. Custom


Caution: If you create and save a rating method from within a service but do not click Save Changes in the Rating Methods pane for the service, the Rating Method is added at the carrier level but is not added to the service.

Note: When you add a rating method by creating it from within a service, the rating method also becomes available at the carrier level.

Edit, remove, or delete a rating method

You must edit a rating method at the carrier level. You can remove a rating method from a service while retaining it for general availability. You can also delete a rating method from a carrier, in which case it is no longer available to apply to any service.

To edit a rating method:

1. In UCM, click the plus sign  next to the carrier to display the set of objects associated with the carrier.
2. Click the Rating Methods link to display the list of rating methods associated with the carrier.
3. Carry out one of the following actions:
 - Double-click the rating method you want to edit to display the Edit Rating Method dialog.
 - Select the rating method you want to edit, and then click Edit to display the Edit Rating Method dialog.

- Modify any parameters, rates, scripts, or script ordering that need changing. For more information, see the following topics under "Create a Rating Method":
- General procedure
- Specific rating methods

Also see the following topics under "Manage Rates":

- Add, import, export, or delete rates
- Rate file formats



Note: The fields and buttons on the Edit Rating Method dialog are identical to those on the Create Rating Method dialog. However, you cannot modify the following values:

- Code
- Rating Type
- Click Save Changes to save your changes to the rating method.

Note: When you save changes to a rating method, every occurrence of this rating method associated with a service automatically incorporates these changes.

Remove or delete a rating method

You remove a rating method from a service and delete a rating method from a carrier. When you remove a rating method from a service, the rating method remains available for other services. However, when you delete a rating method from a carrier, that rating method is removed from all services with which it is associated and is no longer available for adding to any services belonging to the carrier. **To remove a rating method from a service:**

1. In UCM, click the plus sign  next to the carrier to display the set of objects associated with the carrier.
2. Click the plus sign  next to the service you want to remove a rating method from, and then click the Rating Methods link to display the Rating Methods pane with the list of rating methods associated with the service.

3. Select the rating method to remove, and then click Remove to remove the rating method from the list.




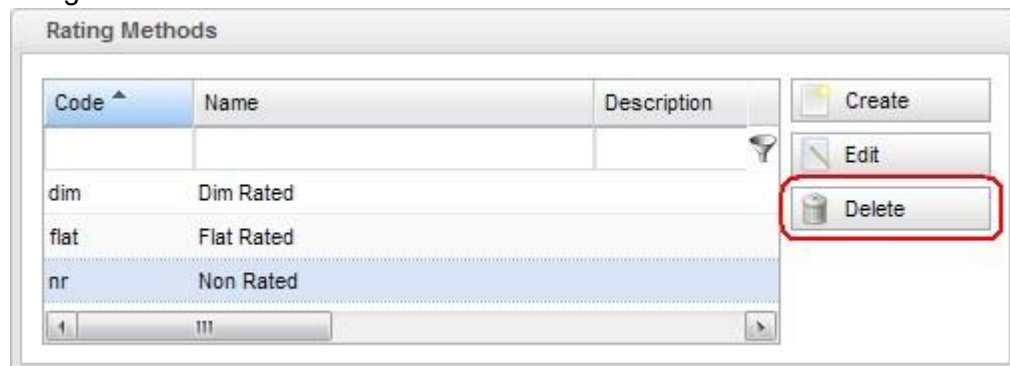
Note: To select multiple rating methods to remove, press CTRL when selecting the rows.

4. Click Save Changes.

Caution: If you do not click Save Changes, the selected rating methods are not removed from the service even though they do not appear in the current Rating Methods pane.

To delete a rating method from a carrier:

1. In UCM, click the plus sign  next to the carrier to display the set of objects associated with the carrier.
2. Click the Rating Methods link to display the Rating Methods pane with the list of rating methods belonging to the carrier.
3. Select the rating method to delete, and then click Delete to display the Confirm dialog.



Note: To select multiple rating methods to remove, press CTRL when selecting the rows.

4. Click OK to permanently delete the rating method from the carrier or click Cancel to exit the dialog without deleting the rating method.

Caution: There is no undo for this operation. Additionally, if a deleted rating method is associated with a service it is automatically removed from the service when you delete it from the carrier.

Reports

Overview of reports

In addition to the standard reports included with UCM (see the section "Reports included with UCM"), you can create and import new reports. You can also export and edit existing reports. The following sections describe the general requirements for UCM reports.

UCM with JasperReports

UCM reports work with JasperReports, an open source reporting library for use with applications based on the Java programming language. With the exception of the Parcel IATA Dangerous Goods Declaration (see the following section), each report in UCM requires the specification of two file types, a .xml file and one or more .jrxml files.

The .xml file type

The .xml file specifies the content of the report in terms of what is printed on the report; for example, the specific wording of the field labels on the report, such as address information, instructions, disclaimers, etc. See the popup topic Sample UCM Reports XML file. In UCM, this file is called the Payload File.

Note: This file is processed by UCM when a report is generated to retrieve from the database the content it specifies.

The .jrxml file type

The file type used by JasperReports is .jrxml. A .jrxml file contains report design definition in .xml format and includes design objects such as report layout, text fields, images, charts, parameters, and variables. A .jrxml file is compiled into a .JASPER file, which is then used to create the actual report. The resulting .JASPER file is then combined with the processed .xml file to generate the final report. A UCM report may have multiple .jrxml files. In UCM, the primary .jrxml file is called the Parent Layout File. The resulting .JASPER file is then combined with the processed .xml file to generate the final report.

Reports included with UCM

The following set of reports is automatically added to the list of Available Reports for each UCM carrier you create:

- Certificate of Origin – Certifies the country of origin of a shipment. (International shipments only.)
- Commercial Invoice – Customs declaration for cross-border export. (International shipments only.)
- End of Day Parcel Manifest – Daily summary of parcel shipments.
- IATA Dangerous Goods – See following Note.
- VICS Bill Of Lading – Per shipment Voluntary Interindustry Commerce Standards (VICS) bill of lading (BOL).
- VICS Consolidated Bill Of Lading – End-of-Day (EOD) VICS Consolidated BOL.

Note: The IATA Dangerous Goods Declaration is included with the Parcel distribution that accesses UCM. This report is the standard IATA Declaration that Parcel provides for dangerous goods shipments and does not use the JasperReports library. This report is listed as an available report for each UCM carrier you create but this means only that the report can be called when the carrier is deployed in Parcel. For this reason, you cannot export this report from the Reports list. However, the code for accessing the IATA Dangerous Goods Declaration in Parcel is included when you export an entire carrier.

Creating or editing report files and adding the report to a carrier

You can perform limited editing of a report from within UCM to change the code, name, or description of the report and to add or delete scripts. However, to add a new report to a carrier, you must first create new .xml and .jrxml files for the report, and then import these files into UCM. The same process holds for editing the content of or reformatting an existing report. You must first export the report, edit the .xml and .jrxml files, and then re-import these files. See the reports included with UCM for examples.

Working with UCM reports

The following topics describe how to work with UCM reports:

- [Select, import, or export a report](#)
- [Edit, remove, or delete a report](#)
- Best practices for working with reports - [Advanced information for reports](#) -[[Add EOD Manifest Default Disclaimer](#)|[Configure objects with a UCM Carrier#Change_EOD_Manifest_Default_Di](#)] -[[Report Scripting](#)|[Configure objects with a UCM Carrier#Report_Scripting](#)]


Select, import, or export a report

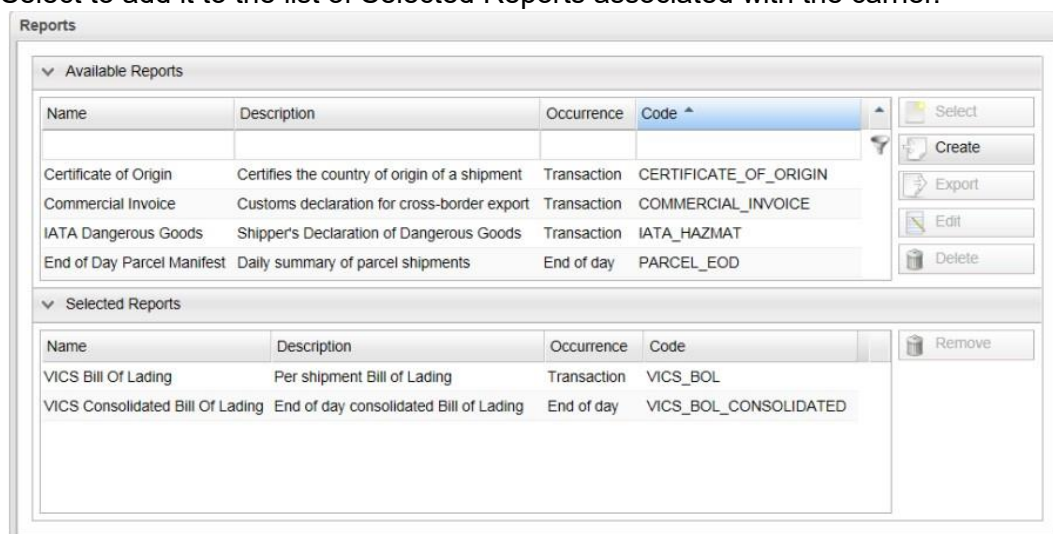
To associate a report with a carrier, you need to select the report from the list of available reports. You can also remove a report from a carrier without deleting the report.

To make a new report or an existing report for which the content or layout is modified available for a carrier, you need to import the .xml and .jrxml files associated with the report. (For more information on these file types, see the topic [Overview of Reports](#).)

Select or remove a report


To select a report for a carrier:

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Reports link under the carrier folder to display the Reports pane.
3. Under Available Reports, click on the report you want to select, and then click Select to add it to the list of Selected Reports associated with the carrier.

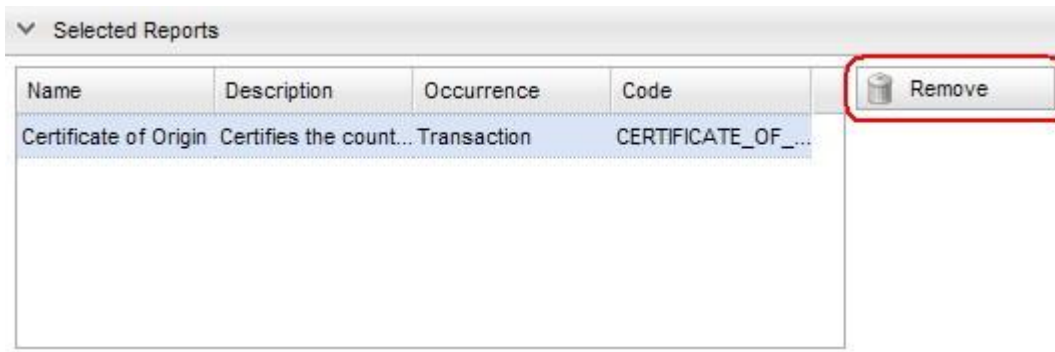


Note: Press CTRL when selecting a report to select multiple reports.

To remove a report from Selected Reports:

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.

2. Click the Reports link under the carrier folder to display the Reports pane.
3. The Import, Export, Edit, and Delete apply to reports in both the Available Reports and Selected Reports lists except the Parcel IATA report.
4. Under Selected Reports, click on the report you want to remove, and then click Remove to remove it from the list of Selected Reports associated with the carrier.



Note:


- Press CTRL when selecting a report to select multiple reports.
- When you remove a report from the Selected Reports list, it appears in the Available Reports list and can be reselected.

Import a report

UCM reports are imported in the form of zip files containing the following report files:

- One .xml file called the "payload" file.
- One or more .jrxml layout files (see step 4a in the following procedure).

To import a report:

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Reports link under the carrier folder to display the Reports pane, and then click Import in the upper right portion of the panel to display the Import Report dialog.

The following illustration shows the Import Report dialog:

Import Report

▼ Basic Information

Code :

Name :

Description :

Report Information

Occurrence :

Import File Name :

The following table lists the basic information for the fields on this dialog:

Field	Max. Length (No. of chars.)	Required
Code	64	Yes
Name	255	Yes
Description	255	No


1. In the Import Report dialog, carry out the following steps under Basic Information:
2. In the **Code** field, type the code for the report; for example: EODCN1
3. Under **Basic Information**, in the Name field, type the name of the report; for example: EOD Consolidation Report 1
4. Under **Basic Information**, in the Description text box, optionally type a description for the report; for example: End of Day consolidation report.
5. Under Report Information, carry out the following steps:
6. From the **Occurrence** drop-down list, select one of the following:
 - End of Day (EOD) – Accept this default so the user can print the report after the day's transactions have been closed.
 - Transaction – Select this option to print the report with each shipment.

Note: Unless scripted to do so, a report does not print automatically with each transaction or at EOD. Typically, a shipping system can also be configured to display a popup dialog with a list of reports to select for printing.

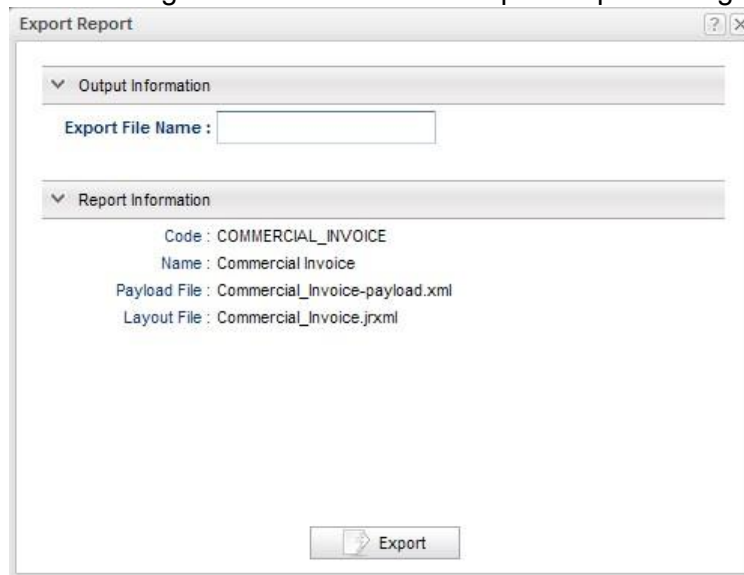
1. In the Import File Name field, click Browse to display the Windows Choose File to Upload dialog.
2. Select the .zip file to import, and then click Open.

3. Click Import to import the .zip file for the report. The text box displays the status of the import, including any errors or warnings. If the import is successful, the dialog displays an "Import succeeded" message, and the imported report appears in the list of Available Reports.

Export a report To export a report:

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Reports link under the carrier folder to display the Reports pane.
3. Select the report you want to export in either the Available Reports list or the Selected Reports list, and then click Export in the upper right portion of the panel to display the Export Report dialog.

The following illustration shows the Export Report dialog:



4. In the Export File Name, type the name of the .zip file for exporting the report, and then click Export to display the Windows File Download dialog.
5. Click Save to open the Windows Save As dialog, select the location where you want the file, and then click Save. Alternatively, click Cancel to cancel the operation.

Notes:

- You cannot open the .zip file to view it in the process of this operation.
- You can modify the filename in the Windows Save As dialog as long as you keep the .zip extension.


Edit or delete a report

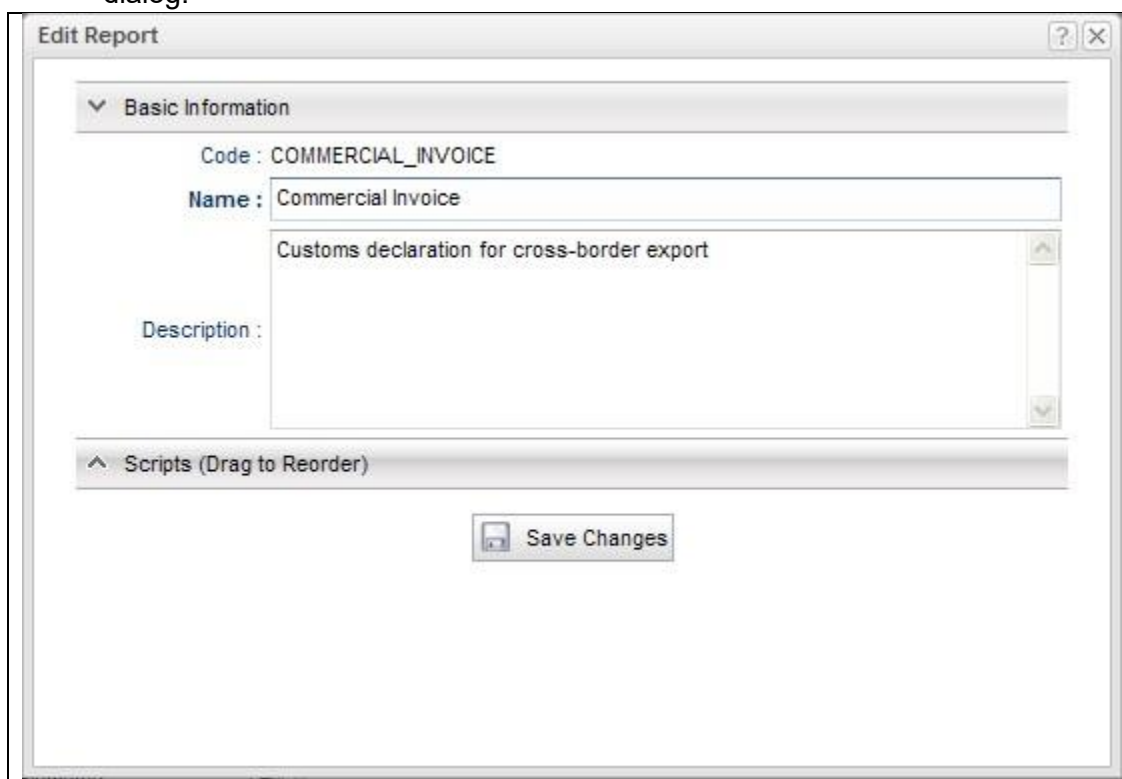
You can perform limited editing of a report directly in UCM for the following items:

- Name
- Description
- Scripts

Otherwise, to edit the content or formatting of a report, you need to modify the code in .xml and/or jrxml files that constitute the report. To do so, you must export the report as a .zip file, open and modify the appropriate files, and then re-import the report. **Note:** You can modify all the fields on the Edit Report dialog except Code. You specify the code for a report when you import the report. Edit a report

To edit a report in UCM:

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Reports link under the carrier folder to display the Reports pane.
3. In either the Available Reports list or the Selected Reports list, do one of the following:
 - Double-click the report you want to edit to display the Edit Report dialog.
 - Select the report you want to edit, and then click Edit to display the Edit Report dialog.



The following table lists the basic information for the fields on this dialog:

Field	Max. Length (No. of chars.)	Required
*Code (not editable – see previous note)	64	Yes
Name	255	Yes

Field	Max. Length (No. of chars.)	Required
Description	255	No

1. Under Basic Information, carry out the following steps:
2. In the **Name** field, optionally modify the name of the report.
3. In the **Description** text box, optionally modify the description of the report.
4. Optionally, modify the script or scripts applied to the report. Click the up arrow (^) next to the word "Scripts" to display the following options for modifying scripts

Add Existing

- – Click Add Existing to display the Select Existing Scripts dialog with a list of available scripts. Select (check) the check box or boxes next to the script(s) you want to add to the billing type, and then click Select to display the selected scripts in the Scripts list.
- Create New – Click Create New to display the Create Script dialog. See the topics under "Create, test, and debug a script." Click Save Changes to display the new script in the Scripts table on the Create Billing Type dialog.
- If, in step 5, you added a script or scripts to the list, select a combination of check boxes in the Pre and Post columns to indicate whether the script should run prior to an event related to printing the report (Pre), after the event (Post), or both.


Caution: If you do not select at least one check box in the Pre or Post columns next to a script, when you save the report, the script is no longer associated with it and does not appear in the list of scripts if you edit this report again.

1. Optionally, to delete a script from the report, clear (deselect) the Pre or Post check boxes for the script. When you save the Report, the script is no longer associated with it. Drag scripts to the order in which you want them to run.
2. Click Save Changes to save your modifications to the report.

Delete a report

You can remove a report from the Selected Reports list, in which case it is no longer associated with the specific UCM carrier but it still appears in the Available Reports list. You can also delete a report, in which case it is no longer immediately available for the carrier (see following Note).

Note: You can delete a standard UCM report from the Available Reports or Selected Reports list for a specific carrier and it is no longer available for that carrier. However, a standard UCM report that is deleted for one carrier remains available for any other carrier where it is not deleted. Thus, if you need a deleted report at a later date and it is on a Reports list (Available or Selected) for another carrier, you can export the report and then import it to the carrier where it is needed. **To delete a report from a carrier:**

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Reports link under the carrier folder to display the Reports pane.
3. In the Available Reports or Selected Reports list, select the report you want to delete, and then click Delete to delete the report from either list.

Best practices for working with reports Advanced information for reports

Overview

Reports are comprised of two components:

1. A payload template file used to map data from UCM to the elements specified in the layout file(s).
2. One or more layout files specifying the layout of report elements.

To generate a report, UCM:

1. Parses the payload template file.
2. Retrieves the data specified in the payload template file.
3. Generates a payload with the same structure as the payload template file, populated with values copied from the payload template file and retrieved from the UCM database.
4. Compiles the layout file(s).
5. Combines the compiled layout file(s) with the payload data file to generate the report PDF.

The payload template file is an XML file which serves as a template for the data required to populate a report. It consists of four primary nodes:

1. A REPORT node identifying the report to which the payload template belongs.
2. A CRITERIA node, which specifies the criteria to use to retrieving shipment data from the UCM database.
3. A STATIC_TEXT node, which should include any static data that needed by the report, such as the actual title text of the report.
4. A DATA node, whose children identify the elements from the UCM database needed by the report.

Each of these nodes is a child of a top-level PAYLOAD node, resulting in a basic structure of:

```
<?xml version="1.0" standalone="yes"?>
<PAYLOAD>
<REPORT uniqueId=""></REPORT>
<CRITERIA></CRITERIA>
<STATIC_TEXT></STATIC_TEXT>
<DATA></DATA>
</PAYLOAD>
```

A layout file is an XML file, with a .jrxml file extension, which specifies the layout of the report. A report will often be comprised of multiple layout files, with one file serving as the master layout and other files used to define the layout of subsections of a report. Layout files are constructed using iReport. A full tutorial on iReport is beyond the scope of this document, but there are areas where the payload template file intersects with the layout files. Where this occurs, this document will stray into iReport territory as necessary.

Criteria Node

The reports included with UCM are primarily concerned with displaying information about one or more shipments, and custom reports are expected to do the same. Shipments, therefore, are the primary unit of data used in report generation. Since a report will be concerned only with some subset of the shipments processed by UCM, a mechanism is needed to identify those shipments. This is the purpose of the CRITERIA node. Multiple criteria can be used to identify the desired reports. For each criterion, a KEY node is specified as a child of the CRITERIA node. A KEY node can be specified in several formats:

1. Data element:
`<KEY key="dataElement"/>`
2. Data element with static value(s): `<KEY key="dataElement">`
`<VALUE>elementValue</VALUE>`
`</KEY>`
3. Data element with dynamic value(s):
`<KEY key="dataElement ">`
`<VALUE type="lookup">dataValueSource</VALUE> </KEY>`
 There are three items of interest present in the three formats:

4. dataElement: The data element to be used to identify shipments. For example, the following node could be used to find shipments shipped using a particular carrier:

```
<KEY key="Shipment.Carrier"/>
```

This basic node format relies on the value of the data element being present in the print generation request. For Parcel the DPRN API includes the carrier for which the report is being generated, so the value is extracted from the API. Consequently, a KEY node containing only a *dataElement* is of limited use.

2. elementValue: A static value for the data element. For example, the following node could be used to identify shipments with a status of Closed or Uploaded for an end-of-day report:

```
<KEY key="Shipment.Status">
<VALUE>CLOS</VALUE>
<VALUE>UPLD</VALUE>
</KEY>
```

3. dataValueSource: The source of a value for the data element. The `type="lookup"`

attribute must be used in concert with a *dataValueSource*. When the value for a data

element is not fixed or can't be known ahead of time, the *dataValueSource* provides

a means for identifying shipments using a dynamic value. For example, the following

can be used to identify shipments based on the date available from the Document.PickupDate date element:

```
<KEY key="Shipment.Ship_Date">
<VALUE type="lookup">Document.PickupDate</VALUE> </KEY>
```

A report using the three examples above would therefore include shipments that were:

- Shipped on the selected carrier

- That have been closed and/or uploaded and
- Shipped on the date selected by the user (from Parcel's Ship->Reports->Carrier Manifests page, for example)

Static Text

Reports contain static values, such as the title of the report, column headers or other text. These static values should be included in the payload template file, not in a layout file. Static text is more easily customized (for example, translated into a different language) if this text is included in the payload template file, as a payload template file is easily edited in a text editor while editing layout files require either iReport or a deep familiarity with the XML generated by iReport.

The children of the STATIC_TEXT node specify individual static values to be included on a report. The format of these nodes is basic: `<NAME>Static value</NAME>`

For example, a node to specify the title of the report:

```
<PAYLOAD>
...
<STATIC_TEXT>
<TITLE>My Report Title</TITLE>
...
</STATIC_TEXT>
...
</PAYLOAD>
```

While it is expected that the STATIC_TEXT node will contain just a list of one-level-deep child nodes, nothing prevents the use nested children. The entire STATIC_TEXT node, including all its children, is copied verbatim from the payload template file to the generated payload file.

Mapping Payload Templates Nodes to Layout Fields

The nodes included in the generated payload file need to be mapped to the fields in the layout files where their values should be displayed. This mapping occurs in the layout files. To perform this mapping, you will need to open the layout file(s) in iReport and:

1. Define a Field. Do this by right-clicking the Fields item in the Report Inspector tree and selecting Add Field.
2. Specify a Name and Description for the field. Select the field in the Report Inspector tree, and use the Properties window to specify these values. The Name can have any value you like. The Description field must be the full path to the node in the payload template file. Given our example above, the Description field for the Field representing the report title should be given a value of `/PAYLOAD/STATIC_TEXT/TITLE`.
3. Position a Text Field on your report where desired. Set the Text Field to use your defined Field as its value by setting the Text Field Expression property of the Text Field. For example, if your defined Field was given a name of Report_Title, you would specify a Text Field Expression of `$F{Report_Title}`.

Data Payload

Obtaining the desired pieces of shipment and other data for inclusion in a report is accomplished using the DATA node. Each desired piece of shipment data is specified by a child node of DATA, and the node has a general format of:

```
<NAME attribute="value"/>
```

1. NAME is the node name that Jasper will recognize. In addition, it can serve to partially or completely specify a piece of data to extract from UCM.
2. attribute can vary, and primarily identifies how value is interpreted. There are several supported attributes:
 - a. data: identifies the value as a data element to be retrieved from the UCM database. UCM uses a native representation of standard shipment data (refer to the index), and nodes with a data attribute use that representation to identify a piece of information. **Note:** Nodes without an explicit attribute are assumed to be data nodes.
 - b. api: identifies value as being a Parcel API key. Where UCM does not provide a native representation for a piece of data, the Parcel API key can be used to identify that piece of data. For example, the node: `<CUSTOMER_NUM api="SFCUSTNUM"/>` will retrieve the value of the SFCUSTNUM key included in the SHIP API used to create a shipment.
 - c. type: specifies a key to be used to select from a collection of data. For example, a shipment includes data on at least two addresses, the shipper and receiver address. To differentiate the two, the type attribute can be used. The node: `<ADDRESS type="shipfrom">` will retrieve the shipper address, while the node: `<ADDRESS type="shipto">` will retrieve the receiver address.
 - d. section: specifies how frequently the children of the should appear on the report. In essence, this controls whether the child nodes will appear only once, or will appear once for each related data set in the retrieved shipment data. There are X possible values:
 - e. once: child nodes should be printed to the report one time only. An example of when this might be used is in specifying the shipper information. Each shipment included on a report may originate from the same shipper; this information is available in each shipment, but need only be retrieved from one shipment:

```

<HEADER section="once">
<SHIPMENT>
<ADDRESS type="shipfrom">
<COMPANY_NAME/>
<ADDRESS1/>
<ADDRESS2/>
<ADDRESS3/>
<CITY/>
<STATE_PROVINCE/>
<POSTAL_CODE/>
</ADDRESS>
</SHIPMENT>
</HEADER>

```

As there can be multiple shipments retrieved for a report, and multiple packages and/or items in a shipment, once should be used only when the desired value is common to each element in a data collection.

1. multiple: child nodes should be printed to the report once for each shipment in the data set. An example is the receiver's address, which will likely be different for each shipment: <BODY section="multiple">

```
<SHIPMENT>
<ADDRESS type="shipto">
<COMPANY_NAME/>
<ADDRESS1/>
<ADDRESS2/>
<ADDRESS3/>
<CITY/>
<STATE_PROVINCE/>
<POSTAL_CODE/>
</ADDRESS>
</SHIPMENT>
</BODY>
```

2. aggregate: this attribute is used to aggregate a value from a collection of data elements (ie Shipment, Package, or Item). For example, a report may need to include the grand total weight of all shipments included on the report. An aggregate node will iterate through all of the shipments, aggregate the specified value and include the aggregated value in the payload data file. For example, to calculate the total weight of all packages in a shipment, you could use the node:

```
<WEIGHT_SUB aggregate="Shipment.Package.Weight"/>
```

The data payload is constructed through the use nodes. Nodes that include an attribute and value tend to include all the information needed to identify a piece of data. For example, to retrieve the width of a package, the following node can be used:

```
<PACKAGE_WEIGHT data="Shipment.Package.Weight"/>
```

Specifying the full context of a piece of data, however, would be verbose. To simplify the payload template file, nodes without an attribute are interpreted as data nodes. In this case, the node name is interpreted as a portion of the value identifying a data element. For example, consider a report that should display the weight of each shipment, and the dimensions of each package in that shipment. A straightforward XML structure for representing those data elements, based on the data elements defined by UCM (refer to the index), would be:

```
<SHIPMENT>
<WEIGHT/>
<PACKAGE>
<LENGTH/>
<WIDTH/>
<HEIGHT/>
</PACKAGE>
</SHIPMENT>
```

When generating the report, UCM will interpret these nodes as:

```
<SHIPMENT data="Shipment">
<WEIGHT data="Shipment.Weight"/>
<PACKAGE data="Shipment.Package"/>
<LENGTH data=" Shipment.Package.Length"/>
<WIDTH data=" Shipment.Package.Width"/>
<HEIGHT data=" Shipment.Package.Height"/>
```

</PACKAGE>

</SHIPMENT>

As each node is processed, UCM will attempt to lookup the interpreted value of each data node. In the case of the SHIPMENT and PACKAGE nodes, there is no single value available so no value is included in the generated payload file. For the other four nodes there are values available, and these values are included in the generated payload file.

Index

This index lists the data elements built-in to UCM that can be retrieved using data nodes, either by specifying them directly using the data attribute or by structuring your payload template file correctly.

Shipment

ActualCarrier

Address

Type values:

shipfrom

shipto

altret1

altret2 billto

ArriveDate

ArriveTime

Carrier

Charge

DeliveryDate

Intl

Item

Location

MSN

Option

Package

PLDFileNumber

PayTerms

RouteCode

Service

ShipDate

ShipmentId

SpotRate

Status

TintCalcMethod

ToZone

TrackNum

TrailerId

Value

Weight

WeightUom

Package

Charge

DimensionalWeight

Height

Length
Option
PackType
Reference
TrackNum
Uom
VolumeWeight
Weight
WeightUom
Width
Address
Account
Address1
Address2
Address3
City
Code
CompanyName
ContactName
CountryCode
CountryName
Email
FaxNumber
GovernmentId
PhoneNumber
PostalCode
Residential
StateProvince
Type
Reference
Item
Description
EccnNumber
HarmonizedCode
ItemCode
ItemUom
LicenseExpdate
LicenseNo
LicenseSymbol
NaftaFlag
NoPkgsPerCommodity
OriginCountry
PackId
PreferenceCriterion
PrintCo
PrintFcc

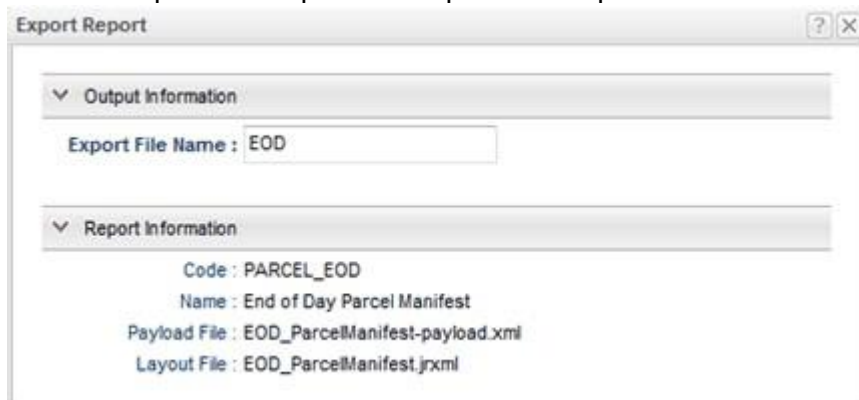
PrintFda
Producer
Quantity
RegionalValueContent
SchedulebUnits1
SchedulebUnits2
SchedulebUom1
SchedulebUom2
SedAmount
UnitValue
Weight
International String:
AdditionalComments
CarrierIdCode
ConsolidateQty
CurrencyCode
DeclarationStatement
DiscountAmt
DocumentsFlag
DutyTaxesBy Eccn
EntryNumber
ExportPartiesFlag
ExportReason
FreightChg
GoodsDescription
GoodsNotFree
InBondCode
IncoTerm
InsuranceChg
InvoiceAmount
ItnNumber
MrnNumber
OriginCountry
OtherChg
SedCode
UltimateDestCountry
XtnSuffix
Option
OptionName
OptionNalue
Charge
ChargeName
Charge
Document
EsmFileName
FileNames
IsPrinted
ManifestNumber
OutputDir

PickupDate
 PldFileNumber
 ReferenceNumber
 TrailerId

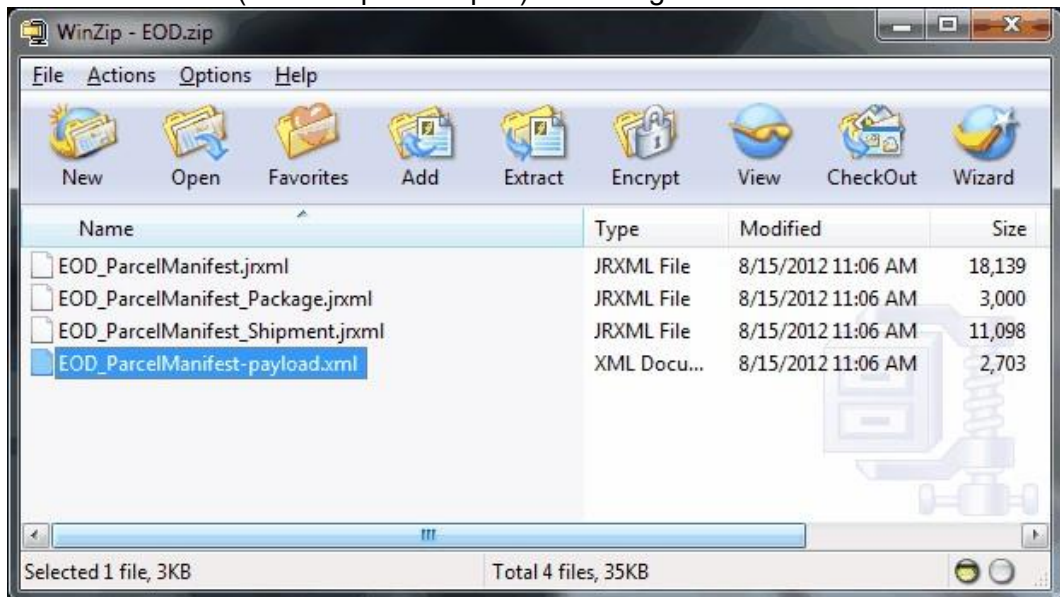
Add EOD Manifest Default Disclaimer

To add an EOD Manifest Default Disclaimer:

1. In UCM, under a carrier definition, select Reports, and then select End of Day Parcel Manifest.
2. Click the Export and export the Report as a .zip file to a local folder.



3. Open the exported .zip file, and then open the EOD_ParcelManifest-payload.xml file in a text editor (for example Notepad) for editing.



4. Locate the section that starts with <STATIC_TEXT> and ends with </STATIC_TEXT>:

```

EOD_ParcelManifest-payload.xml - Notepad
File Edit Format View Help

    <VALUE>UPLD</VALUE>
  </KEY>
</CRITERIA>
<STATIC_TEXT>
  <TITLE>Parcel Carrier Shipping Manifest</TITLE>
  <DATE>Date:</DATE>
  <SHIP_FROM>Ship From:</SHIP_FROM>
  <MANIFEST_NUM>Manifest #:</MANIFEST_NUM>
  <CUSTOMER_ID>Customer ID #:</CUSTOMER_ID>
  <CARRIER_NAME>Carrier Name:</CARRIER_NAME>
  <TRAILER_ID>Trailer ID: </TRAILER_ID>
  <SHIP_TO>Ship To:</SHIP_TO>
  <REFERENCE_NUMS>Reference #'s</REFERENCE_NUMS>
  <REFERENCE1>Ref 1</REFERENCE1>
  <REFERENCE2>Ref 2</REFERENCE2>
  <REFERENCE3>Ref 3</REFERENCE3>
  <REFERENCE4>Ref 4</REFERENCE4>
  <REFERENCE5>Ref 5</REFERENCE5>
  <PIN>PIN/Tracking Numbers</PIN>
  <DIMENSIONS>Dimensions</DIMENSIONS>
  <WEIGHT>weight</WEIGHT>
  <SHIPMENT_TOTAL>Shipment Sub-Totals</SHIPMENT_TOTAL>
  <GRAND_TOTAL>Manifest Grand Totals</GRAND_TOTAL>
  <DISCLAIMER></DISCLAIMER>
  <SHIPPER_SIG>Shipper's Signature</SHIPPER_SIG>
  <DRIVER_SIG>Driver's Signature</DRIVER_SIG>
  <DATE>Date</DATE>
</STATIC_TEXT>
<DATA>
  <WEIGHTUOM data="Shipment.UI_UNIT_OF_MSR"/>
  <REF1_ALIAS api="REF1_ALIAS"/>
  <REF2_ALIAS api="REF2_ALIAS"/>
  <REF3_ALIAS api="REF3_ALIAS"/>
  <REF4_ALIAS api="REF4_ALIAS"/>

```

- On the line `<DISCLAIMER></DISCLAIMER>` add the new disclaimer text between the two bracketed items as follows:
`<DISCLAIMER>new_disclaimer</DISCLAIMER>`:

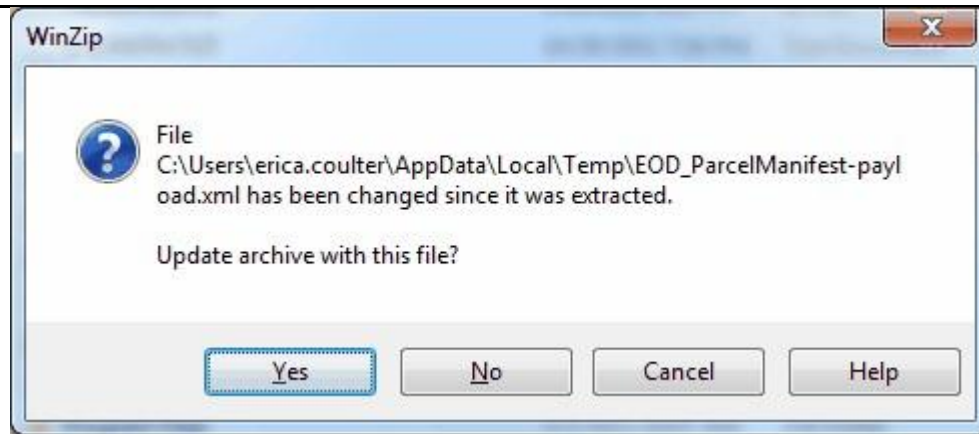
```

EOD_ParcelManifest-payload.xml - Notepad
File Edit Format View Help

    <VALUE>UPLD</VALUE>
  </KEY>
</CRITERIA>
<STATIC_TEXT>
  <TITLE>Parcel Carrier Shipping Manifest</TITLE>
  <DATE>Date:</DATE>
  <SHIP_FROM>Ship From:</SHIP_FROM>
  <MANIFEST_NUM>Manifest #:</MANIFEST_NUM>
  <CUSTOMER_ID>Customer ID #:</CUSTOMER_ID>
  <CARRIER_NAME>Carrier Name:</CARRIER_NAME>
  <TRAILER_ID>Trailer ID: </TRAILER_ID>
  <SHIP_TO>Ship To:</SHIP_TO>
  <REFERENCE_NUMS>Reference #'s</REFERENCE_NUMS>
  <REFERENCE1>Ref 1</REFERENCE1>
  <REFERENCE2>Ref 2</REFERENCE2>
  <REFERENCE3>Ref 3</REFERENCE3>
  <REFERENCE4>Ref 4</REFERENCE4>
  <REFERENCE5>Ref 5</REFERENCE5>
  <PIN>PIN/Tracking Numbers</PIN>
  <DIMENSIONS>Dimensions</DIMENSIONS>
  <WEIGHT>weight</WEIGHT>
  <SHIPMENT_TOTAL>Shipment Sub-Totals</SHIPMENT_TOTAL>
  <GRAND_TOTAL>Manifest Grand Totals</GRAND_TOTAL>
  <DISCLAIMER>Coultter Transportation Standard Terms and Conditions Apply</DISCLAIMER>
  <SHIPPER_SIG>Shipper's Signature</SHIPPER_SIG>
  <DRIVER_SIG>Driver's Signature</DRIVER_SIG>
  <DATE>Date</DATE>
</STATIC_TEXT>
<DATA>
  <WEIGHTUOM data="Shipment.UI_UNIT_OF_MSR"/>
  <REF1_ALIAS api="REF1_ALIAS"/>
  <REF2_ALIAS api="REF2_ALIAS"/>
  <REF3_ALIAS api="REF3_ALIAS"/>
  <REF4_ALIAS api="REF4_ALIAS"/>

```

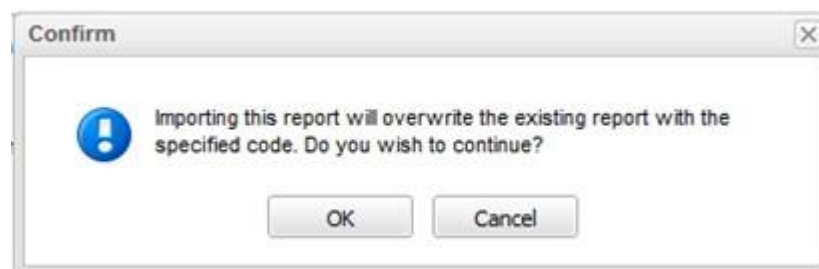
- Save the file, and then click Yes when asked to update the archive with this file.



7. Import the report into the UCM carrier for which you want the disclaimer to appear.

An "Import Report" dialog box with a light gray header bar. It has two sections: "Basic Information" and "Report Information". Under "Basic Information", there are fields for "Code" (PARCEL_EOD), "Name" (End of Day Parcel Manifest), and "Description" (Daily Summary of parcel shipments). Under "Report Information", there are fields for "Parent Layout File" (EOD_ParcelManifest.jrxml), "Occurrence" (End of Day), and "Import File Name" (C:\EOD.zip) with a "Browse..." button.

1. Confirm that you want to overwrite the existing End of Day Parcel Manifest report.



The new disclaimer statement will appear on the standard report under Manifest Grand Totals:

Parcel Carrier Shipping Manifest				
Date: 2012-08-13				
Ship From: Mr. C. Ford 1 Executive Drive Suite 3 Chelmsford, MA, 01824		Manifest #: ALL Customer ID #: 123456789 Carrier Name: Coulter Transportation Trailer ID:		
Page 1 of 1				
Ship To	Reference #'s	PIN/Tracking Numbers	Dimensions	Weight
Coulter Industries 1 Executive Drive Chelmsford, MA 01824		02170	10X10X10 inch	10 lbs
Manifest Grand Totals				10 lbs
Coulter Transportation Standard Terms and Conditions Apply				
Shipper's Signature _____		Date: _____		
Driver's Signature _____		Date: _____		

Report scripting

Use JavaScript script nodes

You can script behavior directly in a payload template by including JavaScript code nodes.

Examples

The following code:

```
<PICKUP_DATE debug="false">
```

```
<![CDATA
```

```
getAPIValue("PICKUPDATE")
```

```
>
```

```
</PICKUP_DATE>
```

Can be used in place of an equivalent API node:

```
<PICKUP_DATE api="Document.PickupDate"/>
```

A single script node can be used to construct a large portion of the payload data file. For example, where a payload template can be written with individual nodes for each piece of data:

```
<BODY section="multiple">
```

```
<SHIPMENT>
```

```
<ADDRESS type="shipto">
```

```
<COMPANYNAME/>
```

```
<ACCOUNT/>
```

```
<CITY/>
```

```
<POSTALCODE/>
```

```

</ADDRESS>
<PACKAGE>
<LENGTH/>
<WIDTH/>
<HEIGHT/>
<WEIGHT/>
</PACKAGE>
<WEIGHT_SUB aggregate="Shipment.Package.Weight"/>
</SHIPMENT>
</BODY>
<span style="color: #363636">A single script node can be used in its place:</span>
<BODY debug="true"> <!CDATA
var service = getAPIValue("SERVICE"); //
Data can be easily manipulated
var shipDate = pickupDate.substr(0, 4) + "-" + pickupDate.substr(4, 2) + "-" +
pickupDate.substr(6); // Queries shortened for space var address_query
= "SELECT sa.Shipment_idHib ..."; var package_query = "SELECT
sp.Shipment_idHib ..."; var address_data =
executeQuery(address_query); var package_data =
executeQuery(package_query); var numRows =
getNumRows(package_data);
var output = "";
for (var i = 0; i < numRows; i++) {
for (var j = 0; j < getNumRows(address_data); j++) {
if (package_data[i] == address_data[j]) { output +=
"<SHIPMENT><ADDRESS>"; var companyName
= address_data[j][1]; output += "<COMPANYNAME>";
output += companyName; output +=
"</COMPANYNAME>"; var city = address_data[j][2];
output += "<CITY>"; output += city; output +=
"</CITY>"; var postalCode = address_data[j][3];
output += "<POSTALCODE>"; output +=
postalCode; output += "</POSTALCODE>"; output
+= "</ADDRESS>"; output += "<PACKAGE>"; var
UOM = package_data[i][10]; output += "<UOM>";
output += UOM; output += "</UOM>";
// Output of additional nodes omitted
}
}
}

```

```

output; >
</BODY>
<span style="color: #363636">While using a script may seem more complex, it provides
greater flexibility. In the <BODY> example above, the script can be used to control the
order in which the shipment data is written to the payload data file, and therefore on the
final report. In this example, the SQL queries used to retrieve the data could include an
ORDER BY statement to specify the order.</span>
<span style="color: #545f66"><strong>Define a Script Node</strong></span> <span
style="color: #363636">Script nodes are identified by the debug attribute, which has a
value of "true" or "false" as in the following examples:</span>
<MYNODE debug="true"></MYNODE>
<span style="color: #363636">Or:</span>
<MYNODE debug="false"></MYNODE>
<span style="color: #363636">This value controls whether the script contained within the
node is presented to the user for debugging when the report is generated. If a node
does not have the debug attribute, its content is not interpreted as a script.</span>
<span style="color: #363636"><strong><em>Note:</em></strong> The script embedded
within a script node must be embedded within a CDATA section. For example:</span>
<MYNODE debug="true">
<![CDATA
// Script goes here
>
</MYNODE>
<span style="color: #363636"><strong><em>Caution:</em></strong> Take care when
using script nodes with other types of nodes to process the same data. Script nodes are
not constrained by the CRITERIA nodes used to retrieve the shipments processed by
other node types. As a rule of thumb, all values used in a CRITERIA node should be
mirrored in the WHERE statement of SQL queries used in a script to retrieve shipment
data.</span>

```

Routing Methods

Overview of Routing Methods

A routing method typically includes a set of specific origin-destination pairs using postal codes, city and state or province information, etc. You can add scripts to a routing method and add a routing method to a carrier and a service. Additionally, you can add routes to a routing method manually (individual routes) or by importing a routing file. You create a routing method at the carrier level, and then select a routing method for a particular service.

The following topics describe routing methods and routes in UCM:

- Create a routing method
- Manage routes
- Add a routing method to a service

- Best practices for working with routing methods

Notes:

- Routes created as part of a carrier cannot be viewed or managed at the carrier instance level (carrier as deployed in a shipping system). Additionally, any routes that you import at the carrier instance level supercede those created at the definition level.
- In terms of data types and formatting, routes are virtually identical to zones. The difference is that zones are used for rating purposes where routes are typically used in conjunction with multi-leg shipments and for labels and reports to ensure fast and accurate delivery.
- For information on adding a routing method to a service, see the topic: [Add or remove objects within a service](#).

Working with routing methods


The following topics describe how to work with UCM routing methods and routes:

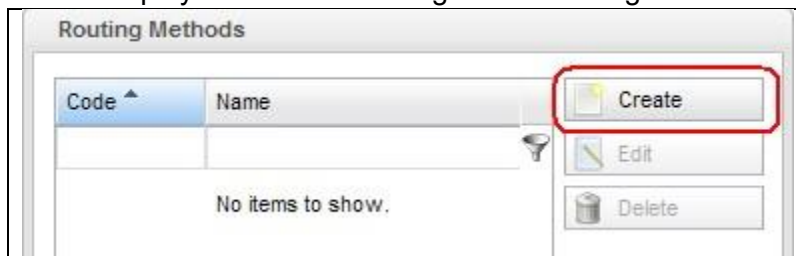
- [Create a routing method](#)
- [Edit or delete a routing method](#)
- [Manage routes](#)

Create a Routing Method

Create a routing method

To create a carrier-level routing method:

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Routing Methods link under the carrier folder to display the Routing Methods pane, and then click Create in the upper right portion of the panel to display the Create Routing Method dialog.



The following illustration shows the Create Routing Method dialog:

The screenshot shows a 'Create Routing Method' dialog box with the following fields and sections:

- Basic Information:**
 - Code :** A text input field.
 - Name :** A text input field.
 - Description :** A large text area with a vertical scrollbar.
- Routing Method:**
 - Response API Key :** A text input field.
 - Save Changes and Manage Routes:** A button.
- Scripts (Drag to Reorder):** A section with an up arrow icon.
- Save Changes:** A button at the bottom.

The following table lists the basic information for the fields on the this dialog:


Field	Max. Length (No. of chars.)	Required
Code	64	Yes
Name	255	Yes
Description	255	No

1. In the Create Routing Method dialog, carry out the following steps:
2. Under Basic Information, in the **Code** field, type the code for the routing method; for example: RTM1
3. Under Basic Information, in the **Name** field, type the name of the routing method; for example: Routing Method One
4. Under Basic Information, in the **Description** text box, optionally type a description for the routing method; for example: Routing method for this carrier.
5. Under Routing Method, in the API key field, type the name of the API key you want to use to store the results of the routing method for future use. For example, the routing code can be printed on the label.
6. Under Scripts, optionally, to add a script to the routing method, click the up arrow (^) next to the word "Scripts" for the following options:

- Add Existing – Click Add Existing to display the Select Existing Scripts dialog with a list of available scripts. Select (check) the check box or boxes next to the script(s) you want to add to the routing method, and then click Select to display the selected scripts in the Scripts table on the Create Routing Method dialog.
 - Create New – Click Create New to display the Create Script dialog. See the topics under "Create, test, and debug a script." Click Select to display the new script in the Scripts table on the Create Routing Method dialog.
1. If, in step 5, you added one or more scripts, select Pre or Post for each of these scripts to indicate whether the script is to run before or after the routing method is applied.
 2. **Caution:** If you fail to make this selection, the script is not saved when you click Save Changes.
 3. If, in step 5, you added more than one script, arrange the scripts in the list in the order you want them to run. To do so, drag a script to the desired position. **Note:** For information on working with scripts, see the topics under "Scripts."
1. Click Save Changes and Manage Routes to save the routing method and display the Routes Editor or click Save Changes if you do not want to add routes at the definition level.
 2. Use the Routes Editor to manage the routes associated with this routing method. See the following topic: Manage routes.

Edit or Delete a Routing Method

You must edit a routing method at the carrier level. You can also delete a routing method from a carrier, in which case it is no longer available to apply to any service. Edit a routing method **To edit a routing method:**

1. In UCM, click the plus sign  next to the carrier to display the set of objects associated with the carrier.
2. Click the Routing Methods link to display the list of routing methods associated with the carrier.
3. Carry out one of the following actions:
 - Double-click the routing method you want to edit to display the Edit Routing Method dialog.
 - Select the routing method you want to edit, and then click Edit to display the Edit Routing Method dialog.

Edit Routing Method

Code: RM1

Name: Routing Method One

Description:

Routing Method

Response API Key: ROUTE_ONE

Save Changes and Manage Routes

Scripts (Drag to Reorder)

Save Changes

1. Modify any parameters, routes, scripts, or script ordering that need changing. For more information, see the following topic: [Create a routing method](#). Also see the following topic: [Manage routes](#).

Note: The fields and buttons on the Edit Routing Method dialog are identical to those on the Create Routing Method dialog. However, you cannot modify the value for Code.


2. Click Save Changes to save your changes to the routing method.

Note: When you save changes to a routing method, every occurrence of this routing method associated with a service automatically incorporates these changes.

Delete a routing method

When you delete a routing method from a carrier, that routing method is removed from all services with which it is associated and is no longer available for adding to any services belonging to the carrier.

To delete a routing method from a carrier:

1. In UCM, click the plus sign  next to the carrier to display the set of objects associated with the carrier.
2. Click the Routing Methods link to display the Routing Methods pane with the list of routing methods belonging to the carrier.
3. Select the routing method to delete, and then click Delete to display the Confirm dialog.



Note: To select multiple routing methods to remove, press CTRL when selecting the rows.

1. Click OK to permanently delete the routing method from the carrier or click Cancel to exit the dialog without deleting the routing method.

Caution: There is no undo for this operation. Additionally, if a deleted routing method is associated with a service it is automatically removed from the service when you delete it from the carrier.

Manage routes

You can manage the routes associated with a routing method using the Routes Editor in the following ways:

- Add a route manually
- Edit a route
- Delete a route
- Import a route file **Notes:**
- You do not need to manage routes at the carrier definition (UCM) level. You can also manage them at the carrier instance level in your shipping system. Additionally, you can create routes at the definition level, and then overwrite them, where necessary, at the instance level. Note, however, that you cannot manage the same data at both levels. Data entered at the instance level overrides definition data.
- Routes created at the carrier definition level are used at the instance level but cannot be viewed there.

Open the Routes Editor

To open the Routes Editor:

Carry out one of the following actions:

- Create a routing method, and then click Save and Manage Routes. This action displays the Routes Editor with no data, enabling you to add routes for the new routing method either manually or by importing a route file.
- Select a routing method in the Routing Methods pane, and then click Edit. You can then modify, add to, or delete existing routes and click Save Changes and Manage Routes.

Effective Date	Origin GeoCode	Destination GeoCode	Route Code
07/05/2012	chlm	chlm	CHLM
07/05/2012	chlm	wstf	CHLM-WSTF

Showing Records 1 - 2 of 2

Use the pagination buttons on the label bar at the bottom of the Routes Editor to navigate among multiple pages of routes as follows:

- First page button (|<) – Go to the first page of records.
- Previous button (<) – Go to the previous page of records.
- Next button (>) – Go to the next page of records.
- Last page button (>|) – Go to the first page of records.

Notes:

- The label bar shows the number of records currently displayed onscreen, as well as the total number of records.
- Edited records remain on the screen until you click Save Changes. These records are displayed as follows:
- When an entry is edited, cells that changed appear in blue. - When an entry is added, all cells that have entries appear in blue. - When an entry is deleted, it appears in gray and each cell has a line through it.

Add a route manually **To**

add a route:

1. In the Routes Editor, click Add Route to display a new line for entering route data.
2. Place the cursor in the following fields and specify values:

Overview of Universal Carrier Module

In this field...	Do this...
------------------	------------

Effective Date	Enter the date on which the route becomes effective or click the calendar icon to select a date. The date format is MM/DD/YYYY.
Origin GeoCode	Enter an origin GeoCode. (For a description of GeoCode, see the Note following this table.)
Destination GeoCode	Enter a destination GeoCode. (For a description of GeoCode, see the Note following this table.)
Route Code	Enter a code for the route. This can be any alphanumeric code; for example: 1

Note: A GeoCode is an alphanumeric geographic code for an origin or destination; for example: METFRAGER for Metropolitan Frankfurt, Germany. You can create a set of GeoCodes using the UCM Geographic Codes object. See the topics under "Geographic Codes."

3. Click outside the fields in the route to re-activate the buttons, and then click Save Changes to save the routes that you added.

Edit a route

Note: To filter for a subset of routes in the Routes Editor, type the filter criteria in the row at the top with the funnel icon on the right. You can also select a date filter using the calendar icon. When your criteria are complete, the list is automatically filtered according to these criteria. **To edit a route**

1. In the Routes Editor carry out one of the following actions:
 - - Double click on the Route you want to edit to make the fields editable.
 - Click on the route to select it, and then click Edit.
2. Modify values as desired for the route. (See the previous procedure for a description of the columns.)
3. Click outside the fields in the route to re-activate the buttons, and then click Save Changes to save your changes.

Delete a route **To**

delete a route:

Select the route and then click Delete. To delete multiple routes, hold down the CTRL key when selecting routes to delete. Click Save Changes to save the updated rates.

Caution: When you delete a route or routes, you are asked to confirm the deletion and are warned that there is no undo.

Import a route file

Route files are CSV files containing a set of routes.

Sample route file

A route file must have the following format:

origin,destination,route_code For
example:

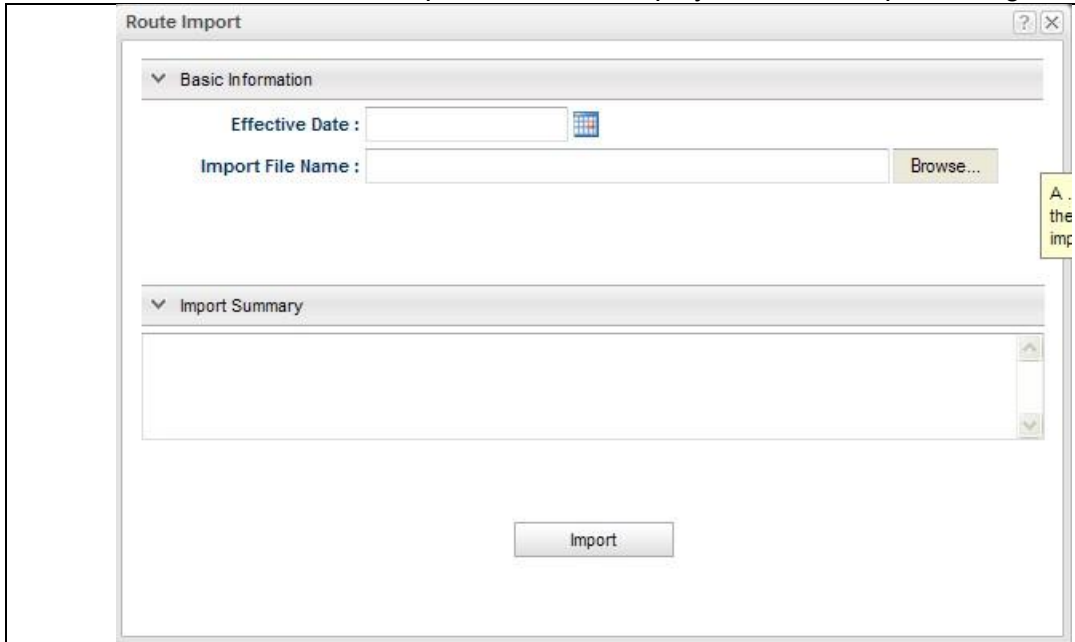
```

origin,destination,route_code
A1,A2,A3
A1,A1,A1
A2,A1,A3
A2,A2,A1
A3,A2,A2

```

To import a route file:

1. In the Routes Editor, click Import Routes to display the Route Import dialog:



2. Click the calendar icon to specify the date when the routes go into effect.
3. Click Browse to display the Windows file dialog, select the route file to import, and then click Open.
4. Click Import to import the routes in the file and display them in the routes list of the Routes Editor.
5. Click Save Changes to save the routes.

Route File Format

A route file must be Comma Separated format (CSV) and the column names must be formatted as follows:

origin,destination,route_code Values
in the columns are as follows:

- origin – origin geographic code
- destination – destination geographic code
- route_code – route code **Notes:**
- For route files, you specify Effective Date when you import the file.

- You can specify the value ALL for origin and destination geographic codes. For information on geographic codes, see the topics under "Geographic Codes." The following is an example of a route file:

```
origin,destination,route_code
ALL,T00001,CBR
ALL,T00002,CBR
ALL,T00003,DWN
ALL,T00004,DWN
ALL,T00005,DWN
ALL,T00006,DWN
ALL,T00007,DWN
ALL,T00008,DWN
ALL,T00009,DWN
ALL,T00010,DWN
ALL,T00011,DWN
```

Sequence and Tracking Numbers

Overview of sequence numbers and tracking numbers

Setting up tracking numbers in UCM consists of the following objects:

- Sequence number – An auto-incrementing number created at the carrier level that serves as the starting point for a sequence of tracking or manifest numbers.
- Tracking number generator – Configures the generation of tracking numbers based on a sequence number and includes checkdigit methodology and scripting. As part of setting up a service, you have the option to select a tracking number generator if one is set up.

Note: If you do not specify a tracking number generator for a service, UCM defaults to random alphanumeric tracking numbers.

Working with sequence numbers and tracking numbers

The following topics describe how to set up sequence numbers and tracking numbers:


- [Create, edit, or delete a sequence number](#)
- [Create, edit, or delete a tracking number generator](#)
- [Best practices for working with tracking numbers](#)

Create, edit, or delete a sequence number

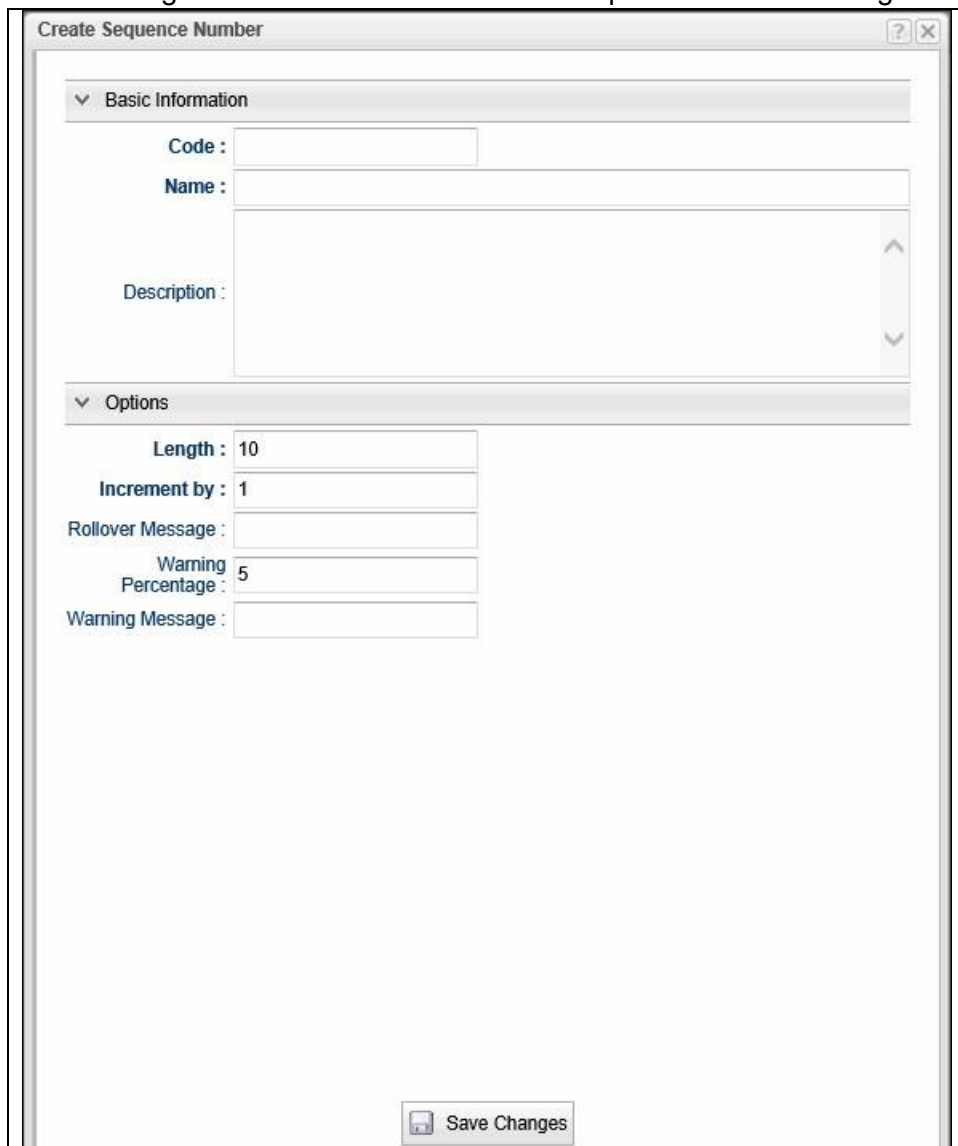
A sequence number specifies the length of tracking numbers created by a tracking number generator and the amount to be incremented for each tracking number in the sequence. If, for example, a sequence number consists of 10 digits, the tracking numbers generated from it will typically range from 0000000001 to 9999999999. If the sequence number has an increment of 1, then the tracking numbers generated from it will have the sequence 0000000001, 0000000002, 0000000003...9999999997, 9999999998, 9999999999. When the tracking numbers reach the limit of the sequence, they can use a rollover range to continue generating tracking numbers. You can set a rollover range when configuring a UCM carrier with your shipping system.

Caution: In addition to setting up the sequence number length and increment in UCM, you also need to configure the actual process of generating tracking numbers within your shipping system itself. For example, when configuring a carrier for your system, you typically need to specify initial and final tracking numbers for the tracking number range, and a tracking number rollover range. If you fail to configure a rollover range, when the upper end of the sequence is reached, the user receives an error message to update sequence data and can no longer ship until this action is carried out.

Create a sequence number **To create a sequence number:**

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Sequence Numbers link under the carrier folder to display the Sequence Numbers pane, and then click Create in the upper right portion of the panel to display the Create Sequence Number dialog.

The following illustration shows the Create Sequence Number dialog:



The illustration shows a dialog box titled "Create Sequence Number". It contains two main sections: "Basic Information" and "Options".

Basic Information:

- Code :** A text input field.
- Name :** A text input field.
- Description :** A large text area with a vertical scrollbar.

Options:

- Length :** A text input field with the value "10".
- Increment by :** A text input field with the value "1".
- Rollover Message :** A text input field.
- Warning Percentage :** A text input field with the value "5".
- Warning Message :** A text input field.

At the bottom right of the dialog is a button labeled "Save Changes".

The following table lists the basic information for the fields on this dialog


Field	Max. Length (No. of chars.)	Required
Code	64	Yes
Name	255	Yes
Description	255	No

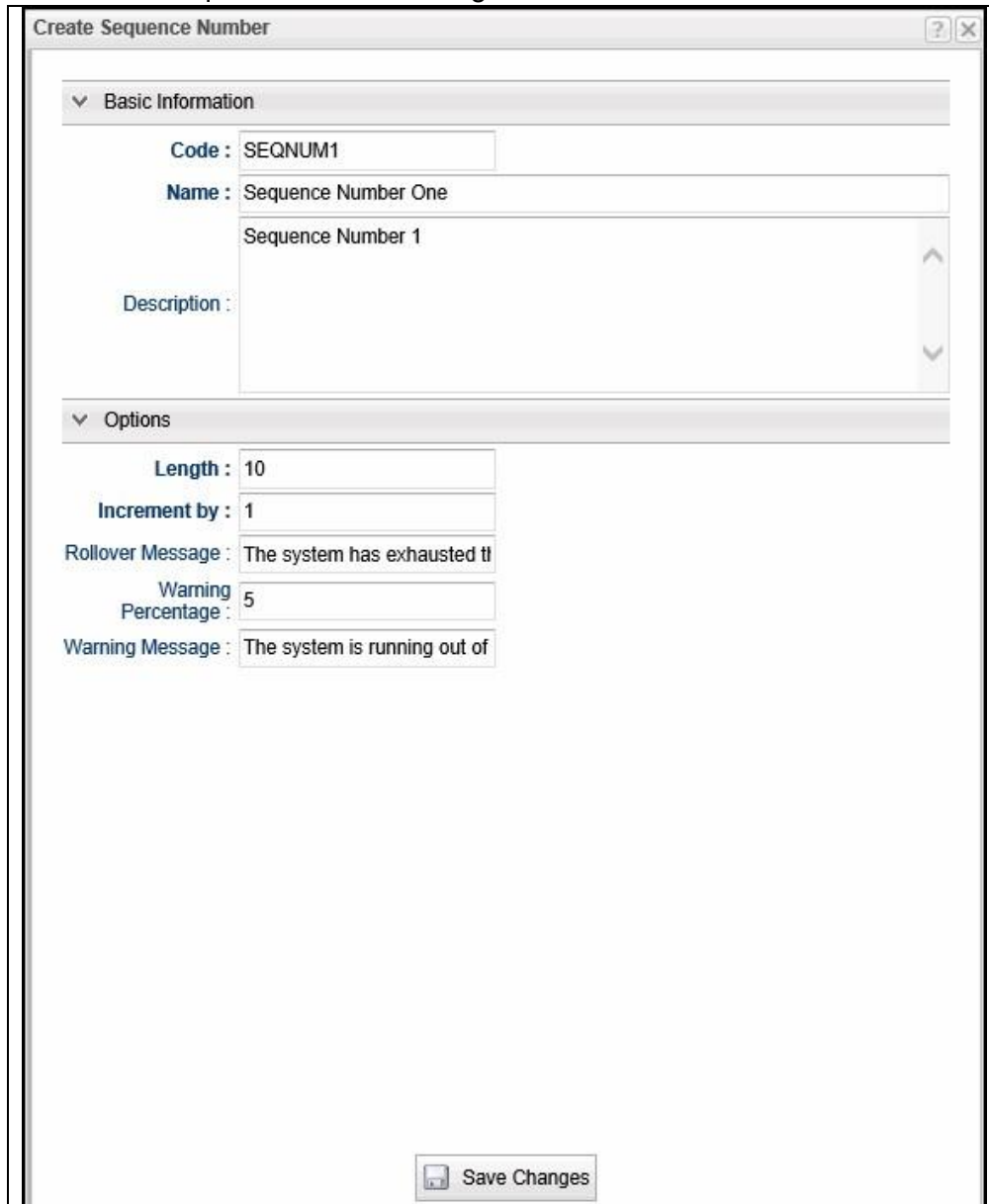
1. In the Create Sequence Number dialog, carry out the following steps:
2. Under Basic Information, in the **Code** field, type the code for the sequence number; for example: SQ1
3. Under Basic Information, in the **Name** field, type the name of the sequence number; for example: Sequence Number One
4. Under Basic Information, in the **Description** text box, optionally type a description for the rating method; for example: Primary sequence number to be used for tracking number generation.
5. Under Options, enter values for the following fields:

In this field...	Type this...
Length	The number of digits in the tracking number. The default is 10. Note: This length does not include any text prefixed or appended to the tracking number.
Increment by	Type the amount to add to a previous tracking number to generate the next tracking number. The default is 1.
Rollover Message	Type the Rollover Message. This is the alert message for the system to display when the end of the current sequence number range has been reached and the rollover range is started.
Warning Percentage	Type the percent of values remaining in the current sequence number range at which point the system displays the Warning Message (following row) that the end of the current sequence number range is about to be reached. The default is 5.
Warning Message	Type the warning message to display when the end of the current sequence number range is approaching based on the Warning Percentage value.

6. Click Save Changes to add the sequence number to the list in the Sequence Numbers pane.

Edit a sequence number **To edit a sequence number:**

1. In UCM, click the plus sign  next to the carrier to display the set of objects associated with the carrier.
2. Click the Sequence Numbers link to display the list of sequence numbers associated with the carrier.
3. Carry out one of the following actions:
 - Double-click the sequence number you want to edit to display the Edit Sequence Number dialog.
 - Select the sequence number you want to edit, and then click Edit to display the Edit Sequence Number dialog.



The image shows a 'Create Sequence Number' dialog box with two main sections: 'Basic Information' and 'Options'.

Basic Information:

- Code:** SEQNUM1
- Name:** Sequence Number One
- Description:** Sequence Number 1

Options:

- Length:** 10
- Increment by:** 1
- Rollover Message:** The system has exhausted the
- Warning Percentage:** 5
- Warning Message:** The system is running out of

At the bottom right, there is a 'Save Changes' button.


1. Modify any values that need changing. See the previous procedure. The Create Sequence Number dialog and the Edit Sequence Number dialog are virtually

identical. However, *you cannot change the Code for the sequence number in the Edit Sequence Number dialog.*

2. Click Save Changes to save your changes to the sequence number.

Note: When you save changes to a sequence number, every service with a tracking number or manifest that uses this sequence number automatically incorporates these changes.

Delete a sequence number **To delete a sequence number:**


1. In UCM, click the plus sign  next to the carrier to display the set of objects associated with the carrier, and then select the Sequence Number link to display the Sequence Number pane with the list of sequence numbers.
2. Select the sequence number you want to delete, and then click Delete to delete the sequence number from the list. When asked to confirm the deletion, click OK.
3. (Click Cancel to cancel the deletion.

Note: To select multiple sequence numbers for deletion, press the CTRL key when making selections.

Create, edit, or delete a tracking number generator

A UCM tracking number generator provides tracking numbers based on a sequence number and may include checkdigit methodology and scripting. As part of setting up a service, you select a tracking number generator. For information on this, see the following topic: Add a tracking number to a service. Create tracking number generator

To create a tracking number generator:

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Tracking Number Generators link under the carrier folder to display the Tracking Number Generators pane, and then click Create in the upper right portion of the panel to display the Create Tracking Number Generator dialog.

The following illustration shows the Create Tracking Number Generator dialog:

The following table lists the basic information for the fields on this dialog:

Field	Max. Length (No. of chars.)	Required
Code	64	Yes
Name	255	Yes
Description	255	No

3. Carry out the following steps:

1.

- a. Under Basic Information, in the **Code** field, type the code for the tracking number generator; for example: TNOGEN
- b. Under Basic Information, in the **Name** field, type the name of the tracking number generator; for example: Tracking Number Generator
- c. Under Basic Information, in the **Description** text box, optionally type a description for the tracking number generator; for example: Basic tracking # generator for all services.

4. Under Options, from the Type drop-down list select one of the following types for the tracking number generator.

- Simple – With a "simple" type tracking number generator, you specify all the configuration options in the dialog itself (you can add a script for a checkdigit calculation). This option is the default

- Script – This option lets you specify a script for the complete tracking number generation process, including any checkdigit operation.
5. Whichever option you chose in step 4, accept the default of the Use Shipment Tracking Number for First Package check box selected (recommended) or deselect this check box if you do *not* want this option.
 6. Carry out one of the following steps:
 - If, in step 4, you selected "Script," click one of the following buttons to specify a script for this tracking number generator:
 - Add Existing - Click Add Existing to display the list of existing scripts, and then select the appropriate tracking number script from the list and then click Select to add it to the tracking number generator, and then go to step 7.
 - Create New - Click Create New to display the Create Script dialog. Create the script, and then add it to the tracking number generator. See the topics under "Create, test, and debug a script" and Apply a script in a context. Go to step 7.

If, in step 4, you select "Simple," specify values for the following fields:

In this field...	Specify this value as follows....
Prefix	Type the text string, if any, to be prefixed to each tracking number. If you leave this field blank, no text will be prefixed to a tracking number.
Append Account Number to Prefix	Select this check box to add the account number for the carrier after the Prefix text string.
Sequence Number	From the drop-down list, select a sequence number from a previously created set of sequence numbers. Note: For information on creating a sequence number, see the topic Create, edit, or delete a sequence number .
Suffix	Type the text string, if any, to be appended to each tracking number. If you leave this field blank, no text will be appended to a tracking number.
Enable Checkdigit Calculation	Select this check box to enable a checkdigit calculation for each tracking number. If you select this check box, specify values for the following fields:
Algorithm	Accept the default value of Custom.
Script	Carry out one of the following steps: <ul style="list-style-type: none"> • To create a new checkdigit script, click the Create to display the Create Script dialog See the topics under "Create, test, and debug a script." Create the script and click Save Changes to display the code for the script in the Script field. • To add an existing checkdigit script, click the Add Existing to display the Select Existing Scripts dialog. Select a script, and then click Select to display the code for the script Code in the Script field.
In this field...	Specify this value as follows....


<p>Compute Checkdigit from a Substring of the Tracking Number</p>	<p>To calculate the checkdigit using a substring of the tracking number, select this checkbox. If you select this checkbox, specify the start position and end position of this substring in the following fields:</p> <ul style="list-style-type: none"> • Start Position – This system uses zero-based counting; thus the position of the first digit in the tracking number string is 0. Count the number of digits to the first number in the substring you want to use and subtract 1. • End Position – Count the number of digits to the last number in the substring you want to use (starting with 0) and add 1. (The last position is ignored in the calculation. See the following example.) <p>Example: In the following formula for a 10-digit tracking number abcdefghij (where each letter represents a digit in that position) and you want to use just the digits in the def positions for a checkdigit calculation, enter 3 for Start Position and 6 for End Position. For example, if the tracking number is 1357924680, the checkdigit calculation in this case uses the substring "792".</p>
---	---

7. Click Save Changes to save the tracking number generator.

Note: For an example of a tracking number script, see the topic [Best practices for working with tracking numbers.](#)

Edit a tracking number generator

To edit a tracking number generator:

1. In UCM, click the plus sign  next to the carrier to display the set of objects associated with the carrier.
2. Click the Tracking Number Generators link to display the list of tracking numbers associated with the carrier.
3. Carry out one of the following actions:
 - Double-click the tracking number generator you want to edit to display the Edit Tracking Number dialog.
 - Select the tracking number generator you want to edit, and then click Edit to display the Edit Tracking Number dialog.

Edit Tracking Number Generator

Basic Information

Code : TRG1

Name : Track Gen 1

Description : Tracking Number Generator One

Options

Type : Simple

☒ Use Shipment Tracking Number for First Package

Prefix : Static text at the beginning of every tracking number

☐ Append Account Number to Prefix

Sequence Number : Sequence Number One

Suffix : Static ending of the tracking number

☐ Enable Checkdigit Calculation

Save Changes

4. Modify any parameters, or checkdigit scripts that need changing. For more information, see the previous section: Create tracking number generator.

Note: The fields and buttons on the Edit Tracking Number dialog are identical to those on the Create Tracking Number dialog. However, you cannot modify the value for Code.

5. Click Save Changes to save your changes to the tracking number generator.

Note: When you save changes to a tracking number generator, every instance of this tracking number generator associated with a service automatically incorporates these changes.

Delete a tracking number generator **To delete a sequence number:**

1. In UCM, click the plus sign **+** next to the carrier to display the set of objects associated with the carrier, and then select the Tracking Number Generators link to display the Tracking Number Generators pane with the list of tracking number generators.
2. Select the tracking number generator you want to delete, and then click Delete to delete the tracking number generator from the list. When asked to confirm the deletion, click OK.

(Click Cancel to cancel the deletion.)



Note: To select multiple tracking number generators for deletion, press the CTRL key when making selections.

Best practices for working with tracking numbers

Script type tracking number

The options section of the Create Tracking Number Generator and Edit Tracking Number Generator look like this:



To add an existing script, click the Add Existing . To create a new script, click the Create New .

Tracking number script example

In the following example of a tracking number script, the comments (//) explain what each section does.

```
// Retrieve the sequence number we've defined in the carrier
var sNo = CURRENT_API.getCarrierDefinition().getSequenceNumber("sno1");

// Retrieve the instance-level sequence data
var sNoData =
CURRENT_API.getCarrierInstance().getSequenceNumberData("sno1");

var prefix = "PRE";
var suffix = "SUF";

// Retrieve the next sequence number by calling sNo.nextAsString and passing in the
instance-level data
var nextSequenceNumber = sNo.nextAsString(sNoData);

// Set the shipment and first package tracking numbers
setAPIValue("TRACKNUM",
prefix+nextSequenceNumber+suffix); setAPIValue("TRACKNUM-1",
prefix+nextSequenceNumber+suffix);

// Iterate through the packages assigning tracking numbers
var packageCount = getAPIValue("PKG CNT"); for(i=2;
i<=packageCount; i++)
{
nextSequenceNumber = sNo.nextAsString(sNoData);

var apiKey = "TRACKNUM-" + i;
setAPIValue(apiKey, prefix+nextSequenceNumber+suffix);
}
```

UI Administrative Elements

Overview of UI administrative elements

There are times when you need the capability to configure carrier information in your shipping system. In UCM, you accomplish this task by defining UI administrative elements. Typically these options or values are displayed on a screen or tab in a shipping system. UI administrative elements consist of the following types:

- Text field

- Numeric field
- Check box
- Drop-down list
- Password
- Master Shipment Selector

You can also specify multiple levels for a UI administrative element, enabling you, for example, to place this element under a specific area on a specific tab on a specific configuration screen.

UI administrative elements included with UCM

The following UI administrative elements are automatically created for the Built-in Time in Transit option:

Code	Name	UI Administrative Label	Data Type	Description
CALC_TINT	Calculate Transit Time	Calculate Transit Time	Checkbox	Specify whether or not to use Time in Transit to calculate when packages should arrive.
TINT_SAT_DELIVERY	Standard Saturday Delivery	Standard Saturday Delivery	Checkbox	Specify whether or not the carrier can deliver packages on Saturday.
UNIT_OF_MEASURE	Units of Measure	Units of Measure	Dropdown	Specify the units of measure for packages.

Additional UI administrative elements with Ground freight functionality

The following additional UI administrative elements are automatically created for the Enable ground freight functionality option.

Bill of Lading (BOL) elements

Code	Name	UI Administrative Label	Data Type	Description
BOL_CUSTOM_LIABILITY_STATEMENT	Custom Liability Statement	Custom Liability Statement	Text	Specify a custom liability statement to appear on the Bill of Lading.

Code	Name	UI Administrative Label	Data Type	Description
------	------	-------------------------	-----------	-------------

BOL_CUSTOM_RECEIVER_STATEMENT_L1	Line 1	Line 1	Text	Specify a custom receiver statement to appear on the Bill of Lading.
BOL_CUSTOM_RECEIVER_STATEMENT_L2	Line 2	Line 2	Text	Specify a custom receiver statement to appear on the Bill of Lading.
BOL_CUSTOM_RECEIVER_STATEMENT_L3	Line 3	Line 3	Text	Specify a custom receiver statement to appear on the Bill of Lading.
BOL_CUSTOM_RECEIVER_STATEMENT_L4	Line 4	Line 4	Text	Specify a custom receiver statement to appear on the Bill of Lading.
BOL_CUSTOM_RECEIVER_STATEMENT_L5	Line 5	Line 5	Text	Specify a custom receiver statement to appear on the Bill of Lading.
BOL_WEIGHT_TO_PRINT	Weight to Print in Customer Order Section	Weight to Print in Customer Order Section	Dropdown	The weight to print in the customer order section.
PREVENT_BOL_LINE_ITEM_GROUPING	Prevent BOL Line Item Grouping	Prevent BOL Line Item Grouping	Checkbox	Prevents line item grouping in BOL.

Code	Name	UI Administrative Label	Data Type	Description
BOL_SHIP_COUNT	BOL Report Count	BOL Report Count	Numeric	Specify a count of BOL's to print on shipment.
BOL_CONSOLIDATED_COUNT	Consolidated BOL Report Count	Consolidated BOL Report Count	Numeric	Specify a count of Consolidated BOL's to print

The following illustration shows the UI Administrative Element for BOL_SHIP_COUNT:

Edit UI Administrative Element

▼ Basic Information

Code : BOL_SHIP_COUNT

Name : BOL Report Count

Description : Count of BOL's to print on shipment

▼ Data Description

Data Type : Numeric

☐ Value is required

☒ Show in UI

UI Label : BOL Report Count

UI Location : /Shipper Defaults/Bill of Lading/General

Save Changes Save Changes and Manage Values

The following illustration shows the UI Administrative Element for BOL_CONSOLIDATED_COUNT:

The screenshot shows a web-based configuration window titled "Edit UI Administrative Element". It contains two main sections: "Basic Information" and "Data Description".

Basic Information:

- Code:** BOL_CONSOLIDATED_COUNT
- Name:** Consolidated BOL Report Count (with a close button 'x')
- Description:** Count of Consolidated BOL's to print (in a scrollable text area)

Data Description:

- Data Type:** Numeric
- ☐ Value is required
- ☒ Show in UI
- UI Label:** Consolidated BOL Report Count
- UI Location:** /Shipper Defaults/Bill of Lading/General (with a refresh icon)

At the bottom, there are two buttons: "Save Changes" and "Save Changes and Manage Values".

Note: For existing and imported carriers, you need to add the above two elements manually by defaulting the Value to 1, as shown in following illustration.

Manage Values for BOL_SHIP_COUNT: BOL Report Count (Numeric)

Effective D...	Value	Comments
2020/01/14	1	

Create

Delete

Save Changes

Rating elements

Code	Name	UI Administrative Label	Data Type	Description
CONSIGNEE_ID	Consignee Identification Number	Consignee Identification Number	Text	The consignee identification number.
CREATE_BOL_ON_CLOSE	Create Consolidated BOL on Close	Create Consolidated BOL on Close	Checkbox	Specify whether a consolidated Bill of Lading should be created on close.

Code	Name	UI Administrative Label	Data Type	Description
------	------	-------------------------	-----------	-------------


FWBR_DEFICIT_RATE	Enable deficit rating	Enable deficit rating	Checkbox	If the next weight break calculates to be less expensive, pad the lowest cost class to meet the next weight break.
FWBR_LOWEST_COST	Rate at lowest cost class	Rate at lowest cost class	Checkbox	Chooses the lowest cost freight class, and rates the entire shipment at this rate regardless of other freight classes.
FWBR_TARIFF_DISCOUNT	Tariff discount percent	Tariff discount percent	Text	Amount of discount to be applied to the base rate.
FWBR2_DEFICIT_RATE	Enable deficit rating	Enable deficit rating	Checkbox	If the next weight break calculates to be less expensive, pad the lowest cost class to meet the next weight break.
Code	Name	UI Administrative Label	Data Type	Description

FWBR2_LOWEST_COST	Rate at lowest cost class	Rate at lowest cost class	Checkbox	Chooses the lowest cost freight class, and rates the entire shipment at this rate regardless of other freight classes.
FWBR2_TARIFF_DISCOUNT	Tariff discount percent	Tariff discount percent	Text	Amount of discount to be applied to the base rate.
GROUND_FREIGHT_SCALE	Standard Carrier Alpha Code	Standard Carrier Alpha Code	Text	Standard Carrier Alpha Code.

Create a UI administrative element

In the case of a UI administrative element, you are typically adding a particular field to a screen, tab, and area (although you have the option for this field not to be displayed). In the process you may create a new screen, tab, or area where the field is to be located. Alternatively, you can add a field to an existing screen, tab, or area. See your shipping application manual for details.

To create a carrier-level UI administrative element:

1. In UCM, click the plus sign  next to the carrier folder to display the set of elements for the carrier.
2. Click the UI Administrative Elements link under the carrier folder to display the UI Administrative Elements pane, and then click Create in the upper right portion of the panel to display the Create UI Administrative Element dialog.

The following illustration shows the Create UI Administrative Element dialog:

The screenshot shows a window titled "Create UI Administrative Element". It contains two expandable sections. The first section, "Basic Information", has three input fields: "Code", "Name", and "Description". The second section, "Data Description", has a "Data Type" dropdown menu, a "Show in UI" checkbox (which is checked), and two more input fields: "UI Label" and "UI Location". At the bottom of the window is a "Save Changes" button.

The following table lists the basic information for the fields on this dialog:

Field	Max. Length (No. of chars.)	Required
Code	64	Yes
Name	255	Yes
Description	255	No

1. Under Basic Information, enter the Code, Name, and Description for the UI administrative element.

Note:The value for Code also serves as the API key when this UI administrative element is used.

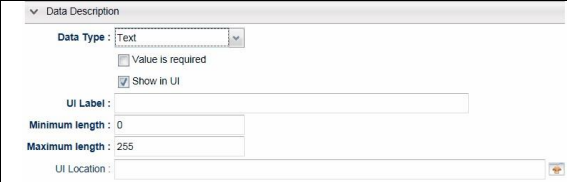
2. Under Data Description, select a data type from the following options on the **Data Type** drop-down list to display additional options for the data type:
 - Text
 - Numeric
 - Checkbox
 - Dropdown
 - Password
 - Master Shipment Selector

Depending on your selection, UCM displays additional options. (See the table under step 5.)

1. Depending on your selection in step 4, carry out one of the following sets of substeps:
2. To display this administrative element on the UI, accept the default of the selected check box. Otherwise, deselect it.

Note:If you deselect this check box, the Value is required and UI label options are removed. Use this option to specify a value or set of values for this element that the user

does not enter. To do so, click Save Changes and Manage Values. See the following section, "Managing Values." You can also import a file with values

For this data type	Carry out the following sub-steps
Text	When you select Text as the data type, UCM displays the following set of options:
	

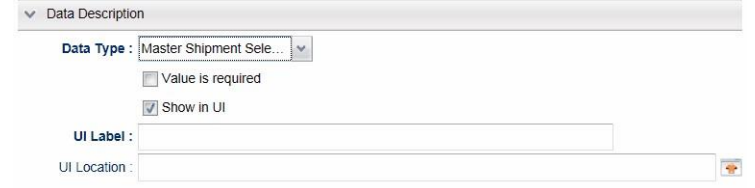
3. If the Show in UI check box is selected:

- If a value is required, select (check) the "Value is required" check box. Otherwise, accept the default of unselected (cleared).
- In the UI Label field, enter the name of the field as you want it to be displayed in your shipping system.

4. Enter the number of characters for the Minimum length and Maximum length of the text element or accept the defaults of 0 and 256 respectively.

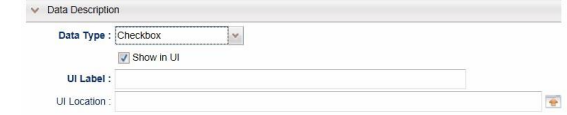
Caution: If, in sub-step b, you select the "Value is required" check box, you must specify a minimum length of 1 or greater.

- **Numeric**
- **Password**
- **Master Shipment Selector** When you select one of these options as the data type, UCM displays the following set of options:



5. To display this administrative element on the UI, accept the default of the selected check box. Otherwise, deselect it.

6. If the Show in UI check box is selected, enter the label for UI administrative elements in the UI Label field.

Checkbox	When you select Checkbox as the data type, UCM displays the following set of options:
	

7. In the UI Label field, enter the name of the field as you want it to be displayed in your shipping system.

Dropdown	When you select Dropdown as the data type, UCM displays the following set of options:
-----------------	---

8.If a value is required, select the "Value is required" check box (cleared by default).

9.In the UI Label field, type the name of the drop-down list as you want it to be displayed in your shipping system.

10.Under the Default Value text box click Create to display the Drop-down Text dialog:

11.In the Value field, enter the value to associate with the drop-down item. This can be either a numerical value or a text string.

12. In the Name field, enter name of the item to display in the drop-down list.


13. To enter additional items, click Save and Create New.

14. Repeat sub-steps e - g until all the required drop-down list values are created, and then click Save Changes to return to the Create UI Administrative Element dialog and display the list of items you added to the drop-down list.

Optionally, in the Default Value area:

Drag each item to the position where you want it to appear in the drop-down list. Items appear in your shipping system in the order they are displayed in the drop-down list Default Value text box.

- To set a value as the default, select the value, and then click Set as Default.
- To edit a value, select the value, and then click Edit to display the Drop-down Text dialog and make changes.
- To delete a value, select the value, and then click Delete.

1. Click the red up arrow  to display the Select UI Location dialog. Configure the UI Location for this administrative element, and then click OK to display the



location in the UI location field. See the topic [Configure UI location for administrative element](#).

Notes: When you select this check box, the Edit dialog displays an additional area for specifying the label and placement of the transactional element that is identical to the corresponding area on the Create UI Transactional Element dialog. See the topic [Create a UI Transactional Element](#).

How these three levels are displayed depends on how the configuration portion of your shipping system is structured. It is recommended that you experiment to determine this factor before defining and deploying a carrier.


2. Click Save Changes to save the UI administrative element and display it in the list of UI administrative elements. To view and optionally reorder the layout of UI Administrative elements including the element you just added, click Reorder to display the Reorder UI Elements. See the topic

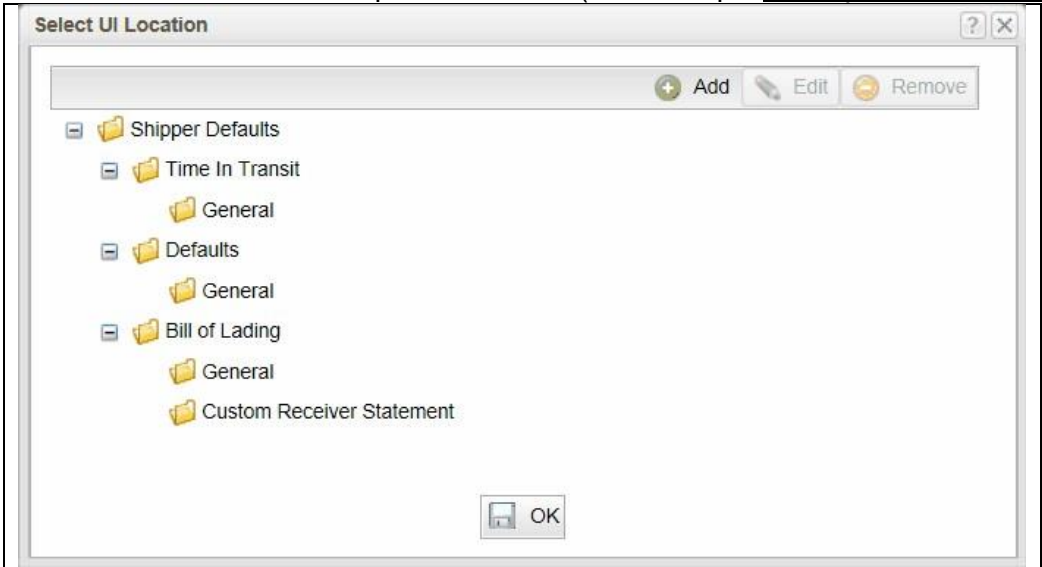
[[Edit, delete, or reorder a UI administrative element](#) | Configure objects with a UCM Carrier#Edit_an_Admin_UI_Element].

- Configure UI location for administrative element
- The actual layout of UI administrative elements depends on the design of your shipping system. The configuration of UI administrative elements in UCM maps to any hierarchical arrangement of locations (for example, tabs) on a set of administrative screens or pages. This hierarchical arrangement is represented in UCM by nodes (folder icons) in a standard tree structure with a plus  sign to expand the tree and a minus  sign to contract it. **Notes:**
- The Select a Location dialog displays available locations only. To view the complete set of locations plus existing elements within those locations, select an element in the UI Administrative Elements list, and then click Reorder. See the topic

[Edit, delete, or reorder a UI administrative element](#).

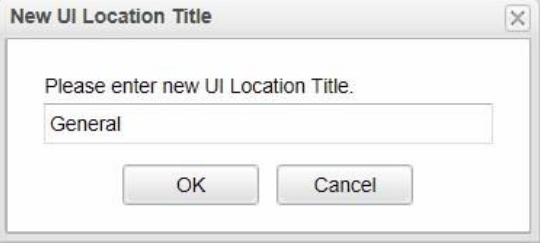
- *If you are creating this UI administrative element for a carrier to be used with [Parcel](#)*, the locations are as follows: - Level 1: Page (main configuration screen) - Level 2: Tab - Level 3: Grouping on tab
- You can configure UI administrative locations as follows:
- Edit the title of the location.
- Add a location (folder) at any level.
- Reorder a location.
- Remove a location.
- Configuring a UI location for an administrative element
Caution: You need to keep the following constraints in mind when configuring a UI location for an administrative element:
- The Maximum depth for a UI administrative element is *three levels* and every location must have three levels.
- You *must* assign a location at the third level to a UI administrative element.

- If these constraints are not followed, an error message displays when you try to specify the location for the UI administrative element. **To configure a UI location:**
 1. In the Create UI Administrative Element dialog or Edit UI Administrative Element dialog, click the red up arrow  at the right end of the UI Location box (see the topic [Create a UI administrative element](#)) to display the Select UI Location dialog.
- The following illustration shows the default UI administrative structure for a UCM carrier with all of the options selected (see the topic [Specify carrier options](#)):



- **Note:**The previous illustration shows the default configuration of UI administrative elements with all carrier options selected. For an example of adding elements, see the following section: Example additions to UI administrative elements.
2. Carry out the following steps to specify a location for the UI administrative element being created or edited:

For this action	Do this
To specify an existing location –	Select the location folder for the UI administrative element, and then click OK to display the path and location in the UI Location field on the Create/Edit UI Administrative Element dialogs. Note: Since you access this dialog from the Create/Edit UI Administrative Element dialogs, <i>you must always carry out this step</i> in order to assign the element to a location after completing any other actions as described in the following rows.
For this action	Do this

To change the title of a location -	<p>1.</p> <p>a. Select the location folder for the UI administrative element, and then click Edit to display the New UI Location Title dialog:</p>  <p>The dialog box is titled 'New UI Location Title' and contains a text input field with the placeholder text 'Please enter new UI Location Title.' and the word 'General' entered. Below the input field are 'OK' and 'Cancel' buttons.</p> <p>b. Enter the new title for the location, and then click OK to display the new title for the location.</p> <p>c. Click OK on the Select UI Location dialog to display the path and location in the UI Location field on Create/Edit UI Transactional Element dialogs.</p>
To reorder a location	Click on and drag the location folder icon to the new position in the tree where you want it to be.
To remove a location	Select the location folder you want to remove, and then click Remove. Caution: When a location is removed, all the child locations under that location are also removed. If you want to remove a location, you must first relocate or delete all the UI administrative elements that belong to that location and its child locations as follows:

To reorder a location -	Click on and drag the location folder icon to the new position in the tree where you want it to be.
To remove a location -	Select the location folder you want to remove, and then click Remove. Caution: When a location is removed, all the child locations under that location are also removed. If you want to remove a location, you must first relocate or delete all the UI administrative elements that belong to that location and its child locations as follows: <ul style="list-style-type: none"> • To delete an element, select the element in the UI Administrative Elements list and click Delete. • To reorder elements, click Reorder, and then click and drag the elements to their new locations. See the topic Edit, delete, or reorder a UI administrative element

Note

For an illustration of a valid location configuration including the UI transactional elements associated with the locations on the tree, see the topic Edit, delete, or reorder a UI transactional element.

3. Click OK to display the location path in the UI Location field on the Create/Edit UI Administrative Element dialog. For example:

UI Location : /Shipper Defaults/Defaults/General	
--	---

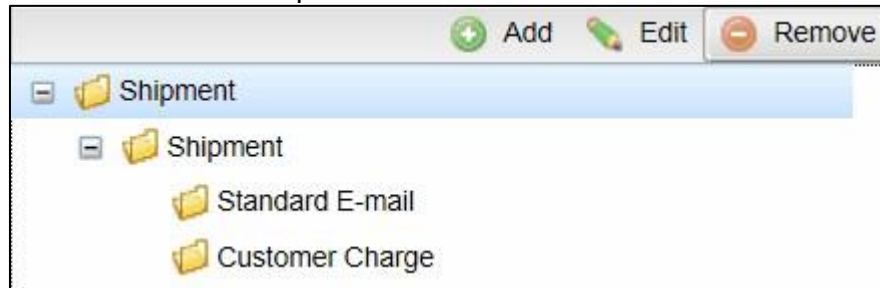
(See the topic [Create a UI administrative element](#).)


Example location addition for UI administrative elements

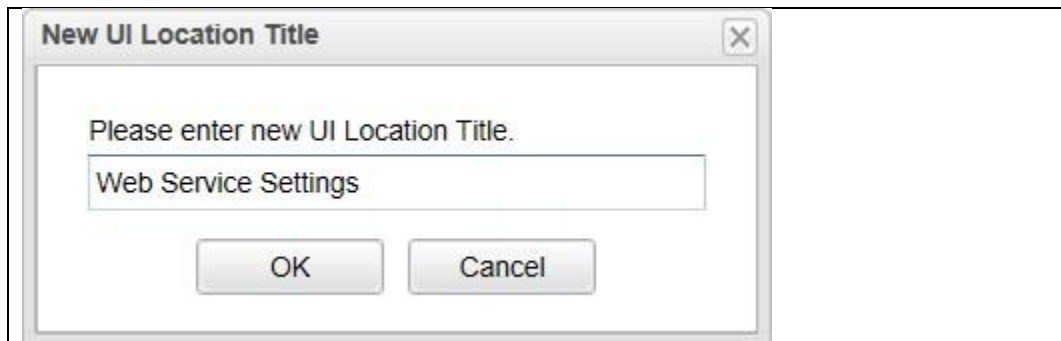
In the following example, a Package tab is added at the second level to the top-level Shipment screen (Web page), a Package Level Options column and an Item Level Options column at the third level, and then a Common section to the Package Level Options column.

To create and reposition the System section:

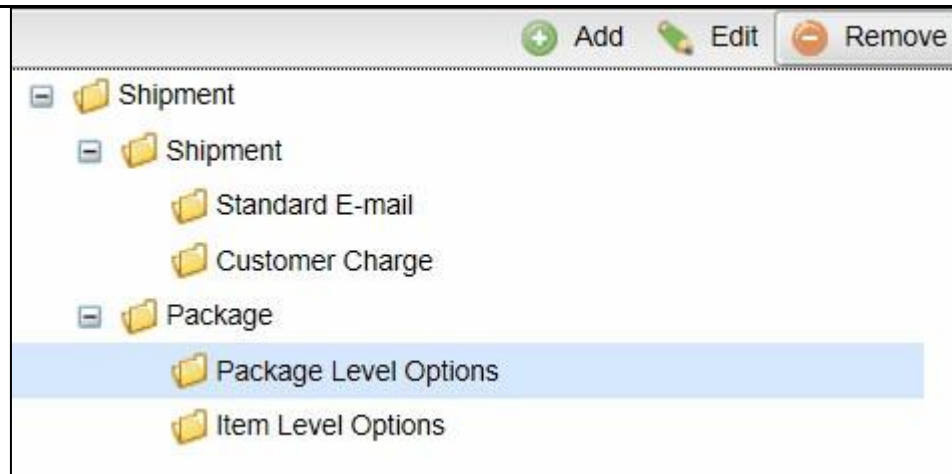
1. Select the first level Shipment folder icon.



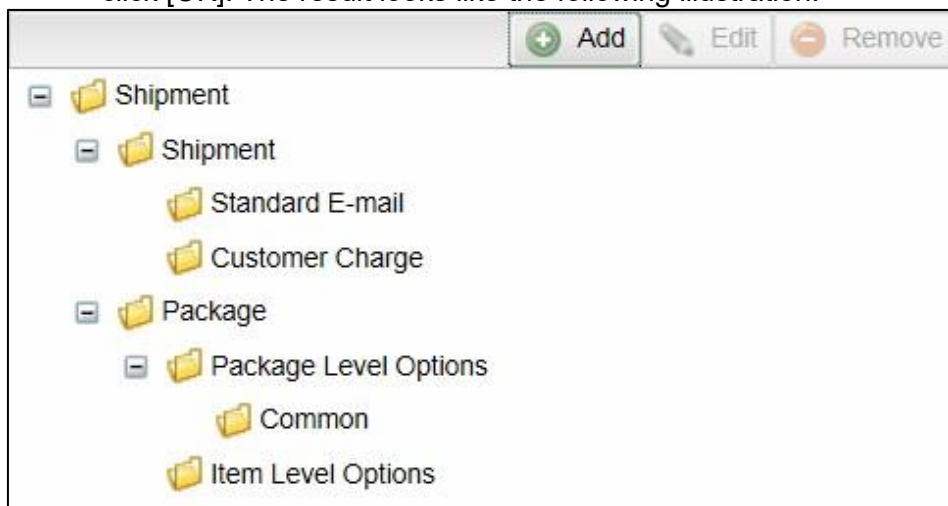
2. Click the Add  to display the New UI Location Title dialog, and then enter the name of the UI administrative location as shown in the following illustration:



3. Select the new Package (tab) folder icon, and then click [Add] to display the New UI Location Title dialog; enter "Package Level Options" as the name of the UI transactional location, and then click [OK].
4. Select the new Package (tab) folder icon, and then click [Add] to display the New UI Location Title dialog; enter "Item Level Options" as the name of the UI transactional location, and then click [OK] to display a result like the following illustration:



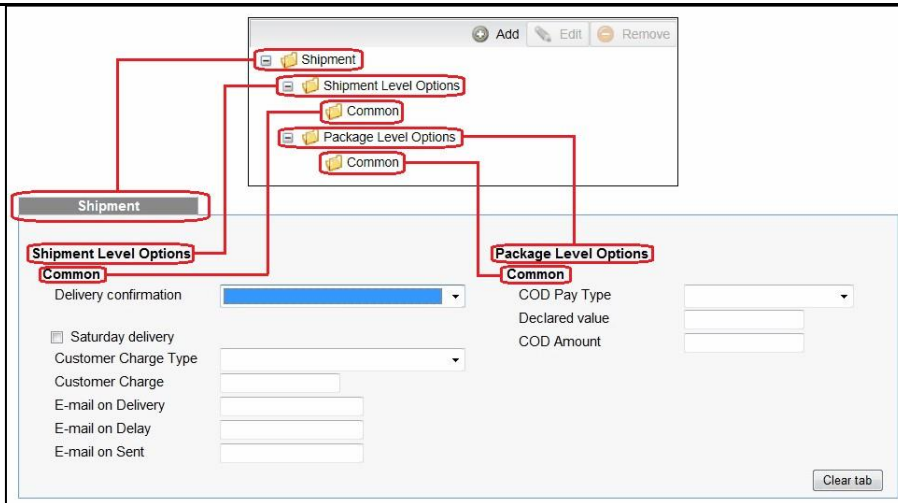
5. Select the new Package Level Options folder (as shown in the previous illustration), and then click [Add] to display the New UI Location Title dialog; enter "Common" as the name of the UI transactional location, and then click [OK]. The result looks like the following illustration:



7. Click [OK] at the bottom of the Select UI Location dialog to save the configuration.

Mapping of UI Administrative location tree to shipping system

The following illustration shows the mapping of the UI Transactional location tree for the UCM OnTracWS pre-configured carrier to the Parcel Warehouse Options screen for an OnTracWS carrier.



- Edit, delete, or reorder a UI administrative element
- In working with existing administrative elements, you can edit and delete an element, and change its position (reorder it) within the hierarchy of elements. Edit a UI administrative element **To edit a UI administrative element:**

1. Click the plus sign **+** next to the carrier folder to display the set of available elements, and then select UI Administrative Elements to display the UI Administrative Elements pane.
2. In the UI Administrative Elements list, carry out one of the following actions to display the Edit UI Administrative Element dialog:
 - Double-click on the row with the UI administrative element you want to edit.
 - Click on the row of the UI administrative element you want to edit to select it, and then click Edit.

3. Make any desired changes to the values and selections for configuring the element, and then click Save Changes. For details on these fields, see steps 2-6 of the topic

Create a UI administrative option.

- **Note:**The fields and selections on the Edit UI Administrative Element dialog are identical to those on the Create UI Administrative Element dialog. You can modify all the fields on this dialog except Code.

4. Click Save Changes.

- Delete a UI administrative element

To delete a UI administrative element from a carrier:

Caution: After you delete a UI administrative element, you cannot undo the operation.

1. Click the plus sign **+** next to the carrier folder to display the set of available objects, and then select UI Administrative Elements to display the UI Administrative Elements pane with a list of currently incorporated UI administrative elements.
2. In the UI Administrative Elements list, click on the row of the element you want to delete to select it, and then click Delete to display the Confirm Delete dialog.


Note: To select multiple elements to delete, hold down the CTRL key while selecting the elements. (This action also disables the Edit.)

3. Click OK to confirm the deletion and remove the UI administrative element or elements from the list of available elements.

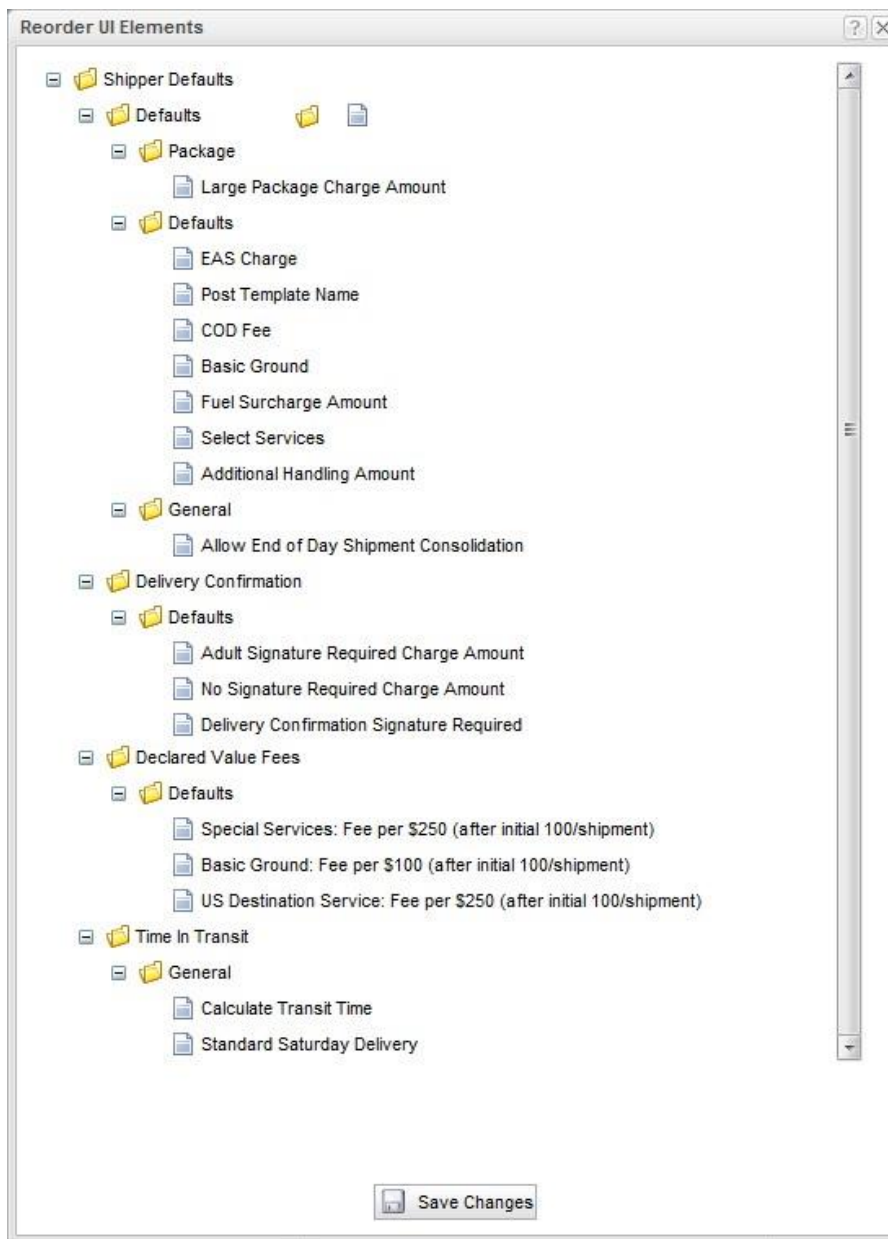
Reorder a UI administrative element

You can change the position on a UI administrative element in your carrier configuration system (for example, switching the positions of two fields on a defaults tab).

To reorder a UI administrative element:

1. Click the plus sign  next to the carrier folder to display the set of available objects, and then select UI Administrative Elements to display the UI Administrative Elements pane.
2. Click the Reorder to display the Reorder UI Elements dialog.

The following example shows a Shipper Defaults configuration screen with tabs for Defaults, Delivery Confirmation, and Declared Value Fees. On each of these tabs are labeled areas with sets of fields.



Note: Folder represent the configuration screen itself (highest level; for example: Shipper Defaults), tabs on this screen ("child" folders; for example: Defaults), and labeled areas on these tabs (for example, "General"). Page represent actual fields, check boxes, or drop-down lists.

1. To reorder an element, click and drag the element to the position where you want it to be displayed. You can move both child folder icons and page icons. **Note:** You can reorder an element only within its node. For example, a third-level element (field, check box, drop-down list) can be reordered only under its original second-level folder. A second-level element can be reordered only within a firstlevel folder. In the previous illustration, for example, Standard Saturday Delivery (check box) can be

moved to directly above Calculate Transit Time but cannot be moved next to any element under any of the Defaults folders. The General folder can be moved above the Package folder (before or after Defaults) but not directly under the topmost Shipper Defaults folder.


2. Click Save Changes to save your changes.

Import values by date

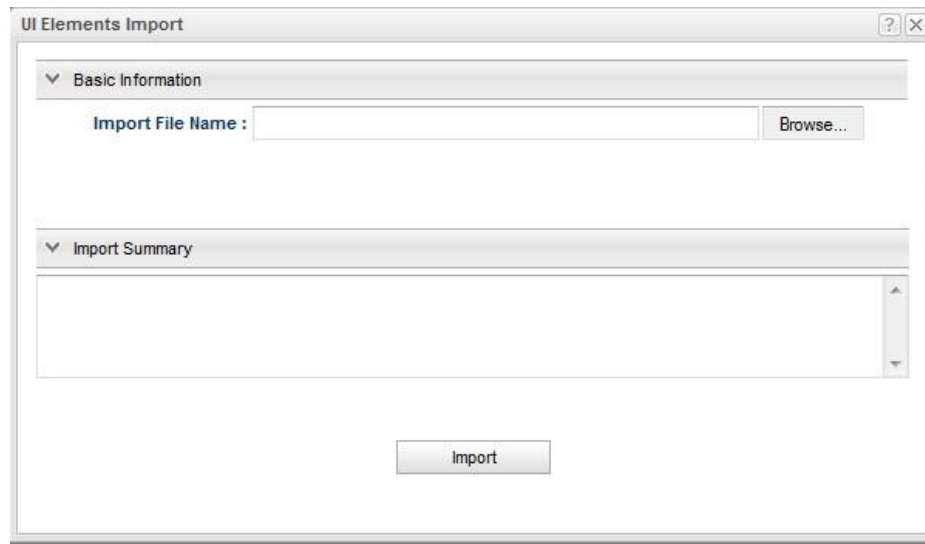
You specify a date on which default values for UI administrative text or numeric fields go into effect by importing a file with these values that includes the effective date.

Import an effective date file

To import an effective date file:

1. Click the plus sign  next to the carrier folder to display the set of available elements, and then select UI Administrative Elements to display the UI Administrative Elements pane.
2. Click the Import Values by Date to display the UI Elements Import dialog.

Note: You do not need to select a UI Administrative Element in the list. The code field in the file identifies this element.



3. Click Browse to open the Windows Choose File to Upload dialog, then select the effective date file to import and click Open.
4. On the UI Elements Import dialog, click Import to import the file
 - **Note:** The Import Summary message tells you that the import was successful or provides detailed error messages enabling you to fix any incorrect formatting in the file.

Format for effective date file

The requirements for an effective date file are as follows:

- The values must be for one of the following data types:
 - Text
 - Numeric

Note: If you attempt to import a file for any other data type, you will receive an "Invalid data type" error.

- The effective date must be the current date or later. An earlier date than the current date returns an error.

An effective date file must be a comma-separated (CSV) file with the following format: `effectivedate,code,value,comment` These values are as follows:

- `effectivedate` – The effective date must have the form: YYYY/MM/DD; for example: 2012/11/09
- `code` – The code of the UI administrative element for which the value is being imported.
- `value` – The default value for the UI administrative element that goes into effect on the specified date.
- `comment` – If this field is left blank, it must still have a leading comma (see the following example)

The following example shows date-effective values for a numeric field called Additional Handling Amount:

```
effectivedate,code,value,comment
2012/12/01,ADDHANDAMT,3.5,increase amount
2013/04/01,ADDHANDAMT,3.6,
2013/08/01,ADDHANDAMT,3.7,
2013/12/01,ADDHANDAMT,3.4,new method decrease
```

UI Transactional Elements

Overview of UI transactional elements

A UI transactional element is an option or value that is specified for a UCM carrier when processing a shipment in your shipping system. Typically, this option or value is displayed on a screen or tab. UI transactional elements consist of the following types:

- Check box
- Drop-down list
- Text field
- Numeric field
- Password
- Master Shipment Selector

You can also specify three levels for a UI transactional element, enabling you to place this element under a specific area on a specific tab on a shipment options screen.

Additionally, to allow a UI transactional element to be set as a default option or value when configuring a UCM carrier, you can specify that this element is a UI administrative element as well. See the topics under "UI Administrative Elements."

UI transactional elements included with UCM

The following UI administrative elements are included with UCM for the Standard Email and Customer Charge options :

Code	Name	UI Administrative Label	Data Type	Description
------	------	-------------------------	-----------	-------------

EMAIL_ON_DELAY	E-mail on Delay	E-mail on Delay	Text	E-mail on Delay.
EMAIL_ON_DLTV	E-mail on Delivery	E-mail on Delivery	Text	E-mail on Delivery.
EMAIL_ON_SENT	E-mail on Sent	E-mail on Sent	Text	E-mail on Sent.
MARGIN_TYPE	Customer Charge Type	Customer Charge Type	Dropdown	Customer Charge Type.
MARGIN_VALUE	Customer Charge	Customer Charge	Numeric	Numeric.

Working with UI transactional elements Notes:

- If you are deploying the carrier with Parcel, there are special restrictions for the top and second levels. See the topic [Create a UI transactional element](#).
- UI transactional elements are added at the carrier level. For each service under a carrier, you can select which available UI transactional elements to use. See the topic [Add or remove objects within a service](#).


The following topics describe how to create and work with UI administrative elements:

- [Create a UI transactional element](#)
- [Configure a UI location for a transactional element](#).
- [Edit or delete a UI transactional element](#)
- [Best practices for working with UI transactional elements](#)

Create a UI transactional element

UI transactional elements provide the options that the user specifies when creating a shipment.

To create a carrier-level UI transactional Element:

1. In UCM, click the plus sign  next to the carrier folder to display the set of elements for the carrier.
2. Click the UI Transactional Elements link under the carrier folder to display the UI Transactional Elements pane, and then click Create in the upper right portion of the panel to display the Create UI Transactional Element dialog.

The following illustration shows the Create UI Transactional Element dialog:

Create UI Transactional Element

Basic Information

Code :

Name :

Description :

☒ Applies to all services

Data Description

Data Type :

UI Label :

UI Location :

New UI Location :

Save Changes

The following table lists the basic information for the fields on this dialog:

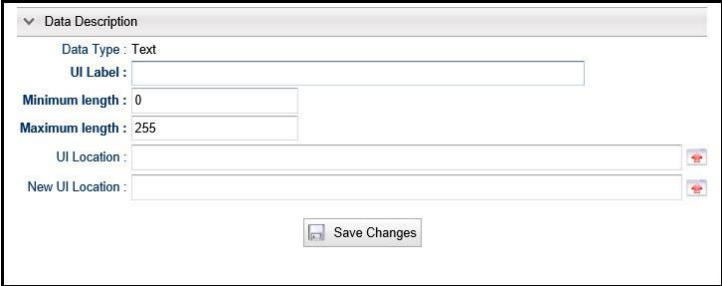
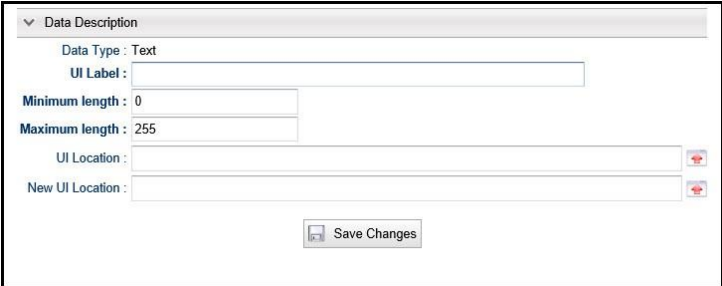
Field	Max. Length (No. of chars.)	Required
Code	64	Yes
Name	255	Yes
Description	255	No

3. Under Basic Information, enter the **Code**, **Name**, and **Description** for the UI transactional element.
4. Select the options for applying this transactional element to a service or multiple services as follows:
 - If you want the UI transactional element applied to all services, leave the Applies to all services check box selected.
 - If you want to apply the UI transactional element to specific services only, deselect (clear) the Applies to all services check box. This action displays the Services list at the bottom of the dialog. Select the check boxes next to the services for which you want to apply and display this UI transactional element.
5. Under Data Description, select a data type from the following options on the **Data Type** drop-down list to display additional options for the data type:

- Text ○
- Numeric ○
- Checkbox

-
- Dropdown
- Password

6. Depending on your selection in step 5, carry out one of the following sets of substeps:


For this data type	Carry out the following sub-steps
Text	<div>When you select Text as the data type, UCM displays the following set of options:</div> <div></div> <div><div>1.</div><div><div>a. In the UI Label field, enter the name of the field as you want it to be displayed in your shipping system.</div><div>b. Enter the number of characters for the Minimum length and Maximum length of the text element or accept the defaults of 0 and 256 respectively.</div></div></div>
<div><div>• Numeric</div><div>• Checkbox</div><div>• Password</div></div>	<div>When you select Text as the data type, UCM displays the following set of options:</div> <div></div> <div>Enter the label for UI administrative elements in the UI Label field.</div>
For this data type	Carry out the following sub-steps

Drop-down

1. When you select Drop-down as the data type, UCM displays the following set of options:

- a. In the UI Label field, type the name of the dropdown list as you want it to be displayed in your shipping system.
- b. Under the text box click Create to display the Drop-down Text dialog:

- c. In the Value field, enter the value to associate with the drop-down item. This can be either a numerical value or a text string.
- d. In the Name field, enter name of the item to display in the drop-down list.
- e. To enter additional items, click Save and Create New.
- f. Repeat sub-steps c - e until all the required drop-down list values are created, and then click Save Changes to return to the Create UI Transactional Element dialog and display the list of items you added to the drop-down list.
- g. Optionally, in the text box:
 - Drag each item to the position where you want it to appear in the drop-down list. Items appear in your shipping system in the order they are displayed in the drop-down list text box.
 - To edit a value, select the value, and then click Edit to display the Drop-down Text dialog and make changes.
 - To delete a value, select the value, and then click Delete.



7. In the Create UI Transactional Element dialog, click the red up arrow  next to the "UI Location" field to display the Select UI Location dialog. Select a UI location for the

transactional element (see the topic [Configure a UI location for a transactional element](#) and then click Save Changes.

Notes:

- The "New UI Location" field is used to configure transactional elements for New UI Location at both shipment level and package levels in Parcel New UI Application.
- *If you are creating this transactional element for a carrier to be used with Parcel*, the top level is always the Warehouse Options screen. The next level is always either the Shipment (left) tab or the Package (right) tab on the Options screen. You can add additional tabs, as well as areas under each tab.

Configure UI location for transactional element

The actual layout of UI transactional elements depends on the design of your shipping system. The configuration of UI transactional elements in UCM maps to any hierarchical arrangement of locations (for example, tabs) on a set of transactional screens or pages. This hierarchical arrangement is represented in UCM by nodes (folder icons) in a standard tree structure with a plus  sign to expand the tree and a minus  sign to contract it. **Notes:**

- The Select a Location dialog displays available locations only. To view the complete set of locations plus existing elements within those locations, select an element in the UI Transactional Elements list, and then click Reorder. See the topic Edit, delete, or reorder a UI transactional element.
- *If you are creating this UI transactional element for a carrier to be used with Parcel UI* – on the Warehouse Options screen, the locations are as follows:
 - Level 1: Tab
 - Level 2: Sub-tab
 - Level 3: Shipment or package left/right column
 - Level 4: Grouping within column (For three levels, leave out the Sub-tab level.)

You can configure UI transactional locations as follows:

- Edit the title of the location.
- Add a location (folder) at any level.
- Reorder a location.
- Remove a location.

Configuring a UI location for a transactional element


Caution: You need to keep the following constraints in mind when configuring a UI location for a transactional element:

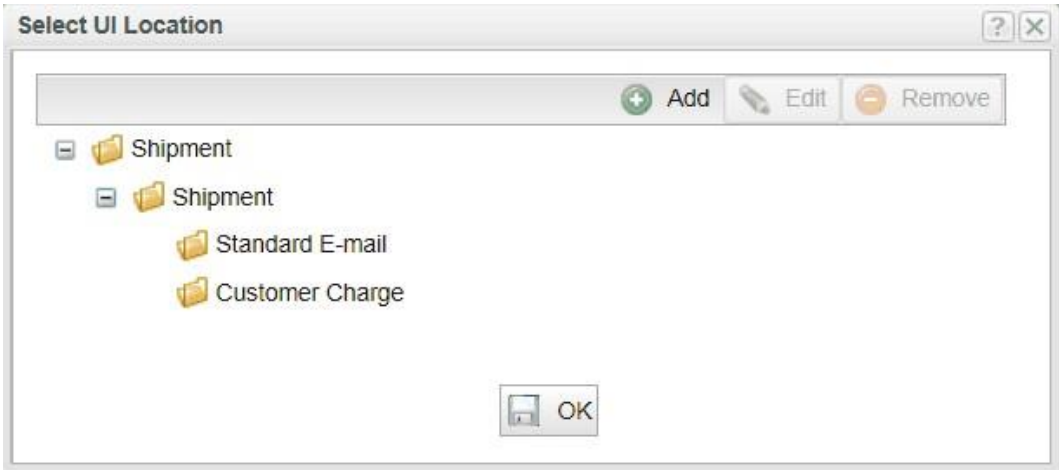
- The Maximum depth for a UI transactional element is four levels.
- When creating or editing a UI transactional element, you must select a location at the third or fourth level for the element.
- You cannot have elements at both the third and fourth levels under the same second-level location.

- The next-to-last level must be either Shipment or Package.

If these constraints are not followed, an error message displays when you try to specify the location for the UI transactional element.

To configure a UI location:

1. In the Create UI Transactional Element dialog or Edit UI Transactional Element dialog, click the red up arrow  at the right end of the UI Location box (see the topic [Create a UI transactional element](#)) to display the Select UI Location dialog. The following illustration shows the default UI transactional structure for a UCM carrier:



2. Carry out the following steps to specify a location for the UI transactional element being created or edited:

For this action	Do this
To specify an existing location –	Select the location folder for the UI transactional element, and then click OK to display the path and location in the UI Location field on the Create/Edit UI transactional Element dialogs. Note: Since you access this dialog from the Create/Edit UI Transactional Element dialogs, you must always carry out this step in order to assign the element to a location after completing any other actions as described in the following rows.
For this action	Do this

To change the title of a location —	<ol style="list-style-type: none"> 1. <ol style="list-style-type: none"> a. Select the location folder for the UI transactional element, and then click Edit to display the New UI Location Title dialog: <div> </div> b. Enter the new title for the location, and then click OK to display the new title for the location. <p>Click OK on the Select UI Location dialog to display the path and location in the UI Location field on the Create/Edit UI Transactional Element dialogs.</p>
To reorder a location	Click on and drag the location folder icon to the new position in the tree where you want it to be.
To remove a location	<p>Select the location folder you want to remove, and then click Remove.</p> <p>Caution: When a location is removed, all the child locations under that location are also removed. If you want to remove a location, you must first relocate or delete all the UI transactional elements that belong to that location and its child locations as follows:</p> <ul style="list-style-type: none"> • To delete an element, select the element in the UI Transactional Elements list and click [Delete]. • To reorder elements, click [Reorder], and then click on and drag the elements to their new locations.

To remove a location —	<p>Select the location folder you want to remove, and then click Remove.</p> <p>Caution: When a location is removed, all the child locations under that location are also removed. If you want to remove a location, you must first relocate or delete all the UI transactional elements that belong to that location and its child locations as follows:</p> <ul style="list-style-type: none"> • To delete an element, select the element in the UI Transactional Elements list and click Delete. • To reorder elements, click Reorder, and then click on and drag the elements to their new locations. <p>See the topic Edit, delete, or reorder a UI transactional element</p>
---------------------------	---

Note:For an illustration of a valid location configuration including the UI transactional elements associated with the locations on the tree, see the topic [Edit, delete, or reorder a UI transactional element](#).

3. Click OK to display the location path in the UI Location field on the Create/Edit UI Transactional Element dialog. For example:

UI Location : /Shipment/Shipment/Customer Charge



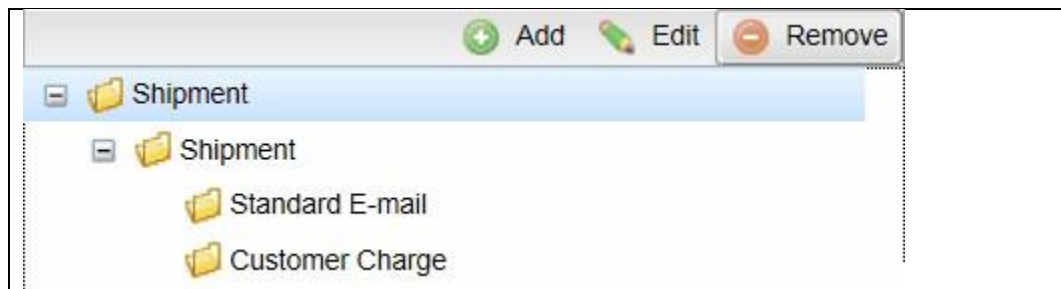
(See the topic [Create a UI transactional element](#).)


Example location additions for UI transactional elements

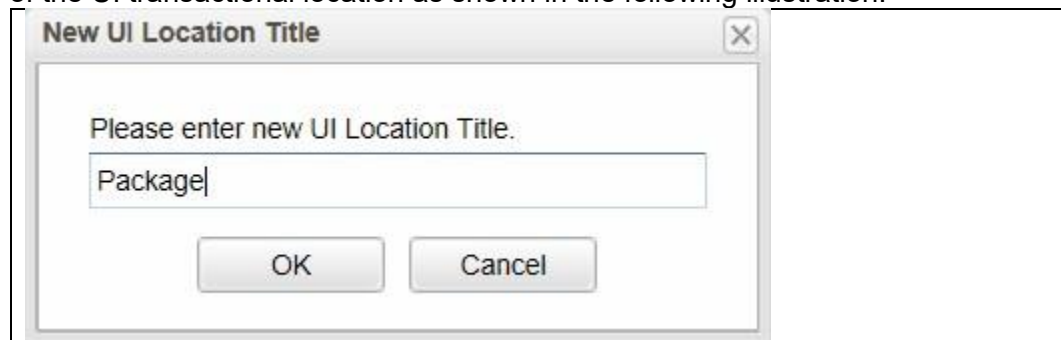
In the following example, a Package tab is added at the second level to the top-level Shipment screen (Web page), a Package Level Options column and an Item Level Options column at the third level, and then a Common section to the Package Level Options column.

To create and reposition the System section: 1.

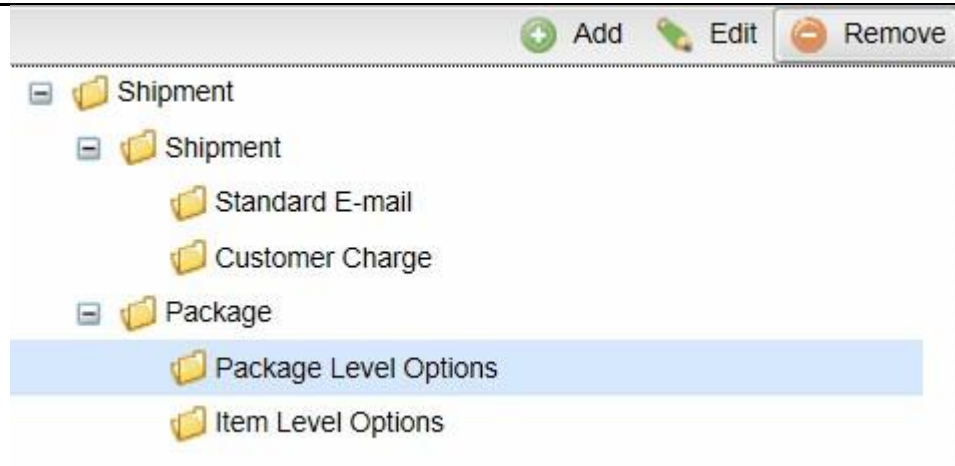
Select the first level Shipment folder icon.



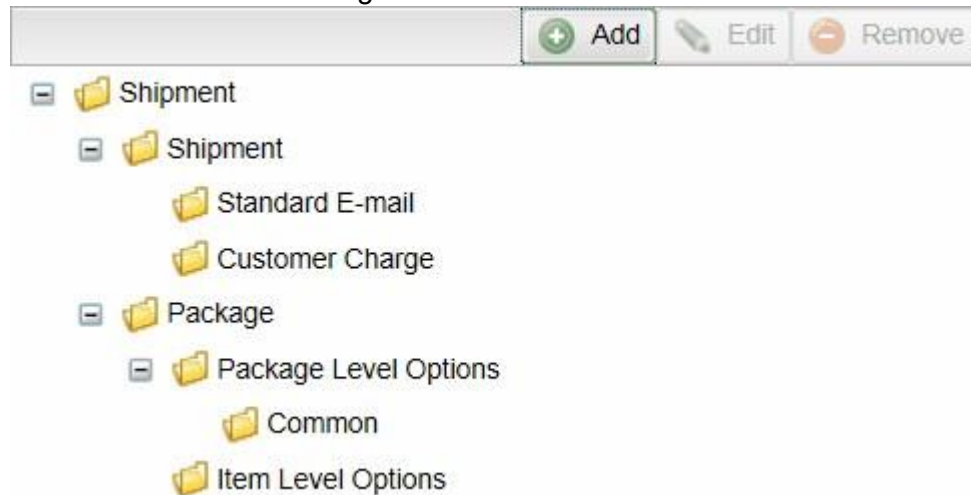
2. Click the Add  to display the New UI Location Title dialog, and then enter "Package" as the name of the UI transactional location as shown in the following illustration:



3. Select the new Package (tab) folder icon, and then click Add to display the New UI Location Title dialog; enter "Package Level Options" as the name of the UI transactional location, and then click OK.
4. Select the new Package (tab) folder icon, and then click Add to display the New UI Location Title dialog; enter "Item Level Options" as the name of the UI transactional location, and then click OK to display a result like the following illustration:



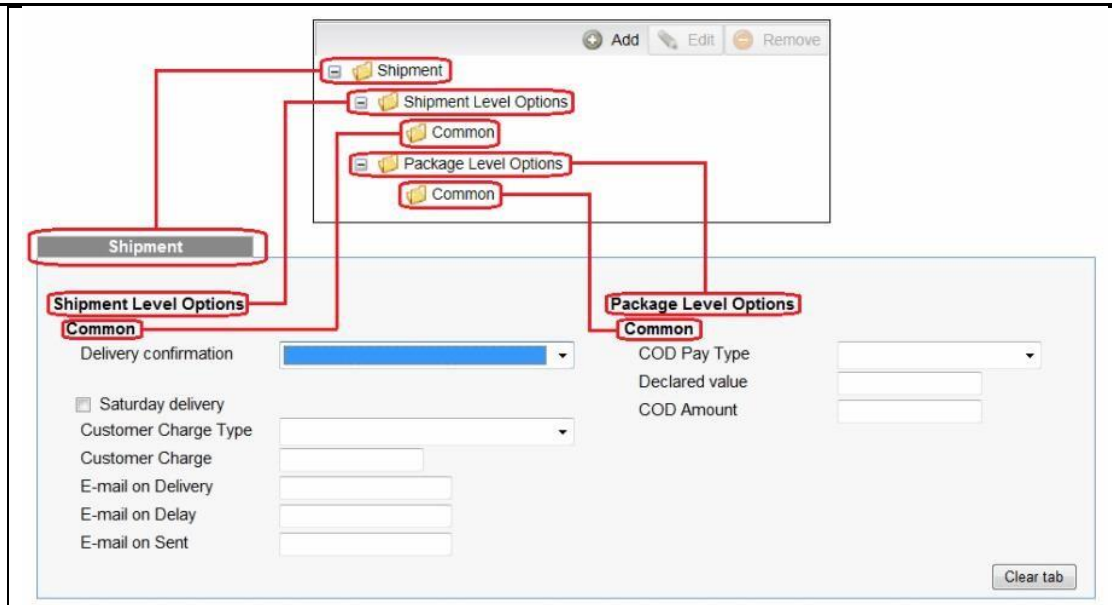
5. Select the new Package Level Options folder (as shown in the previous illustration), and then click Add to display the New UI Location Title dialog; enter "Common" as the name of the UI transactional location, and then click OK. The result looks like the following illustration:



6. Click OK at the bottom of the Select UI Location dialog to save the configuration.

Mapping of UI Transactional location tree to shipping system

The following illustration shows the mapping of the UI Transactional location tree for the UCM OnTracWS pre-configured carrier to the Parcel Warehouse Options screen for an OnTracWS carrier.



Edit, delete, or reorder a UI transactional element

In working with existing transactional elements, you can edit and delete an element, and change its position (reorder it) within the hierarchy of elements.

Edit a UI transactional element

To edit a UI transactional element:

1. Click the plus sign **+** next to the carrier folder to display the set of available elements, and then select UI Transactional Elements to display the UI Transactional Elements pane.
2. In the UI Transactional Elements list, carry out one of the following actions to display the Edit UI Transactional Element dialog:
 - Double-click on the row with the UI transactional element you want to edit.
 - Click on the row of the UI transactional element you want to edit to select it, and then click Edit.
3. Make any desired changes to the values and selections for configuring the element, and then click Save Changes. See steps 2-5 of the topic Create a UI transactional option for details on these fields.

Note: The fields and selections on the Edit UI Transactional Element dialog are identical to those on the Create UI Transactional Element dialog. You can modify all the fields on this dialog except Code.
4. Click Save Changes.

Delete a UI transactional element

To delete a UI transactional element from a carrier:

Caution: After you delete a UI transactional element, you cannot undo the operation.

1. Click the plus sign **+** next to the carrier folder to display the set of available objects, and then select UI Transactional Elements to display the UI

Transactional Elements pane with a list of currently incorporated UI transactional elements.

2. In the UI transactional Elements list, click on the row of the element you want to delete to select it, and then click Delete to display the Confirm Delete dialog.


Note: To select multiple elements to delete, hold down the CTRL key while selecting the elements. (This action also disables the Edit)

3. Click OK to confirm the deletion and remove the UI transactional element or elements from the list of available elements.

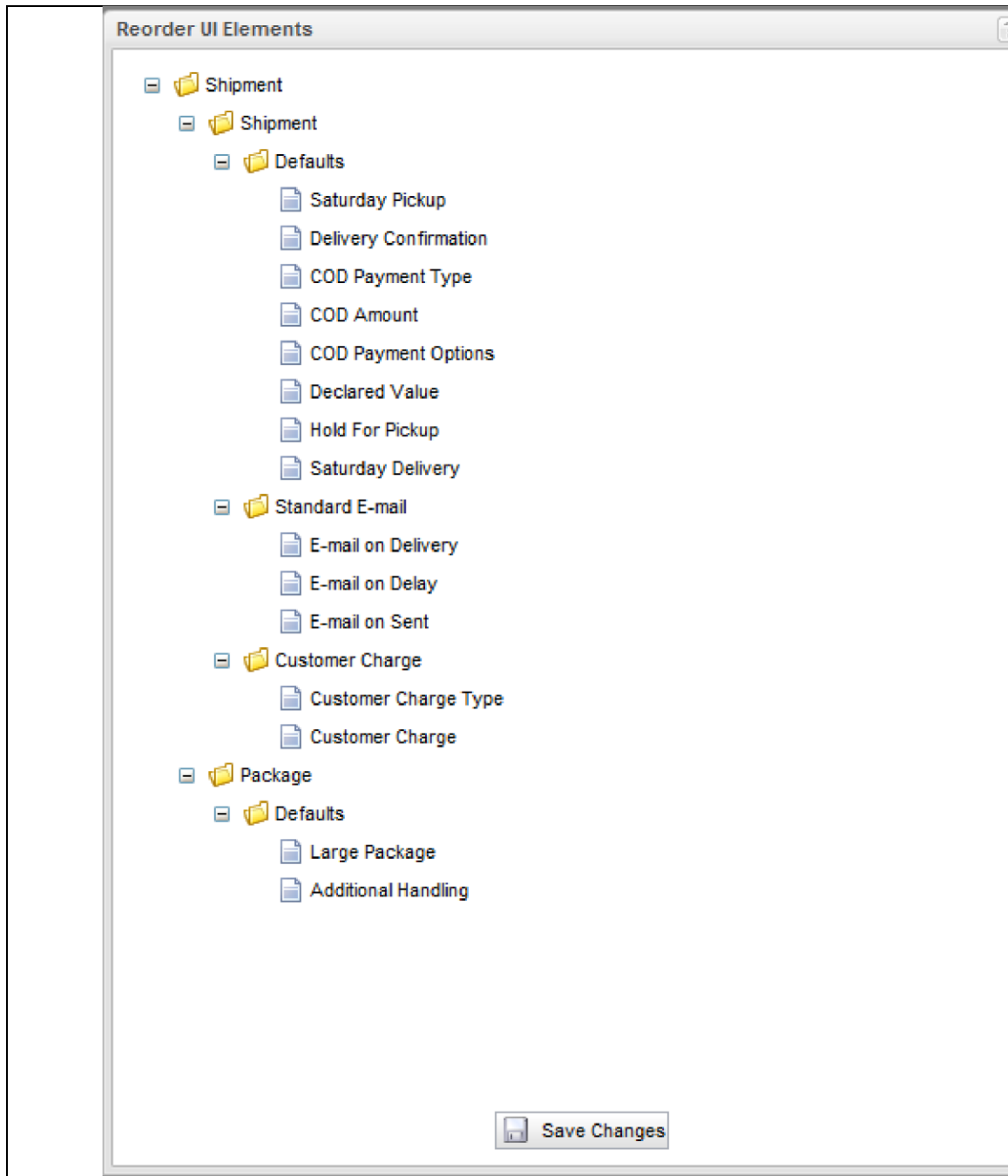
Reorder a UI transactional element



You can change the position on a UI transaction element on your shipping options screen, as well as the order of the tabs on this screen (for example, switching the positions of the package and shipment tabs).

To reorder a UI transaction element:

1. Click the plus sign  next to the carrier folder to display the set of available objects, and then select UI Transactional Elements to display the UI Transactional Elements pane.
2. Click the Reorder to display the Reorder UI Elements dialog.

The following example shows an Options screen with Shipment Level Options and Package Level Options. Shipment Level Options have the following labeled areas: Defaults, Standard E-mail, Customer Charge. Package Level Options have a single labeled area: Defaults.



Note: Folder  represent labeled tabs (highest level; for example: Shipment) or labeled areas on a tab ("child" folders; for example: Defaults). Page  represent actual fields, check boxes, or drop-down lists.

3. To reorder an element, click and drag the element to the position where you want it to be displayed. You can move both child folder icons and page icons.

Note: You can reorder an element only within its node. For example, a third-level element (field, check box, drop-down list) can be reordered only under its original

second-level folder. A second-level element can be reordered only within a first-level folder. In the previous illustration, for example, Saturday Delivery (check box) can be moved to directly under Saturday Pickup but cannot be moved next to any element under Customer Charge. The Customer Charge folder can be moved under the Package folder (before or after Defaults) but not directly under the topmost Shipment folder.

4. Click Save Changes to save your changes.

Best practices for working with UI transactional elements Setting up COD as a transactional option at ship-time

Setting up COD requires creating and configuring the following multiple objects and elements:

1. UI Transactional Elements to capture the COD information at ship-time.
2. A UI Administrative Element to hold the fee information per COD shipment.
3. A charge to calculate the actual charge amount for the COD service.
4. A script to determine whether COD should be calculated for the shipment.
5. A label; in order to print the COD amount the driver should collect on this label, you need to carry out the following tasks:
 - Create a script to calculate the amount.
 - Add an event to labels that uses the script pre-label call (so the amount can be calculated on reprints as well).
 - Add a Post Template that will print the COD Amount label and amount on the Standard Label.
 - Add a UI Administrative element that points to the Post Template.
 - Add a script to print the COD Amount label and amount on the Standard Label

Note: This example is for use with Parcel. Other shipping systems require similar procedures.

UI transactional elements

There are typically three pieces of data that the user must enter at the time of shipment: COD Amount, Payment Type, and Payment Options. The following steps and illustrations show how to configure the UI transactional elements for entering this data.

To create the required UI transactional elements:

6. Create a numeric field for COD Amount.

Edit UI Transactional Element [?] [X]

▼ **Basic Information**

Code : CODAMT

Name : COD Amount

Description :

☐ Applies to all services

▼ **UI Screen Location**

UI Transactional Label : COD Amount

Top Level : Shipment ▼

Second Level : Shipment ▼

Third Level : Defaults ▼

Create :

☐ This UI Transactional Element is also a UI Administrative Element.

▼ **Data Description**

Data type : Numeric ▼

Default value :

^ **Services**

7. Create a drop-down list for COD Payment Options.

Edit UI Transactional Element

▼ **Basic Information**

Code : CODOPTIONS

Name : COD Payment Options

Description :

☐ Applies to all services

▼ **UI Screen Location**

UI Transactional Label : COD Payment Options

Top Level : Shipment

Second Level : Shipment

Third Level : Defaults

Create :

☐ This UI Transactional Element is also a UI Administrative Element.

▼ **Data Description**

Data type : Dropdown

Default value :

Value	Name
FF	COD Fee + Freight
FI	COD Fee + Invoice Amount
FIF	COD Fee + Invoice Amount + Freight
IF	Invoice Amount + Freight
I	Invoice Amount Only

Create a drop-down list for Payment Type.

Edit UI Transactional Element

Basic Information

Code : CODPAYMENTTYPE

Name : COD Payment Type

Description :

☐ Applies to all services

UI Screen Location




UI Transactional Label : COD Payment Type

Top Level : Shipment

Second Level : Shipment

Third Level : Defaults

Create :

 Add to Top Level  Add to Second Level  Add to Third Level

☐ This UI Transactional Element is also a UI Administrative Element.

Data Description

Data type : Dropdown

Default value :

Value	Name
CASH	Cash
CHEQUE	Regular Cheque
POSTDATED	Post Dated Cheque

UI Administrative Element This example assumes that there is a flat fee per COD shipment. By creating an administrative UI element, this fee can be configured and managed via system administration. The following

illustration shows an example of how to configure a UI administrative element for this function:

The screenshot displays the 'Edit UI Administrative Element' window. It is divided into three main sections: Basic Information, UI Screen Location, and Data Description.

Basic Information:

- Code:** COD_FEE
- Name:** COD Fee Per Shipment
- Description:** The flat-rate fee for each COD shipment.

UI Screen Location:

- UI Administrative Label:** COD Fee
- ☐ Value is required
- Top Level:** Shipper Defaults
- Second Level:** Defaults
- Third Level:** Defaults
- Create:** (empty text box)
-
- ☐ This UI Administrative Element is also a UI Transactional Element.

Data Description:

- Data type:** Numeric
- Default value:** 2.25
-

Charge

Since the fee is managed by a UI administrative element, the charge should derive the information from that element to calculate the COD surcharge. The following illustration shows the charge created for this purpose:

The screenshot shows the 'Edit Charge' window with the following configuration:

- Basic Information**
 - Code : cod_Charge
 - Name : COD Charge
 - Description : (Empty text area)
 - ☒ Applies to all services
- Options**
 - Response Key : COD_FEE
 - Applied per : Shipment
 - ☐ Include this charge in fuel surcharge calculations
 - ☐ This charge has associated label text
- Calculation Method**
 - Method : Fixed Amount
 - Charge Source : UI Element
 - UI Element : COD Fee Per Shipment
- Scripts (Drag to Reorder)**

Scripts

Two scripts are needed for COD. The first script checks whether the shipment has COD and, if so, has the user provided the information for all three pieces of data? The second script calculates the amount the driver must collect at the time of delivery.

Script 1 – Does the shipment have COD? Carry out the following steps:

1. Create the script

Edit script

Basic Information

Code : isCOD

Name : is COD

Description : Checks to see if a shipment is COD

JavaScript Code

Type : Advanced

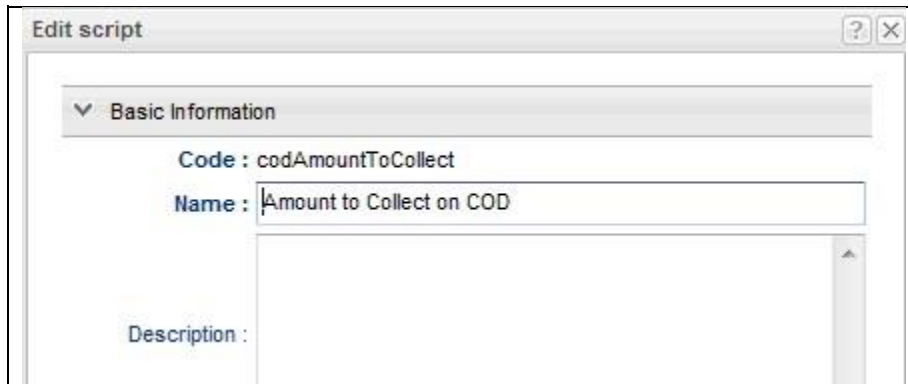
```
if(!(getAPIValue("CODAMT") == null) || !(getAPIValue("CODOPTIONS") ==
null) || !(getAPIValue("CODPAYMENTTYPE") == null)) {
    if(!(!(getAPIValue("CODAMT") == null))) {
        setError("COD Amount, Payment Type, and Payment Options are
required for COD shipments");
    }
    else if(!(!(getAPIValue("CODOPTIONS") == null))) {
        setError("COD Amount, Payment Type, and Payment Options are
required for COD shipments");
    }
    else if(!(!(getAPIValue("CODPAYMENTTYPE") == null))) {
        setError("COD Amount, Payment Type, and Payment Options
are required for COD shipments");
    }
}
}else{
    setNotApplicable();
}
```

}

2. Apply the script to the services that allow COD as well as to the charge. If the script returns false, it does not calculate a COD charge.

Referenced By					
Pre	Post	Code	Name	Type	Desc
<input checked="" type="checkbox"/>	<input type="checkbox"/>	cod_Charge	COD Charge	Charge	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	GND	Ground	Service	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	SLTR	Select Letter	Service	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	SPAK	Select Pak	Service	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	SPAR	Select Parcel	Service	

Script 2 – COD Amount to collect



The screenshot shows a window titled "Edit script" with a standard Windows-style title bar (minimize, maximize, close buttons). Inside the window, there is a tab labeled "Basic Information" with a downward arrow icon. Below the tab, the "Code" field is set to "codAmountToCollect". The "Name" field contains the text "Amount to Collect on COD". The "Description" field is currently empty. A vertical scrollbar is visible on the right side of the description area.

Edit script

▼ Basic Information

Code : codAmountToCollect

Name : Amount to Collect on COD

Description :

```

option = getAPIValue("CODOPTIONS");
codfee = parseFloat(getAdminValue("COD_FEE"));
totalfreight = parseFloat(getAPIValue("TOTAL_FREIGHT"));
invoiceamount = parseFloat(getAPIValue("CODAMT"));

// COD Fee + Freight  if
(option == "FF")
{
COD_TO_COLLECT = codfee + totalfreight ;
setAPIValue("COD_TO_COLLECT", COD_TO_COLLECT);
}

//COD Fee + Invoice Amount  else
if (option == "FI")
{
COD_TO_COLLECT = codfee + invoiceamount;
setAPIValue("COD_TO_COLLECT", COD_TO_COLLECT);
}

//COD Fee + Invoice Amount + Freight  else
if (option == "FIF")
{
COD_TO_COLLECT = codfee + invoiceamount + totalfreight ;
setAPIValue("COD_TO_COLLECT", COD_TO_COLLECT);
}

//Invoice Amount + Freight  else
if (option == "IF")
{
COD_TO_COLLECT = invoiceamount + totalfreight;
setAPIValue("COD_TO_COLLECT", COD_TO_COLLECT);
}

//Invoice Amount Only  else
if (option == "I")
{
COD_TO_COLLECT = invoiceamount ;
setAPIValue("COD_TO_COLLECT", COD_TO_COLLECT);
}
else
{
setNotApplicable();
}

```

Event

After creating the script to calculate COD amount, you need to set up a Label event to run this calculation prior to creating the label.

Events

Available Events

LABL API

Applied Scripts (Drag to Reorder)

Pre	Post	Name	Descr
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Amount to Collect on COD	

Label To create the label:

1. Add a UI administrative element for the Post Template.

Note: Template_name2 is the standard Parcel value for the Post Template.

Create UI Administrative Element

Code : Template_name2

Name : Post Template

Description :

UI Screen Location

UI Administrative Label : Post Template Name

☐ Value is required

Top Level : Shipper Defaults

Second Level : Defaults

Third Level : Defaults

Create :

☐ This UI Administrative Element is also a UI Transactional Element.

Data Description

Data type : Text

Default value : PostTemp

Minimum length : 0

Maximum length : 255

2. Add a script for the label to print the COD Amount and its value. Make this a Pre Script on the Standard Label template (or on any label that you want to have print

this information).

Create script

Basic Information

Code : PrintCODAmount

Name : Print COD Amount

Description : Print the title of COD Amount plus the actual COD Value that is to be collected by the shipper.

JavaScript Code

Type : Advanced

```
codToCollect = getAPIValue("COD_TO_COLLECT"); if (!! codToCollect)
{
  codToCollectN = codToCollect*1;
  codText = "COD Amount $" + codToCollectN.toFixed(2);
  setAPIValue("CODTEXT", codText);
}
```

3. Create the post template for the COD Amount.

Note: This template must be stored on the Parcel server in the ..Flagship\Templates directory. The file must have the same filename it has in UI administrative element for the post template (in this example Template_name2).

For example, for a PNG label, carry out the following steps:

1.
 - a. Open the Standard Label Template.
 - b. Expand the Printer Support section.
 - c. Select the printer to use.
 - d. Click the View to view the printer code for the template.
 - e. Find the line of code where you would want the COD Amount to print on the label. In this example, we want it to print under the Weight portion of the label, within the Address section. The line of code for the guideline is as follows:

```
^FO500,0140^AUN,21,18^FDSHIP WGT: {WEIGHT}
{WEIGHT_UOM}^FS
```

- f. Copy this line into a text editor; for example, Notepad.
 - g. Modify the line information so that it prints the data you want as well where you want it to print; for example:

```
^FO500,0180^AUN,35,25^FD{CODTEXT}^FS
```

Or


```
^FO500,0455^AUN,35,25^FD{CODTEXT}^FS
```

Note: The latter line of code prints the COD Amount on the same line as the Service Name.

- h. Save the template with a filename of PostTemp.pngt to the following folder

..Flagship\Templates

The following illustration shows a PNG label with COD Amount created with the previous procedures:

File	Edit	View	Favorites	Tools	Help
Mr. C. Ford 1 Executive Drive Suite 3 CHELMSFORD MA 01824 United States: 0206659961			PKG WGT: 100.00 lbs SHIP DATE: 2012-09-01 SHIP #: SHIP WGT: 100.00 lbs		
SHIP TO:			COD Amount \$180.92		
Coulter Industries Shane Coulter 1 Executive Drive CHELMSFORD MA 01824 US 9784822707					
East Coast Trucking Signature Required					
					
02030					

Zoning Methods

Overview of zoning methods

You create a zoning method at the carrier level and apply the zoning method at the service level. Rating methods can be configured to use zoning methods created in this way. You can also specify an effective date for a zone. The following zoning methods are available as options in UCM:

- Based on a script
- Based on geocodes
- Based on postal codes

A zoning method includes a set of zones for use with certain types of rating methods where standard rates based on origin-destination pairs can be calculated. A zoning method also includes a Response API key. A zone is essentially a set of location data for determining standard rates.


The following topics describe zoning methods and zones:

- [Create a zoning method](#)
- [Edit or delete a zoning method](#)
- Manage zones
 - [Overview of managing zones](#)
 - [Add geocode zones](#)
 - [Add postal code zones](#)
 - [Zone file formats](#)

Note: For information on adding a zoning method to a service, see the topic: [Add or remove objects within a service](#). Create a zoning method

Create a zoning method

To create a carrier-level zoning method:

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Zoning Methods link under the carrier folder to display the Zoning Methods pane, and then click Create in the upper right portion of the panel to display the Create Zoning Method dialog.

The following illustration shows the Create Zoning Method dialog:

The screenshot shows a 'Create Zoning Method' dialog box. It contains three main sections: 'Basic Information' with fields for Code (test2), Name (test2), and Description; 'Zoning Method' with a Type dropdown; and 'Scripts (Drag to Reorder)'. At the bottom are 'Save Changes' and 'Save Changes and Manage Zones' buttons.

The following table lists the basic information for the fields on this dialog:

Field	Max. Length (No. of chars.)	Required
Code	64	Yes
Name	255	Yes
Description	255	No
Type	255	Yes

3. In the Create Zoning Method dialog, carry out the following steps:

1.

- Under Basic Information, in the **Code** field, type the code for the zoning method; for example: ZNM1
- Under Basic Information, in the **Name** field, type the name of the zoning method; for example: Zoning Method One
- Under Basic Information, in the **Description** text box, optionally type a description for the zoning method; for example: Zoning method for this carrier.
- From the **Type** drop-down list, select one of the following zoning method types:
 - Custom ○
 - Geographic Code ○
 - Postal Code Range

4. If, in step 3-d, you select Custom, UCM displays a script field for adding the script:

You need to add a script to the zoning method using following options:

- Add Existing – Click Add Existing

To display the Select Existing Scripts dialog with a list of available scripts. Select (check) the check box or boxes next to the script(s) you want to add to the zoning method, and then click Select to display the selected scripts in the Scripts field on the Create Zoning Method dialog.

- Create New – Click Create New

To display the Create Script dialog. See the topics under "Create, test, and debug a script." Click Select to display the new script in the Scripts field on the Create Zoning Method dialog. **Note:** For information on working with scripts, see the topics under "Scripts."

5. If, in step 3-d, you selected Geographic Code or Postal Code Range, click Save Changes and Manage Zones to save the zoning method and display the Zones Editor.

Note: Use the Zones Editor to manage the zones associated with this zoning method. See the topics under "Manage zones."

Edit or delete a zoning method

You must edit a zoning method at the carrier level. You can also delete a zoning method from a carrier, in which case it is no longer available to apply to any service.

Edit a zoning method

To edit a zoning method:

1. In UCM, click the plus sign next to the carrier to display the set of objects associated with the carrier.
2. Click the Zoning Methods link to display the list of zoning methods associated with the carrier.
3. Carry out one of the following actions:
 - Double-click the zoning method you want to edit to display the Edit Zoning Method dialog.

- Select the zoning method you want to edit, and then click Edit to display the Edit Zoning Method dialog.

4. Modify any parameters, zones, scripts, or script ordering that need changing. For more information, see the following topic: [Create a zoning method](#). Also see the topics under "Manage zones."

Note: The fields and buttons on the Edit Zoning Method dialog are identical to those on the Create Zoning Method dialog. However, you cannot modify the value for Code.


5. Click Save Changes to save your changes to the zoning method.

Note: When you save changes to a zoning method, every occurrence of this zoning method associated with a service automatically incorporates these changes.

Delete a zoning method

You can delete a zoning method from a carrier. When you delete a zoning method from a carrier, that zoning method is removed from all services with which it is associated and is no longer available for adding to any services belonging to the carrier.

To delete a zoning method from a carrier:

1. In UCM, click the plus sign  next to the carrier to display the set of objects associated with the carrier.
2. Click the Zoning Methods link to display the Zoning Methods pane with the list of zoning methods belonging to the carrier.
3. Select the zoning method to delete, and then click Delete to display the Confirm dialog.

Note: To select multiple Zoning methods to remove, press CTRL when selecting the rows.

4. Click OK to permanently delete the zoning method from the carrier or click Cancel to exit the dialog without deleting the zoning method.

Caution: There is no undo for this operation. Additionally, if a deleted zoning method is associated with a service it is automatically removed from the service when you delete it from the carrier.

Manage Zones Overview of managing zones

Zones associated with a zoning method can be managed using the Zones Editor. You can manage the zones associated with a zoning method using the Zones Editor in the following ways:

- Open the Zones Editor
- Edit a zone
- Delete a zone
- Import a zone file **Notes:**
- Zones added at the carrier definition level cannot be viewed or managed at the carrier instance level. Zones added at the instance level override those added at the definition level.
- The following procedure applies to zones based on geographic codes and postal codes. Zones based on a script must be managed using the script. The Zones Editor works the same for both geocode zones and postal code zones. The difference lies in the columns displayed for these respective zone types.

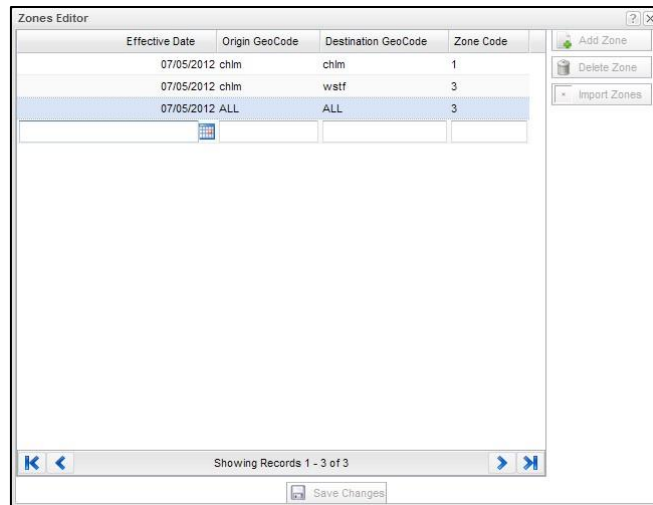
Open the Zones Editor To

open the Zones Editor:

Carry out one of the following actions:

- Create a zoning method, and then click Save Changes and Manage Zones. This action displays the Zones Editor with no data, enabling you to add zones for the new zoning method either manually or by importing a zone file.
- Select a zoning method in the Zoning Methods pane, and then click Edit. You can then modify, add to, or delete existing zones. Note that when finished, you need to click Save Changes and Manage Zones.

The following example shows the Zones Editor with a set of geocode zones:



Use the pagination buttons on the label bar at the bottom of the Routes Editor to navigate among multiple pages of routes as follows:

- First page button (|<) – Go to the first page of records.
- Previous button (<) – Go to the previous page of records.
- Next button (>) – Go to the next page of records.
- Last page button (>|) – Go to the first page of records.

Notes:

- The label bar shows the number of records currently displayed onscreen, as well as the total number of records.
- Edited records remain on the screen until you click Save Changes. These records are displayed as follows:
 - When an entry is edited, cells that changed appear in blue.
 - When an entry is added, all cells that have entries appear in blue.
 - When an entry is deleted, it appears in gray and each cell has a line through it.
- To filter for a subset of zones in the Zones Editor, type the filter criteria in the row at the top with the funnel icon on the right. You can also select a date filter using the calendar icon. When your criteria are complete, the list is filtered automatically.

Edit a zone

To edit a zone:

1. In the Zones Editor, double click on the zone you want to edit to make the fields editable.
2. Modify values as desired for the zone. See the topics [Geocode zones](#) and [Postal code zones](#) for a description of the columns for each type of zone.

3. Click outside the fields in the zone to re-activate the buttons, and then click Save Changes to save your changes.

Delete a zone

To delete a zone:

Select the zone and then click Delete. To delete multiple zones, hold down the CTRL key when selecting zones to delete. Click Save Changes to save the updated rates.

Caution: When you delete a zone or zones, you are asked to confirm the deletion and warned that there is no undo.

Import a zone file

Zone files are CSV files containing a set of rates. For the correct formatting of each type of zone file, see the topic Zone file formats.

To import a zone file:

1. In the Zones Editor, click Import Zones to display the Zone Import dialog.

The screenshot shows the 'Zone Import' dialog box. It has a title bar with a question mark icon and a close button. The dialog is divided into two main sections. The first section, 'Basic Information', contains two fields: 'Effective Date' with a calendar icon and 'Import File Name' with a 'Browse...' button. The second section, 'Import Summary', is empty. At the bottom of the dialog is an 'Import' button.

2. Click the calendar icon to specify the date when the zones go into effect.
3. Click Browse to display the Windows file dialog, select the zone file to import, and then click Open.
4. Click Import to import the zones in the file and display them in the zones list of the Zones Editor.
5. Click Save Changes to save the zones.

See the following Help topics for information on managing specific types of zones:

Geocode zones

Postal code zones

Add geocode zones

Add a geocode zone manually with the Zones Editor To
add a geocode zone manually:

1. Carry out the general procedure for opening the Zones editor.

The following illustration shows the Zones Editor with a set of geocode zones.

The screenshot shows the 'Zones Editor' window. It contains a table with the following data:

Effective Date	Origin GeoCode	Destination GeoCode	Zone Code
07/05/2012	chlm	chlm	1
07/05/2012	chlm	wsif	3
07/05/2012	ALL	ALL	3

Below the table is an empty row for adding a new zone. To the right of the table are buttons for 'Add Zone', 'Delete Zone', and 'Import Zone'. At the bottom of the window, there is a status bar showing 'Showing Records 1 - 3 of 3' and a 'Save Changes' button.

2. In the Zones Editor, click Add Zone to display a new line for entering zone data as shown in the previous illustration.
3. Place the cursor in the following fields and specify values:

In this field...	Do this...
Effective Date	Type in the date on which the zone becomes effective or click the calendar icon to select a date. The date format is MM/DD/YYYY.
Origin GeoCode	Enter an origin geocode. (For a description of geocode, see the Note following this table.)
Destination GeoCode	Enter a destination geocode. (For a description of geocode, see the Note following this table.)
Zone Code	Type a code for the zone. This can be any alphanumeric code; for example: 1

Note: A geocode is an alphanumeric geographic code for an origin or destination (typically a range of postal codes); for example: METFRAGER for Metropolitan Frankfurt, Germany. You can create a set of geocodes using the UCM Geographic Codes object. See the topics under "Geographic Codes."

- Click outside the fields in the zone to re-activate the buttons, and then click Save Changes to save the zones that you added.

Add postal code zones Add a postal code zone manually with the Zones Editor

The following options for postal codes can be added with a Postal Code type of zoning method with the Zones Editor:

- Zone based on an origin-destination postal codes pairing.
- Zone based on destination postal code only.

Note: The fields in Zones Editor are the same for both of these options. For Zones based on destination postal codes only, leave the Origin Postal fields blank. Otherwise, the procedure for these types of postal code zones is the same. **To add a postal code zone manually:**

- Carry out the general procedure for opening the Zones editor.

The following illustration shows the Zones Editor with an origin-destination postal code zone. (The destination postal code editor is the same without the Origin Postal columns.)

Effective Date	Origin Postal		Destination Postal		Zone Code
	Low	High	Low	High	
2013/10/25	01824	88888	00000	99999	Testzone

- In the Zones Editor, click Add Zone to display a new line for entering zone data as shown in the previous illustration.
- Depending on the type of postal code zone, place the cursor in the following fields and specify values.

For origin-destination postal code zones:

In this field...		Do this...
Effective Date		Type in the date on which the zone becomes effective or click the calendar icon to select a date. The date format is MM/DD/YYYY.
Origin Postal	Low	Optionally, enter the lowest origin postal code in the postal code range.
	High	Optionally, enter the highest origin postal code in the postal code range.
Destination Postal	Low	Enter the lowest destination postal code in the postal code range.
	High	Enter the highest destination postal code in the postal code range.
Zone Code		Type a code for the zone. This can be any alphanumeric code; for example: Z1

- Click outside the fields in the zone to re-activate the buttons, and then click Save Changes to save the zones that you added.

Zone file formats

You can create and import the following types of zone files:

- Zones based on geocodes
- Zones based on origin-destination postal codes
- Zones based on destination postal codes **Notes:**
- For zone files, you specify Effective Date when you import the file.
- Zone files of all types must be Comma Separated format (CSV). See the examples in the following sections.

Zone file format based on geocodes

For a zone file based on geocodes, column names must be formatted as follows:

```
origin,destination,zone_code
```

Values in the columns are as follows:

- origin – origin geographic code
- destination – destination geographic code
- zone_code – zone code

Note: You can specify the value ALL for origin and destination geographic codes. For information on geographic codes, see the topics under "Geographic Codes." The following is an example of a zone file based on geocodes:

```
origin,destination,zone_code
500,100,500100
500,200,500200
500,300,500300
500,400,500400
500,500,500500
400,100,400100
400,200,400200
400,300,400300
400,400,400400
400,500,400500
200,100,200100
200,200,200200
200,300,200300
200,400,200400
200,500,200500
```

Zone file format based on origin-destination postal codes

For a zone file based on origin-destination postal codes, column names must be formatted as follows:

```
origin_postlow,origin_posthigh,destination_postlow,destination_posthigh,zone_code
```

Values in the columns are as follows:

- origin_postlow – Lowest postal code in the origin postal code range
- origin_posthigh – Highest postal code in the origin postal code range

- `destination_postlow` – Lowest postal code in the destination postal code range
- `destination_posthigh` – Highest postal code in the destination postal code range
- `zone_code` – zone code

The following is an example of a zone file based on origin-destination postal codes (fivedigit US Zip codes):

```
origin_postlow,origin_posthigh,destination_postlow,destination_posthigh,zone_code
00001,19999,40000,59999,US1
00001,19999,60000,79999,US2
00001,19999,80000,99999,US3
20000,39999,60000,79999,US4
20000,39999,80000,99999,US5
40000,59999,80000,99999,US6
```

Zone file format based on destination postal codes

For a zone file based on destination postal codes, column names must be formatted as follows: `destination_postlow,destination_posthigh,zone_code` Values in the columns are as follows:

- `destination_postlow` – Lowest postal code in the destination postal code range
- `destination_posthigh` – Highest postal code in the destination postal code range
- `zone_code` – zone code

The following is an example of a zone file based on destination postal codes (five-digit US Zip codes):

```
destination_postlow,destination_posthigh,zone_code
00001,19999,US1
20000,39999,US2
40000,59999,US3
60000,79999,US4
80000,99999,US5
```

Index Keys Overview of Index Keys

The Parcel database includes a set of API keys that are submitted and returned with appropriate values as part of a shipment request and response. These keys are predefined in terms of the level they apply to (shipment, package, or item level). The UCM index key object type enables you to dynamically define a level for an existing API key for indexing purposes. With this feature, you can create, edit and delete a new set of keys. The main purpose of specifying these keys is for use in indexing, in order to retrieve key-value pairs from the database. **Notes:**

- API keys are the values in the `name_di` column of the Parcel `di_map` table.
- You can also create dynamic API keys with the UI Administrative Elements feature in UCM.
- The following Key Types are available for index keys in UCM:

- Shipment ○
- Package ○
- Item

When a user performs a shipment with a UCM Carrier, the respective index keys created for Shipment, Package, or Item are present in the Database with the same IDHIB as the shipment.

Index key examples Shipment keys

The following are examples of valid key names for the Shipment Key type:

- UI_SFEMAIL
- PRINTER_PORT
- PKGCNT
- ORIGINAL_SHIPDATE
- HOLD_CARRIER

Package keys

The following are examples of valid key names for the Package Key type:

- ADDR_LINE1
- ADDR_CITY
- ADDR_COUNTRY
- CODIND
- IS_APO

Item keys

The following are examples of valid key names for the Item Key type:

- ITEMCOMMODITY_CODE
- ITEM_COUNTRY
- ITEM_WEIGHT_UOM
- SCH_BCODE
- UOM


Working with index keys

The following topic describes how to work with UCM index keys: Create, edit, or delete an index key.

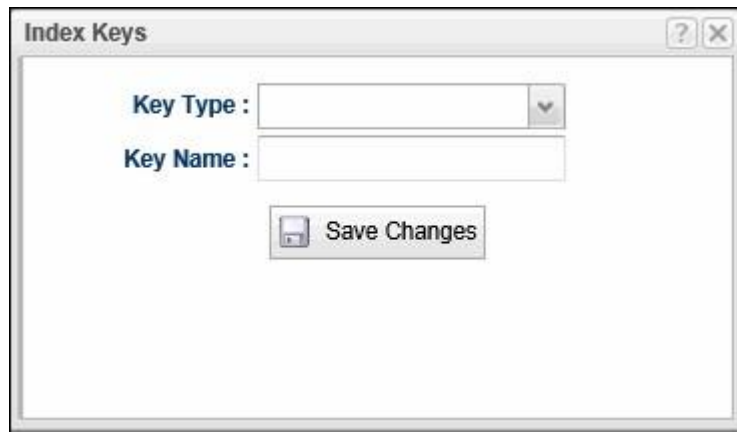
Create, edit, or delete an index key Create an index key

For information on the function of index keys, see the Help topic Overview of index keys.

To create an index key:

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.

2. Click the Index Keys link under the carrier folder to display the Index Keys pane, and then click Create in the upper right portion of the panel to display the Create Index Keys dialog, as shown in the following illustration:



The screenshot shows a dialog box titled "Index Keys". Inside the dialog, there are two labels: "Key Type :" followed by a text box with a downward-pointing arrow, and "Key Name :" followed by a text box. Below these two fields is a button labeled "Save Changes" with a small floppy disk icon to its left. The dialog box has a standard Windows-style title bar with a question mark and a close button.

3. In the Create Index Keys dialog, carry out the following steps:
 1.
 - a. From the **Key Type** drop-down list, select the following type of key for which you want to create a index:
 - ☐ Shipment
 - ☐ Package
 - ☐ Item
 - b. In the **Key Name** field, type the name of the key; for example: UI_SFEMAIL
4. Click Save Charges to save your changes to the index key.


Note: If you click Save Changes without entering the index keys details (Key Type and/or Key Name) the error icon (❗) is displayed to the right of the field with the missing value.

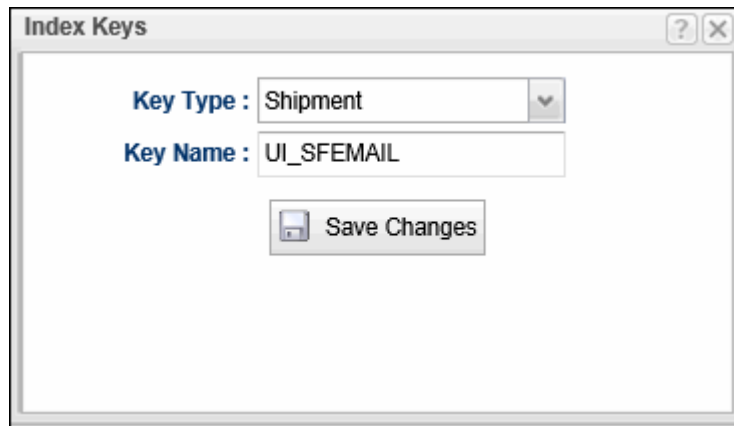
UCM also enables you to edit an index key at the carrier level and also delete an index key from a carrier. See the following sections.

Edit an index key

Editing an index key enables you to change the Key Type or the Key Name.

To edit an index key :

1. In UCM, click the plus sign  next to the carrier to display the set of objects associated with the carrier.
2. Click the Index Keys link to display the list of index keys associated with the carrier.
3. Carry out one of the following actions to display the Edit Index Keys dialog, as shown in the following illustration:
 - Double-click the index key you want to edit.
 - Select the index key you want to edit, and then click Edit.




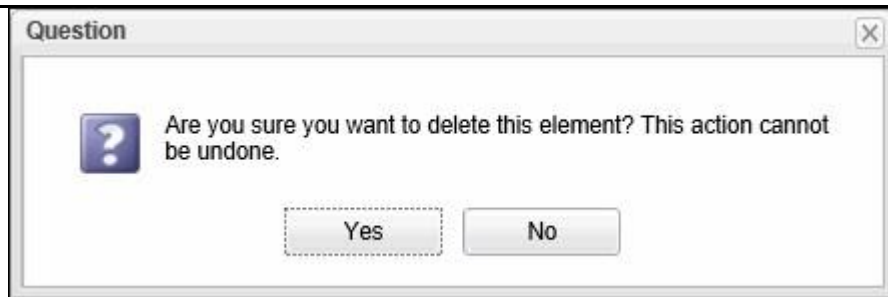
4. Make any desired changes to the **Key Type** and/or **Key Name** fields. For more information, see the previous section, "Create an Index Key."
5. Click Save Changes to save your changes to the Index Key.

Delete an index key

You can delete a index key from a carrier.

To delete an index key:

1. In UCM, click the plus sign  next to the carrier to display the set of objects associated with the carrier.
2. Click the Index Keys link to display the Index Keys pane with the list of index keys belonging to the carrier.
3. Select the index key(s) to delete, and then click Delete to display the Confirm Delete dialog.



Note: To select multiple index keys to delete, hold down the **Ctrl** key while selecting the rows. (This action also disables the Edit).

4. Click Yes to permanently delete the index key(s) from the carrier or click No to exit the dialog without deleting the index key.

Scripts

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Overview of scripts

Scripts enable you to add additional logic to operations and processes carried out by a UCM Carrier. UCM provides both a set of built-in scripts and the capability to create and edit custom scripts of several types depending on operational requirements. (For a description of these types, see the topic [Specific script types](#).)

UCM incorporates scripts and script creation at the following levels:

- Built-in – UCM includes a set of built-in scripts that you can apply to any of the objects or events in UCM that can use scripts. These scripts cannot be edited. However, their code can be copied and then modified to create new scripts.
- Carrier level – You typically create a script at the carrier level, and then apply it to a specific object, element, or event. Additionally, a script created within a specific context (for example, a script created in conjunction with a specific object such as a routing method) is also added to the list of scripts available at the carrier level.
- Contextual – A context is any specific object, element, event, or other process that a script can be applied to. You can create a script when configuring a specific context, and then directly apply the script to that context.

Additionally, scripts can be applied before a specific operation or process is performed, after it is performed, or in conjunction with an event; an operation, for example, can be the submission of a SHIP API request.

Note: All UCM scripts use JavaScript, which does not need to be compiled. The UCM application also provides means of testing and debugging scripts. See the topics under "Create, test, and debug a script."

Script execution workflow

Note: Scripts that run before a given operation is carried out are called "pre" and scripts that run after an operation are called "post." UCM scripts run in the following order:

1. API pre-scripts
2. Carrier pre-scripts
3. Service pre-scripts
4. Packaging type pre-scripts
5. Billing Type pre-scripts
6. Any charges / logic / other carrier logic applied (if rating or shipping)
7. Zoning Event pre-scripts
8. Zoning
9. Zoning Event post-scripts
10. Routing Event pre-scripts
11. Routing
12. Routing Event post-scripts
13. Rating Event pre-scripts
14. For each rating method associated with the service
15. Rating method pre-scripts
16. Rating method- Dim weight script if used
 - Volume script if used
17. Rating method post-scripts
18. Rate selection script
19. Rating Event post-scripts

20. Charge Event pre-scripts
21. For each charge associated with the service
22. Charge pre-scripts
23. Charge- Charge script – if used
24. Charge post-scripts
25. Charge Event post-scripts
26. TINT script – if used
27. Any other carrier logic applied (if shipping)
28. Tracking number script - if used
29. Check digit script – if used
30. For each transactional report
31. Report pre-script
32. Any other carrier logic applied (if label)
33. For each package
34. For each label associated with the service- Label template pre-scripts
 - Label
 - Included label template's pre-scripts
 - Included label template
 - Included label template's post-scripts
 - Label template post-scripts
35. Any other carrier logic applied (if reporting)
36. Report pre-script
37. Report
38. Report post-script
39. Any other carrier logic applied (if close)
40. EOD Selection script – if used
41. EOD Rate script – if used
42. EOD Split script – if used
43. Billing Type post-scripts
44. Packaging type post-scripts
45. Service post-scripts
46. Carrier post-scripts
47. API post-scripts


Create, test, and debug a script

General Procedure

You can create various types of scripts. The general procedure for creating a script is the same for all these types. The options available for each type differ depending on the script type. See the topic [Specific script types](#). **Notes:**

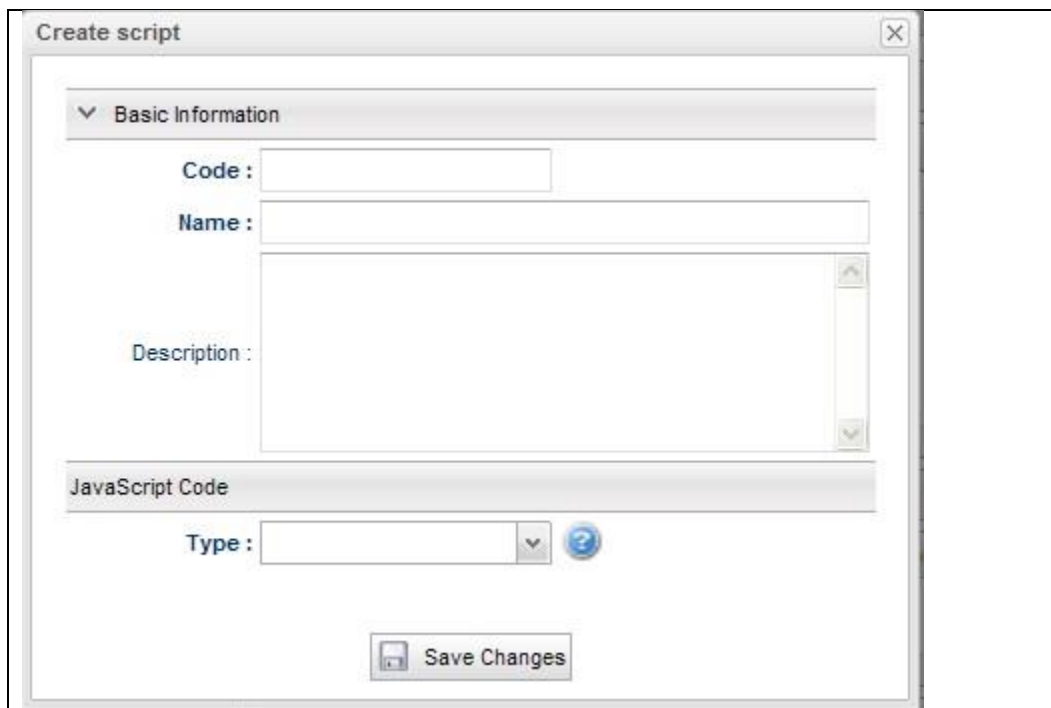
- After you access the Create Script dialog, the procedure for creating a script in the context of creating or editing a specific object is identical to creating a script directly from the Scripts pane. If you are also applying the script to a specific object (creating an "in context" script), see the topic for creating that object.
- Scripts applied to a particular object run in the order in which they are listed in the list of scripts for that object. A new script created for that object is added at the end of its list of scripts. To change the order, drag the script to the desired position.

To create a carrier-level script:

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Scripts link under the carrier folder to display the Scripts pane, and then click Create in the upper right portion of the panel to display the Create Script dialog.



3. The following illustration shows the Create script dialog:


 A screenshot of the 'Create script' dialog box. The dialog has a title bar 'Create script' and a close button. It contains a section 'Basic Information' with the following fields: 'Code' (text input), 'Name' (text input), and 'Description' (text area). Below these fields is a section 'JavaScript Code' with a 'Type' dropdown menu and a help icon. At the bottom of the dialog is a 'Save Changes' button.

The following table lists the basic information for the fields on this dialog box:

Field	Max. Length (No. of chars.)	Required
Code	64	Yes
Name	255	Yes
Description	255	No

4. In the Create script dialog under Basic Information, carry out the following steps:
5. In the **Code** field, type the code for the script; for example: IsDomValid
6. Under Basic Information, in the **Name** field, type the name of the script; for example: Domestic Shipment Validation
7. Under Basic Information, in the **Description** text box, optionally type a description for the script; for example: Validates a shipment is domestic and asks user whether to proceed if not.
8. Under JavaScript Code, from the **Type** drop-down list, select a script type to display the options for that script type. **Note:** Click the context Help for information on script types or see the topic: [Specific script types](#).
9. Code and configure the script. (For configuration options for a specific script type, see the topic [Specific script types](#).)
10. Optionally, to check the JavaScript syntax of your script, click Validate. This action progressively highlights any syntax errors in the text box where you entered the JavaScript code.
11. Optionally, select the Debug check box. If your UCM carrier is set up for JavaScript debugging, it launches the Mozilla Rhino Debugger when the script is executed. **Note:** The debugger helps debug scripts running in multiple threads and provides facilities to set and clear breakpoints, control execution, view variables, and evaluate arbitrary JavaScript code within the current scope of an executing script. For a UCM carrier, this debugging functionality can be useful during the test phase of deployment. See the topic [Best practices for working with scripts](#).
12. Click Save Changes to add the script to the Existing Scripts list for the UCM carrier.

Specific script types

The following UCM script types are available:

- [Advanced](#)
- [Criteria](#)
- [Criteria/Validation](#)
- [Request Modification](#)
- [Validation](#)

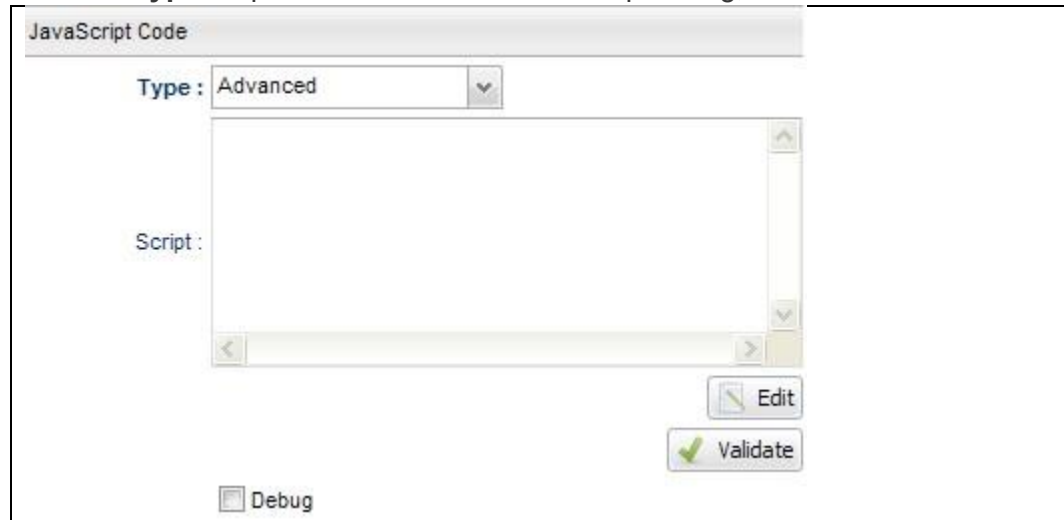
The following sections describe how to select and configure these script types. **Note:** For information on debugging scripts and script examples, see the topic [Best practices for working with scripts](#).

Advanced script

An Advanced script includes complete implementation of a script with no automatically added code such as is provided with other script types; for example, with a Validation

script, the code to display the error message (see Note after step 6). **To create an Advanced script:**

1. Carry out steps 1 - 3c of the [General Procedure](#).
2. From the **Type** drop-down list in the Create Script dialog, select Advanced:



The screenshot shows a dialog box titled "JavaScript Code". Inside, there is a "Type:" label followed by a dropdown menu currently showing "Advanced". Below this is a large text area labeled "Script:". At the bottom right of the dialog are two buttons: "Edit" (with a pencil icon) and "Validate" (with a green checkmark icon). At the bottom left is a checkbox labeled "Debug".

3. In the *Script* text box, type the JavaScript code for the script. Optionally, click Edit to display the full-screen Edit Advanced Script editor.
4. In the *Script* text box, type the JavaScript code for the script. Optionally, click Edit to display the full-screen Edit Advanced Script editor.
5. You can check and correct syntax from within this screen by clicking Validate.

- When you finish editing your code on the Edit Advanced Script screen, click Update to save your changes and return to the Create Script dialog.
- Optionally, select the **Debug** check box to debug the script when it runs.
- Click Save Changes to save the script. **Notes:** When you edit a script originally created as another script type, you can change the type to Advanced. In this case, the additional code added by UCM for the original script type is included in the code displayed in the Script text box. Use this feature to view the complete code for scripts where code is automatically added but not visible with the original script type.
For more information on steps 4 and 5, see the topic [General Procedure](#).

Criteria script

A Criteria script specifies a condition (criterion) which, if met, causes the system to skip processing the object that the script is applied to but allows subsequent processing to continue. For example, you could use this type of script to test whether a shipment is domestic in conjunction with processing a special service available only for domestic shipments. If the shipment is not domestic, the system continues processing the shipment without the special service. **To create a Criteria script:**

- Carry out steps 1 - 3c of the [General Procedure](#).
- From the **Type** drop-down list in the Create Script dialog, select Criteria to display the configuration for a Criteria script:



The screenshot shows a configuration window titled "JavaScript Code". It contains a "Type" dropdown menu set to "Criteria". Below it is a text field labeled "Criteria:". To the right of the text field is a "Validate" button with a green checkmark icon. At the bottom left, there is a "Debug" checkbox.

- In the **Criteria** field, type the condition (criterion) that, if met, causes the system to skip processing the object the script is applied to. **Note:** This criterion must be a "if" condition.
- However, you do not need to add the if statement itself, only the valid JavaScript condition that goes inside the parentheses () of the if statement. UCM automatically codes the complete if statement including the condition you entered.
- Optionally, select the **Debug** check box to debug the script when it runs.
- Click Save Changes to save the script. **Note:** or more information on steps 4 and 5, see the topic [General Procedure](#).

Criteria/Validation script

This script type (as the name implies) is a combination of Criteria and Validation script types that works as follows:

- If both conditions (Criteria and Validation) are met, the system processes the object that the script is applied to, and then continues processing the shipment.

- If the Criteria condition is not met but the Validation condition is met, the system skips processing the object the script is applied to but continues processing the shipment.
- If the Criteria condition is met but the Validation condition is not, the system stops processing and returns the Validation error message.
- If neither condition is met, the system stops processing and returns the Validation error message.

To create a Criteria/Validation script:

1. Carry out steps 1 - 3c of the [General Procedure](#).
2. From the **Type** drop-down list in the Create Script dialog, select Criteria/Validation to display the configuration for a Criteria/Validation script:

The screenshot shows a dialog box titled "JavaScript Code". It contains the following fields and controls:

- Type :** A drop-down menu currently showing "Criteria / Validation".
- Criteria :** A text input field.
- Validation :** A large text area for entering JavaScript code.
- Error Message :** A text input field.
- Validate :** A button with a green checkmark icon.
- Debug :** A checkbox.

3. In the **Criteria** field, type the condition (criterion) that, if not met, causes the system to skip processing the object the script is applied to. **Note:** This criterion must be a valid JavaScript "if" condition. However, you do not need to add the if statement itself, only the condition that goes inside the parentheses () of the if statement. UCM automatically codes the complete if statement including the condition you entered.
4. In the **Validation** text box, type the JavaScript code for the Validation portion of the script:
5. In the **Error Message** field, type the message to be returned if a validation error is encountered.
6. Optionally, click Validate to check the JavaScript syntax.
7. Optionally, select the **Debug** check box to debug the script when it runs.
8. Click Save Changes to save the script. **Note:** For more information on steps 6 and 7, see the topic [General Procedure](#).

Request Modification script

A request modification script is typically used to perform modifications to the current API request being processed.

To create a Request Modification script:

1. Carry out steps 1 - 3c of the [General Procedure](#).

2. From the **Type** drop-down list in the Create Script dialog, select Request Modification to display the configuration for a Criteria/Validation script:



The screenshot shows a dialog box titled "JavaScript Code". Inside, there is a "Type" drop-down menu set to "Request Modification". Below this is a large text area labeled "Request Modification :". At the bottom left is a "Debug" checkbox, and at the bottom right is a "Validate" button with a green checkmark icon.

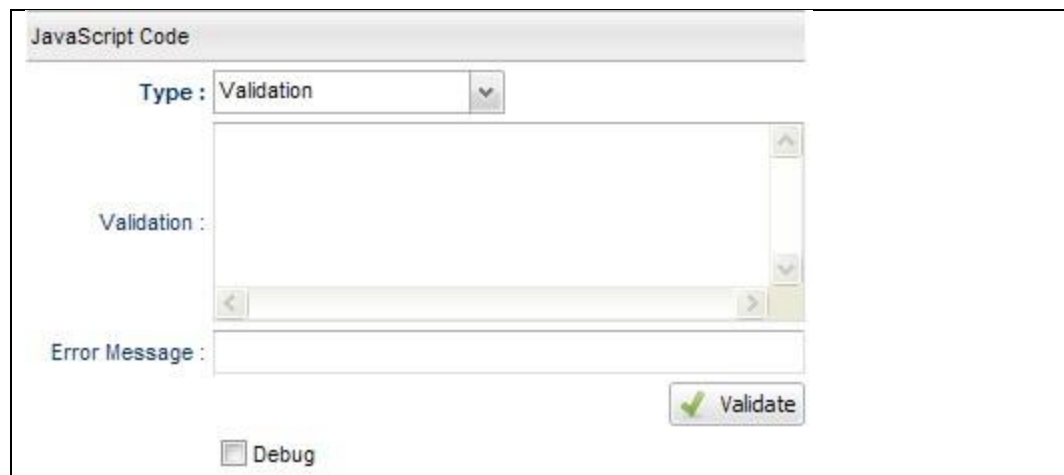
3. In the **Request Modification** text box, type the JavaScript code for the Request Modification. **Note:** This criterion must be a valid JavaScript function. However, you do not need to add the function itself – RequestMod () – only the code that goes inside the curly brackets {} of the function. UCM automatically codes the complete function including the code you entered. You also need to ensure that the code for the request modification itself always returns a value of "true."
4. Optionally, click Validate to check the JavaScript syntax.
5. Optionally, select the **Debug** check box to debug the script when it runs.
6. Click Save Changes to save the script. **Note:** For more information on steps 4 and 5, see the topic [General Procedure](#).

Validation script

If the Validation condition is not met, the system stops processing and returns the Validation error message.

To create a Validation script:

1. Carry out steps 1 - 3c of the [General Procedure](#).
2. From the **Type** drop-down list in the Create Script dialog, select Validation to display the configuration for a Validation script:



The screenshot shows a dialog box titled "JavaScript Code". Inside, there is a "Type" drop-down menu set to "Validation". Below this is a large text area labeled "Validation :". Underneath the text area is an "Error Message" text box. At the bottom left is a "Debug" checkbox, and at the bottom right is a "Validate" button with a green checkmark icon.

3. In the **Validation** text box, type the Javascript code for the condition that, if not met, causes the system to stop processing and return the error message specified in step 4.

Notes:

- This must be a valid JavaScript "if" condition. However, you do not need to add the if statement itself, only the condition that goes inside the parentheses () of the if statement. UCM automatically codes the complete if statement including the condition you entered.
 - UCM also prefixes a "not" character (!) to the condition. Thus, if the condition you specify does not obtain, then the error message is returned.
4. In the **Error Message** field, type the message to be returned if a validation error is encountered.
 5. Optionally, click Validate to check the JavaScript syntax.
 6. Optionally, select the **Debug** check box to debug the script when it runs.
 7. Click Save Changes to save the script.

Note: For more information on steps 5 and 6, see the topic [General Procedure](#).

Using the JavaScript editor

UCM includes a JavaScript editor to facilitate the creation, editing, and testing of lengthier scripts

The Javascript editor includes the following features:

- Color highlighting of syntax
- Automatic line numbering
- Automatic indent and outdent
- Capacity for very large scripts
- Line-by-line live syntax checking
- Drag and drop text
- Cut, copy, and paste functionality

Opening the JavaScript Editor

You can open an existing script for editing or create a new script using the JavaScript editor.

To edit an existing script:

1. Double-click the script in the Existing Scripts pane or select the script and click Edit to open the Edit Script dialog.
2. On the Edit Script dialog, click Edit to open the script in the JavaScript editor.

To create a new script

1. In the Existing Scripts pane, click Create to open the Create Script dialog.
2. Fill in the **Code**, **Name**, and **Description** fields, and then, from the **Type** dropdown list, select the script type to display additional options.
3. Click Edit to display the JavaScript editor (see the examples in the following section).

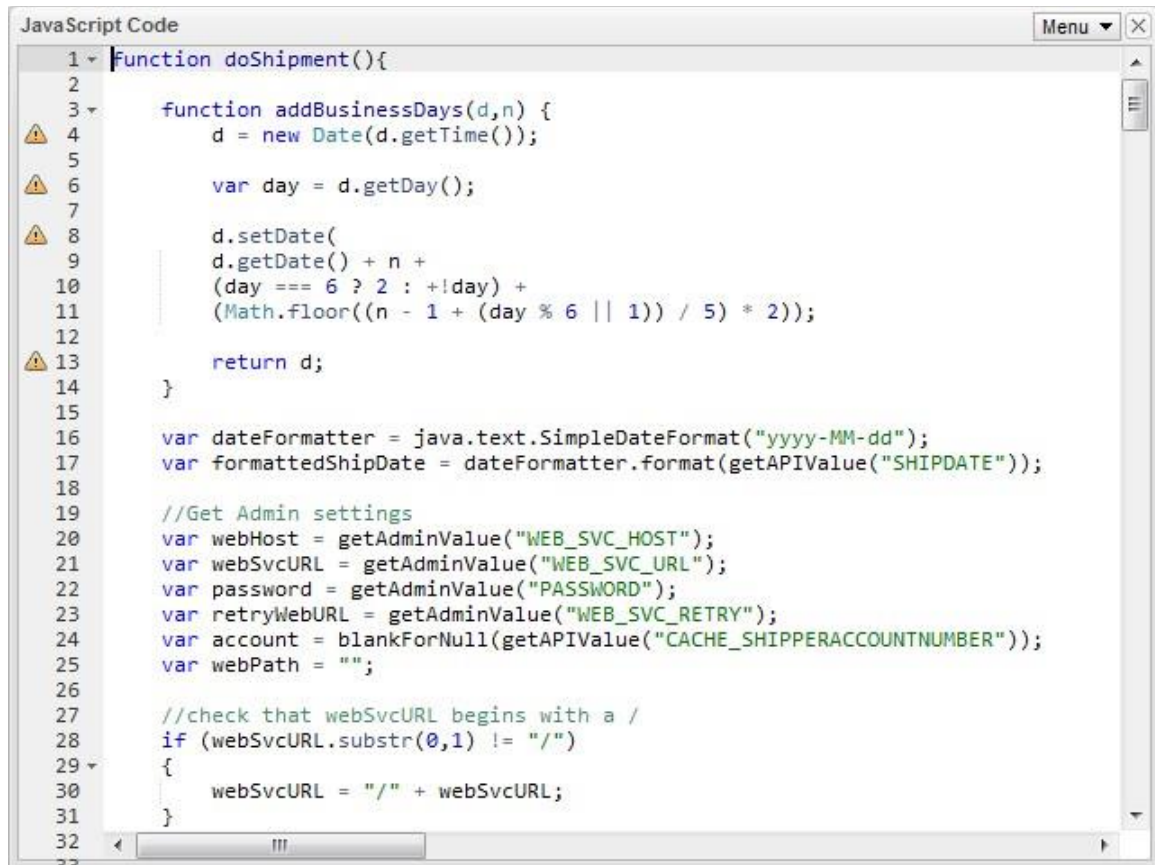
Note: For more information on creating scripts, see the following topics:

- Create, test, and debug a script - [General procedure](#) - [Specific script types](#)

General functionality

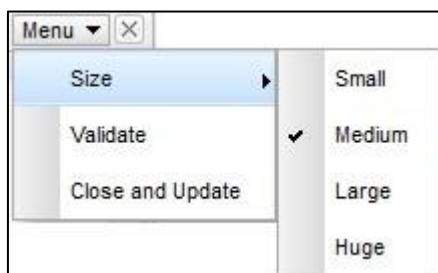
When you open the JavaScript editor, you can access the following functionality.

Display window



Menu drop-down

The menu drop-down list in the upper right corner of the JavaScript Editor display window includes the following options:



Use these options as follows:


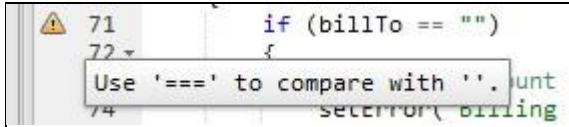


- **Size** – Resize the JavaScript Editor window. Note that the default size is Medium and that Size options affect only the size of the editing window not the size of the text.
- **Validate** – Validate the entire script (check format and syntax). This option has the same function as the Validate buttons on the Create Script and Edit Script dialogs.
- **Close and Update** – Save changes to the script and close the JavaScript editor.

Add a new line

To insert a new blank line, place the cursor at the end of the line you want to add the new line after, and then press <Enter>. You can then drag and drag or paste text into this blank line.

Check lines of code as you go

The JavaScript Editor validates individual lines of code as they are entered and provides a tool tip suggestion for modifying the line of code.


Icon	Description
	Caution: Formatting or syntax is non-standard. Example: 
	Warning: Formatting or syntax is incorrect. Example:
Icon	Description
	Incomplete: Missing an element. Example:

Edit or delete a script

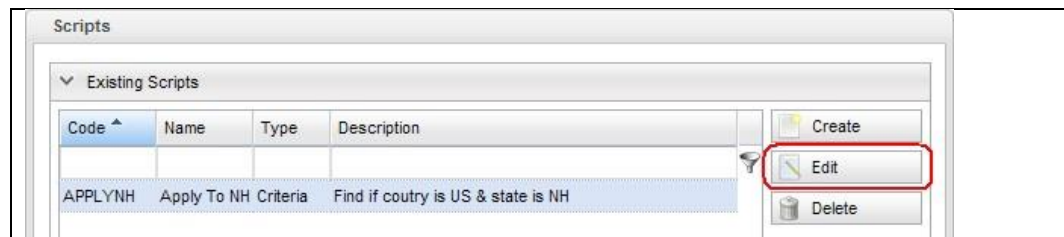
Note: You can edit or delete a script at the carrier level only.

Edit a script

To edit a script:

1. Click the plus sign  next to the carrier folder to display the set of available objects, and then select Scripts to display the Scripts pane.
2. In the Existing Scripts list, carry out one of the following actions to display the Edit script dialog:
 - Double-click on the row with the script you want to edit.

- Click on the row of the script you want to edit to select it, and then click Edit.



3. Make any desired changes to the script, and then click Save Changes. For details on script types, see steps 2-6 of the topic [Create a UI administrative option](#).


Note: The fields and selections on the Edit Script dialog are identical to those on the Create Script dialog. You can modify all the fields on this dialog except Code.

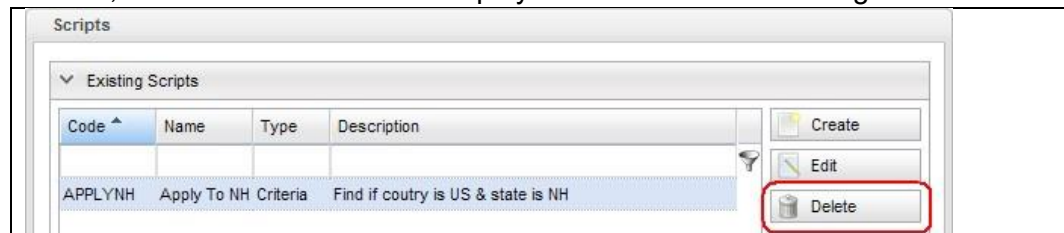
4. Click Save Changes.

Delete a script

To delete a script from a carrier:

Caution: After you delete a script, you cannot undo the operation.

1. Click the plus sign  next to the carrier folder to display the set of available objects, and then select Scripts to display the Scripts pane with a list of currently Existing Scripts.
2. In the Existing Scripts list, click on the row of the script you want to delete to select it, and then click Delete to display the Confirm Delete dialog.



Note: To select multiple scripts to delete, hold down the CTRL key while selecting the scripts. (This action also disables the Edit)

3. Click OK to confirm the deletion and remove the script or scripts from the list of available scripts.


Apply a script in a context

You can apply a script to a context in the following ways:

- When creating or editing an object (for example, a rating method), you can create a script or apply an existing script to that context as part of the configuration process. See the topics for creating specific objects.
- You can use a UCM carrier's Scripts object to apply a script to a particular context, as well as view the contexts which a particular script is currently applied to.

View and apply a script

To view existing script contexts and apply a script to a new context:

1. In UCM, click the plus sign  next to the carrier folder to display the set of objects for the carrier.
2. Click the Scripts link under the carrier folder to display the Scripts pane, and then, in the Existing Scripts list, select the script you want to view and/or apply in a new context.

Note: A list of the contexts the script is currently applied to appears in the Referenced By list.



- Optionally, to apply the script to a new context, click Apply to display the Apply to other contexts window.



Note: This window displays the list of all contexts belonging to the current carrier which the selected script can be (but is not currently) applied to. You can sort and filter the list as follows:

- To sort the list by column, click on a column heading. (To reverse the sort, click on the column heading again.)
 - To filter the list, type a filter criterion in the appropriate column in the top (blank) row. For example, to display only events, type "Event" in the top cell of the Type column.
- Select the Pre and/or Post check box for the context you want the script applied to, depending on whether you want the script to run before (Pre) or after (Post) the associated process or both. **Note:** You can select as many contexts in this way as you want and apply the script simultaneously to all of them.
 - Click Save Changes to save the script applications you specified and display the additional contexts for the selected script in the Referenced By list.

Apply a script in a context from within an object or carrier

The configuration functions for many objects allow you to add a script or scripts from within the object or for an object at the carrier level. Where this is the case, the add script feature takes the form described in the following procedure. Some items allow you to add only a single script for that item. **Notes:**

- Objects such as Billing or Packaging Types typically allow you to add multiple scripts with Pre or Post execution options. This type will have a gray bar labeled "Scripts." Click the up arrow (^) next to the word "Scripts" to display both a list of scripts currently applied in this context as well as buttons for adding additional scripts (see the following procedure).
- Single items such as End of Day Consolidation allow you to add only a single script without execution options (no Pre or Post – the point at which the script runs is determined automatically). This type of item typically has a single field for specifying the script (see the second following procedure). To apply the script **To add a script or scripts to an object:**

- Under the Scripts area, use the following buttons:
 - Add Existing

- Click Add Existing to display the Select Existing Scripts dialog with a list of available scripts. Select (check) the check box or boxes next to the script(s) you want to add to the object, and then click Select

to display the selected scripts in the Scripts table.

- Create New – Click Create New to display the Create Script dialog. See the topics under "Create, test, and debug a script." Click Save Changes to display the new script in the Scripts table
- Select a combination of check boxes in the Pre and Post columns to indicate whether the script should run prior to an event related to applying the object to a shipment or after the event.

For example, you might add a script to validate third party billing before processing the charge (Pre), and then another script to actually process the charge (Post). (See the following Help topic section [Example of billing type with script.](#))

Caution: If you do not select at least one check box in the Pre or Post columns next to a script, when you save the object, the script is no longer associated with it and does not appear in the list of scripts if you edit this object.

To apply a single script to an item within an object or carrier:

- To the right of the specific script field, click the Add Existing or the Create New , and then carry out the appropriate step for selecting an existing script or creating and adding a new script:
- Optionally, to add an existing script, in the Select Existing Scripts dialog select a *single* script, and then click Select to display the script name in the script field.

Optionally, to create a new script, in the Create Script dialog, carry out the appropriate procedure described under "Create, test, and debug a script, and then click Save Changes to display the script name in the script field.

Manage built-in scripts

UCM includes a set of built-in scripts that can be applied to any context with any UCM carrier. You can view and copy the code for these scripts but they are not editable directly. To modify a built-in script, open the script for viewing, copy the code, create a custom script, paste the code into the custom script, and then make any desired modifications to the code. See the topics under "Create, test, and debug a script."

UCM includes the following built-scripts:

UCM Script Name	UCM Code	Description
Calculate Dimensional Weight	glb_CalculateDimensionalWeight	Determines the dimensional weight of a package (length x width x height divided by a dimensional weight factor).
Calculate Volume Weight	glb_CalculateVolumeWeight	Determines the volume weight of a package (length x width x height).
Domestic shipment validation	glb_IsDomValidation	Stops processing a shipment if the ship-to country does not match the ship-from country.
UCM Script Name	UCM Code	Description

International shipment validation	glb_IsIntlValidation	Stops processing a shipment if the ship-to country matches the ship-from country.
Use with Shipments within the European Union	glb_IsWithinEUValidation	Stops processing a shipment if both the ship-to country and the ship-from country are not with the European Union (EU).
Reformat US Zip Codes	glb_ReformatUSZip	Apply to an object and it will convert zip codes in zip+4 form without the hyphen to zip+4 with hyphen in API addresses.
Use with domestic shipment	glb_UseWithDom	Applies to an object only if it is available for domestic shipments but does not return an error if this is not the case.
Use with shipments within the European Union	glb_UseWithinEU	Applies to an object only if it is available for intra-EU shipments but does not return an error if this is not the case.
Use with international shipments	glb_UseWithIntl	Applies to an object only if it is available for international shipments but does not return an error if this is not the case.

Note:

- For a description of script types, see the topic [Specific script types](#).
- All built-in scripts belong to the script type Advanced.

View built-in scripts**To view the code for a built-in script:**

1. In the UCM left pane, click Manage Built-in Scripts to display the Manage Built-in Scripts pane.
2. In the Existing Scripts list, select the built-in script you want to view, and then click View to display the code for this script.
3. Optionally, to copy the code, select it and then press CTRL + C.
4. Click Close to close the View Script window.

Apply built-in scripts

You can apply a built-in script to a context in the following ways:

- When creating or editing an object (for example, a rating method), you can apply an existing script to that context as part of the configuration process. Built-in

scripts appear in the list of existing scripts when you click Add Existing. See the topics for creating specific objects.

- Use the following procedure to apply a built-in script to a particular context, as well as view the contexts which a particular built-in script is currently applied to.

To apply a built-in script to a context:

Applying a built-in script in a context works exactly the same way as applying a custom script in a context. See the topic [Apply a script in a context](#).

1. In the UCM left pane, click Manage Built-in Scripts to display the Manage Built-in Scripts pane.
2. In the Existing Scripts list, select the built-in script you want to apply, and then click Apply to display the Apply to other contexts screen.
Note: Selecting a built-in script also displays all the contexts where the script is currently applied in the Referenced By list.
3. This window displays the list of all contexts for all carriers and objects where the selected script can be (but is not currently) applied. You can sort and filter the list as follows:
4. To sort the list by column, click on a column heading. (To reverse the sort, click on the column heading again.) For example, to sort by carrier, click the Carrier column heading.
5. To filter the list, type a filter criterion in the appropriate column in the top (blank) row. For example, to display only events, type "Event" in the top cell of the Type column.
6. Select the Pre and/or Post check box for the context you want the script applied to, depending on whether you want the script to run before (Pre) or after (Post) the associated process or both.
Note: You can select as many contexts in this way as you want and apply the script simultaneously to all of them.
7. Click Save Changes to save the script applications you specified and display the additional contexts for the selected script in the Referenced By list.

Best practices for working with scripts

Script debugging

Caution: If you have enabled Debug for a script and have configured your UCM server to run in debug mode, any transaction that triggers one of the scripts with debug enabled stops processing when an error in the script is encountered and displays the script in a debug window with the error highlighted. You need to correct the script in the debug window before processing can continue. **To set up a script for debugging:**

1. Select the Debug checkbox on the Create Script or Edit Script dialog.
2. Run the UCM service as an executable. To do so, go to the following location on the server where UCM is installed: C:\Program Files (x86)\Kewill\Flagship\ucm\java. Double-click the UCM-Server-Service-Test-JSDebug.bat file to shut down UCM-Server service and run UCM as an executable.

3. Deploy the carrier that uses the script, and create an instance of this carrier in your shipping system.
4. In your shipping system, perform the action that triggers the script.
5. The UCM server displays a debug window when the script is triggered and an error is encountered.
6. In the debug window, correct any errors in the script until your shipping system can proceed with processing.
7. After you finish debugging the script, stop running the UCM server as an executable. Restart the UCM-server service and run the UCM Server as a service.

Script examples

The following sections include examples of each type of script. To create this sample scripts follow the instructions in the appropriate section of the topic [Specific script types](#).

Advanced script

1. From the **Type** drop-down list in the Create Script dialog, select Advanced. 2.

Complete the information in the following fields on the Create Script dialog:

- Code: ADV ○ Name: Advanced Script ○
Description: Writes the tracking number to the log file.
- Type: Advanced ○ Script:
`logInfo(getAPIValue("TRACKNUM-1"));`

3. Click Save Changes.

Criteria script

1. From the **Type** drop-down list in the Create Script dialog, select Criteria.
2. Complete the information in the following fields on the Create Script dialog:
Code: CRI
Name: Criteria Script
Description: Compares the shipment weight to determine whether it is greater than 49 lbs. Type: Criteria
Criteria: `compareFloat(getAPIValue("WEIGHT"),>,49)`

3. Click Save Changes. **Criteria/Validation**

script

1. From the **Type** drop-down list in the Create Script dialog, select Criteria/Validation.
2. Complete the information in the following fields on the Create Script dialog:
 -
 - Code: CRVAL
 - Name: Criteria/Validation Script ○ Description: Checks whether Address line 2 exists; if not, returns the error when user attempts to ship. ○ Type:

Criteria/Validation ○ Criteria: `getAPIValue("S2STATE")=="WA" && getAPIValue("S2COUNTRYID")=="US"`

- Validation: `!isBlank(getAPIValue("S2ADD2"))` ○ Error Message: Address line 2 is required for shipments to Washington.

3. Click Save Changes.

Request Modification script

1. From the **Type** drop-down list in the Create Script dialog, select Request/Modification.
2. Complete the information in the following fields on the Create Script dialog:
 - Code: REQMOD
 - Name: Request Modification Script
 - Description: Request Modification Script Test Case
 - Type: Request Modification
 - Request Modification:

```
var totalWeight = 0;
for (var i=1; i <= getAPIValue("PKGCNT"); i++) {
  var key = "WEIGHT-";
  key+=i;
  totalWeight+=+(getAPIValue(key));
}
setAPIValue("WEIGHT",totalWeight); logInfo("Total Weight" +
getAPIValue("WEIGHT"));
```

3. Click Save Changes.

Validation Script

1. From the **Type** drop-down list in the Create Script dialog, select Validation.
2. Complete the information in the following fields on the Create Script dialog:
 - ○ Code: VALWCST
 - Name: Validate West Coast States
 - Description: Validate that only the states of California, Oregon and Washington can be used for this service code. Runs as Pre script.
 - Type: Validation
 - Validation: `(getAPIValue("S2STATE") == "CA" || getAPIValue("S2STATE") == "OR" || getAPIValue("S2STATE") == "WA")`
 - Error Message: Service is not available for states outside of the West Coast.
3. Click Save Changes.

SQL for UCM shipment data by date

Overview

The following Help topics describe how to use SQL statements to retrieve UCM transaction data relative to a specified date:

SQL queries for shipment-related counts relative to date Link TBA

SQL queries for shipment details relative to date Link TBA **Notes:**

- Examples in these topics reference the OnTracWS Pre-defined Carrier included with UCM. See the Parcel online Help for more information about this carrier.
- Use the following operators alone or in combination to indicate relative dates: < Before specified date = On specified date > After specified date These functions can also be used in combination. For example, a statement including shipDate <= '2016-07-12' retrieves a count of relevant shipments, packages, etc., made on or before July 12, 2016. Dates are specified in the form yyyy-mm-dd.
- For the general form of a SQL statement, variables are italicized. The examples included in the tables in these topics make this relationship clear.
- For additional information on the UCM carrier database schema, see the following Help topic: [Create and define a new UCM carrier](#).

SQL for shipment-related counts by date

The following tables list and describe SQL Queries that can be used to retrieve shipment counts from the UCM database. These queries include SQL statements to return the following results before, on, or after a specified date:

- Total Shipment Count
- Package Count
- Item Count
- International Shipment Count
- Address Count

Total shipment count relative to date

The following table lists and describes SQL Queries for retrieving the total shipment count for a specific UCM carrier relative to date.

Notes: For each type of query, you can use the following methods for retrieving the information:

- Retrieve the information from the Parcel database shipment table using the carrier name (for example, ONTRACWS).

Retrieve the information from the UCM Transactions database shipment table for a specific UCM carrier (for example, ucm_transactions_otws.shipment). This database and table are indicated in the SQL statement by the variable **<Database>.shipment**.

SQL statement	Example	Example result returned
SELECT COUNT (*) FROM shipment WHERE actualCarrier = 'Carrier_Name' AND shipDate = 'yyyy-mmdd';	SELECT COUNT (*) FROM shipment WHERE actualCarrier = 'ONTRACWS' AND shipDate = '2016-07-12';	Total number of shipments with a UCM OnTracWS carrier performed on July 12, 2016.
SELECT COUNT (*) FROM <Database>.shipment WHERE shipdate = 'yyyymm-dd';	SELECT COUNT(*) FROM ucm_transactions_otws.shipment WHERE shipdate = '2016-07-12';	Total number of packages shipped with a UCMOnTracWS carrier after July 12, 2016
SELECT COUNT (*) FROM shipment WHERE actualCarrier = 'Carrier_Name' AND shipDate > 'yyyy-mmdd';	SELECT COUNT (*) FROM shipment WHERE actualCarrier = 'ONTRACWS' AND shipDate > '2016-07-12';	Total number of shipments with a UCM OnTracWS carrier performed after July 12, 2016
SELECT COUNT (*) FROM <Database>.shipment WHERE shipdate > 'yyyy-mm-dd';	SELECT COUNT (*) FROM ucm_transactions_otws.shipment WHERE shipdate > '2016-07-12';	
SELECT COUNT (*) FROM shipment WHERE actualCarrier = 'Carrier_Name' AND shipDate < 'yyyy-mmdd';	SELECT COUNT (*) FROM shipment WHERE actualCarrier = 'ONTRACWS' AND shipDate < '2016-07-12';	Total number of shipments with a UCM OnTracWS carrier performed before July 12, 2016.
SELECT COUNT (*) FROM <Database>.shipment WHERE shipdate < 'yyyy-mm-dd';	SELECT COUNT (*) FROM ucm_transactions_otws.shipment WHERE shipdate < '2016-07-12';	

Total package count relative to date

The following table lists and describes SQL Queries for retrieving the total number of packages shipped with a specific UCM carrier relative to date.

Note: This information is retrieved from the **package** table of the UCM carrier transactions database. This table is indicated in the SQL statement by the variable `<Database>.package`.

SQL statement	Example	Example result returned
SELECT COUNT (*) FROM <Database>.package WHERE shipdate ='yyyymm-dd';	SELECT COUNT (*) FROM ucm_transactions_otws.package WHERE shipDate = '2016-07-12';	Total number of packages shipped with a UCM OnTracWS carrier on July 12, 2016.
SELECT COUNT (*) FROM <Database>.package WHERE shipdate > 'yyyymm-dd';	SELECT COUNT (*) FROM ucm_transactions_otws.package WHERE shipDate > '2016-07-12';	Total number of packages shipped with a UCM OnTracWS carrier after July 12, 2016.
SELECT COUNT (*) FROM <Database>.package WHERE shipdate < 'yyyymm-dd';	SELECT COUNT (*) FROM ucm_transactions_otws.package WHERE shipDate < '2016-07-12';	Total number of packages shipped with a UCM OnTracWS carrier before July 12, 2016.

Total item count relative to date

The following table lists and describes SQL Queries for retrieving the total number of items shipped with a specific UCM carrier relative to date.

Note: This information is retrieved from the **item** table of the UCM carrier transactions database. This table is indicated in the SQL statement by the variable `<Database>.item`.

SQL Statement	Example	Example result returned
SELECT COUNT (*) FROM <Database>.item WHERE shipdate ='yyyy-mm-dd';	SELECT COUNT (*) FROM ucm_transactions_otws.item WHERE shipDate = '2016-07-12';	Total number of items shipped with a UCM OnTracWS carrier on July 12, 2016.
SELECT COUNT (*) FROM <Database>.item WHERE shipdate > 'yyyy-mm-dd';	SELECT COUNT (*) FROM ucm_transactions_otws.item WHERE shipDate > '2016-07-12';	Total number of items shipped with a UCM OnTracWS carrier after July 12, 2016.
SELECT COUNT (*) FROM <Database>.item WHERE shipdate < 'yyyy-mm-dd';	SELECT COUNT (*) FROM ucm_transactions_otws.item WHERE shipDate < '2016-07-12';	Total number of items shipped with a UCM OnTracWS carrier before July 12, 2016.

Total international shipments count relative to date

The following table lists and describes SQL Queries for retrieving the total number of international shipments with a specific UCM carrier relative to date.

Note: This information is retrieved from the international table of the UCM carrier transactions database. This table is indicated in the SQL statement by the variable `<Database>.international`.

SQL Statement	Example	Example Result Returned
SELECT COUNT (*) FROM <Database>.international WHERE shipdate ='yyyymm-dd';	SELECT COUNT (*) FROM ucm_transactions_otws.international WHERE shipDate = '2016-07-12';	Total number of international shipments with a UCM OnTracWS carrier performed on July 12, 2016.
SELECT COUNT (*) FROM <Database>.international WHERE shipdate >'yyyymm-dd';	SELECT COUNT (*) FROM ucm_transactions_otws.international WHERE shipDate > '2016-07-12';	Total number of international shipments with a UCM OnTracWS carrier performed after July 12, 2016.
SELECT COUNT (*) FROM <Database>.international WHERE shipdate <'yyyymm-dd';	SELECT COUNT (*) FROM ucm_transactions_otws.international WHERE shipDate < '2016-07-12';	Total number of international shipments with a UCM OnTracWS carrier performed before July 12, 2016.

Total address count relative to date

The following table lists and describes SQL Queries for retrieving the total number of unique addresses shipped to with a specific UCM carrier relative to date. **Note:** This information is retrieved from the address table of the UCM carrier transactions database. This table is indicated in the SQL statement by the variable `<Database>.address`.

SQL Statement	Example	Result Returned
SELECT COUNT (*) FROM <Database>.address WHERE shipdate ='yyyymm-dd';	SELECT COUNT (*) FROM ucm_transactions_otws.address WHERE shipDate = '2016-07-12';	Total number of addresses shipped to with a UCM OnTracWS carrier on July 12, 2016.
SQL Statement	Example	Result Returned

SELECT COUNT (*) FROM <Database>.address WHERE shipdate > 'yyyy-mm-dd';	SELECT COUNT (*) FROM ucm_transactions_otws.address WHERE shipDate > '2016-07-12';	Total number of addresses shipped to with a UCM OnTracWS carrier after July 12, 2016.
SELECT COUNT (*) FROM <Database>.address WHERE shipdate < 'yyyy-mm-dd';	SELECT COUNT (*) FROM ucm_transactions_otws.address WHERE shipDate < '2016-07-12';	Total number of addresses shipped to with a UCM OnTracWS carrier before July 12, 2016..

SQL for shipment-related details by date

The following tables list and describe SQL Queries that can used to retrieve shipment details from the UCM database. These queries include SQL statements to return the following results before, on, or after a specified date:

- Shipment Details
- Package Details
- Item Details
- International Shipment Details
- Address Details

Shipment details relative to date

The following table lists and describes SQL Queries for retrieving shipment details for all shipments relative to date.

Note: This information is retrieved from the shipment table of the UCM carrier transactions database. This table is indicated in the SQL statement by the variable <Database>.shipment.

SQL Statement	Example	Example result returned
SELECT * FROM Database.shipment WHERE shipdate = 'yyyy-mm-dd';	SELECT * FROM ucm_transactions_otws.shipment WHERE shipdate = '2016-07-12';	Shipment details for shipments with the UCM OnTracWS carrier performed on July 12, 2016.
SELECT * FROM Database.shipment WHERE shipdate > 'yyyy-mm-dd';	SELECT * FROM ucm_transactions_otws.shipment WHERE shipdate > '2016-07-12';	Shipment details for shipments with the UCM OnTracWS carrier performed after July 12, 2016.
SQL Statement	Example	Example result returned

SELECT * FROM Database.shipment WHERE shipdate < 'yyyy-mm-dd';	SELECT * FROM ucm_transactions_otws.shipment WHERE shipdate < '2016-07-12';	Shipment details for shipments with the UCM OnTracWS carrier performed before July 12, 2016.
--	---	--

Package details relative to date

The following table lists and describes SQL Queries for retrieving package details relative to date.

Note: This information is retrieved from the `package` table of the UCM carrier transactions database. This table is indicated in the SQL statement by the variable `<Database>.package`.

SQL Statement	Example	Example result returned
SELECT * FROM Database.package WHERE shipdate = 'yyyy-mm-dd';	SELECT * FROM ucm_transactions_otws.package WHERE shipdate = '2016-07-12';	Package details for shipments with the UCM OnTracWS carrier performed on July 12, 2016.
SELECT * FROM Database.package WHERE shipdate > 'yyyy-mm-dd';	SELECT * FROM ucm_transactions_otws.package WHERE shipdate > '2016-07-12';	Package details for shipments with the UCM OnTracWS carrier performed after July 12, 2016.
SELECT * FROM Database.package WHERE shipdate < 'yyyy-mm-dd';	SELECT * FROM ucm_transactions_otws.package WHERE shipdate < '2016-07-12';	Package details for shipments with the UCM OnTracWS carrier performed before July 12, 2016.

Item details relative to date

The following table lists the SQL Queries for retrieving the item shipment details relative to date.

Note: This information is retrieved from the `item` table of the UCM carrier transactions database. This table is indicated in the SQL statement by the variable `<Database>.item`.

SQL statement	Example	Example result returned
SELECT * FROM Database.item WHERE shipdate = 'yyyy-mm-dd';	SELECT * FROM ucm_transactions_otws.item WHERE shipdate = '2016-07-12';	Item details for shipments with the UCM OnTracWS carrier performed on July 12, 2016.
SQL statement	Example	Example result returned

SELECT * FROM Database.item WHERE shipdate > 'yyyy-mm-dd';	SELECT * FROM ucm_transactions_otws.item WHERE shipdate > '2016-07-12';	Item details for shipments with the UCM OnTracWS carrier performed after July 12, 2016.
SELECT * FROM Database.item WHERE shipdate < 'yyyy-mm-dd';	SELECT * FROM ucm_transactions_otws.item WHERE shipdate < '2016-07-12';	Item details for shipments with the UCM OnTracWS carrier performed before July 12, 2016.

SQL queries for International shipment details relative to date

The following table lists the SQL Queries for retrieving the international shipment details relative to date.

Note: This information is retrieved from the international table of the UCM carrier transactions database. This table is indicated in the SQL statement by the variable *Database.international*.

SQL statement	Example	Example result returned
SELECT * FROM Database.international WHERE shipdate = 'yyyy-mm-dd';	SELECT * FROM ucm_transactions_otws.international WHERE shipdate = '2016-07-12';	Shipment details for international shipments with the UCM OnTracWS carrier performed on July 12, 2016.
SELECT * FROM Database.international WHERE shipdate > 'yyyy-mm-dd';	SELECT * FROM ucm_transactions_otws.international WHERE shipdate > '2016-07-12';	Shipment details for international shipments with the UCM OnTracWS carrier performed after July 12, 2016.
SELECT * FROM Database.international WHERE shipdate < 'yyyy-mm-dd';	SELECT * FROM ucm_transactions_otws.international WHERE shipdate < '2016-07-12';	Shipment details for international shipments with the UCM OnTracWS carrier performed before July 12, 2016.

SQL queries for address details relative to date

The following table lists the SQL Queries for retrieving the address shipment details relative to date.

Note: This information is retrieved from the `address` table of the UCM carrier transactions database. This table is indicated in the SQL statement by the variable `<Database>.address`.

SQL statement	Example	Example result returned
SELECT * FROM Database.address WHERE shipdate = 'yyyy-mm-dd';	SELECT * FROM ucm_transactions_otws.address WHERE shipdate = '2016-07-12';	Address details for shipments with the UCM OnTracWS carrier performed on July 12, 2016.
SELECT * FROM Database.address WHERE shipdate > 'yyyy-mm-dd';	SELECT * FROM ucm_transactions_otws.address WHERE shipdate > '2016-07-12';	Address details for shipments with the UCM OnTracWS carrier performed after July 12, 2016.
SELECT * FROM Database.address WHERE shipdate < 'yyyy-mm-dd';	SELECT * FROM ucm_transactions_otws.address WHERE shipdate < '2016-07-12';	Address details for shipments with the UCM OnTracWS carrier performed before July 12, 2016.

Create and test a UCM carrier

Create- trial carrier

The following procedure guides you through the process of quickly creating and testing a basic, "no frills" carrier in order to verify the following functionality:

- UCM connectivity with your shipping system – Successfully deploy the carrier.
- Configure the carrier in your shipping system – Add the carrier for making shipments.
- Ship with the carrier – Create and ship several test shipments.

The trial carrier created for this purpose includes the following objects and elements:

- One Flat Rate rating method for package level rating with three rates
- One sequence number to generate tracking numbers
- One tracking number generator
- One service
- One UI Administrative element
- One UI Transactional element

Caution: Deploy and try out this carrier in a test environment only.

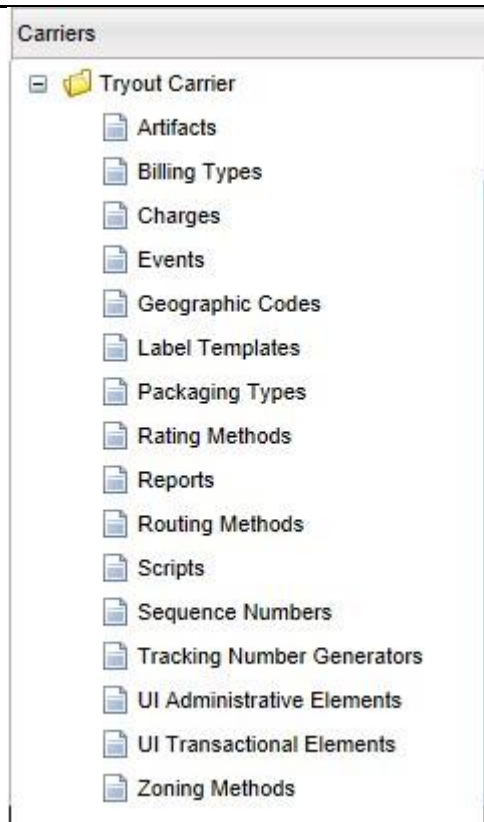
Create the trial carrier

To create the trial carrier:

1. In the upper left pane, click Create Carrier to display the Create Carrier dialog.
2. Enter the carrier code and carrier name, and then click Create Carrier.
3. Optionally, enter a brief description of the carrier, and then deselect any check boxes that are selected by default, so that the right pane looks like the following illustration:

The screenshot shows the 'Tryout Carrier' dialog box. On the left is a vertical toolbar with icons and labels: 'Save Changes' (floppy disk), 'Version Carrier' (clock), 'Create Service' (lightbulb), 'Export Carrier' (arrow), 'Deploy Carrier' (upload), 'Deactivate' (left arrow), 'Remove from Flagship' (flag), and 'Delete Carrier' (trash). The main area is divided into sections: 'Basic Information' with fields for 'Code' (TRYCAR), 'Name' (Tryout Carrier), and 'Description' (Simple trial UCM carrier for test environment); 'Options' with checkboxes for 'Use License Plate Number for Pre-shipments', 'Enable Dangerous Goods', 'Enable ground freight functionality', 'Standard E-mail options', and 'Customer charge options'; 'Rating Units of Measure' (Metric), 'Tracking Number Reuse' (Deny), 'End of Day' with 'Manifest Sequence Number' and checkboxes for 'Allow Shipment Consolidation' and 'Allow Shipment Grouping'; and 'Time In Transit' with 'Time in Transit Calculation Method' (Built-in Method).

4. Click Save Changes to add the carrier to the list of carriers in the lower left pane, and then click the plus sign (+) next to the Tryout Carrier folder icon to display the tree of object links for the carrier:



You can now proceed to the next step of [adding a rating method and rates, a sequence number, and a service](#).

Add rates, sequence & tracking numbers, service

Rating with the Tryout Carrier is done using a simple flat-rated rating method with three rates without zones. The sequence number is the default sequence number starting at one to create basic 10-digit tracking numbers based on the specified tracking number generator parameters. Finally, create a single service for the carrier and associate the rating method, sequence number, and tracking number generator with the service.

Add the rating method and rates **To**

add the rating method:

1. With the Tryout Carrier object tree expanded (see step 4 of [Create the carrier](#)), click the Rating Methods link to display the Rating Methods pane, and then click Create to display the Create Rating Method dialog.
2. In the Basic Information section, enter the code, name, and, optionally, a description of the rating method as shown in the illustration following step 3.
3. In the Rating Method section, carry out the following sub-steps:
4. From the **Rating Type** drop-down list, select Flat Rated.
5. In the **Response Key** field, enter TRYCAR_RATE. This is the API key that returns the rate for a shipment.

6. Leave the default selection for the **Package Level Rating** check box selected. The Create Rating Method dialog now looks as follows:

The screenshot shows the 'Create Rating Method' dialog box with the following details:

- Basic Information:**
 - Code: TCFR
 - Name: Tryout Carrier Flat Rates
 - Description: Flat rate rating method and rates for Tryout Carrier.
- Rating Method:**
 - Rating Type: Flat Rated
 - Response Key: TRYCAR_RATE
 - ☒ Package Level Rating
 - ☒ Dimensional Weighting
 - ☒ Include Zone
- Scripts (Drag to Reorder):** (Empty list)
- Buttons:** Save Changes, Save Changes and Manage Rates

To add rates to the Tryout Carrier Flat Rates rating method:

7. After specifying the values in the Create Rating Method dialog as shown in the previous illustration, click Save Changes and Manage Rates to display the Rates Editor.
8. Click Add Rate to add the rates as shown in the following illustration. Use today's date for the effective date. (See the [Rates Editor](#) Help topic for more information about using the Rates Editor to manually enter rates.) The following illustration shows the Rates Editor with the three rates for the flat rate rating method created in the previous procedure.

Effective Date	Weight	Rate
2014/02/14	5	4.4
2014/02/14	10	5.5
2014/02/14	15	6.6

Buttons: Add Rate, Delete Rate, Import Rates, Save Changes

- Click Save Changes to close the dialog, add the rates to the rating method, and add the rating method to the list of rating methods in the right pane. **Note:** Incremental weight-based rates as shown in the previous illustration work by rounding up intermediate weights. For example, if a package rated with this method weighs 7.5 lbs., it is rated at \$5.50.

Create the sequence number generator To create the sequence number generator:

- With the Tryout Carrier object tree expanded, click the Sequence Number link to display the Sequence Numbers pane, and then click Create to display the Create Sequence Number dialog.
- In the Basic Information section, enter the code, name, and, optionally, a description of the sequence number as shown in the following illustration:

Create Sequence Number

Basic Information

Code : TSEQ

Name : Tryout Carrier Sequence Number

Description : Tryout Carrier Sequence Number.

Options

Length : 10

Increment by : 1

Save Changes

3. Accept the default values of 10 characters for length and an Increment by value of 1, and then click Save Changes to add the Sequence Number to the list of sequence numbers available for the Tryout Carrier.

Add the tracking number generator

1. With the Tryout Carrier object tree expanded click the Tracking Number Generators link to display the Tracking Number Generators pane, and then click Create to display the Create Tracking Number Generator dialog.
2. In the Basic Information section, enter the code, name, and optionally a description of the tracking number generator as shown in the illustration in step 3.
3. In the Options section, carry out the following sub-steps:
4. In the **Type** drop-down list, leave the default selection of Simple selected.
5. Leave the **Prefix** and **Suffix** fields blank and the check boxes in their default states.
6. From the **Sequence Number** drop-down list, select the sequence number generator created with the previous procedure. The Create Tracking Number Generator dialog now looks as follows:

Create Tracking Number Generator

▼ Basic Information

Code : TCTNG

Name : Tryout Carrier Tracking Number Generator

Tryout Carrier Tracking Number Generator.

Description :

Options

Type : Simple ▼

☒ Use Shipment Tracking Number for First Package

Prefix :

☐ Append Account Number to Prefix

Sequence Number : Tryout Carrier Sequence Number ▼

Suffix :

☐ Enable Checkdigit Calculation

Save Changes

**Add and configure the service To
add the service:**

1. Click the folder icon for the Tryout Carrier to display the carrier configuration in the right pane, and then click Create Service to display the Create Service dialog.
2. Enter the name and code for the service (see illustration in step 3), and then click Create Service to add the service to the object tree for the Tryout Carrier.
3. Click the folder icon for the Tryout Package Service to display the components of the service in the right pane. Optionally add a description, accept the default selection of all the check boxes, enter values for Label Text and Report Text, and then click Save Changes to save the Tryout Package Service configuration.

TC Package Service

Save Changes **Delete Service**

Basic Information

Code : TCPS

Name : TC Package Service

Description :

☒ Use all Billing Types

☒ Use all Packaging Types

☒ Use all Charges

☒ Use all Label Templates

☒ Use all UI Transactional Elements

Options

Tracking Number Generator : Tryout Carrier Tracking Number Generator

Routing Method :

Zoning Method :

Label Text : Tryout Package Label

EDI Text :

Report Text : Tryout Report

Scripts (Drag to Reorder)

4. Click the plus sign (+) next to the folder icon for the Tryout Package Service, and then click the Rating Methods link to display the list of rating methods associated with the service, and then click Add Existing to display the Available Rating Methods dialog.
5. Select the check box next to the Flat Rated rating method created in the "Add the rating method and rates" procedure and then click Select to add this rating method to the service and display it in the Rating Methods list.

Available Rating Methods

<input checked="" type="checkbox"/> Code	Rating Method
<input checked="" type="checkbox"/> TCFR	Tryout Carrier Flat Rates

Select

- Click Save Changes at the bottom of the Rating Methods pane to save this service configuration. You can now proceed to the next step of [adding UI elements to the carrier](#).

Add UI elements

Add a UI administrative element, and then a related UI transactional element to test this UCM carrier functionality.

Add the UI administrative element To *add a UI administrative element:*

- With the Tryout Carrier object tree expanded click the UI Administrative Elements link to display the UI Administrative Elements pane, and then click Create to display the UI Administrative Element dialog.
- Enter the basic information for **Code**, **Name**, and optionally **Description**.
- Under Data Description, from the **Data Type** drop-down list, select numeric, and then, in the UI Label field, enter "Saturday Delivery Charge" (without quotation marks); accept the remaining defaults so that the Create UI Administrative Element dialog looks like the following illustration:

The screenshot shows the 'Create UI Administrative Element' dialog box. It has three main sections: 'Basic Information', 'Data Description', and 'UI Screen Location'.
- In 'Basic Information', 'Code' is 'SDC', 'Name' is 'Saturday Delivery Charge', and 'Description' is 'Charge for Saturday Delivery with Tryout Carrier.'
- In 'Data Description', 'Data Type' is 'Numeric', 'Value is required' is unchecked, 'Show in UI' is checked, and 'UI Label' is 'Saturday Delivery Charge'.
- In 'UI Screen Location', 'Top Level' is 'Shipper Defaults', 'Second Level' is 'Defaults', and 'Third Level' is 'Defaults'.
At the bottom, there are buttons for 'Add to Top Level', 'Add to Second Level', 'Add to Third Level', 'Save Changes', and 'Save Changes and Manage Values'.

- Click Save Changes and Manage Values to display the Manage Values dialog, and then click Create to enter a default value for the Tryout Carrier Saturday Delivery Charge, as shown in the following illustration.

Effective Date	Value	Comments
2014/02/21	5	Default Sat Deliv Chg

Buttons: Create, Delete, Save Chang...

- Click Save Changes to add the UI administrative element together with its default value to the list of UI Administrative elements for the Tryout Carrier.

Add the UI transactional element

To add the UI transactional element:

- With the Tryout Carrier object tree expanded click the UI Transactional Elements link to display the Create UI Transactional Element dialog.
- Enter the basic information for **Code**, **Name**, and optionally **Description**.
- Under Data Description, from the **Data Type** drop-down list, select numeric, and then, in the UI Label field, enter "Saturday Delivery Charge" (without quotation marks); accept the remaining defaults, so that the Create UI Transactional

Element dialog looks like the following illustration.

Create UI Transactional Element

▼ Basic Information

Code : TEST_SDCSO

Name : Sat Dlv Chg Shipment Option

Description : Test Carrier Saturday Delivery Charge Shipment Option

☒ Applies to all services

▼ Data Description

Data Type : Numeric

UI Label : Saturday Delivery Charge

▼ UI Screen Location

Top Level : Shipment

Second Level : Shipment

Third Level : Defaults

Create :

Add to Top Level Add to Second Level Add to Third Level

Save Changes

4. Click Save Changes to add the UI transactional elements together with a default value to the list of UI Administrative elements for the Tryout Carrier. You can now proceed to test the carrier. See [Deploy and test the carrier](#).

Deploy and test carrier

This topic suggests steps for testing the UCM carrier created for this purpose. This testing consists of the following basic steps:

- Deploy the Tryout Carrier to your shipping system.
- Configure the Tryout Carrier in your shipping system.
- Perform test shipments with the Tryout Carrier

Caution: To deploy and test the carrier in your shipping you must have installed the Orchestration Layer (OL), and then UCM plus the BJOL plug-in for your shipping system.

Note: If your shipping system is Parcel with the optional UCM module attached and you create the Tryout Carrier by opening UCM from Parcel, you can deploy the carrier directly without installing KOL and plug-ins. See the UCM Installation Guide for more information.

Deploy the UCM Tryout Carrier To deploy the Tryout Carrier:

1. In the left pane, select the folder icon for the Tryout Carrier to display the Tryout Carrier configuration in the right pane, and then click Deploy Carrier to display the deployment confirmation dialog.
2. Click the Deploy Carrier at the bottom of the dialog. If the deployment is successful, UCM displays a success message.

Add the UCM Tryout Carrier to the active carriers in your shipping system

If your shipping system has an administrative component that enables you to activate and configure available carriers, do the following:

1. Carry out activation/configuration steps to ensure that the UCM carrier is functional within your shipping system.
2. Verify that the Saturday Delivery Charge UI administrative element that you added to the Tryout Carrier is displayed as part of carrier administration, including the default value (5.00) for this field.
3. Verify that the Tryout Carrier is now available for shipping with.

Ship with the UCM Tryout Carrier

1. Create and ship several shipments with the Tryout Carrier.
2. Verify that the Saturday Delivery Charge appears as an option.
3. Verify that a label, reports, and manifests are created and displayed with the correct header text.

Tutorial - Sample UCM Carrier

Overview of steps and carrier requirements

This tutorial steps you through the process of defining a UCM carrier, and then deploying a sample carrier named Carrier Module (CM) Shipping.

Note: This tutorial does not repeat general information in the UCM Help describing each type of component, object, or element in UCM. Each topic in this tutorial includes links to related general topics in the UCM Help.

Steps for creating and deploying CM Shipping

The following steps reflect a logical order for setting up any UCM carrier for use with your shipping system. For example, your requirements should include the need for any custom scripts to be called by other objects. Once these scripts are determined, creating them and adding them to the carrier first allows you to simply add an existing script or scripts as required when you create other objects. (You can, of course, still create additional scripts later in the process.) This order is followed in creating and deploying the CM Shipping carrier.

Pre-setup – Define Requirements

The first step in setting up a UCM is to define carrier requirements. This means determining what if any custom scripts are needed, what services and rating methods for those services are required, and whatever other elements need to be incorporated in the carrier (for example, geographic codes, labels, reports, UI elements, etc.) The requirements for CM Shipping are as follows:

- CM Shipping is a Canada-based carrier providing Ground and Express services to Canadian destinations plus a single Express service for all US destinations.
- Dimensional weight rating in combination with flat rate rating methods are required for the various services.
- Calculation of Time in Transit (TinT) is required. Built-in TinT can be used.
- License Plate Number for Pre-shipments is not required.
- Dangerous goods/hazardous materials can be shipped with this carrier.
- Email notification is required.
- An electronic End of Day (EOD) Manifest is required including a sequence number for the manifest.
- Standard UCM label templates, reports, and packaging types can be used. Additionally, a custom label template is required to retrieve and print COD information when needed.
- Shipment consolidation is allowed. Built-in consolidation and consolidation rating can be used. The default rate split is by package ("even").
- A number of custom scripts are required for rating and other functions to determine whether special services are required, determining valid destinations, etc.
- A number of user interface (UI) administrative and transactional elements for configuring the carrier and selecting options at ship time, as well as for specifying what value added services will be used and/or charges are required.
- The following services are required: - A ground service for delivery to Canadian destinations. - An express service for delivery to Canadian destinations. - An express service with delivery to all US destinations.
- A set of rating methods for these services is required.
- A set of geographic codes incorporating Canadian locations and one US location is required.
- Miscellaneous additional objects such as a tracking number generator, a routing method, and zoning methods based on the geographic codes are required.

Steps for creating, defining, and deploying the CM Shipping carrier

The following topics describe the step-by-step procedures for creating, defining, and deploying CM Shipping:

- [Step 1 – Create and define the Carrier](#)
- [Step 2 – Add custom scripts](#)

- Step 3 – Create additional objects - [Tracking numbers, geocodes, routing method](#) - [Zoning methods](#) - [Charges and other objects](#) - [UI administrative elements](#) - [UI transactional elements](#)
- Step 4 – Add services and rates - [Create rating methods](#) - [Add rates to rating methods](#) - [Create services and add rating methods](#)
- [Step 5 – Save, version, deploy, and export CM Shipping](#)

Step 1 - Create and define the carrier

The process of defining a UCM carrier consists of creating or importing a carrier, and then adding, editing, or removing various objects associated with the carrier, as well as configuring the objects themselves; for example, the services associated with the carrier.

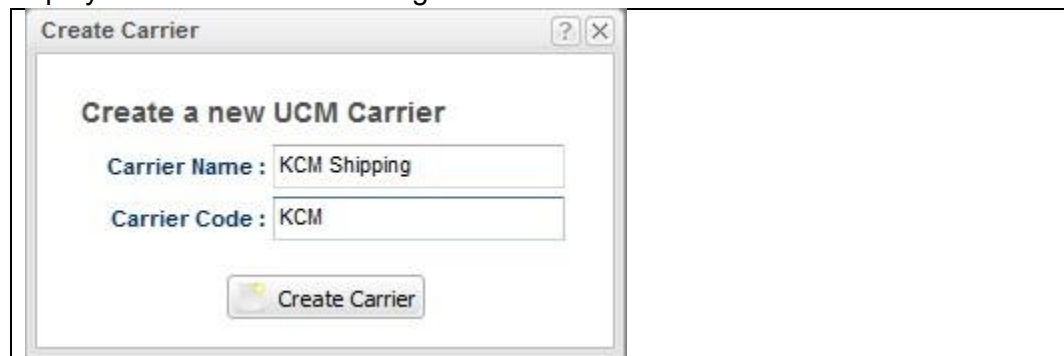
Note: For more information on creating and defining a UCM carrier, see the following topics:

- [UCM carrier setup workflow](#)
- [Create and define a new UCM carrier](#)

Create the CM Shipping carrier

To create the CM Shipping carrier:

1. In the Actions (topmost) area of the left UCM panel, click Create a New Carrier to display the Create Carrier dialog:




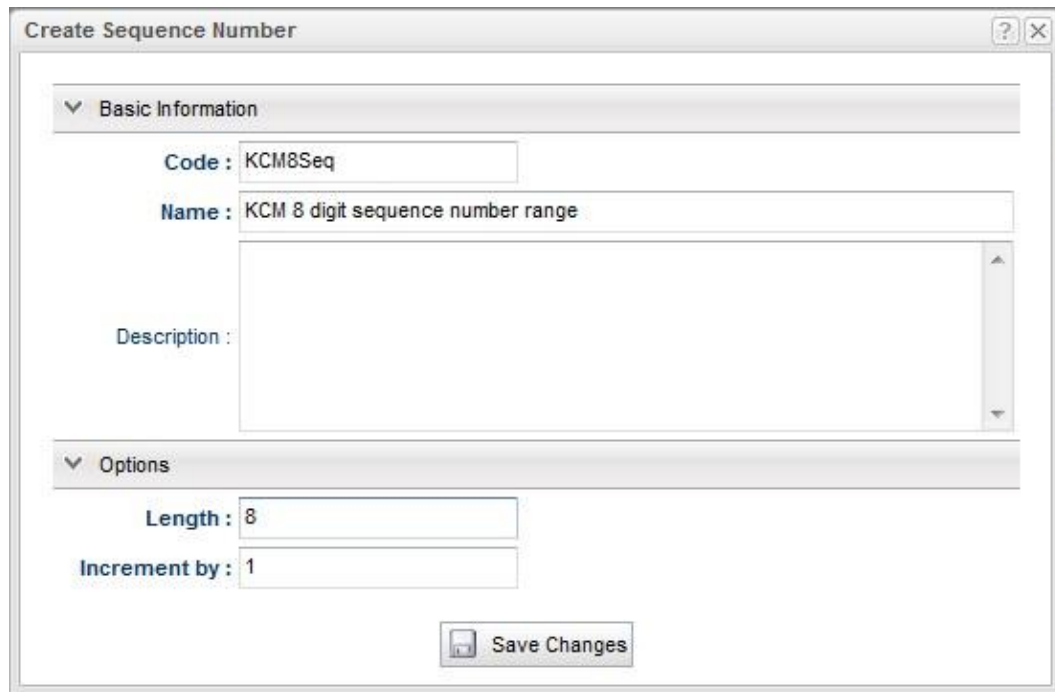
2. In the **Carrier Name** field, type CM Shipping.
3. In the **Carrier Code** field, type KCM. **Note:** When you save this information, any lowercase letters in the carrier code are automatically converted to uppercase, so that the carrier code is displayed and stored in the database in all uppercase. Additionally, any scripts that reference a carrier code must use all uppercase letters.
4. Click Create Carrier to create the carrier, display the CM Shipping folder icon in the left panel under Carriers, and display the carrier definition screen for CM Shipping.

Define the CM Shipping carrier

To define the CM Shipping carrier on the carrier definition screen:

1. Optionally, add a description of the carrier in the Description field.
2. Click the up arrows (^) on the Options bar and End of Day bar to display the carrier definition options.

3. In the Options section, select the following check boxes: Use Built-in Time in Transit
Enable Dangerous Goods
Standard E-mail options
Customer charge options
4. In End of Day section, click the Create  next to the Manifest Sequence Number field to display the Create Sequence Number dialog. **Note:** This operation defines the sequence number used to generate the manifest number for the End-of-Day (EOD) Manifest.
5. In the Create Sequence Number dialog populate the following fields with the following values, and then click Save Changes.



The image shows a 'Create Sequence Number' dialog box with two main sections: 'Basic Information' and 'Options'. In the 'Basic Information' section, the 'Code' field is set to 'KCM8Seq', the 'Name' field is set to 'KCM 8 digit sequence number range', and the 'Description' field is empty. In the 'Options' section, the 'Length' field is set to '8' and the 'Increment by' field is set to '1'. A 'Save Changes' button with a floppy disk icon is located at the bottom right of the dialog.

Section	Field	Value
Basic Information	Code	KCM8Seq
	Name	KCM 8 digit sequence number range
	Description	
Options	Length	8
	Increment by	1

6. In the End of Day section, select the check box labeled Allow Shipment Consolidation. This action displays the following additional options: Use Built-in Consolidation Selection (check box – accept the default selection) Use Built-in Consolidation Rating (check box – accept the default selection) Default Rate Split (drop-down list – accept the default selection of Even)

Module 7. The CM Shipping carrier definition screen now looks like the following illustration.



8. Click Save Changes to save the carrier definition and proceed to [Step 2 - Add custom scripts](#).

Step 2 - Add custom scripts

CM Shipping requires a number of scripts for various purposes. This topic steps through the creation of the script for determining if an adult signature is required on delivery. Due to considerations of space, details for each script are presented in the form of popup topics that are linked to at the end of this topic. For general information on creating and applying UCM scripts, see the following Help topics under Scripts:

- [Overview of scripts](#)
- Create, test, and debug a script - [General procedure](#) - [Specific script types](#)
- [Edit or delete a script](#)
- [Apply a script in a context](#)
- [Manage built-in scripts](#)
- [Best practices for working with scripts](#)

Scripts for CM Shipping

The following scripts are required for the objects associated with the CM Shipping carrier:

Code ^	Name	Type
AddHandlingSelect	Additional Handling Select script	Criteria
CalcFuelSurcharge	Calculate Fuel Surcharge	Advanced
codAmountToCollect	Amount to Collect on COD	Advanced
DLVY_AREA	Delivery Area	Advanced
InsAmtScript	Insurance Amount Calculation Script	Advanced
isCOD	Is COD	Advanced
isDeclaredValue	is Declared Value	Criteria
isOversized	Is Oversized	Advanced
ManifestScript	Manifest Script	Advanced
mod10	Check Digit Calculation Modified Mod 10	Advanced
PrintCODAmount	Print COD Amount	Advanced
RES_FLAG	Residential Delivery	Criteria
SATDLVY	Saturday Delivery	Criteria
SIG_REQ	Signature Required	Criteria

Note: There are several approaches for creating scripts and applying them to objects:

- Create and apply the script when you create and define the object.
- Create all the objects first, and then create the scripts and apply them to the objects.
- Create the script in advance, and then select it from the list of existing scripts when defining the object.

For the sake of efficiency, this tutorial follows the latter method. In practical terms, however, it often makes sense to create all or some of the objects first, since this process can clarify scripting requirements (for example, when a script includes a reference to an object by name). When carrying out this tutorial, you can vary this order as needed. The script examples in the Appendix also enable you to create all the required objects first, and then create the scripts and apply them to the objects. If you were creating a carrier from scratch, this might be the method you would follow.

Create a script

What follows is a step-by-step procedure to create the criteria script that determines whether the Signature Required Charge applies to a shipment. This is a Pre-execution script that is applied to the Charge named Signature Required Fee which is, in turn, used with the UI Administrative Element field named Signature Confirmation Amount that enables an administrator to specify a flat fee for this service.

To create the Signature Required script

1. With the list of objects under the CM Shipping folder displayed, click the Scripts link to display the Scripts screen.
2. Click the Create to display the Create Script dialog.
3. Fill in the fields on the dialog as shown in the following illustration, click the Validate to check the script for errors, and then click Save Changes to save the script and add it to the list of Existing Scripts.

Create script

Basic Information

Code : SIG_REQ

Name : Signature Required

Description : Determines if the Signature Required Charge will be applied.
Type: Criteria

JavaScript Code

Type : Criteria

Criteria : getAPIValue("DLVY_CONF_TYPE")=="y"

Validation Status : No errors detected

☐ Apply At Rating Time Only

☐ Debug

Note: The Criteria script in this case is run Pre rating and retrieves the value of the DLVY_CONF_TYPE API key. This key is a flag that returns a value of "y" if the shipment requires delivery confirmation and "n" if it does not require this confirmation. If this value equals "y," then the criterion is met and the charge specified in the UI administrative field is applied. If the API key value equals "n," then the charge is not applied.

Additional scripts required for CM Shipping

The following additional scripts must be created for CM Shipping. To display a table with the configuration information for the remaining scripts (both Advanced and Criteria) see the following topics under "Sample carrier appendix":

- [Advanced scripts-1](#)
- [Advanced scripts-2](#)
- [Additional Criteria scripts](#) **Notes:**
- Since many of the objects created during the successive steps of this tutorial require these scripts, it is recommended that you either create all the scripts now or create a script when creating the object that requires it. (See Note at end of "Scripts for CM Shipping" section.) However, procedures for creating objects requiring scripts specify the "Add Existing" option for scripts.
- For the codes for scripts, see the Code column in the scripts list under the section "Scripts for CM Shipping."

- The topics in the previous list include the code for each script, which can be copied and pasted into the text box for the JavaScript code when creating the script.


Step 3- Create additional objects

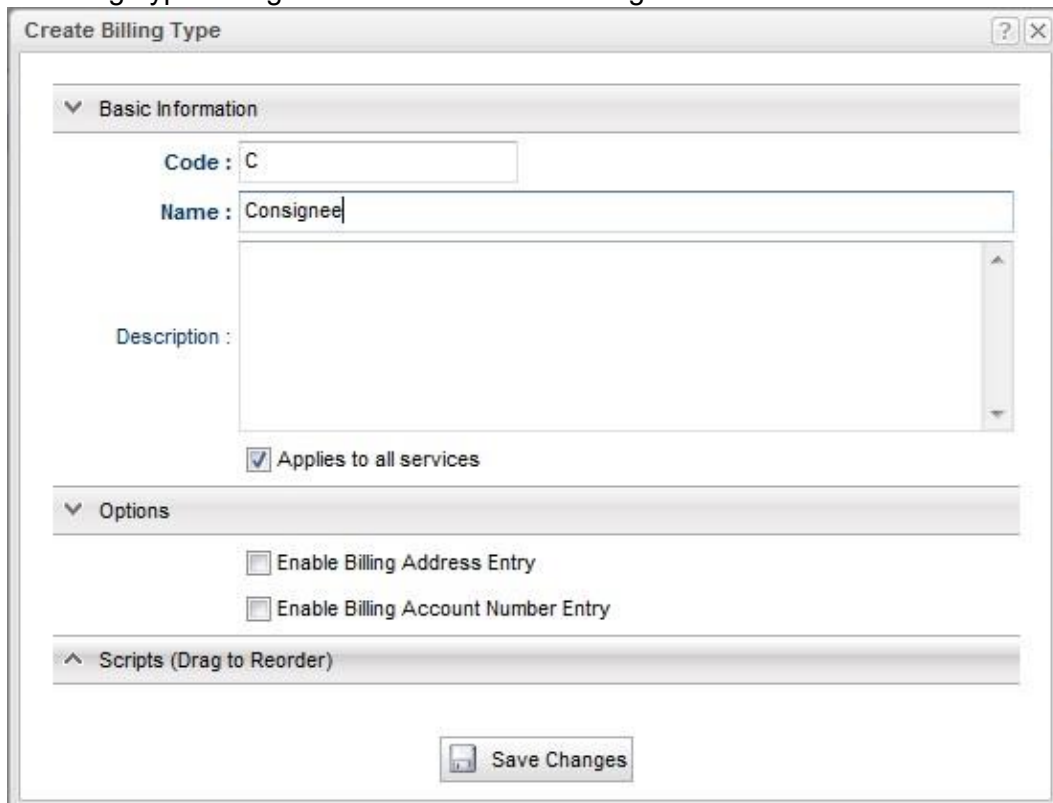
Billing types

The CM Shipping sample carrier requires the following billing types:

- Consignee – You need to create this billing type.
- Prepaid – This billing type is included with all UCM carriers.
- Third Party – You need to create this billing type.

The following procedures describe how to create the additional billing types required. **To create the Consignee billing type:**

1. Click the plus sign  next to the CM Shipping folder icon to display the list of object types that can be associated with the carrier.
2. In the list of objects, click the Billing Types link to display the Billing Types screen, and then click the Create to display the Create Billing Type dialog.
3. Under Basic Information, fill in the **Code** and **Name** as shown in the following illustration (optionally, fill in a Description).
4. Select the **Applies to all services** check box.
5. Under Options, leave the check boxes labeled **Enabled Billing Address Entry** and **Enable Billing Account Number Entry** deselected (cleared). The Create Billing Type dialog now looks like the following illustration:



Create Billing Type

▼ Basic Information

Code : C

Name : Consignee

Description :


☒ Applies to all services

▼ Options

☐ Enable Billing Address Entry

☐ Enable Billing Account Number Entry

^ Scripts (Drag to Reorder)

 Save Changes

Note: No scripts are associated with this billing type.

6. Click Save Changes to add Consignee billing to the Billing Types list.

To create the Third Party billing type:

1. Follow steps 1-2 of the previous procedure.
2. Under Basic Information, fill in the **Code** and **Name** as shown in the following illustration (optionally, fill in a **Description**).
3. Select the **Applies to all services** check box.
4. Under Options, select the check boxes labeled **Enabled Billing Address Entry** and **Enable Billing Account Number Entry**. The Create Billing Type dialog now looks like the following illustration:


The screenshot shows the 'Create Billing Type' dialog box. It has a title bar with a question mark and a close button. The dialog is divided into three main sections: 'Basic Information', 'Options', and 'Scripts (Drag to Reorder)'. In the 'Basic Information' section, there are three fields: 'Code' with the value 'T', 'Name' with the value 'Third Party', and 'Description' which is empty. Below these fields is a checkbox labeled 'Applies to all services' which is checked. In the 'Options' section, there are two checkboxes: 'Enable Billing Address Entry' and 'Enable Billing Account Number Entry', both of which are checked. The 'Scripts' section is currently empty. At the bottom right of the dialog is a button labeled 'Save Changes'.

Note: No scripts are associated with this billing type.

5. Click Save Changes to add Third Party billing to the Billing Types list.

Label template

CM Shipping uses the Standard Shipping template included with UCM. Additionally, CM Shipping uses a Post Template label to retrieve and print COD information when applicable. The following procedure describes how to create this label template. **To create the Post Template and enable for PNG printing:**

1. Click the plus sign  next to the CM Shipping folder icon to display the list of object types that can be associated with the carrier.
2. In the list of objects, click the Label Templates link to display the Label Templates screen, and then click the Create to display the Create Label Template dialog.

3. Under Basic Information, fill in the **Code** and **Name** as shown in the following illustration (optionally, fill in a **Description**).
4. Select the **Applies to all services** check box.
5. Under Label Template Specifications, from the *Label type* drop-down list, select Pre/Post Template, and then click Save Changes to add the Post Template to the list of label templates.
Note: No scripts are associated with this label template.
6. Select the Post Template in the label templates list, and then double-click on the selection or click Edit to display the Edit Label Template dialog.
1. Click the up arrow (^) on the Printer Support bar to expand the list of printers.
2. In the list of printers, select png and then double click the selection or click Edit to display the Edit Printer Template screen.
3. In the text area, enter the following
line: ^FO500,0455^AUN,35,25^FD{CODTEXT}^FS
4. Click Save Changes to enable the PNG printer. The Edit Label Template dialog now looks like the following illustration:

Edit Label Template

▼ Basic Information

Code : POSTTEMP

Name : Post Template

Description :

☒ Applies to all services

▼ Label Template Specifications

Label type : Pre / Post Template ▼

▼ Printer Support

Printer ^	File extension	Status	
Eltron	etn	Not found	Enable
Intermec	ipl	Not found	Disable
Monarch	fmt	Not found	Edit
png	pngt	Enabled	View
ProdigyMax	dmx	Not found	Delete
SATO	sat	Not found	
Zebra	zpl	Not found	

^ Scripts (Drag to Reorder)

Save Changes

5. Click Save Changes to complete the configuration of the Post Template label template.

Tracking number, geocodes, routing method

In addition to rating methods, the other objects required for creating the CM Shipping services are the following:

- Tracking number generator – Tracking number generator for producing tracking numbers based on the sequence number created in [Step 1 - Create and Define the carrier](#).
- Geographic codes – Required for routing method and zoning methods.
- Routing method – A routing method including a set of routes imported from a routes file.
- Zoning methods – Zoning methods including a set of zones imported from a zones file.


Note: All services use the same tracking number generator and routing method. Each service has a separate zoning method.

Tracking number generator



Note: See the following topics under Sequence and Tracking Numbers:

- [Overview of sequence numbers and tracking numbers](#)
- [Create, edit, or delete a sequence number](#)
- [Create, edit, or delete a tracking number generator](#)
- [Best practices for working with tracking numbers](#) *To create the tracking*

number generator:

1. Click the plus sign  next to the CM Shipping folder icon to display the list of object types that can be associated with the carrier.
2. In the list of objects, click the Tracking Number Generators link to display the Tracking Number Generators screen, and then click the Create to display the Create Tracking Number Generator dialog.
3. Under Basic Information, fill in the **Code**, **Name**, and **Description** of the Tracking Number Generator as shown in the illustration under step 4.
4. Under Options, select the following options:
5. In the **Type** drop-down list, accept the default of Simple. (This means no custom script is used for the tracking number generator itself.)
6. Accept the default selection of the check box labeled **Use Shipment Tracking Number for First Package**.
7. In the **Prefix** field, enter KCM. This prefixes the string "KCM" to each tracking number.
8. Accept the default of unselected (cleared) for the check box labeled **Append Account Number to Prefix**.
9. From the **Sequence Number** drop-down list, select KCM 8 digit sequence number range. This is the sequence number created in [Step 1 - Create and Define the carrier](#).

10. Leave the **Suffix** field blank.

11. Select the check box labeled **Enable Checkdigit Calculation**. This action displays the following set of options for configuring checkdigit calculation: **Algorithm** (drop-down list) – Select CUSTOM. This action displays the Script selection field that enables you to select or create a checkdigit script. Click the Add Existing  to display the list of available scripts, from the script list, click the script with the code mod10, and then click Select. (If you have not yet created this script, click the Create . See the topic [Add custom scripts](#) for a procedure and the topic [Advanced scripts-2](#) for the mod10 script specification and JavaScript code.) Select the check box labeled **Compute Checkdigit from a Substring of the Tracking Number**. This action displays the fields for specifying the start and end positions for the checkdigit calculation. In the Start Position field, enter 3. In the End Position field, enter 999 (see following note). At this point, the Create Tracking Number Generator dialog should look like the following illustration:

Create Tracking Number Generator

Basic Information

Code : KCMTrackNo

Name : Tracking Number

Description :

Options

Type : Simple

☒ Use Shipment Tracking Number for First Package

Prefix : KCM

☐ Append Account Number to Prefix

Sequence Number : KCM 8 digit sequence number range

Suffix : Static ending of the tracking number

☒ Enable Checkdigit Calculation

Algorithm : CUSTOM

Script : mod10

☒ Compute Checkdigit from a Substring of the Tracking Number

Start Position : 3

End Position : 999

Save Changes

Note:For the value of End Position, you can enter any number greater than 1. The value of 999 is used here to ensure that the checkdigit calculation is performed on all the digits in the tracking number from position 3 to the end. This way, if the length of the tracking number is changed, the checkdigit calculation still uses the last digit as the End Position. The start position is 3 because each tracking number has the three-character prefix KCM. For information on how the Simple checkdigit calculation works, see the topic [Create, edit, or delete a tracking number](#).

Geographic codes


Geographic codes can be created individually or imported from a file. This tutorial imports a Geographic code file as a set of Canadian postal code ranges. Region names and cities are not required or included. Each postal code range is assigned an associated (arbitrary) Geocode.

Note:See the following topics under Geographic codes:

- [Create, edit, or delete a geographic code](#)

- [Import a geographic code](#)
- [Best practices for working with geographic codes](#) To add geographic

codes:

1. Click the plus sign  next to the CM Shipping folder to display the list of objects, and then click the Geographic Codes link to display the Geographic Codes screen:

Geocode ^	Description	Country Name	Region Name	City	Postal Low	Postal High
CPD019		Canada	New Brunswick			
CPD020		Canada	New Brunswick			
CPD021		Canada	Quebec			
CPD022		Canada	Quebec			
CPD023		Canada	Quebec			
CPD024		Canada	Quebec			
CPD025		Canada	Quebec			
CPD026		Canada	Quebec			
CPD027		Canada	Quebec			
CPD028		Canada	Quebec			
CPD029		Canada	Quebec			
CPD030		Canada	Quebec			
CPD031		Canada	Quebec			
CPD032		Canada			H1A0A0	H9X9Z9
CPD033		Canada	Quebec			

The previous illustration shows a portion of the complete set of geographic codes included with the CM Shipping sample carrier. If you are following this tutorial, the suggestion is to manually enter half a dozen or so geographic codes for testing purposes. To do so, carry out the following steps.

Note: If you want to create a geographic codes file for import, see the topic [Import a geographic code](#). To obtain the full set of geographic codes for testing the CM Shipping sample carrier, you need to import the carrier .zip file included with your UCM distribution. See the topic [Import or export a UCM carrier](#). The highlighted geographic code in the previous illustration is used with the routing and zoning methods created for this tutorial. The route and zone that use this geographic code are also highlighted in the illustrations with the procedures for creating routing and zoning methods.

2. In the Geographic Codes pane, click Create in the upper right portion of the panel to display the Geographic Code dialog.

The following illustration shows the Geographic Code dialog:

Note: If you are entering geographic codes manually, it is recommended that you include the geocode in the previous illustration, since it is used by the routing and zoning methods described in the following section.

3. Enter the information from one of the lines in the illustration under step 1, and click Save Changes. Repeat this step until you have as many geographic codes as you want for testing purposes.


Routing method

A routing method uses geographic codes to create standard routes for rating and shipping purposes. CM Shipping uses a single routing method based on a single Origin geocode of ALL and various Destination geocodes (see the illustration in step 4 of the following procedure).

Note: See the following topics under Routing Methods:

- [Overview of routing methods](#)
- [Create a routing method](#)
- [Edit or delete a routing method](#)
- [Manage routes](#)

To create the routing method for all services:

1. Click the plus sign  next to the CM Shipping folder icon to display the list of object types that can be associated with the carrier.
2. In the list of objects, click the Routing Methods link to display the Routing Methods screen, and then click the Create to display the Create Routing Method dialog.
3. Under Basic Information, fill in the **Code**, **Name**, and **Description** of the routing method as shown in the following illustration:

Create Routing Method

Basic Information

Code : KCMRoutes

Name : KCM Route Codes

Description :

Scripts (Drag to Reorder)

Save Changes Save Changes and Manage Routes

Note: No scripts are associated with this routing method.

- Click Save Changes and Manage Routes to display the Routes Editor:

Routes Editor


Effective Date	Origin GeoCode	Destination GeoCode	Route Code
2012/11/07	ALL	CPD032	032E
2012/11/07	ALL	CPD404	021-031G
2012/11/07	ALL	CPD403	013-020E
2012/11/07	ALL	CPD402	011-012C
2012/11/07	ALL	CPD401	006-010B
2012/11/07	ALL	CPD400	001-005A
2012/11/07	ALL	CPD300	300US
2012/11/07	ALL	CPD414	200-220Y
2012/11/07	ALL	CPD405	033-051J
2012/11/07	ALL	CPD406	052-053K
2012/11/07	ALL	CPD407	054-055L
2012/11/07	ALL	CPD056	056M
2012/11/07	ALL	CPD408	057-060N
2012/11/07	ALL	CPD409	061-062P
2012/11/07	ALL	CPD410	063-068R
2012/11/07	ALL	CPD411	069-072S
2012/11/07	ALL	CPD412	073-091T
2012/11/07	ALL	CPD413	092-104V


Add Route Delete Route Import Routes

Save Changes

The previous illustration shows the complete set of routes included with the CM Shipping sample carrier. If you are following this tutorial, the suggestion is to manually enter half a dozen or so routes for testing purposes. To do so, carry out the following steps.

Notes: If you want to create a routes file for import, see the topic [Manage routes](#). To obtain the full set of routes for testing the CM Shipping sample carrier, you need to import the carrier .zip file included with your UCM distribution. See the topic [Import or export a UCM carrier](#). If you are entering routes manually, it is recommended that you include the route highlighted in the previous illustration, since it references one of the geocodes (highlighted) described in the previous section. (You will, however, require a different Effective Date.)

5. In the Routes Editor, click Add Route in the upper right portion of the panel to display a blank row for entering the information for the route.
6. Click the calendar  to specify an Effective Date, and then fill in the other information, and then click Save Changes to save the route.

Note: You must specify the current date or a later date. Repeat this steps 5-6 until you have as many routes as you want for testing purposes and then click the Close .

Zoning methods

A zoning method assigns a zone code to origin-destination pairs. This tutorial uses three zoning methods. For each zoning method, the zone code for each destination is associated with all origins (Origin GeoCode = ALL).


The following zoning methods are required for the CM Shipping sample carrier:

- Zoning within Canada
- Delivery Area Surcharge Zone
- Zoning to the US

Note: See the following topics under Zoning Methods:

- [Overview of zoning methods](#)
- [Create a zoning method](#)
- [Edit or delete a zoning method](#)
- [Manage zones](#)

To create the Zoning within Canada zoning method:

1. Click the plus sign  next to the CM Shipping folder icon to display the list of object types that can be associated with the carrier.
2. In the list of objects, click the Zoning Methods link to display the Zoning Methods screen, and then click the Create to display the Create Zoning Method dialog.
3. Under Basic Information, fill in the **Code** and **Name** as shown in the following illustration (optionally, fill in a **Description**):

Create Zoning Method

▼ Basic Information

Code : ZONECA

Name : Zoning within Canada

Description :

^ Scripts (Drag to Reorder)

Save Changes Save Changes and Manage Zones

Note: No scripts are associated with this zoning method.

- Click Save Changes and Manage Routes to display the Zones Editor:

Zones Editor


Effective Date	Origin GeoCode	Destination GeoCode	Zone Code
2012/11/07	ALL	CPD053	2
2012/11/07	ALL	CPD052	6
2012/11/07	ALL	CPD051	3
2012/11/07	ALL	CPD050	7
2012/11/07	ALL	CPD049	3
2012/11/07	ALL	CPD048	7
2012/11/07	ALL	CPD047	7
2012/11/07	ALL	CPD046	3
2012/11/07	ALL	CPD045	7
2012/11/07	ALL	CPD044	3
2012/11/07	ALL	CPD043	7
2012/11/07	ALL	CPD042	3
2012/11/07	ALL	CPD041	7
2012/11/07	ALL	CPD040	3
2012/11/07	ALL	CPD039	7
2012/11/07	ALL	CPD038	3
2012/11/07	ALL	CPD037	7
2012/11/07	ALL	CPD036	3
2012/11/07	ALL	CPD035	7
2012/11/07	ALL	CPD034	3
2012/11/07	ALL	CPD033	7
2012/11/07	ALL	CPD032	2
2012/11/07	ALL	CPD031	3

Add Zone Delete Zone Import Zones

Save Changes

The previous illustration shows a portion of the complete set of routes included with the CM Shipping sample carrier. If you are following this tutorial, the suggestion is to manually enter half a dozen or so of these zones for testing purposes, including the highlighted zone, which references a geographic code shown in the previous geographic codes procedure. To do so, carry out the following steps.

Notes:

- If you want to create a zones file for import, see the topic [Manage zones](#). To obtain the full set of zones for testing the CM Shipping sample carrier, you need to import the carrier .zip file included with your UCM distribution. See the topic [Import or export a UCM carrier](#).
 - If you are entering zones manually, it is recommended that you include the zone highlighted in the previous illustration, since it references one of the geographic codes (highlighted) described in the geographic codes section. (You will, however, require a different Effective Date.)
1. In the Zones Editor, click Add Zone in the upper right portion of the panel to display a blank row for entering the information for the zone.
 2. Click the calendar  to specify an Effective Date, and then fill in the other information, and then click Save Changes to save the route.
Note:You must specify the current date or a later date.Repeat this steps 6-7 until you have as many routes as you want for testing purposes.

To create the other zoning methods:

1. Follow steps 1-2 of the previous procedure.
2. In steps 3-7 of the previous procedure, configure the zoning methods according to the following table:

Code	Name	Description	Zone
ZONEDAS	Delivery Area Surchage Zone	N/A	<ul style="list-style-type: none"> • Effective Date – Current date or later

- Origin GeoCode – ALL
- Destination GeoCode (see following note) – CPD414
- Zone Code – DAS

Note:For this zoning method, you need to create the CPD414 GeoCode. See the following table.]

ZONEUS	Zoning to the US	N/A	<ul style="list-style-type: none"> • Effective Date – Current date or later
---------------	------------------	-----	--

- Origin GeoCode – ALL
- Destination GeoCode (see following note) – CPD300

Zone Code – 1

Note:For this zoning method, you need to create the CPD300 GeoCode. See the following table.]

Geocodes for Delivery Area Surchage Zone and Zoning to the US

For the procedure for adding a geographic code (geocode), see the following topic: The values for the required geocodes for "Delivery Area Surchage Zone" and "Zoning to the US" are as follows:

Geocode	Description	Country Name	Region Name	City	Postal Low	Postal High
CPD300	N/A leave blank	United States	All Regions	N/A leave blank	N/A leave blank	N/A leave blank
CPD414	CPD200-CPD220 ZIP RANGE	Canada	All Regions	N/A leave blank	Y0A1B0	Y1A7A3

UI administrative elements

User interface (UI) administrative elements are used after a carrier is deployed to a shipping system to configure the carrier for the shipping system, typically with default values for various configuration options.

Note: For general information on UI administrative elements, see the following topics under UI Administrative Elements:

- [Overview of UI administrative elements](#)
- [Create a UI administrative element](#)
- [Edit or delete a UI administrative element](#)
- [Import values by date](#)

The CM Shipping sample carrier requires the following UI administrative elements:


Code ^	Name	Data Type
ADDHANDLINGAMT	Additional Handling Amount	Numeric
ALLOW_EOD_CONSOLIDATION	Allow End of Day Shipment Consolidation	Checkbox
CALC_TINT	Calculate Transit Time	Checkbox
COD_FEE	COD Fee Per Shipment	Numeric
DECVALAMT	Declared Value Charge Amount	Numeric
DIMFACTOR	Dimension Factor	Numeric
DLVY_AREA_AMT	Delivery Area Charge Amount	Numeric
DLVY_CONF_AMT	Signature Confirmation Amount	Numeric
FUELSURCHARGEAMT	Fuel Surcharge Amount	Numeric
INSMINAMT	Insurance Minimum Charge Amount	Numeric
MANI_FTP_DIR	FTP Directory	Text
MANI_FTP_HOST	FTP Hostname	Text
MANI_FTP_PASS	FTP Password	Text
MANI_FTP_USER	FTP Username	Text
OVERAMT	Oversized Amount	Numeric
OVERMAXUOM	Oversized Maximum Value UOM	Drop-down
OVERMAXVALUE	Oversized Maximum Value	Numeric
RES_AMT	Residential Charge Amount	Numeric
SPCDLVYAMT	Saturday Delivery Charge Amount	Numeric
TEMPLATE_NAME2	Post Template	Text
TINT_SAT_DELIVERY	Standard Saturday Delivery	Checkbox

Note: Calculate Transit Time and Standard Saturday Delivery are included with UCM if the user selects Time in Transit when creating the carrier..

Create a UI administrative element

The following procedure describes how to create the UI administrative element for COD Fee Per Shipment. This element is a numeric field that allows the administrator setting up a CM Shipping carrier in the shipping system to specify a default value for COD. The links that follow this procedure display the topics with information on the remaining UI administrative elements.

To create the COD Fee administrative element:

1. Click the plus sign  next to the CM Shipping folder to display the list of objects, and then click the UI Administrative Elements link to display the UI Administrative Elements screen.
2. Click Create to display the Create UI Administrative Element dialog, and then configure the sequence number by carrying out the following sub-steps:
3. Under Basic Information, fill in the information for **Code**, **Name** and **Description**.
4. Under Data Description, from the **Data Type** drop-down list, select Numeric.
5. Leave the defaults for the cleared Value is required check box and selected Show in UI Administrative location check box.

6. In the Administrative Label field, enter COD Fee. This is the text that appears next to the numeric field for COD on the configuration screen.
7. Under UI Screen Location, select the following options:
8. From the Top Level Admin drop-down list, leave the default selection of Shipper Defaults. This selection locates the default COD Fee field on a tab on the Shipper Defaults screen, which deploying the UCM carrier automatically creates when the deployed carrier is added to a shipping system.
9. From the Second Level drop-down list, leave the default selection of Defaults. This selection locates the COD Fee field on the Defaults tab of the Shipper Defaults screen.
10. From the Third Level drop-down list, leave the default selection of Defaults. This selection labels the section under which the COD Fee field is located with "Defaults" in bold text.
11. Leave the Create field blank and accept the deselected (cleared) check box labeled This UI Administrative Element is also a UI Transactional Element. The resulting Create UI Administrative Element dialog looks like this:

Create UI Administrative Element

Basic Information

Code : COD_FEE

Name : COD Fee Per Shipment

Description : The flat-rate fee for each COD shipment.

Data Description

Data Type : Numeric

Data Type :

☐ Value is required

☒ Show in UI Administrative location

UI Administrative Label : COD Fee

UI Screen Location


Top Level Admin : Shipper Defaults

Second Level : Defaults

Third Level : Defaults

Create :

☐ This UI Administrative Element is also a UI Transactional Element.

12. Click Save Changes and Manage Values to display the Manage Values for COD_FEE dialog. Click Create to display an active row for entering the information. Click the calendar  and specify an effective date of today or later (you cannot save with an earlier date); fill in the other fields as shown in the following illustration. Click Save Changes to make the amount that you entered

under Value the default value for the *COD Fee* field. The following illustration shows the current default value for this field (the later effective date preceding the current date represents the current value).

Effective Date	Value	Comments
2012/11/13	10	Amended 2012 Rate
2012/11/12	2.25	2012 Rate

Note: Click the funnel (filter) to activate existing rows for editing, and then double-click on a row to edit the values in that row.

Additional UI administrative elements required for CM Shipping

The following additional UI administrative elements must be created for CM Shipping. To display a table with the configuration information for the following UI administrative elements, see the topic [Additional UI administrative elements](#).

- Additional Handling Amount
- Allow End of Day Shipment Consolidation
- COD Fee Per Shipment
- Declared Value Charge Amount
- Dimension Factor
- Delivery Area Charge Amount
- Signature Confirmation Amount
- Fuel Surcharge Amount
- Insurance Minimum Charge Amount
- FTP Delivery
- FTP Hostname
- FTP Password
- FTP Username
- Oversized Amount
- Oversized Maximum Value UOM
- Oversized Maximum Value
- Residential Charge Amount
- Saturday Delivery Charge Amount
- Post Template

Note: The UI administrative elements named Calculate Transit Time and Standard Saturday Delivery are included (pre-configured) with all UCM carriers and therefore not included in this table.

UI transactional elements

User interface (UI) transactional elements are used after a carrier is deployed to a shipping system during the shipping process to specify values for various charges (if different from the default), types of delivery confirmation, and other service options.

Note:For general information on UI administrative elements, see the following topics under UI Administrative Elements:

- [Overview of UI transactional elements](#)
- [Create a UI transactional element](#)
- [Edit or delete a UI transactional element](#)
- [Best practices for working with UI transactional elements](#)


The CM Shipping carrier requires the following UI transactional elements:

Code ^	Name	UI Transactional Label	Data Type
ADDHANDLING_TYPE	Additional Handling	Additional Handling	Checkbox
CODAMT	COD Amount	COD Amount	Numeric
CODOPTIONS	COD Options	COD Options	Drop-down
CODPAYTYPE	COD Payment Type	COD Payment Type	Drop-down
DLVY_CONF_TYPE	Signature Service Type	Signature Required	Checkbox
EMAIL_ON_DELAY	E-mail on Delay	E-mail on Delay	Text
EMAIL_ON_DLVY	E-mail on Delivery	E-mail on Delivery	Text
EMAIL_ON_SENT	E-mail on Sent	E-mail on Sent	Text
INSAMT	Declared Value for Insurance	Declared Value for Insurance	Numeric
MARGIN_TYPE	Customer Charge Type	Customer Charge Type	Drop-down
MARGIN_VALUE	Customer Charge	Customer Charge	Numeric
SPCDLVYFLAG	Saturday Delivery Flag	Saturday Delivery Flag	Checkbox

Create a UI transactional element

The following procedure describes how to create the UI transactional element for COD Amount. This element is a numeric field that allows the shipping application user to specify a value for COD amount. The links that follow this procedure display rows in a table with information on the remaining UI transactional elements that remain to be created.

To create the COD Amount transactional element:

1. Click the plus sign  next to the CM Shipping folder to display the list of objects, and then click the UI Transactional Elements link to display the UI Transactional Elements screen.

2. Click Create to display the Create UI Transactional Element dialog, and then configure the sequence number by carrying out the following sub-steps:
3. Under Basic Information, fill in the information for **Code**, **Name** and **Description** as shown in the following illustration, and accept the selection of the check box labeled: Applies to all services.
4. Under Data Description, from the **Data Type** drop-down list, select Numeric.
5. In the UI Transactional Label field, enter COD Amount. This is the text that appears next to the numeric field for COD Amount on the shipment options screen.
6. Under UI Screen Location, select the following options:
7. From the Top Level drop-down list, accept the default selection of Shipment. This selection locates the default COD Amount field on the Shipment tab of the Options screen, which deploying the UCM carrier automatically creates when the deployed carrier is added to a shipping system.
8. From the Second Level drop-down list, accept the default selection of Shipment. This selection locates the COD Amount field under the Shipment Level Options section of the Shipment tab.
9. From the Third Level drop-down list, accept the default selection of Defaults. This selection labels the section under which the COD Amount field is located with "Defaults" in bold text.
10. Leave the Create field blank and accept the deselected (cleared) check box labeled This UI Transactional Element is also a UI Administrative Element. The resulting Create UI Transactional Element dialog looks like this:

Create UI Transactional Element

Basic Information

Code : CODAMT

Name : COD Amount

Description :

☒ Applies to all services

Data Description

Data Type : Numeric

UI Transactional Label : COD Amount

UI Screen Location

Top Level Tran : Shipment

Second Level : Shipment

Third Level : Defaults

Create :

Add to Top Level Add to Second Level Add to Third Level

☐ This UI Transactional Element is also a UI Administrative Element.

Save Changes Save Changes and Manage Values

11. Since no default values are required for this field, click Save Changes to save the UI transaction element.

Additional UI transactional elements required for CM Shipping

The following additional UI transactional elements must be created for CM Shipping. To display a table with the configuration information for the following UI transactional elements, see the topic [Additional UI transactional elements](#).

- Additional Handling
- COD Amount
- COD Options
- COD Payment Type
- Signature Service Type
- Declared Value for Insurance
- Saturday Delivery Flag

Note: The following UI administrative elements used with the CM Shipping sample carrier are not included in this table, since they are included (pre-configured) with all UCM carriers:

- E-mail on Delay
- E-mail on Delivery
- E-mail on Sent
- Customer Charge Type
- Customer Charge

Charges and other objects

The objects in this category represent some objects that were not created in earlier steps. They include the following:

- Charges – A number of charges must be created and configured. See the following section: [Create charges](#).
- Packaging Types – User Packaging is the only packaging type required for CM Shipping. This packaging type is included with all UCM carriers.
- Reports – CM Shipping uses the following standard Reports included with UCM. See the following section: [Add reports](#). - Certificate of Origin - Commercial Invoice - IATA Dangerous Goods - End of Day Parcel Manifest

Note: Since charges (as options and amounts) are typically specified from the user interface (UI), the UI elements (both administrative and transactional need to be created and configured before creating the set of charges for the carrier). See the topics under UI Elements:

- [UI administrative elements](#)
- [UI transactional elements](#)

See also the following general topics under Charges:


- [Overview of charges](#)
- [Create a charge](#)
- [Edit, delete, or remove a charge](#)
- Best practices for working with charges - [Example of Extended Area Surcharge](#) - [Example of Delivery Confirmation Charges](#) - [How to set up Fuel Surcharge](#)

[Create charges](#)

CM Shipping requires the following charges:

Code ^	Name
AddHandlingChg	Additional Handling Charge
CHG_DLVY_AREA	Delivery Area Surcharge
CHG_DLVY_CONF	Signature Required Fee
CHG_RESIDENTIAL	Residential Charge
CODFEE	COD Surcharge
DECVALCHG	Insurance Charges
OVERSIZE_CHG	Oversize Charge
SATDLVYCHG	Saturday Delivery Charge

The following procedure steps through creating the Signature Required Fee. The information for the other charges can be accessed by clicking the links following this procedure. Note that UI administrative and transactional elements must be created first, as several of these charge types need to have UI elements associated when configuring the charge. ***To create the Signature Required Fee:***

1. Click the plus sign  next to the CM Shipping folder to display the list of objects, and then click the Charges link to display the Charges screen.
2. Click Create to display the Create Charge dialog, and then configure the charge by carrying out the following sub-steps:
3. Under Basic Information, fill in the **Code**, **Name**, and **Description** fields as shown in the following illustration and leave the check box labeled **Applies to all services selected**.
4. Under Options specify the following values:
5. In the **Response Key** field, enter: CHG_DLVY_CONF.
6. From the Applied per drop-down list, select Shipment. This selection indicates that the charge is to be applied per shipment.
7. Accept the default of deselected (cleared) for the check box labeled: Include this charge in fuel surcharge calculations.
8. Select the check box labeled This charge has associated label text to display the Label Text field, and then enter the following text in the Label Text field: Signature Required.
9. Under Calculation Method, select the following options:
10. From the **Method** drop-down list, select Fixed Amount.
11. From the Charge Source drop-down list, select UI Element to display the UI Element drop-down list and then, from this list, select Signature Confirmation Amount. This selection makes the value entered in this UI administrative field the source of the charge amount for the Signature Required Fee.
12. Click the up arrow (^) to expand the Scripts section, and then click Add Existing to display the list of available scripts. Select the script named Signature

Required, and then click Select to add the script to this charge. (If you have not yet created this script, click Create New. See the topic [Add custom scripts](#) for a procedure and the topic [Additional Criteria Scripts](#) for the Signature Required script specification and JavaScript code.) Select Pre to run the script before the shipment is processed to determine if this Signature Required charge applies.

The Create Charge dialog should now look like the following illustration:

Edit Charge

Basic Information

Code : CHG_DLVY_CONF

Name : Signature Required Fee

Description :

☒ Applies to all services

Options

Response Key : CHG_DLVY_CONF

Applied per : Shipment

☐ Include this charge in fuel surcharge calculations

☒ This charge has associated label text

Label Text : Signature Required

Calculation Method

Method : Fixed Amount

Charge Source : UI Element

UI Element : Signature Confirmation Amount

Scripts (Drag to Reorder)

Pre	Post	Name	Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Signature Required	Determines if the Signature Required Charge will be applied.

Add Existing Create New

Save Changes

- Click Save Changes to add the charge to the list of charges associated with CM Shipping.

See the following topic under "Sample carrier appendix" for details on the following additional charges that need to be created and configured for the CM Shipping sample carrier: [Additional charges](#).

- Additional Handling
- Delivery Area Surcharge
- Residential Charge
- COD Charge
- Insurance Charges
- Oversize Charge
- Saturday Delivery Charge

Add Reports


Adding reports to CM Shipping is a matter of selecting the reports included with UCM.

Note: For general information on UCM reports, see the following topics under Reports:

- [Overview of reports](#)
- [Select, import, or export a report](#)
- [Edit, remove, or delete a report](#)
- Best practices for working with reports - [Advanced information for reports](#) - [[Add EOD Manifest Default Disclaimer](#)]

Carrier#Change_EOD_Manifest_Default_Di] - [[Report Scripting](#)]

objects with a UCM Carrier#Report_Scripting] **To add reports to CM Shipping:**

- Click the plus sign  next to the CM Shipping folder to display the list of objects, and then click the Reports link to display the Reports screen.

Select the following reports in turn and, after each selection, click Select. Press the <Ctrl> key to make select multiple reports.

Available Reports				
Name	Description	Occurrence	Code ^	
Certificate of Origin	Certifies the country of origin of a shipment	Transaction	CERTIFICATE_OF_ORIGIN	
Commercial Invoice	Customs declaration for cross-border export	Transaction	COMMERCIAL_INVOICE	
IATA Dangerous Goods	Shipper's Declaration of Dangerous Goods	Transaction	IATA_HAZMAT	
End of Day Parcel Manifest	Daily summary of parcel shipments	End of day	PARCEL_EOD	

 Select
 Import
 Export
 Edit
 Delete

After you complete this step, the Selected Reports section should look like the following illustration:

Selected Reports			
Name	Description	Occurrence	Code
Certificate of Origin	Certifies the country of origin ...	Transaction	CERTIFICATE_OF_ORIGIN
Commercial Invoice	Customs declaration for cross...	Transaction	COMMERCIAL_INVOICE
IATA Dangerous Goods	Shipper's Declaration of Dang...	Transaction	IATA_HAZMAT
End of Day Parcel Manifest	Daily summary of parcel shipm...	End of day	PARCEL_EOD

Step 4 - Add rates and services

Create rating methods

Since services require rating methods, the logical order is to create the services and add existing rating methods. This means you need to create the rating methods before creating the services and associating rating methods with them. CM Shipping includes the following services and rating methods.

Note: For general information on creating and applying UCM rating methods, see the following Help topics under Rating Methods:

- [Overview of rating methods](#)
- Create a rating method - [General procedure](#) - [Specific rating](#)
- Manage rates - [Rates Editor](#) - [Rate file formats](#)
- [Add a rating method to a service](#)
- [Edit, remove, or delete a rating method](#)

The following table list the services for CM Shipping and the rating methods associated with these services:

Service	Rating Methods	Rating Type
Ground	Ground Rating	Flat Rated with dimensional rating calculations included.
Express	Express Rating	Flat Rated with dimensional rating calculations included.
Express US	Express US Rating	Flat Rated with dimensional rating calculations included.

Notes:

- Each of these rating methods requires specifying a UI administrative element named Dimension Factor for use in the dimensional weight calculation for the rate. (See step 4 of the following procedure.) You must create this UI Administrative element before creating the rating methods for CM Shipping. For a procedure for creating a UI administrative element, see the following topic: [UI administrative elements](#). For the specifications for the Dimension Factor element, see the following topic under the Sample carrier appendix: [Additional UI administrative elements](#).
- No scripts are required for these rating methods.

Create rating methods

The following procedures create the Flat Rated rating methods for the CM Shipping services.

To create the Flat Rated rating method for the Ground service:

1. With the list of objects under the CM Shipping folder displayed, click the Rating Methods link to display the Rating Methods screen, and then click the Create to display the Create Rating Method dialog.
2. Under Basic Information, fill in the **Code**, **Name**, and **Description** of the Rating Method as shown in the illustration under step 4.
3. Under Rating Method, from the **Rating Type** drop-down list, select Flat Rated. Selecting this rating type displays the following additional options:
 - **Response Key** (field) – Enter the following API response key: GND_CHARGE. This API key returns the flat rate charge for a shipment based on the rates table for this rating method.
 - **Package Level Rating** (check box) – Deselect (clear) this check box (selected by default) to specify shipment-level rating. Deselecting this check box also displays the Rate Split drop-down list. Accept the default of Even, meaning that the total rate for a shipment is split evenly among the packages in the shipment.
 - **Dimensional Weighting** (check box) – Select this check box to apply dimensional weighting to this rating method. Selecting this check box displays the Dimensional Weighting section (see step 5).
 - **Include Zone** (check box) – Select this check box to include zone with a shipment.
 - **Weight UOM** (drop-down list) – Select Pound for the default weight unit of measure (UOM).
 - **Response Key** (field) – Enter the following API response key: GND_CHARGE. This API key returns the flat rate charge for a shipment based on the rates table for this rating method.
 - **Package Level Rating** (check box) – Deselect (clear) this check box (selected by default) to specify shipment-level rating. Deselecting this check box also displays the Rate Split drop-down list. Accept the default of Even, meaning that the total rate for a shipment is split evenly among the packages in the shipment.
 - **Dimensional Weighting** (check box) – Select this check box to apply dimensional weighting to this rating method. Selecting this check box displays the Dimensional Weighting section (see step 5).
 - **Include Zone** (check box) – Select this check box to include zone with a shipment.
 - **Weight UOM** (drop-down list) – Select Pound for the default weight unit of measure (UOM).
1. Under Dimensional Weighting, specify the following options:

- **Factor Source Type** (drop-down list) – Select UI Element. This selection provides a list of UI administrative elements from which to select the source for the dimensional factor (see following option).
- **Dim. Factor Source** (drop-down list) – From the list of UI administrative elements, select Dimension Factor. This selection enables the administrator configuring an instance of the CM Shipping carrier to enter a value for the dimension factor in this field.
- **Calculation Method** (drop-down list) – Accept the default of Simple. This method uses the following built-in formula for calculating dimensional weight = (Length x Width x Height)/Dim Factor.

When completed, the Create Rating Method dialog for Ground Rating should look like the following illustration:

Create Rating Method

Basic Information

Code : CP_GND_SP

Name : Ground Rating

Description : Ground Rating

Rating Method

Rating Type : Flat Rated

Response Key : GND_CHARGE

☐ Package Level Rating

☒ Dimensional Weighting

☒ Include Zone

Rate Split : Weight Percent

Weight UOM : Pound

Dimensional Weighting

Factor Source Type : UI Element

Dim. Factor Source : Dimension Factor

Calculation Method : Simple

Scripts (Drag to Reorder)

Save Changes Save Changes and Manage Rates

1. Click Save Changes to save this rating method, display it in the list on the Rating Methods screen, and make it available for associating with the Ground service.

To create the Flat Rated rating methods for the Express and US Express services:

Carry out steps the previous procedure, specifying the options as shown in the following illustrations.

Express Rating

The screenshot shows the 'Edit Rating Method' dialog box with the following fields and options:

- Basic Information:**
 - Code: Exp_US_Rate
 - Name: Express US Rating
 - Description: Express US Rating
- Rating Method:**
 - Rating Type: Flat Rated
 - Response Key: EXP_US_Charge
 - ☒ Package Level Rating
 - ☒ Dimensional Weighting
 - ☒ Include Zone
 - Weight UOM: Pound
- Dimensional Weighting:**
 - Factor Source Type: UI Element
 - Dim. Factor Source: Dimension Factor
 - Calculation Method: Simple
- Scripts (Drag to Reorder):** (Empty list)

At the bottom, there are two buttons: 'Save Changes' and 'Save Changes and Manage Rates'.

At a later point, this tutorial covers adding rates to these rating methods. You also have the option to click Save Changes and Manage Rates when creating a rating method, and then add rates by importing a rates file or adding individual rates to the rates table manually. You can then save the rates and rating method at the same time.

Add Rates to Rating Methods



You add rates to a rating method using the Rates Editor. The Rates Editor enables you to add rates in the following ways:

- Add an individual rate by entering the values manually.
- Import a rates file containing the complete list of rates.

The following procedure includes illustrations that show sets or subsets of the rates included with the CM Shipping sample carrier. If you are following this tutorial, the suggestion is to manually enter half a dozen or so rates for each rating method for testing purposes. **Notes:**

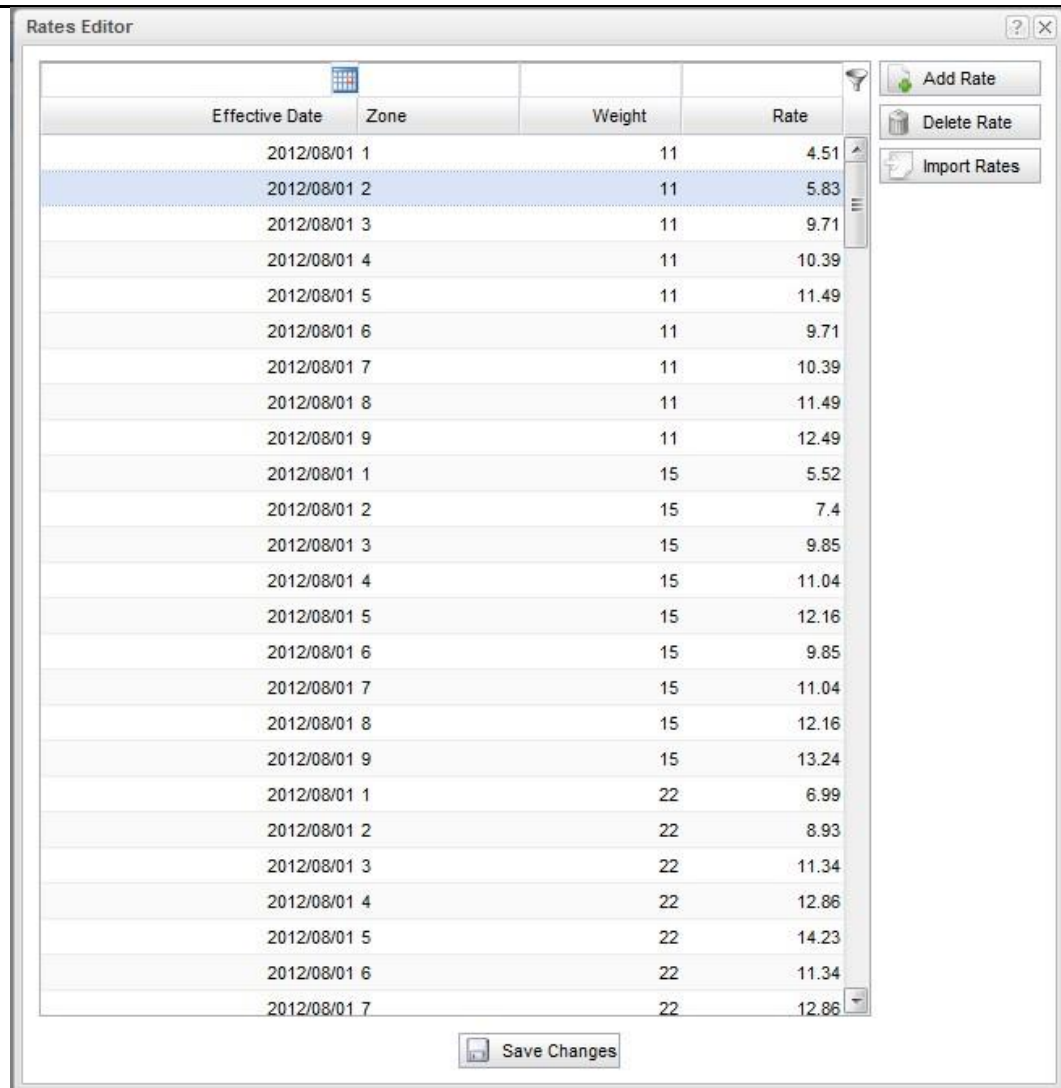
- If you want to create rates files for import, see the topic [Rate file formats](#). To obtain the full set of rates for testing the CM Shipping sample carrier, you need to import the carrier .zip file included with your UCM distribution. See the topic [Import or export a UCM carrier](#).
- If you are entering rates manually, it is recommended that you *include the rates highlighted in the following illustrations*, since these rates reference the zones one of the geocodes (highlighted) described in the previous section.
- For Effective Date, you need to specify the current date or later.

To add rates to the rating methods:

1. In UCM, click the plus sign  next to the CM Shipping sample carrier folder to display the set of objects for the carrier.
2. Click the Rating Methods link under the carrier folder to display the Rating Methods pane, select each rating method in turn, and then click Edit in the upper right portion of the panel to display the Edit Rating Method dialog for each rating method (see the topic : [Rates editor](#)).
3. Click Save Changes and Manage Rates to display the Rates Editor, and then click Add Rate to display a blank row for entering values.
4. Click the calendar  , and then select the current date or later. Enter the rest of the information in the appropriate cells, and then click outside the row to add the data and continue entering rates. Repeat steps 3-4 until you have entered all the desired rates, and then click Save Changes to save the set of rates and add them to the rating method.

The following illustrations show the tables of rates for the rating methods of the CM Shipping sample carrier. (Express and Ground rates are subsets of the complete list; the illustration for Express US rates shows the entire set of rates.)

- Rates Editor showing subset of rates for the [Express Rating](#) rating method:



Effective Date	Zone	Weight	Rate
2012/08/01	1	11	4.51
2012/08/01	2	11	5.83
2012/08/01	3	11	9.71
2012/08/01	4	11	10.39
2012/08/01	5	11	11.49
2012/08/01	6	11	9.71
2012/08/01	7	11	10.39
2012/08/01	8	11	11.49
2012/08/01	9	11	12.49
2012/08/01	1	15	5.52
2012/08/01	2	15	7.4
2012/08/01	3	15	9.85
2012/08/01	4	15	11.04
2012/08/01	5	15	12.16
2012/08/01	6	15	9.85
2012/08/01	7	15	11.04
2012/08/01	8	15	12.16
2012/08/01	9	15	13.24
2012/08/01	1	22	6.99
2012/08/01	2	22	8.93
2012/08/01	3	22	11.34
2012/08/01	4	22	12.86
2012/08/01	5	22	14.23
2012/08/01	6	22	11.34
2012/08/01	7	22	12.86

- Rates Editor showing complete set of rates for the Express US Rating rating method:

Rates Editor

Effective Date

Zone

Weight

Rate

2012/11/07	1	20	18.76
2012/11/07	1	15	16.14
2012/11/07	1	10	14.06
2012/11/07	1	5	10.94
2012/11/07	1	30	21.86
2012/11/07	1	40	24.47
2012/11/07	1	50	27.06
2012/11/07	1	60	28.24
2012/11/07	1	70	29.4
2012/11/07	1	80	30.5
2012/11/07	1	90	31.66
2012/11/07	1	100	32.82

Add Rate

Delete Rate

Import Rates

Save Changes

Rates Editor showing subset of rates for the *Ground Rating* rating method:

Rates Editor			
Effective Date	Zone	Weight	Rate
2012/08/01	1	1	2.58
2012/08/01	2	1	2.79
2012/08/01	3	1	3.41
2012/08/01	4	1	3.85
2012/08/01	5	1	4.26
2012/08/01	6	1	3.41
2012/08/01	7	1	5.96
2012/08/01	8	1	6.4
2012/08/01	9	1	6.81
2012/08/01	1	2	2.96
2012/08/01	2	2	3.15
2012/08/01	3	2	3.82
2012/08/01	4	2	4.27
2012/08/01	5	2	4.71
2012/08/01	6	2	3.82
2012/08/01	7	2	6.27
2012/08/01	8	2	6.72
2012/08/01	9	2	7.17
2012/08/01	1	4	3.25
2012/08/01	2	4	3.6
2012/08/01	3	4	4.49
2012/08/01	4	4	4.99
2012/08/01	5	4	5.52
2012/08/01	6	4	4.49
2012/08/01	7	4	6.93

Save Changes

Create Services and Add Rating Methods

Create a Service and Add Rating Methods

This part of the tutorial steps through creating all the services for the CM Shipping sample carrier and adding the rating method used by each service.

The following services are associated with the CM Shipping carrier:

- Express – Flat-rated express service to destinations within Canada.
- Express US – Flat rated express service to all US destinations.
- Ground – Flat-rated ground service to destinations within Canada.

Note: For more information on working with UCM services, see the following topics under Services:

- [Overview of services](#)
- [Create or delete a service](#)
- [Add or remove objects within a service](#)

Create the Express Service

To create the Express service:

1. Click the folder icon for CM Shipping to display the CM Shipping screen, and then click Create Service to display the Create Service dialog.
2. In the *Service Name* field, enter Express; in the *Service Code* field, enter *EXP{*}, and then click Create Service to display the Express service folder in the CM Shipping objects list.
3. Click the folder icon for the Express service to display the Express service configuration screen.
4. Select options for the Express service as follows:
5. Under Basic Information, enter the information and select the options as shown in the following illustration. Note that all the check boxes except Use UI Transactional Elements are selected by default. Select this check box as well, so that all the check boxes are selected.
6. Under Options, make the following selections:
7. From the **Tracking Number Generator** drop-down list, select Tracking Number.
8. From the **Routing Method** drop-down list, select KCM Route Codes.
9. From the **Zoning Method** drop-down list, select Zoning within Canada.
10. Accept the default selection of the check box for **Enable Dangerous Goods**.
11. Click the up arrow (^) on the Scripts bar to display the scripting section, and then click Add Existing to display the list of existing scripts.
12. From the script list, select the built-in script with the following code:
gb_IsDomValidation, and then click Select to apply this script to the Express service.
13. Select the **Pre** check box for the script to indicate that it should run before the shipment is processed with the Express service. Since this service is for Canadian destinations only, this script validates that the destination is within Canada by comparing the country in the Ship To address to the country in the Ship From address. If there is no match, the script stops the processing of the shipment and returns an error message.

▼ Basic Information

Code : EXP

Name : Express

Description :

☒ Use all Billing Types
 ☒ Use all Packaging Types
 ☒ Use all Charges
 ☒ Use all Label Templates
 ☒ Use all UI Transactional Elements

▼ Options

Tracking Number Generator : Tracking Number

Routing Method : KCM Route Codes

Zoning Method : Zoning within Canada

☒ Enable Dangerous Goods

▼ Scripts (Drag to Reorder)

Pre	Post	Name	Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Domestic shipment validation	Stops processing shipment if the ship to country does not match the ship from country

Add Existing

Create New

14. Click Save Changes to add the Express service to the CM Shipping carrier. The Express service now appears in the list of objects under the CM Shipping folder.

Create the Remaining Services

The following procedure steps you through creating the Express US and Ground services. The procedure is identical to the previous procedure except for steps 2,3, 4b-iii and 4d.

To create the Express US and Ground services:

- For each service, click the folder icon for CM Shipping to display the CM Shipping screen, and then click Create Service to display the Create Service dialog.
- Specify each service as follows:

For the Express US service:

- In the Service Name field, enter Express US.
- In the Service Code field, enter EXPUS.

For the Ground service:

1. In the Service Name field, enter Ground.
2. In the Service Code field, enter GND.
3. Click Create Service to display each service folder in the CM Shipping objects list.
4. Click the folder icon for each service to display the service configuration screen for that service. For each service, modify the configuration steps (steps 4a - 4e) in the previous procedure as follows (for all other options use the same configuration):

For the Express US service:

1. For Zoning Method, select: Zoning to the US.
2. For Script, select the script with the following code: gb_IsIntlValidation.
3. Select Pre for script execution to indicate that this script should run before the shipment is processed with the Ground service. Since this service is for nonCanadian (US) destinations, this script validates that the destination is international by comparing the country in the Ship To address to the country in the Ship From address. If there is a match (destination is Canadian), the script stops the processing of the shipment and returns an error message.

For the Ground service:

1. For Zoning Method, select: Zoning within Canada.
2. For Script, select the same built-in script as for the Express service (step 4d) with the code: gb_IsDomValidation.
3. Select Pre for script execution. See step 4e of the previous procedure for details on what this script does.
4. Click Save Changes to add each service to the CM Shipping carrier. The folder icons for the respective services now appear in the list of objects under the CM Shipping folder.


Add Rating Methods to Service

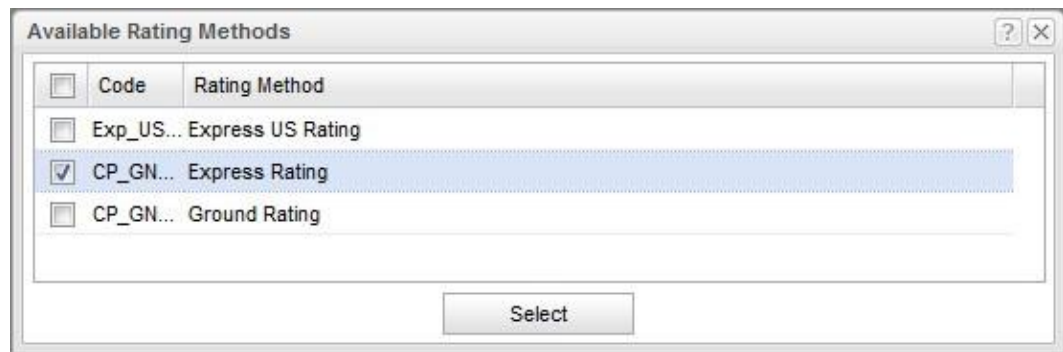
The services previously added to the CM Shipping sample carrier require the following rating methods:

- Express – Requires the Express Rating rating method.
- Express US – Requires the Express US Rating rating method.
- Ground – Requires the Ground Rating rating method.

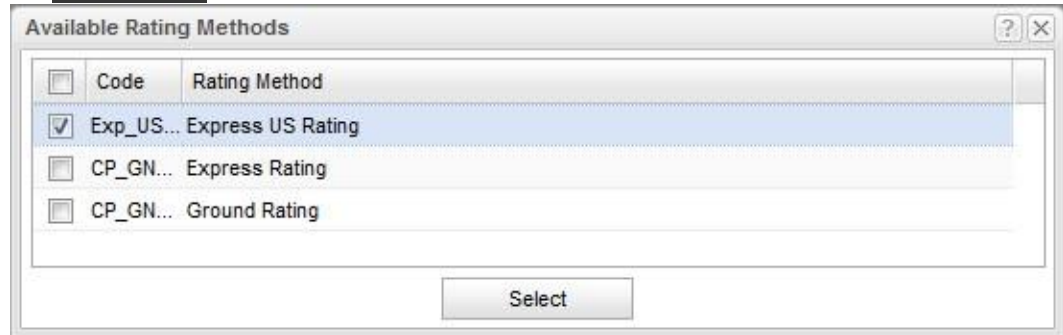
These rating methods were previously created (see Create rating methods) and can be added to a service.

To add the required rating methods to the services:

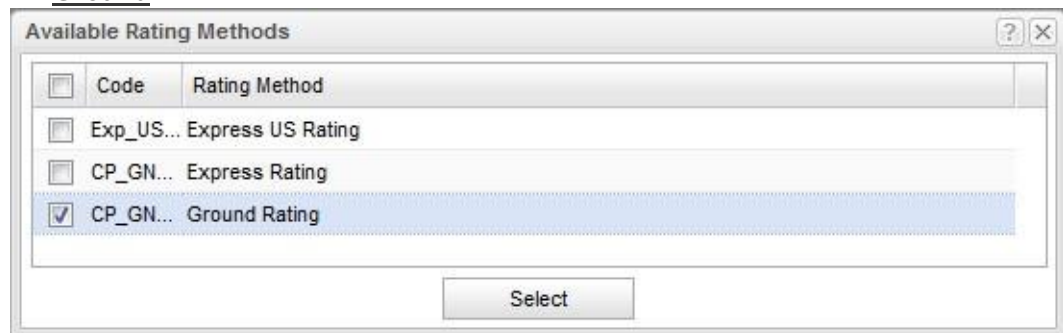
1. Click the plus sign  next to each service folder to display the Rating Methods link for that service and then click this link to display the Rating Methods screen.
 2. Click Add Existing to display the available rating methods dialog.
 3. Select the check box next to the required rating method as shown in the following illustrations, and then click Select to add the rating method to each respective service.
- For Express:



- For Express US:



- For Ground:



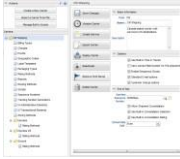
1. Click Save Changes to save each service and display its service folder under the CM Shipping carrier folder.

Step 5 - Save, Version, Deploy, and Export CM Shipping

After the carrier definition of CM Shipping is completed, carry out the following tasks:

- Save the changes made to the carrier – Click Save Changes(no further action required).
- Optionally, version the carrier – Click Version Carrier. See the following procedure for this.
- Deploy the carrier for use in the current shipping system – Click Deploy Carrier(no further action required).
- Optionally, export the carrier to a .zip file for importing into other shipping systems – Click Export Carrier. See the following procedure for this.

When the CM Shipping carrier setup is complete, click the CM Shipping folder icon to display all the information and options for the carrier:

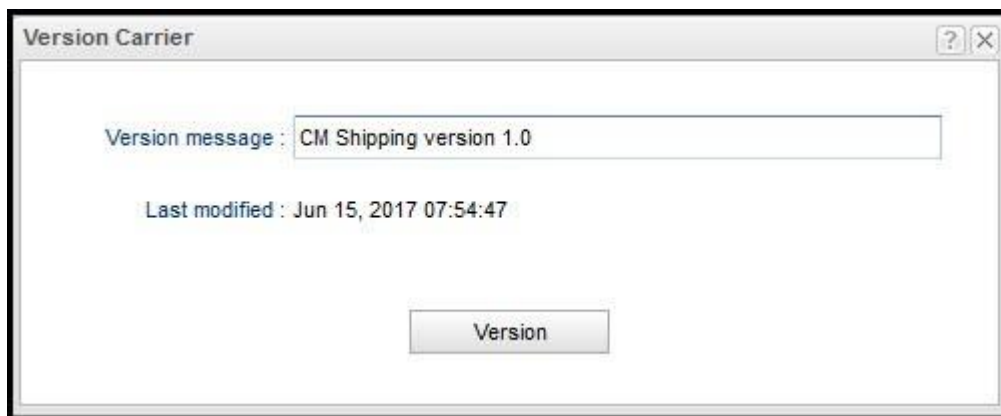


Version CM Shipping

There may be reasons to work with multiple versions of the same carrier. For example, if you want to make modifications for deploying the carrier with different options to multiple shipping systems, you can create and maintain multiple versions of the same carrier.

For information on how carrier versioning works in UCM, see the following topic: [Best practices for UCM carrier setup - Versioning a carrier](#). **To version CM Shipping:**

1. Click the CM Shipping folder icon to display the CM Shipping carrier screen as shown in the previous illustration.
2. Click Version Carrier to display the Version Carrier dialog as shown in the following illustration, and then enter text in the *Version Message* field to identify the version.



3. Click Version to save this version of CM Shipping. The CM Shipping carrier screen now displays the following text: "The carrier was versioned as CM Shipping Version 1.0 on <{ }Date_Time{ }>."

Export CM Shipping

To export CM Shipping:

1. Click the CM Shipping folder icon to display the CM Shipping carrier screen, and then click Export Carrier to display the Export Carrier dialog.
2. Enter a filename in the *Export File Name* field, and then click Export{*}.* Under Export Summary, you should see the following message: "Export Succeeded."

Export Carrier

▼ Basic Information

Carrier Name : CM Shipping

Carrier Code : CM

Export File Name : CM_Shipping.zip

▼ Export Summary

Export

Note: Exporting the carrier simply creates a zip file with the carrier data and the filename you give it. Saving the file is a separate step – see the following step.

3. In the *Windows Save As* dialog, select the location where you want to save the .zip file, and then click Save.

Sample Carrier Appendix

Additional Charges

The following illustrations show the UCM Edit Charge dialog for each additional charge type. Except for the Code field being non-enterable on the Edit Charge dialog, the fields on this dialog are identical to the fields on the corresponding Create Charge dialog.

_Note:{ }{}For Charges requiring scripts, click Add Existing and select the script from the list of built-in scripts plus scripts created in [Step 2 - Add custom scripts](#) , and then click Select. All the scripts associated with Charges for the CM Shippingsample carrier are Pre scripts. Alternately, you can create the appropriate script at this point by clicking Create New to display the Create Script dialog, and then referencing the information for the appropriate script in one of the following topics under "Sample carrier appendix":

- [Advanced Scripts-1](#)
- [Advanced Scripts-2](#)
- [Additional Criteria scripts](#)

Additional Handling

Note:This charge has no scripts associated with it.

?

X

▼

Basic Information

Code :

AddHandlingChg

Name :

Additional Handling Charge

Description :

☒ Applies to all services

▼

Options

Response Key :

AddHandlingChg

Applied per :

Package

Package Criteria :

AddHandlingSelect

☐ Include this charge in fuel surcharge calculations

☐ This charge has associated label text

Calculation Method

Method :

Fixed Amount

Charge Source :

UI Element

UI Element :

Additional Handling Amount

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Scripts (Drag to Reorder)

Save Changes

Delivery Area Surcharge Residential Charge COD Charge

Edit Charge

Basic Information

Code : CODFEE

Name : COD Charge

Description :

☒ Applies to all services

Options

Response Key : CODFEE

Applied per : Shipment

☐ Include this charge in fuel surcharge calculations

☐ This charge has associated label text

Calculation Method

Method : Fixed Amount

Charge Source : UI Element

UI Element : COD Fee Per Shipment

A

T

Scripts (Drag to Reorder)

Pre	Post	Name	Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is COD	Checks to see if a shipment is COD.

Add Existing

Create New

Save Changes

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Insurance Charges

Note: This charge has no scripts associated with it.

The screenshot shows the 'Edit Charge' dialog box with the following fields and options:

- Basic Information:**
 - Code: DECVALCHG
 - Name: Insurance Charges
 - Description: (Empty text area)
 - ☒ Applies to all services
- Options:**
 - Response Key: DECVALCHG
 - Applied per: Package (dropdown)
 - Package Criteria: isDeclaredValue (text field)
 - ☐ Include this charge in fuel surcharge calculations
 - ☐ This charge has associated label text
- Calculation Method:**
 - Method: Script (dropdown)
 - Script: InsAmtScript (text field)
- Scripts (Drag to Reorder):** (Empty list)
- Buttons:** Save Changes

Oversize Charge

Note: This charge has no scripts associated with it.

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Edit Charge

▼ Basic Information

Code : OVERSIZE_CHG

Name : Oversize Charge

Description :

☒ Applies to all services

▼ Options

Response Key : OVERSIZE_CHG

Applied per : Package

Package Criteria : isOversized

☒ Include this charge in fuel surcharge calculations

☐ This charge has associated label text

Calculation Method

Method : Fixed Amount

Charge Source : UI Element

UI Element : Oversized Amount

^ Scripts (Drag to Reorder)

Save Changes

Saturday Delivery Charge

Edit Charge			
Basic Information			
Code :	SATDLVYCHG		
Name :	Saturday Delivery Charge		
Description :			
	<input checked="" type="checkbox"/> Applies to all services		
Options			
Response Key :	SATDLVYCHG		
Applied per :	Shipment		
	<input type="checkbox"/> Include this charge in fuel surcharge calculations		
	<input checked="" type="checkbox"/> This charge has associated label text		
Label Text :	Saturday Delivery		
Calculation Method			
Method :	Fixed Amount		
Charge Source :	UI Element		
UI Element :	Saturday Delivery Charge Amount	A T	
Scripts (Drag to Reorder)			
Pre	Post	Name	Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Saturday Delivery	Determines if the Saturday Delivery Charge should be applied.
		Add Existing	Create New
Save Changes			

Advanced scripts - 1

To add each of the following scripts to the CM Shipping sample carrier:

1. In the Create Script dialog, under Basic Information, enter the **Code**, **Name**, and, optionally, the **Description** for the script.
2. From the **Type** drop-down list, select Advanced.

3. Click Edit to display the Edit Advanced Script dialog; copy and paste the JavaScript code from each of the following sections into the text box in this dialog for the corresponding script, and then click Update to add the code to the script. (Optionally, click Validate to ensure that the code is correct.)
4. Click Save Changes to save the script. Calculate Fuel Surcharge
 - Code – CalcFuelSurcharge
 - Name – Calculate Fuel Surcharge
 - Description – N/A

JavaScript code –

```
var fsa = getAdminValue("FUELSURCHARGEAMT"); var
amount = getCharge("FuelSurchargeableAmount");
amount = amount * fsa;

var charge = new java.math.BigDecimal(amount.toString());
charge = charge.setScale(2, java.math.RoundingMode.CEILING);

setCharge("FUELCHG", charge); addToCharge("Total_Freight",
charge); addToCharge("CalcFreight", charge);

var numpkg = getAPIValueAsNumeric("PKG CNT");
var pkgchg; if (numpkg > 0) {
pkgchg = charge * (1 / numpkg);
}
for(var i = 0; i < numpkg; i++) { var
index = i + 1;
setChargePkg("FUELCHG", index, pkgchg);
addToChargePkg("CalcFreight", index, pkgchg);
}
```

Amount to Collect on COD

- Code – codAmountToCollect
- Name – Amount to Collect on COD
- Description – N/A
- JavaScript code –

```
option = getAPIValue("CODOPTIONS"); codfee =  
parseFloat(getAdminValue("COD_FEE"));  
totalfreight = getCharge("Total_Freight");  
invoiceamount = parseFloat(getAPIValue("CODAMT"));  
  
// COD Fee + Freight  
if (option == "FF")  
{  
    COD_TO_COLLECT = codfee + totalfreight ;  
    setAPIValue("COD_TO_COLLECT", COD_TO_COLLECT);  
}  
  
//COD Fee + Invoice Amount else  
if (option == "FI")  
{  
    COD_TO_COLLECT = codfee + invoiceamount;  
    setAPIValue("COD_TO_COLLECT", COD_TO_COLLECT);  
  
}  
  
//COD Fee + Invoice Amount + Freight  
else if (option == "FIF")  
{  
    COD_TO_COLLECT = codfee + invoiceamount + totalfreight ;  
    setAPIValue("COD_TO_COLLECT", COD_TO_COLLECT);  
  
}  
  
//Invoice Amount + Freight else  
if (option == "IF")  
{  
    COD_TO_COLLECT = invoiceamount + totalfreight;  
    setAPIValue("COD_TO_COLLECT", COD_TO_COLLECT);  
  
}  
  
//Invoice Amount Only  
else if (option == "I")  
{  
    COD_TO_COLLECT = invoiceamount ;  
    setAPIValue("COD_TO_COLLECT", COD_TO_COLLECT);  
  
}  
  
else  
{  
    setNotApplicable();
```



Delivery Area

- Code – DLVY_AREA
- Name – Delivery Area
- Description – Determines if the Delivery Area Charge will be applied.
- JavaScript code –

if

```
(CURRENT_API.getCarrierDefinition().getZoningMethod("ZONEDAS").execute(CURRENT_API)!="DAS") setNotApplicable();
```

Insurance Amount Calculation Script

- Code – InsAmtScript
- Name – Insurance Amount Calculation Script
- Description – N/A
- JavaScript code –

```
DecValue = parseFloat(getAPIValue("INSAMT-"+CURRENT_PKGNUM));
INSAMT = 0;

if(DecValue > 100)
{
  AmtToInsure = DecValue - 100;
  NoOfIncrements = AmtToInsure/100;
  NoOfIncrements = Math.ceil(NoOfIncrements);
  DecIncrementalFee = parseFloat(getAdminValue("DECVALAMT"));
  INSAMT = DecIncrementalFee * NoOfIncrements;
}
if(INSAMT<parseFloat(getAdminValue("INSMINAMT")))
{
  INSAMT=getAdminValue("INSMINAMT");
}
INSAMT ;
```

Is COD

- Code – isCOD
- Name – Is COD
- Description – Checks to see if a shipment is COD.
- JavaScript code –

if(!(getAPIValue("CODAMT") == null)	!(getAPIValue("CODOPTIONS") == null)	!(getAPIValue("CODPAYMENTTYPE") == null)) { if(!(getAPIValue("CODAMT") == null))) { setError("COD Amount, Payment Type, and Payment Options are required for COD shipments"); } else if(!(getAPIValue("CODOPTIONS") == null))) { setError("COD Amount, Payment Type, and Payment Options are required for COD shipments"); } else if(!(getAPIValue("CODPAYTYPE") == null))) { setError("COD Amount, Payment Type, and Payment Options are required for COD shipments"); } }else{ setNotApplicable(); } }
-------------------------------------	--------------------------------------	--

Is Oversized

- Code – isOversized
- Name – Is Oversized

Description – Mark shipment as Oversized if dimension exceeds 50 inches.

<pre> var length=PACKAGE.getLength(); var width=PACKAGE.getWidth(); var height=PACKAGE.getHeight(); var maxamt=parseFloat(getAdminValue("OVERMAXV ALUE")); var maxuom=getAdminValue("OVERMAXUOM").toLo werCase().substring(0,2); var pkguom=PACKAGE.getUom().toLowerCase().sub string(0,2); length=convertUOM(length,pkguom,maxuom,"leng th"); width=convertUOM(width,pkguom,maxuom,"length "); height=convertUOM(height,pkguom,maxuom,"leng th"); if(length>maxamt </pre>	<pre> width>ma xamt </pre>	<pre> height>maxamt) { setAPIValue("OVER SIZE","y"); } else { setNotApplicable(); } </pre>
---	-------------------------------	---

Advanced scripts - 2

To add each of the following scripts to the CM Shipping sample carrier:

1. In the Create Script dialog, under Basic Information, enter the **Code**, **Name**, and, optionally, the **Description** for the script.
2. From the **Type** drop-down list, select Advanced.
3. Click Edit to display the Edit Advanced Script dialog, and then copy and paste the JavaScript code from each of the following sections into the text box in this dialog for the corresponding script, and then click Update to add the code to the script. (Optionally, click Validate to ensure that the code is correct.)
4. Click Save Changes to save the script.

Manifest Script

- Code – ManifestScript
- Name – Manifest Script
- Description – N/A
- /*****
- This script demonstrates how one might go about creating an electronic manifest file to be sent to the carrier
- It pulls a number of elements into three files - a header, shipment, and package data file
- Once complete, it sends the file via FTP to the configured location
- In order to use all features of this script with your carrier, it must be set up with the following

- 1) Zoning for all services
- 2) Dim weight rating for all services
- 3) Following Shipment UI Options
 - a) Saturday Delivery Flag - Code: SPCDLVYFLAG - Checkbox
 - b) Signature Service Type - Code: DLVY_CONF_TYPE - Dropdown with 1 character values - ex: A - Adult Signature Required, S - Signature Required
 - c) COD Amount - Code: CODAMT - Numeric
 - d) COD Payment Type - Code: CODPAYTYPE - Dropdown with 1 character values - ex: 1 - Cash, 2 - Check, 3 - Money Order
- 4) Following Shipment level charges
 - a) Saturday Delivery Charge - Code: SATDLVYCHG
 - b) Signature Required Fee - Code: CHG_DLVY_CONF
 - c) Residential Delivery Charge - Code: CHG_RESIDENTIAL
 - d) Delivery Area Surcharge - Code: CHG_DLVY_AREA
 - e) COD Surcharge - Code: CODFEE
- 5) Following Package UI Options
 - a) Declared value for insurance - Code: INSAMT - Numeric
 - b) Additional handling type - CODE: ADDHANDLING_TYPE
- 6) Following Package level charges
 - a) Insurance charges - Code: DECVALCHG
 - b) Additional handling charges - Code: CHG_ADD_HANDL
 - c) Fuel surcharge - Code: FUELCHG
 - d) Oversize charge - Code: OVERSIZE_CHG
- 7) Results of a script
 - a) Oversize validation - Code: OVERSIZE - 'y' or 'n'
- 8) UI Administrative options
 - a) FTP Hostname - Code: MANI_FTP_HOST - Text
 - b) FTP Username - Code: MANI_FTP_USER - Text
 - c) FTP Password - Code: MANI_FTP_PASS - Text
 - FTP Directory - Code: MANI_FTP_DIR - Text

*****/

```
var fieldDelimiter = ",";
var charFieldEnclose = "\"";
var charBlank = ""; var
numBlank = 0; var
booleanYes = "Y"; var
booleanNo = "N";
var headerFilename = "MH{PLD_FILENUMBER}.TXT"; var
shipmentFilename = "SD{PLD_FILENUMBER}.TXT";
var packageFilename = "PD{PLD_FILENUMBER}.TXT";
```

```
var outputHeaders = false;
```

```
//Data mappings in the following format
```

```
//element number (informational only), column header, evaltype, evalkey, datatype,  
length
```

```
var headerdatamappings =
```

```
1,"Shipper Account Number","js","account_no","char","8",  
2,"Manifest Number","api","PLD_FILENUMBER","char","7",  
3,"Shipping Date","api","SHIPDATE","date","8",  
4,"Shipper Name","loc","sfname","char","40",  
5,"Shipper Address Line 1","loc","sfadd1","char","40",  
6,"Shipper Address Line 2","loc","sfadd2","char","40",  
7,"Shipper Address Line 3","loc","sfadd3","char","40",  
8,"Shipper City","loc","sfcity","char","30",  
9,"Shipper State/Province","loc","sfstate","char","2",  
10,"Shipper Postal Code","loc","sfzip","char","6",  
11,"Shipper Country Code","loc","sfcountry_iso_2","char","2",  
12,"Shipper Contact","loc","sfattention","char","30",  
13,"Shipper E-Mail Address","loc","sfemail","char","60"  
;
```

```
var shipmentdatamappings =
```

```
1,"Manifest Number","api","PLD_FILENUMBER","char","7",  
2,"Shipment Number","api","MSN","char","7",  
3,"Number of Packages","api","PKGCNT","num","6",  
4,"Product/Service Code","api","SERVICE","char","4",  
5,"Total Shipment Actual Weight","api","WEIGHT","num","6.2",  
6,"Weight Unit of Measure","api","WEIGHT_UOM","char","2",  
7,"Total Charges","charge","CalcFreight","num","7.2",  
8,"Shipping Date","api","SHIPDATE","date","8",  
9,"Delivery Zone","api","S2MAILZONE","char","3",  
10,"Consignee Account #","api","S2CUSTNUM","char","10",  
11,"Consignee Name","api","S2NAME","char","40",  
12,"Consignee Address Line 1","api","S2ADD1","char","40",  
13,"Consignee Address Line 2","api","S2ADD2","char","40",  
14,"Consignee Address Line 3","api","S2ADD3","char","40",  
15,"Consignee City","api","S2CITY","char","30",  
16,"Consignee Province / State","api","S2STATE","char","2",  
17,"Consignee Postal Code","api","S2PCODE","char","10",  
18,"Consignee Country Code","api","S2COUNTRYID","char","2",  
19,"Consignee Attention Name","api","TO_ATTENTION","char","30",  
20,"Consignee E-Mail Address","api","TO_EMAIL","char","60",  
21,"Billing Type","api","TERMS","char","1",  
22,"Third Pary Billing Account #","api","ALTP_CUSTOMER_CODE","char","8",  
23,"Third Pary Billing Name","api","ALTP_COMP_NAME","char","40",  
24,"Third Pary Billing Address Line 1","api","ALTP_ADD1","char","40",  
25,"Third Pary Billing Address Line 2","api","ALTP_ADD2","char","40",  
26,"Third Pary Billing Address Line 3","api","ALTP_ADD3","char","40",
```

```

27,"Third Pary Billing City","api","ALTP_CITY","char","30",
28,"Third Pary Billing State/Province","api","ALTP_STATE","char","2",
29,"Third Pary Billing Postal Code","api","ALTP_PCODE","char","6",
30,"Third Pary Billing Country Code","api","ALTP_COUNTRYID","char","2",
31,"Customs Pre-departure filing number","api","FTSREXEMPTIONNO","char","30",
32,"Customer Reference
Number","api","CUSTOMERREFERENCENUMBER","char","40",
33,"Customer Cost Center","api","COST_CENTER","char","40",
34,"Customer Order Number","api","PURCHASEORDERNUMBER","char","40",
35,"Saturday Delivery Indicator","api","SPCDLVYFLAG","char","2",
36,"Saturday Delivery Charge","charge","SATDLVYCHG","char","7.2",
37,"Signature Service Indicator","api","DLVY_CONF_TYPE","char","1",
38,"Signature Required Fee","charge","CHG_DLVY_CONF","num","7.2",
39,"Residential Delivery Indicator","api","S2RESFLAG","bool","1",
40,"Residential Delivery Charge","charge","CHG_RESIDENTIAL","num","7.2",
41,"Delivery Area Surcharge","charge","CHG_DLVY_AREA","num","7.2",
42,"C.O.D. Charges","api","CODFEE","num","7.2",
43,"C.O.D. Payment Type","api","CODPAYTYPE","char","1",
44,"C.O.D. Amount","api","CODAMT","num","7.2",
;
var packagedatamappings =
1,"Manifest Number","api","PLD_FILENUMBER","char","7",
2,"Shipment Number","api","MSN","char","7",
3,"Package Identification Number","api-p","TRACKNUM","char","20",
4,"Actual Piece Weight","api-p","WEIGHT","num","4.2",
5,"Weight Unit of Measure","api-p","PKG_UOM","char","2",
6,"Special Instructions","api-p","PKG_REFERENCE","char","40",
7,"Package Base Charge","charge-p","Freight","num","7.2",
8,"Length of Piece","api-p","LENGTH","num","4.2",
9,"Width of Piece","api-p","WIDTH","num","4.2",
10,"Height of Piece","api-p","HEIGHT","num","4.2",
11,"Dimension Unit of Mesure","api-p","PKG_UOM","char","2",
12,"Piece Dim Weight","api-p","DIM_WEIGHT","num","4.2",
13,"Piece Dim Weight Unit of Measure","api-p","PKG_DIM_UOM","char","2",
14,"Insurance Charges","charge-p","DECVALCHG","num","7.2",
15,"Declared Value for Insurance","api-p","INSAMT","num","7.2",
16,"Additional/Special Handling Indicator","api-p","ADDHANDLING_TYPE","char","2",
17,"Additional/Special Handling Charge","charge-p","CHG_ADD_HNDL","num","7.2",
18,"Oversize Indicator","api-p","OVERSIZE","bool","1",
19,"Oversize Charge","charge-p","OVERSIZE_CHG","num","7.2",
20,"Fuel Surcharge","charge-p","FUELCHG","num","7.2"
;
/////
// Nothing beyond this point should need to change function getRequiredItem(itemtype,
itemkey, pkgnum)
{
if (itemtype == "api-p") {
return getAPIValue(itemkey + "-" + pkgnum);
}
}

```

```

    } else if(itemtype == "api") { return
    getAPIValue(itemkey); } else
    if(itemtype == "loc") { return
    getLocationDefault(itemkey); } else
    if(itemtype == "js") { return
    eval(itemkey); } else if(itemtype ==
    "charge") { return
    getCharge(itemkey); } else
    if(itemtype == "charge-p") {
    return getChargePkg(itemkey, pkgnum);
    }
    }
    function formatRequiredItem(itemvalue, datatype, datalength)
    {
    if (datatype == "bool") {
    if (isBlank(itemvalue) || itemvalue.equalsIgnoreCase("f") ||
    itemvalue.equalsIgnoreCase("false") || itemvalue.equalsIgnoreCase("n") ||
    itemvalue.equalsIgnoreCase("no")) { return booleanNo;
    } else if (!isBlank(itemvalue) && (itemvalue.equalsIgnoreCase("t") ||
    itemvalue.equalsIgnoreCase("true") || itemvalue.equalsIgnoreCase("y") ||
    itemvalue.equalsIgnoreCase("yes"))){ return booleanYes;
    } else {
    logWarning("Invalid value being treated as boolean " + itemvalue); return
    booleanNo;
    }
    } else if (datatype == "char") { if
    (isBlank(itemvalue)) {
    return charFieldEnclose + charBlank + charFieldEnclose;
    } else {
    return charFieldEnclose + String(itemvalue).substring(0, Number(datalength)) +
    charFieldEnclose;
    }
    } else if (datatype == "num") {
    var num = parseFloat(blankOrNull(itemvalue));
    var precis = datalength.split("."); if
    (isBlank(itemvalue)) { return
    numBlank.toFixed(precis1); } else
    if(!isNaN(num)) { num =
    num.toFixed(precis1); return num;
    } else {
    logWarning("Invalid value being treated as number " + itemvalue); return
    numBlank;
    }
    } else if (datatype == "date") { if
    (isBlank(itemvalue)) {
    logWarning("Invalid date
    passed " + itemvalue); return
    ""; }else{
    var sd_format = java.text.SimpleDateFormat("yyyyMMdd"); return
    String(sd_format.format(itemvalue).toString());

```

```
}
}
}

function getDataElement(dataarr, pkgnum)
{
  var line = dataarr; var
  itemtype = line2; var
  itemkey = line3; var
  datatype = line4; var
  datalength = line5;
  var itm = getRequiredItem(itemtype, itemkey, pkgnum); return
  formatRequiredItem(itm, datatype, datalength);
}

//Retrieve list of shipments for this manifest
var shipments = getShipmentsForManifest(getAPIValue("PLD_FILENUMBER"),
getAPIValue("SHIPDATE")); //Set up JS vals for header
var account_no = CURRENT_API.getCarrierInstance().getAccountNumber();
var dirname = CURRENT_API.getCarrierInstance().getInstanceGuid(); var
dir = java.io.File(dirname); dir.mkdir();
//Replace PLD_FILENUMBER in filenames var
pldnum = getAPIValue("PLD_FILENUMBER");
headerFilename = headerFilename.replace("{PLD_FILENUMBER}", pldnum);
shipmentFilename = shipmentFilename.replace("{PLD_FILENUMBER}", pldnum);
packageFilename = packageFilename.replace("{PLD_FILENUMBER}", pldnum);

//Open files
var header_file_name = java.io.File(dirname, headerFilename);
header_file_name.createNewFile();
var header_file = java.io.FileWriter(header_file_name); var
header_file_stream = java.io.BufferedWriter(header_file); var
shipment_header_written = false;
var shipment_file_name = java.io.File(dirname, shipmentFilename);
shipment_file_name.createNewFile();
var shipment_file = java.io.FileWriter(shipment_file_name); var
shipment_file_stream = java.io.BufferedWriter(shipment_file);

var package_header_written = false;
var package_file_name = java.io.File(dirname, packageFilename);
package_file_name.createNewFile(); var package_file =
java.io.FileWriter(package_file_name); var package_file_stream =
java.io.BufferedWriter(package_file);

//Generate header
var header_columns = ""; var
header_data = "";
for (var i = 0; i < headerdatamappings.length; i++) { var item
= getDataElement(headerdatamappings[i], 0);
header_columns += headerdatamappings[i].fieldDelimiter;
header_data += item + fieldDelimiter;
```

```
}
if (outputHeaders) {
  header_file_stream.write(header_columns);
  header_file_stream.newLine();
}
header_file_stream.write(header_data);
header_file_stream.newLine(); //Generate
shipments and packages while (shipment =
getNextShipment(shipments)) { var
shipment_columns = ""; var shipment_data = "";
for (var i = 0; i < shipmentdatamappings.length; i++) { var item =
getDataElement(shipmentdatamappingsi, 0);
shipment_columns += shipmentdatamappingsi1 + fieldDelimiter;
shipment_data += item + fieldDelimiter;
}
if (outputHeaders && !shipment_header_written) {
shipment_file_stream.write(shipment_columns);
shipment_file_stream.newLine(); shipment_header_written
= true;
}
shipment_file_stream.write(shipment_data); shipment_file_stream.newLine();

var pkgcnt = getAPIValueAsNumeric("PKG CNT");
for (var j = 1; j <= pkgcnt; j++) { //Set up JS vals for package var
package_columns = ""; var package_data = ""; for (var k = 0; k
< packagedatamappings.length; k++) { var item =
getDataElement(packagedatamappingsk, j); package_columns
+= packagedatamappingsk1 + fieldDelimiter;
package_data += item + fieldDelimiter;
}
if (outputHeaders && !package_header_written) {
package_file_stream.write(package_columns); package_file_stream.newLine();
package_header_written = true;
}
package_file_stream.write(package_data);
package_file_stream.newLine();
}
}
//Close the files header_file_stream.close();
```

```
shipment_file_stream.close(); package_file_stream.close();
```

```
//Upload to FTP Server
```

```
var hostname = getAdminValue("MANI_FTP_HOST"); var
username = getAdminValue("MANI_FTP_USER"); var
password = getAdminValue("MANI_FTP_PASS");
var dir = getAdminValue("MANI_FTP_DIR");
```

```
populateProxySettingsFromLocation();
```

```
var ftpconn = FTPOpenConnection(hostname, username, password);
if(!ftpconn.changeDirectory(dir)){
setError("Failed to change directory on FTP server to: " + dir + " " +
ftpconn.getLastErrorMessage());
}else{
if(!ftpconn.putFile(headerFilename, header_file_name.toString())){
setError("Failed to upload manifest header file: " + header_file_name.toString() + " " +
ftpconn.getLastErrorMessage());
}
if(!ftpconn.putFile(shipmentFilename, shipment_file_name.toString())){
setError("Failed to upload manifest header file: " + header_file_name.toString() + " " +
ftpconn.getLastErrorMessage());
}
if(!ftpconn.putFile(packageFilename, package_file_name.toString())){
setError("Failed to upload manifest header file: " + header_file_name.toString() + " " +
ftpconn.getLastErrorMessage());
}
}
<ac:structured-macro ac:name="anchor" ac:schema-version="1"
ac:macroid="2b737eb5-2722-4671-8767-ea402c05fd45"><ac:parameter
ac:name="">Advanced_scripts___2_Mod1071DB77E5</ac:parameter></ac:structuredm
acro><span style="color: #2e852e">Check Digit Calculation Modified Mod 10</span>
```

- Code – mod10
- Name – Check Digit Calculation Modified Mod 10

Description – N/A


```
// implementation of modified mod 10

var trkNo = TRACKNUM;
var total = 0;

for(var i = trkNo.length-1; i >= 0; i = i-2)
{
  var x = (trkNo.charAt(i) * 2); var
  y = x.toString();
  for(var j = 0; j < y.length; j++)
  {
    total = total + (y.charAt(j) * 1);
  }
}

for(var i = trkNo.length-2; i >= 0; i = i-2)
{
  total = total + (trkNo.charAt(i) * 1);
}

var result = total % 10; result.toString();
```

Print COD Amount

- Code – PrintCODAmount
- Name – Print COD Amount

Description – Print the title of COD Amount plus the actual COD Value that is to be collected by the shipper.

```
codToCollect = getAPIValue("COD_TO_COLLECT"); if (!! codToCollect)
{
  codToCollectN = codToCollect*1;
  codText = "COD Amount $" + codToCollectN.toFixed(2); setAPIValue("CODTEXT",
  codText);
}
```

Additional Criteria scripts

For all Criteria scripts with the CM Shipping carrier, the following check boxes under the JavaScript Code section of the Create Script dialog can be left unselected (cleared) which is the default:

- Apply at Rating Time Only
- Debug

The following table lists the information for the criteria type scripts required for the CM Shipping sample carrier.

Code	Name	Description	Criteria
------	------	-------------	----------

AddHandlingSelect	Additional Handling Select script	Selects if the Additional Handling charge should be applied.	getAPIValue("ADHANDLING_TYPE"+CURRENT_PKG
isDeclaredValue	is Declared Value	Determine s if the Insurance charge should be applied.	!isBlank(getAPIValue("INSAMT-"+CURRENT_PKGNUM))
RES_FLAG	Residential Delivery	Determine s if the Residential Delivery Charge should be applied.	getAPIValue("S2RESFLAG")=="y"
SATDLVY	Saturday Delivery	Determine s if the Saturday Delivery Charge should be applied.	getAPIValue("SPCDLVYFLAG")=="y"
SIG_REQ	Signature Required	Determine s if the Signature Required Charge will be applied.	getAPIValue("DLVY_CONF_TYPE")="y"

Additional UI administrative elements

Note: The following configuration options hold for every UI administrative element listed in the following table:

- Leave the Value is required check box de-selected (cleared). This is the default.
- Leave the Show in UI Administrative location check box selected. This is the default.
- Leave the Create field under UI Screen Location blank.
- Under UI Screen Location, leave de-selected (cleared) the check box This UI Administrative Element is also a UI Transactional Element. This is the default.

Code	Name	Description	Data Description & UI Screen Location
------	------	-------------	---------------------------------------

ADDHANDLINGAMT	Additional Handling Amount	N/A	<ul style="list-style-type: none"> Data Type – NumericSelect the indicated UI Screen Locations from the dropdown list for each level. A > B > C in the following table indicates A (Top Level), B (Second Level), C (Third Level). To enter a default value for a Numeric, Text, or Checkbox data type as specified in the Data Description & UI Screen Location column, click Save Changes and Manages Values to display the Manage Values dialog. Click Create to display a blank row, enter the values specified in the table, and then click Save Changes. Note that if Default Value is listed as "None." you do not need to carry out this step.
-----------------------	----------------------------	-----	---

- Default Value - Effective Date: 2012/11/12 - Value: 8.5 - Comments: 2012 Rate
- UI Administrative Label – Additional Handling Amount
- UI Screen Location – Shipper Defaults > Defaults > Defaults|

ALLOW_EOD_CONSOLIDATION	Allow End of Day Shipment Consolidation	Specify whether or not to allow packages to be consolidated when closing shipments at end of day.	<ul style="list-style-type: none"> Data Type – Checkbox
--------------------------------	---	---	--

- Default Value - Effective Date: 2012/11/07 - Value: Check box de-selected (cleared) - Comments: N/A
- UI Administrative Label – Allow End of Day Shipment Consolidation
- UI Screen Location – Shipper Defaults > Defaults > Defaults|

COD_FEE	COD Fee Per Shipment	The flat-rate fee for each COD shipment.	<ul style="list-style-type: none"> Data Type – Numeric
----------------	----------------------	--	---

Default Values: - Row 1: Effective Date: 2012/11/13 Value: 10 Comments: Amended 2012 Rate

- UI Administrative Label – Calculate Transit Time
- UI Screen Location – Shipper Defaults > Defaults > Defaults|

DECVALAMT	Declared Value Charge Amount	The first \$100 of declared value is insured for free. Each additional increment of up to \$100 in declared value will incur this fee.	<ul style="list-style-type: none"> • Data Type – Numeric
------------------	------------------------------	--	---

- Default Value - Effective Date: 2012/11/08 - Value: 0.85 - Comments: 2012 Charge Amount
- UI Administrative Label – Declared Value Fee per \$100 (after initial 100/shipment)

- UI Screen Location – Shipper Defaults > Defaults > Defaults|

DIMFACTOR	Dimension Factor	N/A	<ul style="list-style-type: none"> • Data Type – Numeric
------------------	------------------	-----	---

- Default Values: - Row 1: Effective Date: 2012/11/13 Value: 166 Comments: 2012 Revised Value - Row 2: Effective Date: 2012/11/07 Value: 194 Comments: 2012 Value
- UI Administrative Label – Dimension Factor

- UI Screen Location – Shipper Defaults > Defaults > Defaults|

DLVY_AREA_A MT	Delivery Area Charge Amount	N/A	<ul style="list-style-type: none"> • Data Type – Numeric
---------------------------	-----------------------------	-----	---

- Default Value - Effective Date: 2012/11/08 - Value: 10 - Comments: 2012 Charge Amount
- UI Administrative Label – Delivery Area Charge Amount
- UI Screen Location – Shipper Defaults > Defaults > Defaults|

DLVY_CONF_A MT	Signature Confirmation Amount	Signature Confirmation Amount	<ul style="list-style-type: none"> • Data Type – Numeric
---------------------------	-------------------------------	-------------------------------	---

- Default Value - Effective Date: 2012/11/08 - Value: 5 - Comments: 2012 Charge Amount
- UI Administrative Label – Signature Confirmation Amount
- UI Screen Location – Shipper Defaults > Defaults > Defaults|

-

FUELSURCHAR GEAMT	Fuel Surcharge Amount	Enter the value you want the charge reference to be multiplied by. For example, enter 0.15 for a 15% charge.	<ul style="list-style-type: none">• Data Type – Numeric
------------------------------	--------------------------	--	---

- Default Value - Effective Date: 2012/11/12 - Value: 0.075 - Comments: 2012 Rate
- UI Administrative Label – Fuel Surcharge Amount
- UI Screen Location – Shipper Defaults > Defaults > Defaults|

INSMINAMT	Insurance Minimum Charge Amount	N/A	• Data Type – Numeric
------------------	---------------------------------	-----	-----------------------

Default Value - Effective Date: 2012/11/12 - Value: 2.5 - Co 2012 Value

UI Administrative Label – Insurance Minimum Charge Amount

UI Screen Location – Shipper Defaults > Defaults > Defaults|

MANI_FTP_DIR	FTP Directory	N/A	• Data Type – Text
---------------------	---------------	-----	--------------------

Default Value – None

UI Administrative Label – FTP Directory

UI Screen Location – Shipper Defaults > Defaults > Defaults|

			Data Type – Text
MANI_FTP_HOS	FTP Hostname	N/A	• T

Default Value – None

UI Administrative Label – FTP Hostname

UI Screen Location – Shipper Defaults > Defaults > Defaults|

MANI_FTP_PAS S	FTP Password	N/A	• Data Type – Text
---------------------------	--------------	-----	--------------------

Default Value – None

UI Administrative Label – FTP Password

UI Screen Location – Shipper Defaults > Defaults > Defaults|

MANI_FTP_USE R	FTP Username	N/A	• Data Type – Text
---------------------------	--------------	-----	--------------------

Default Value – None

UI Administrative Label – FTP Username

UI Screen Location – Shipper Defaults > Defaults > Defaults|

OVERAMT	Oversized Amount	N/A	• Data Type – Numeric
----------------	------------------	-----	-----------------------

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-
-

Default Value - Effective Date: 2012/11/12 - Value: 5 - Comments: 2012 Value

- UI Administrative Label – Oversized Amount
- UI Screen Location – Shipper Defaults > Defaults > Defaults|

OVERMAXUOM	Oversized Maximum Value UOM	N/A	<ul style="list-style-type: none"> • Data Type – Dropdown
-------------------	-----------------------------------	-----	--

- UI Administrative Label – Oversized Maximum Value UOM
- Default Value – IN

To add values for this drop-down list:

1. When you select Drop-down as the data type, UCM displays a Create. Click Create and enter the following values:

Value	Name
IN	Inches
CM	Centimeters

2. Select the row with IN and then click Set as Default.

- UI Screen Location – Shipper Defaults > Defaults > Defaults|

OVERMAXVALU E	Oversized Maximum Value	Value that will state whether the package is considered oversized or not.	<ul style="list-style-type: none"> • Data Type – Numeric
--------------------------	----------------------------	---	---

- Default Value - Effective Date: 2012/11/12 - Value: 50 - Comments: 2012 Value

- UI Administrative Label – Oversized Maximum Value
- UI Screen Location – Shipper Defaults > Defaults > Defaults|

RES_AMT	Residential Charge Amount	N/A	<ul style="list-style-type: none">• Data Type – Numeric
----------------	------------------------------	-----	---

- Default Value - Effective Date: 2012/11/08 - Value: 3 - Comments: 2012 Charge Amount
 - UI Administrative Label – Residential Charge Amount
 - UI Screen Location – Shipper Defaults > Defaults > Defaults|
- | | | | |
|-------------------|------------------------------------|-----|---|
| SPCDLVYAMT | Saturday Delivery
Charge Amount | N/A | <ul style="list-style-type: none">• Data Type
– Numeric |
|-------------------|------------------------------------|-----|---|
- Default Value - Effective Date: 2012/11/08 - Value: 15 - Comments: 2012 Charge Amount
 - UI Administrative Label – Saturday Delivery Charge Amount
 - UI Screen Location – Shipper Defaults > Defaults > Defaults|

TEMPLATE_NA ME2	Post Template	N/A	<ul style="list-style-type: none"> Data Type – Text
----------------------------	---------------	-----	--

- Default Value - Effective Date: 2012/11/12 - Value: POSTTEMP - Comments: Post Template COD label and value
- UI Administrative Label – Post Template Name
- UI Screen Location – Shipper Defaults > Defaults > Defaults]

Additional UI transactional elements

Note: The following configuration options hold for every UI transactional element listed in the following table:

- Leave the "Applies to all services" check box selected. (This is the default.)
- Leave the Create field under UI Screen Location blank.
- Under UI Screen Location, leave de-selected (cleared) the check box labeled This UI Transactional Element is also a UI Administrative Element. (This is the default.)
- Select the indicated UI Screen Locations from the drop-down list for each level. A > B > C in the following table indicates A (Top Level), B (Second Level), C (Third Level).
- All check boxes will be de-selected (cleared) by default on the shipping system UI. Note that this automatically becomes the default when you create a check box if you do not set the default value to selected using the Manage Values dialog.
- There are no default values for Text and Numeric data types.

Code	Name	Description	Data Description & UI Screen Location
ADDDHANDLING_ TYPE	Additional Handling	N?A	<ul style="list-style-type: none"> Data Type – Checkbox

- UI Transactional Label – Additional Handling
- UI Screen Location – Shipment > Package > Defaults]

CODAMT	COD Amount	N/A	<ul style="list-style-type: none"> Data Type – Numeric
---------------	------------	-----	---

- UI Transactional Label – COD Amount
- UI Screen Location – Shipment > Shipment > Defaults]

CODOPTIONS	COD Options	N/A	<ul style="list-style-type: none"> Data Type – Dropdown
-------------------	-------------	-----	--

- UI Transactional Label – COD Options
Default Value – Blank

To add values for this drop-down list:

When you select Drop-down as the data type, UCM displays a Create. Click Create and enter the following values:

Value	Name
FF	COD Fee + Freight
FI	COD Fee + Invoice Amount
FIF	COD Fee + Invoice Amount + Freight
IF	Invoice Amount + Freight
I	Invoice Amount Only

- UI Screen Location – Shipment > Shipment > Defaults|

CODPAYTYPE	COD Payment Type	N/A	• Data Type – Dropdown
-------------------	------------------	-----	------------------------

- UI Transactional Label – COD Payment Type
- Default Value – Blank

To add values for this drop-down list

When you select Drop-down as the data type, UCM displays a Create. Click Create and enter the following values:

Value	Name
1	Cash
2	Check
3	Money Order

- UI Screen Location – Shipment > Shipment > Defaults|

DLVY_CONF_TY PE	Signature Service Type	N/A	• Data Type – Check box
----------------------------	------------------------	-----	-------------------------

UI Transactional Label – Signature Required

•

INSAMT	Declared Value for Insurance	N/A	• Data Type – Numeric UI Screen Location – Shipment > Shipment > Defaults
---------------	------------------------------	-----	--

- UI Transactional Label – Declared Value for Insurance
- UI Screen Location – Shipment > Package > Defaults|

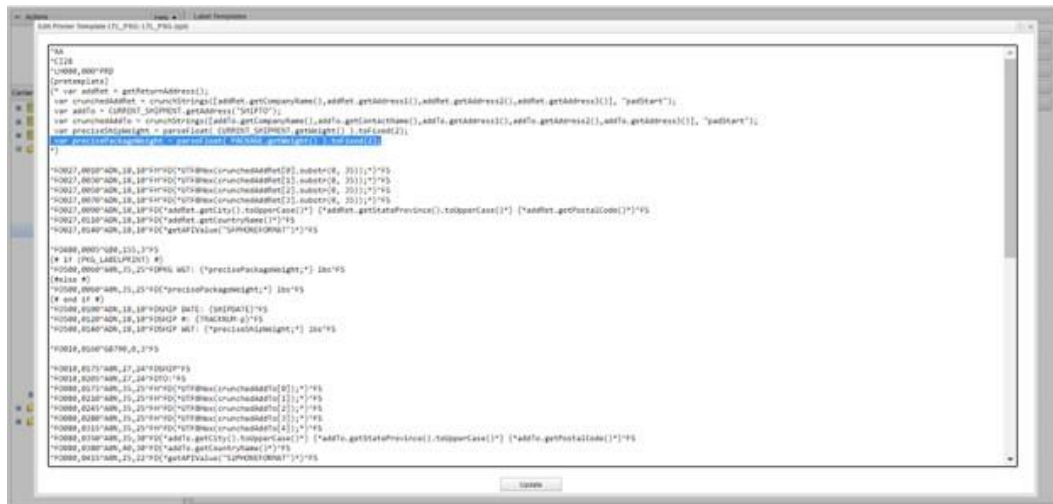
SPCDLVYFLAG	Saturday Delivery Flag		• Data Type – Checkbox
--------------------	------------------------	--	------------------------

- UI Transactional Label – Saturday Delivery Flag
- UI Screen Location – Shipment > Shipment > Defaults|

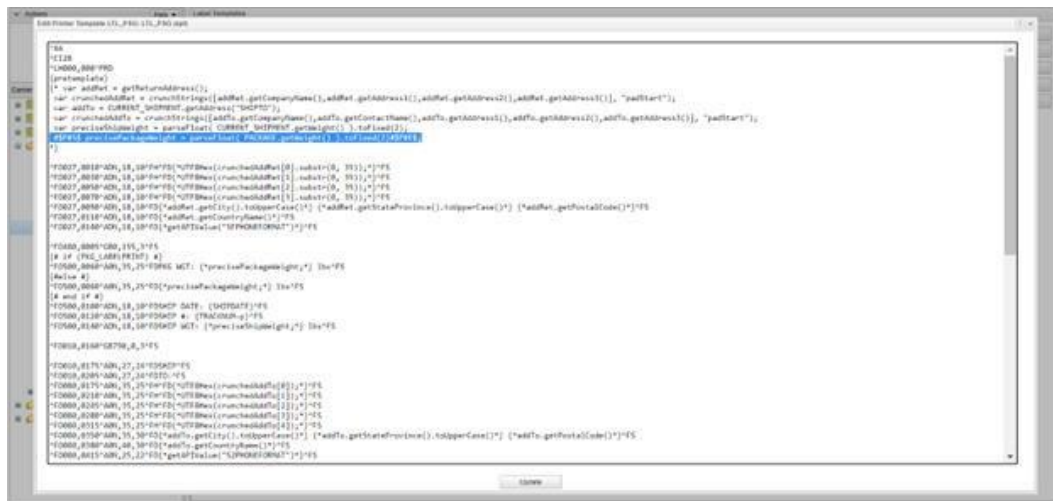
Label Performance Improvement

Label tuning has improved the UCM label performance. To access this functionality:

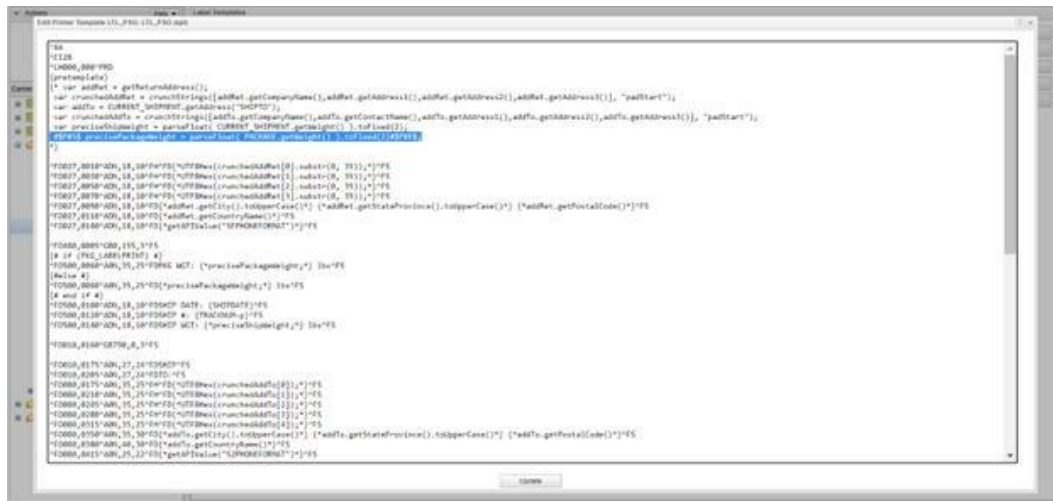
-
- 1. Select **UCM Carriers**.
- 2. Expand the **Carriers** selection tree available on the left-hand side.
- 3. Select **Label Templates**.
A pop-up **Label Templates** appears.
- 4. Select a template to modify—click on edit—A pop-up **Edit Label Template** appears.
- 5. Click on the **Printer Support** Tab in the **Edit Label Template** Popup window. A list of available/configured printers appears.
- 6. Select the printer and click on the **Edit** button. A pop-up **Edit Printer Template** appears.
- 7. Click on the **Edit button** to maximize the **Edit Printer Template**.



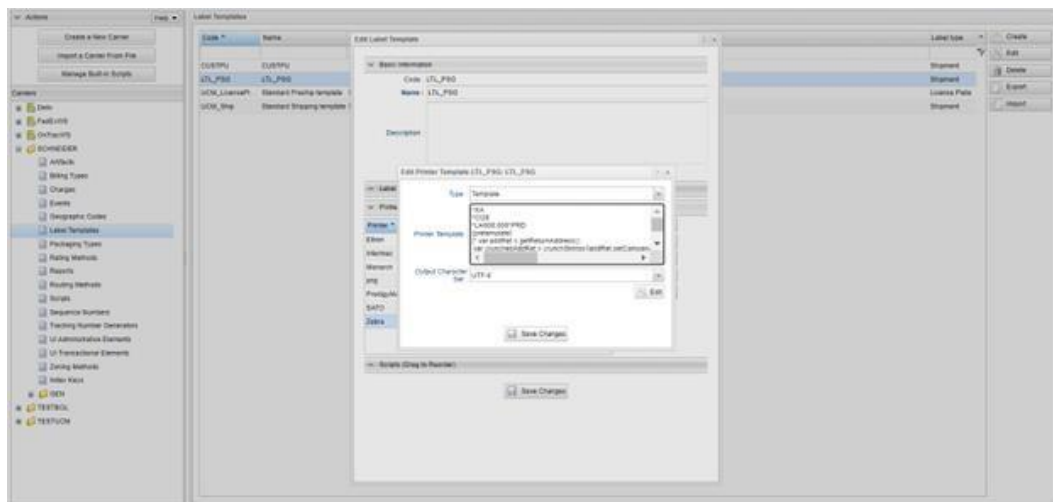
- 8. Identify package level lines from the template. Add tags at the start and end of the package level line. Example: Edit line 10 from the template as below:
From: `var precisePackageWeight = parseFloat(PACKAGE.getWeight()).toFixed(2);`
To: `##$P#$ $ precisePackageWeight = parseFloat(PACKAGE.getWeight()).toFixed(2)##$P#$E$;`



9. Click the Update Button.



10. Click Save Changes.



11. Click **Save changes**.

