



Shipping Connector

User Manual

Version 3.0

Contents

- About this manual 4
- Overview 5
 - What is the Shipping Connector? 5
 - What the Shipping Connector is not... 5
- Features 6
 - Shipping Information Data Exchange..... 6
 - Rate Adjustments (aka, *Freight Markup*) 6
 - Address Verification 6
 - Rate Shopping..... 6
 - Premium..... 6
- Sales Order Shipping..... 7
 - Sales Order Shipping Workflow..... 7
 - Preparing to Ship with FedEx Ship Manager 8
 - Ship with FedEx Ship Manager 9
 - Import the Shipment Details onto the Business Central Sales Order 10
 - Ship the Sales Order in Business Central..... 11
 - Voiding a Shipment..... 11
 - Shipping Connector Fields on the Sales Order Page 11
 - Customer Card..... 14
 - Ship-to Address Card 15
 - Location Card..... 16
- Purchase Return Order Shipping 17
 - Purchase Return Shipping Workflow 17
 - Preparing to Ship with UPS WorldShip 18
 - Ship with UPS WorldShip..... 19
 - Import the Shipment Details onto the Business Central Purchase Return Order 19
 - Ship the Purchase Return Order in Business Central 21
 - Voiding a Shipment..... 21
 - Shipping Connector Fields on the Purchase Return Order..... 21
- Transfer Order Shipping..... 23
 - Transfer Order Shipping Workflow..... 23
 - Preparing to Ship with Stamps.com 23
 - Ship with Stamps.com 25
 - Import the Shipment Details onto the Business Central Transfer Order 25
- Service Order Shipping..... 28
 - The Service Order Shipping Workflow 28
 - Preparing to Ship with FedEx Ship Manager LTL 29

Ship with FedEx Ship Manager	30
Import the Shipment Details onto the Business Central Service Order	30
Ship the Service Order in Business Central	31
Voiding a Shipment.....	31
Shipping Connector Fields on the Service Order Page.....	32
Carrier Billing Accounts.....	34
Alt. Ship-from Address (Blind Shipments).....	35
Blind Ship Scenarios Supported.....	35
Creating an Alt. Ship-from Address entry	35
Creating a Sender Entry in FedEx Ship Manager	37
Rate Adjustments (a.k.a. Freight Markup).....	38
Rate Adjustment Calculation.....	38
Rate Adjustment Discovery	38
Filter Criteria.....	38
Matching Criteria	39
Directly Referenced Rate Adjustments	39
Creating Rate Adjustment Entries	39
Priority Based Ordering.....	40
Rate Adjustment Examples	41
Address Verification.....	42
Rate Shopping	44
Addresses	44
Packages & Package Templates.....	45
Shipping Agents	46
Rate Filtering	46
Rate Selection	46
Applying a Rate.....	47
Server Messages	47
Shipping Connector Setup Page	48
General.....	48
Numbering.....	49
Web Services	50
Rate Shopping.....	50
Address Verification.....	52
Email and Email Message	53
Package Tracking & Notification.....	54
Installation and Configuration.....	55
Install the Shipping Connector extension application	55

Register Shipping Connector	55
Configure a Web Service Access Key	56
Configure Shipping Connector Setup (for Sales Order shipping)	57
Shipping Connector Workstation Installation and Configuration	59
The Shipping Connector Workstation Settings Dialog	61

About this manual

This document attempts to provide general configuration and usage information for Shipping Connector. It is not a field itemization and reference – for that please refer to the online help pages accessible from the Shipping Connector pages and field labels in Business Central (via Ctrl+F1 or selecting the “*Learn more*” option on a field label tooltip).

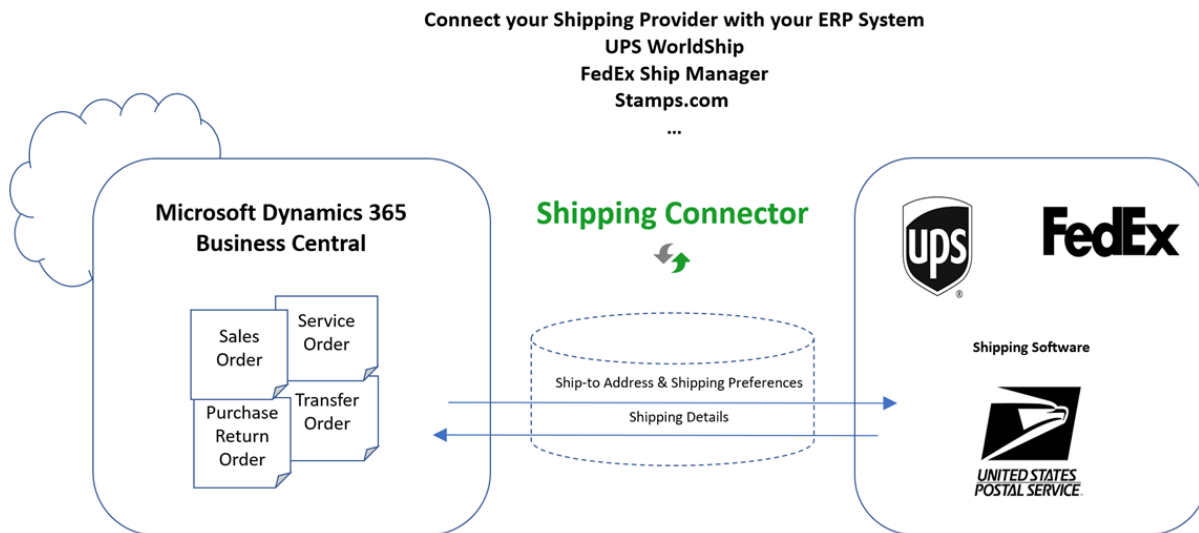
Overview

What is the Shipping Connector?

The Shipping Connector is an extension application that facilitates the exchange of shipping information between Business Central and third-party, external shipping software. The Shipping Connector has been verified to interface with FedEx Ship Manager (FSM), UPS WorldShip (WS), Stamps.com, and Endicia Pro. Integrations have also been made with other shipping software packages (e.g., Purolator). Automated configuration for FSM, WS, and Stamps.com is provided by the configuration utility, automated configuration for the other packages is not yet available – they require a manual configuration step. In practice, the Shipping Connector can be configured to interface with any shipping software that can exchange data with an external database.

This graphic provides a good visual ...

Shipping Connector for Microsoft Dynamics 365 Business Central



What the Shipping Connector is not...

The Shipping Connector is not a shipping application, it does not create shipping labels.

At this time, the Shipping Connector does not manage line level order information – i.e., it does not define packages into which items can be packed and linked with specific tracking numbers (though this feature is under consideration).

Features

The following are the main features of Shipping Connector.

Shipping Information Data Exchange

As described above Shipping Connector is first and foremost a facilitator of data exchange between Business Central and external shipping software. Shipping Connector provides fields and options within Business Central to manage the type and content of the data that is exchanged.

Shipping Connector integrates its data management features in Business Central in such a way as to leverage the built-in workflows for order processing.

The primary goal of Shipping Connector is to enable shipping with external shipping software in such a manner as to make it feel well integrated and natural to the Business Central workflow.

Data Exchange is a standard Shipping Connector feature.

Rate Adjustments (aka, *Freight Markup*)

Rate adjustments may be used to modify the shipping charge prior to placement on the order. Typically, rate adjustments are used to *pad* the shipping charge to recoup the cost of handling the product, but they may also be used for incentives and penalties.

Shipping Connector provides a robust rate adjustment engine that can be used to manage shipping charge adjustments for a variety of scenarios.

Rate Adjustments is a standard Shipping Connector feature.

Address Verification

Address Verification provides an integrated user interface to verify and correct destination addresses.

When an address on a shipment is incorrect – e.g., a suite number or apartment number is missing, or the address is misspelled – the carrier may charge an address correction fee. If a company ships to new addresses on an ongoing basis, the Address Verification feature can save significantly. While shipping software frequently includes address verification, that software is not integrated with Business Central and hence does not provide a convenient interface to update the addresses in Business Central. This integrated feature provides distinct time and cost savings.

Address Verification is an optional Shipping Connector feature.

Rate Shopping

Rate Shopping provides an integrated user interface to query rates from the shipping carriers.

For companies that accept credit card payments and generate a *Credit Authorization* when the order is released, having a shipping charge line present is mandatory or else the *Credit Authorization* will not include the shipping charges. Rate Shopping provides a convenient user interface to solicit accurate rates for this scenario.

As well, Rate Shopping may be used to find optimal shipping rates amongst the shipping carriers potentially saving significant costs over time.

Rate Shopping is an optional Shipping Connector feature.

Premium

Business Central Premium edition includes support for Service and Warehouse Management. The Shipping Connector Premium option enables support for Service Order and Warehouse shipping. In addition, it includes Address Verification, Rate Shopping and enables Data Exchange with an unlimited number of companies.

Sales Order Shipping

To provide an introduction to Business Central shipping using Shipping Connector we will process a sales order shipment. Doing so will introduce the basic features of Shipping Connector and provide a context to discuss the more detailed capabilities of the product.

Sales Order Shipping Workflow

As earlier noted, Shipping Connector taps into the standard Business Central workflows. So, to ship a sales order you would first prepare an order in the usual Business Central fashion – i.e.,

1. Create a new sales order
2. Specify a customer
3. Set or verify addressing information
4. Add product
5. Set shipping preferences
6. Release the order

That would result in a sales order similar to this one:

The screenshot shows a Business Central Sales Order form for 'The Cannon Group PLC' with the following details:

- Order Header:** Order No. S-ORD1003, Customer No. 10000, Order Date 4/8/2019, Due Date 5/8/2019, Status Released.
- General Section:**
 - Customer Name: The Cannon Group PLC (highlighted with red box 1)
 - SELL-TD: 2 (highlighted with red box 2)
 - Address: 2281 DEFOOR HILLS RD NW
 - City: ATLANTA, State: GA, ZIP Code: 30318-2203, Country/Region Code: US
 - Contact: Mr. Andy Teal, Email: andy.teal@cannongroup.com
 - External Document No.: PO33245 (highlighted with red box 3)
- Lines Section:**

Type	No.	Description	Location Code	Quantity	Qty. to Assemble to Order	Reserved Quantity	Unit of Measure Code	Unit Price Excl. Tax	Tax Area Code	Tax Group Code	Line Discount %
Item	1900-S	PARIS Guest Chair, black	BLUE	1			PCS	192.80	ATLANTA, GA	FURNITURE	
- Summary Section:**

Subtotal Excl. Tax (USD)	192.80	Total Excl. Tax (USD)	192.80
Inv. Discount Amount Excl. Tax (USD)	0.00	Total Tax (USD)	11.57
Invoice Discount %	0	Total Incl. Tax (USD)	204.37
- Shipping and Billing Section:**
 - Ship-to: Default (Self-to Address)
 - Contact: Mr. Andy Teal
 - SHIPMENT METHOD Code: EXW
 - Agent: LPS (highlighted with red box 4)
 - Agent Service: GROUND
 - Package Tracking No.:
 - Bill-to: Default (Customer), Location Code: BLUE, Shipment Date: 11/1/2019, Shipping Advice: Partial
 - Outbound Whse. Handling Time:
 - Shipping Time:
 - Late Order Shipping: No
 - SHIPPING CONNECTOR: Verified, 11/4/2019, USPS/UPS/FEDDEX, 81, C061
 - Free Shipping: 5 (highlighted with red box 5)
 - Bill Shipping To: Sender
 - Bill Shipping To Account:
 - Rate Adjustment Entry No.: 0
 - Alt. Ship-from Address Id:
 - Sender Account Id:
 - Delivery Instructions:
 - Ship-to Residential:
 - Saturday Delivery:
 - Quoted Shipping Charges: 0.00
 - Billed Shipping Charges: 0.00

In the above figure the fields pertinent to shipping are marked in red outline and numbered.

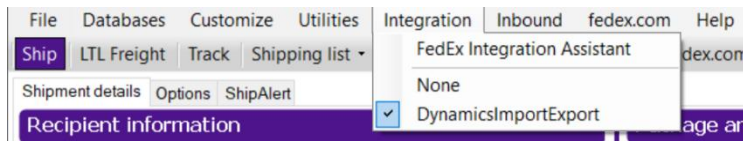
When the user *Releases* the order, Shipping Connector automatically queues the shipping information for export.

Subsequently, the Shipping Connector Workstation (SCW) application, installed on the same workstation as the shipping software, periodically retrieves the queued shipping information (via the Shipping Connector Web Service) and stores it locally on the shipping workstation.

Preparing to Ship with FedEx Ship Manager

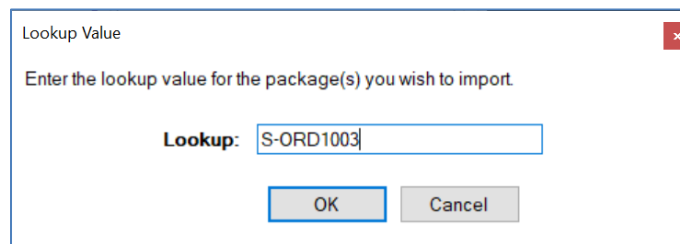
The FedEx Ship Manager (FSM) application enables data exchange with external systems via its “*Data Integration*” feature. To enable FSM data exchange with Shipping Connector you must first turn it on as follows:

- Click the “*Integration*” menu item (the Integration menu will display)
- Select the “*DynamicsImportExport*” option

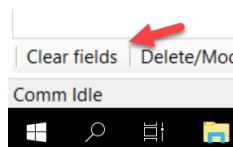


Note: The *DynamicsImportExport* Integration option was installed during the Shipping Connector Workstation configuration procedure. If it does not appear in the menu then you will need to rerun the configuration procedure and “*Copy*” the FedEx map when on the “*Data Maps*” step.

With Integration turned on FSM may then retrieve the shipping information from the SCW local cache and populate its data fields with the information. To initiate data exchange, enter or scan the Business Central order number into the FSM Lookup Value dialog.



Note: If the Lookup Value dialog does not display press the “*Clear Fields*” button in the lower left of the FSM interface



Once the order number is entered the Business Central order information will populate as shown below.

The screenshot displays the FedEx shipping software interface with the following sections:

- Recipient information:** Includes fields for Recipient ID, Country (US - United States), Contact name (Mr. Andy Teal), Company name (The Cannon Group PLC), Address 1 (2281 DEFOOR HILLS RD NW), Address 2, Postal code (30318-2203), City (ATLANTA), and Telephone ((470) 355-9455). There are checkboxes for "Ship to group", "Include a Return Label", and "Hold".
- Package and shipment details:** Includes Number of packages (1), Weight (1 lbs), Service type (R - FedEx Ground Service), Package type (1 - Your Packaging), Package dimensions (Select an item...), Ship date (11/20/2019), and Declared value (\$).
- Sender information:** Includes Change sender (RIOS SOFTWARE - Phil Rios), Current sender (Rios Software, 349 Bahia Circle, Longwood, FL 32750), and Change return address (Current sender).
- Billing details:** Includes Bill transportation to (1 - Sender), Acct # (757783304), Department notes, Customer reference (S-ORD1003), and P.O. number (P033245).
- Additional references:** Includes Invoice number, Shipment ID, and Delivery instructions.
- Shortcuts:** Includes Special Services (Battery, COD, Dry Ice Only, Hazardous Materials, Hold at Location, Non-Standard Packaging, ORM-D/Limited Quantity, Small Quantity Exception [SQE]) and Auto Track.

At the bottom of the interface, there is a status bar with the text: "Clear fields | Delete/Modify shipment | Repeat shipment | Override prefs | Rate Quote and Transit Times | \$8.45 Dim Weight 1 lbs | Multiple-piece shipment | Ship".

In this figure the fields from the sales order are populated into the fields of FSM with association identified by the numbering.

With the data fields populated from the Business Central order information you may now interact with the FSM data fields as necessary to fully prepare the order to ship. The only restriction imposed by Shipping Connector is that the “Customer reference” field must not be changed – else Shipping Connector will not be able to identify the associated shipment when it is processed.

Note: A perceptive observer may notice that we specified “UPS Ground” as the shipping agent service to be used to ship the order. Shipping Connector passed that information to FSM however FSM does not recognize “UPS Ground” as a service so it populated its “Service Type” field with the default value of “FedEx Ground Service”.

Ship with FedEx Ship Manager

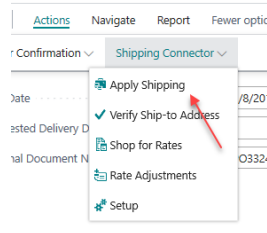
When the shipment is ready to process press the “Ship” button in the lower right corner. Assuming all is in order FSM will print a shipping label and (importantly to us) export the shipment details to the Shipping Connector Workstation local cache. When this happens, you will notice the Shipping Connector Workstation icon in the system tray flash green while it relaying the information back to Business Central.



Import the Shipment Details onto the Business Central Sales Order

We can now switch back to the sales order page in Business Central.

If you have enabled “Auto Apply Shipping” in Shipping Connector Setup then the shipment details will automatically populate onto the sales order (you may need to refresh the page by pressing F5). Otherwise, you may initiate data exchange via the “Apply Shipping” action in the Shipping Connector menu on the Sales Order page.



The shipment details will populate onto the sales order in the form of a shipping charge line, information (comment) lines, and updates to the Shipping and Billing fields – as shown here:

SALES ORDER | WORK DATE: 4/8/2019

S-ORD1003 · The Cannon Group PLC

New Process Report Release Posting Prepare Order Request Approval Print/Send Navigate Actions Navigate Report Fewer options

General Show more

Customer Name: The Cannon Group PLC Due Date: 5/8/2019
 Contact: Mr. Andy Teal Requested Delivery Date:
 Posting Date: 4/8/2019 External Document No.: PO33245
 Order Date: 4/8/2019

Lines Manage More options

Type	No.	Description	Location Code	Quantity	Qty. to Assemble to Order	Reserved Quantity	Unit of Measure Code	Unit Price Excl. Tax	Tax Area Code	Tax Group Code	Line Discount %
Item	1900-S	PARIS Guest Chair, black	BLUE	1			PCS	192.80	ATLANTA, GA	FURNITURE	
Comment		Shipped: 2019-11-20									
Comment		Via: FEDEX Ground									
Comment		Tracking ID: 676128086540									
G/L Account	40100	Shipping Charge	BLUE	1				18.45	ATLANTA, GA	NONTAXABLE	

Subtotal Excl. Tax (USD) 192.80 Total Excl. Tax (USD) 192.80
 Inv. Discount Amount Excl. Tax (USD) 0.00 Total Tax (USD) 11.57
 Invoice Discount % 0 Total Incl. Tax (USD) 204.37

Invoice Details > 1M(8D) Yes ATLANTA, GA

Shipping and Billing Show less

Ship-to: Default (Self-to Address) SHIPPING CONNECTOR
 Contact: Mr. Andy Teal Ship-to Verification Status: Verified, 11/4/2019, USPS/UPS/FEDEX, 81, C061
 SHIPMENT METHOD: EXW Free Shipping:
 Agent: FEDEX Bill Shipping To: Sender
 Agent Service: GROUND Rate Adjustment Entry No.: 0
 Package Tracking No.: 676128086540 Alt. Ship-from Address Id:
 Bill-to: Default (Customer) Sender Account Id:
 Location Code: BLUE Delivery Instructions:
 Shipment Date: 11/20/2019 Ship-to Residential:
 Shipping Advice: Partial Saturday Delivery:
 Outbound Whse. Handling Time: Quoted Shipping Charges: 0.00
 Shipping Time: Billed Shipping Charges: 8.45
 Late Order Shipping: No

The information lines provide details for each package shipped including the ship date, shipping service, tracking number, and shipping charges. For a sales order, the shipping charges may be specified via a G/L Account number or a Resource - as defined in Shipping Connector Setup, discussed later.

With single or multiple package shipments, the first package tracking number is the master tracking number and it will be written into the Package Tracking No. field on the Shipping and Billing fast-tab.

Once shipment details have populated onto the order, the user may modify, add, or delete any information. If the user desires to display the shipping information but either not charge for shipping or add to the amount generated from the shipping software, the line may be deleted or changed prior to posting.

Note: A perceptive observer may notice that the shipping charge in the example above was \$8.45 in FSM but was placed on the sales order with a value of \$18.45. This was due to the influence of a rate adjustment. If we look at the off-screen information in the shipment detail lines...

Type	Planned Shipment Date	Shipment Date	Department Code	Project Code	Customergro... Code	Area Code	Businessgroup Code	Salescampaign Code	Package Tracking Number	Quoted Shipping Charges	Billed Shipping Charges	Rate Adjustment Entry No.
→ Item	4/8/2019	4/8/2019	SALES		MEDIUM	30				0.00	0.00	0
Comment		11/20/2019							676128086540	0.00	0.00	0
Comment		11/20/2019							676128086540	0.00	0.00	0
Comment		11/20/2019							676128086540	0.00	0.00	0
G/L Account	11/20/2019	11/20/2019	SALES		MEDIUM	30			676128086540	0.00	8.45	1

...you can see that a rate adjustment entry has inflated the original shipping charge of \$8.45 to the \$18.45 value charged to the customer. We will discuss Rate Adjustments in more detail in a later section.

Ship the Sales Order in Business Central

At this point you can Post/Ship, Invoice the order. Doing so will create Posted Sales Shipment and Posted Sales Invoice entries in Business Central. The pertinent shipment details from the order will be transferred onto those entries making it available for subsequent recall.

Voiding a Shipment

If a shipment is voided/deleted from the shipping software prior to manifesting, the deletion will be passed to Business Central. In that event, clicking on the Apply Shipping button will cause the associated shipment details to be removed from the order (or they will be removed automatically if “Auto Apply Shipping” is enabled).

Note: Manually removing the shipment detail from the Business Central sales order does not void the shipment in the shipping software. To prevent the carrier from attempting to pick up the package (and charging you to do so) you must void the shipment in the shipping software.

Shipping Connector Fields on the Sales Order Page

There are a number of Shipping Connector fields on the Sales Order page that we did not use in the above shipping scenario. We will elaborate on those now.

This figure shows the Shipping Connector fields on the Sales Order outlined in red.

The screenshot shows the 'Shipping and Billing' fast-tab. The 'SHIPPING CONNECTOR' section is highlighted with a red box. The fields in this section are:

- Ship-to Verification Status: Verified, 11/4/2019, USPS/UPS/FEDEX, 81, C061
- Free Shipping:
- Bill Shipping To: Sender
- Bill Shipping To Account: [Empty]
- Rate Adjustment Entry No.: 0
- Alt. Ship-from Address Id: [Empty]
- Sender Account Id: [Empty]
- Delivery Instructions: [Empty]
- Ship-to Residential:
- Saturday Delivery:
- Quoted Shipping Charges: 0.00
- Billed Shipping Charges: 8.45

We should first note that many of these fields were populated from the Customer Card at the time the Sales Order was created. Also, there are two other influences that will determine the initial value of the Shipping Connector fields – the Ship-to Address and the Location. The initialization of the Shipping Connector fields follows this logic:

1. Copy the Customer Card fields onto the order when the Sell-to Customer is specified.
2. Copy the Ship-to Address Card fields onto the order when a Ship-to Address is specified.
3. Copy the Location Card fields onto the order when a Location (warehouse) is specified.

Thus, the Shipping Connector fields are updated when any one of the above three fields are specified with a “last one wins” priority. After the fields are initialized the user may modify them as needed.

The descriptions below for the fields also applies to the same fields on the Customer Card, Ship-to Address Card and the Location Card.

Ship-to Verification Status	Provides indication of the current verification status of the Ship-to Address. Address Verification (an optional feature) can be initiated from the Shipping Connector action menu. In this example the address has been verified with USPS, UPS and FedEx on the date indicated with a USPS “Delivery Point” of 81 and “Carrier Route” of C061. If the address was also a residential address then the status would so indicate. Note: At this time only FedEx returns residential address indication.
Free Shipping	If this option is enabled then no shipping charges will be added to the order.
Bill Shipping To	Identifies who shall pay for the shipping charges. One of: <ul style="list-style-type: none">• Sender - the Shipper's account will be used to pay the charges• Recipient - the Recipient's account will be used to pay the charges• Third Party (Bill-to Customer) - a Third Party account associated with the Bill-to Customer will be used to pay the charges
Bill Shipping To Account	Identifies the account to use when billing shipping (in the shipping software).
Rate Adjustment Entry No.	Identifies a rate adjustment entry to use for all shipping charges on the order
Alt. Ship-from Address Id	Identifies an alternate return address for the shipping label. Most shipping packages provide a way to display a return address on the shipping label that is not the address where the shipment originated. This is known as “Blind Shipping” or “Alternate Ship-from Addressing”.
Sender Account Id	Identifies a send-from account in the shipping agent software. Some shipping packages provide a way to select a carrier billing account to be used as the sender account. The carrier billing account defines the shipment originating address and billing details. Note: At this time only UPS WorldShip is known to support this option via external data exchange.
Delivery Instructions	Instructions for the shipping agent courier that are displayed on the handheld
Ship-to Residential	Allows stipulation that the Ship-to Address is a residential address. Not all shipping providers (e.g., USPS, UPS) return residential designation when verifying addresses -- however, most providers will adjust delivery cost based on this classification. If you know the recipient's address is residential you may so state here.
Saturday Delivery	Some shippers provide an option for weekend delivery (FedEx) for a fee. This field indicates to the shipping provider that weekend delivery is acceptable.

Quoted Shipping Charges	Provides a summation of the quoted shipping charges (if any) on the sales order.
Billed Shipping Charges	Provides a summation of the billed shipping charges (if any) on the sales order. These are the charges that have been billed to you (the sender) not including any rate adjustments – thus providing you a way to track your actual shipping costs.

Customer Card

Shipping Connector fields may be set on a per customer basis. Subsequently, when the customer is specified on an order (Sales Order or Service Order) the Shipping Connector field values from the Customer Card will be transferred to the order. This allows you to define customer preferences for options such as carrier billing accounts, shipping rate adjustments, delivery instructions or blind shipments.

The Customer Card

CUSTOMER CARD | WORK DATE: 4/8/2019

10000 · The Cannon Group PLC

Address & Contact

ADDRESS

Address 2281 DEFOOR HILLS RD NW

Address 2

Country/Region Code US

City ATLANTA

State GA

ZIP Code 30318-2203

Address Verification Status Verified, 11/4/2019, USPS/UPS/FEDEX, 81, C061

CONTACT

Contact Name Mr. Andy Teal

Phone No.

Email

Home Page

Invoicing >

Payments >

Shipping

Ship-to Code

Location Code BLUE

Combine Shipments

Reserve Optional

Shipping Advice Partial

SHIPMENT METHOD

Code EXW

Agent USPS

Agent Service RETAILGND

Shipping Time

Base Calendar Code

Customized Calendar No

SHIPPING CONNECTOR

Free Shipping

Bill Shipping To Third Party

Bill Shipping To Account

Rate Adjustment 0

Alt. Ship-from Id SoftwareGrotto

Delivery Instructions

Saturday Delivery

The Shipping Connector actions and fields are identified in red.

We have described the fields in the previous section – here we will elaborate on their use.

Free Shipping – There are a variety of scenarios where you may wish to offer your customers free shipping but need to manage it on a per customer or per order basis. For example, when a customer’s total purchases have exceeded a specified threshold or they have achieved some other preferred status. For this you may use the Free Shipping option to avoid charging the customer for shipping.

Bill Shipping To, Bill Shipping To Account – If the shipping charges for shipments to a customer should be billed to the customer’s carrier account (Recipient) or a different account (Third Party) then you can store the billing account information here. See also, Carrier Billing Accounts later in this document.

Rate Adjustment – If shipping charges for shipments to a customer need to be adjusted based on specific criterion (e.g., expedited processing) then you may wish to create a rate adjustment for that scenario and specify it here. The rate adjustment entry will be transferred to the order and used during rate calculation.

Alt. Ship-from Id – This is a lesser used feature and may require configuration in the shipping software. You can use this feature when you wish to label the shipment with an originating address different from the actual

shipper information. Normally this feature is used in a “fulfillment” situation where you are shipping product on behalf of a third party. *For more details refer to the Alt. Ship-from Address discussion later in this document.*

Delivery Instructions – This field allows you to state a short description of any special considerations the courier should observe when delivering the shipment. E.g., “Deliver to rear loading dock”.

Saturday Delivery – This is a FedEx option for delivery. Some FedEx services will allow delivery on a weekend (for a fee) if given prior approval.

Ship-to Address Card

Shipping Connector fields may be set on a per ship-to address basis. Subsequently, when the ship-to address is specified on an order (Sales Order or Service Order) the Shipping Connector fields from the Ship-to Address Card will be transferred to the order. This allows you to define customer preferences for specific delivery locations.

The Ship-to Address Card

The screenshot shows the Dynamics 365 Business Central interface for a Ship-to Address Card. The address is 10000 The Cannon Group PLC, LEWES ROAD, The Cannon Group PLC. The card is divided into several sections: General, Show on Map, and SHIPPING CONNECTOR. The SHIPPING CONNECTOR section is highlighted with a red box and contains the following fields: Ship-to Verification Status (Verified, 11/21/2019, USPS/UPS/F...), Bill Shipping To (Sender), Bill Shipping To Account, Saturday Delivery (toggle), and Delivery Instructions.

General	
Code	LEWES ROAD
Name	The Cannon Group PLC
GLN	
Address	5611 RIVERDALE RD
Address 2	STE F
City	ATLANTA
State	GA
ZIP Code	30349-7381
Country/Region Code	US
Home Page	
Location Code	BLUE
Shipment Method Code	EXW
Shipping Agent Code	
Shipping Agent Service...	
Service Zone Code	
Last Date Modified	
Tax Liabile	<input type="checkbox"/>
Tax Area Code	

SHIPPING CONNECTOR	
Ship-to Verification Stat...	Verified, 11/21/2019, USPS/UPS/F...
Bill Shipping To	Sender
Bill Shipping To Account	
Saturday Delivery	<input type="checkbox"/>
Delivery Instructions	

We should note that the Ship-to Address Code is specified on an order after the Sell-to Customer Code has been specified. Hence the preferences on the Ship-to Address Card, if set, will overwrite the Customer Card preferences.

The descriptions and use of the Shipping Connector fields are provided in the previous sections.

Location Card

The Location Card in Business Central is used to define a product depot, a.k.a. warehouse. You may use a location for inventory purposes and/or for product branding. For example, you may depot product for multiple companies -- Company X using Location X and Company Y using Location Y.

Dynamics 365 Business Central | Sandbox36560 | PR

LOCATION CARD | WORK DATE: 4/8/2019 | ✓ SAVED

BLUE · Blue Warehouse

Process | Location | Navigate | Fewer options

General > BLUE

Address & Contact Show less

ADDRESS	CONTACT
Address South East Street, 3	Contact Jeff Smith
Address 2	Phone No. +1-(0)20 8207 4533
City Atlanta ...	Fax No. +1-(0)20 8207 5000
State GA	Email
ZIP Code 31772 ...	Home Page
Country/Region Code US	

SHIPPING CONNECTOR

Shipping Agent Code	▼
Alt. Ship-from Id	▼
Sender Account No.	▼

Show on Map

Address Verification Sta... []

When shipping product for each company, if you would like the shipping label to display a unique name and address for that company then you can use the Alt. Ship-from Id field to identify an originating address entry.

Similarly, if you would like to use a specific sender account in the shipping software then you can use the Sender Account No. field to identify the sender account.

Purchase Return Order Shipping

Purchase Return Shipping Workflow

The Purchase Return shipping workflow runs through the Purchase Return Order - which can be created from purchase documents, Posted Purchase Invoice, Purchase Credit Memo or by manually entering the required fields onto a new Posted Return Order. Regardless of how the Purchase Return Order is created the steps in the workflow are similar to those of the sales order shipping workflow – i.e.,

1. Create a purchase return order
2. Specify a vendor
3. Set or verify addressing information
4. Add product to return
5. Select shipping preferences
6. Release the order to ship

The above would result in a purchase return order similar to this one:

1 P-RET1001 · London Postmaster

General > London Postmaster 123456 Open

Type	No.	Description	Return Reason Code	Location Code	Quantity	Direct Unit Cost Excl. Tax	Tax Area Code	Tax Group
Comment		Invoice No. 108011:						NONTA
→ Comment		Inv. No. 108011 - Rcpt. No. 107011						NONTA
Item	1968-S	MEXICO Swivel Chair, black		WEST	1	148.10		FURNIT

Subtotal Excl. Tax (USD) 148.10 Total Excl. Tax (USD) 148.10
 Inv. Discount Amount (USD) 0.00 Total Tax (USD) 0.00
 Invoice Discount % 0 Total Incl. Tax (USD) 148.10

Invoice Details > CM

Shipping and Payment Show less

Ship-to Default (Vendor Address) PAY-TO

2

Name	London Postmaster	Name	London Postmaster
Address	775 LAKE AVE NE	Address	10 North Lake Avenue
Address 2		Address 2	
State	GA	State	GA
ZIP Code	30307-2462	ZIP Code	31772
City	ATLANTA	City	Atlanta
Country/Region Code	US	Country/Region	US
Contact	Mrs. Carol Philips	Contact	Mrs. Carol Philips

3

SHIPPING CONNECTOR

Ship-to Verification Status Verified, 11/22/2019, USPS/UPS/FEDEX, Resi...

Shipping Agent FEDEX

Shipping Agent Service GROUND

Bill Shipping To Sender

Bill Shipping To Account

Saturday Delivery

Delivery Instructions

Total Shipping Charges 0.00

In the above figure the fields pertinent to shipping are marked in red outline and numbered.

When the user *Releases* the order, Shipping Connector automatically queues the shipping information for export.

Subsequently, the Shipping Connector Workstation (SCW) application, installed on the same workstation as the shipping software, periodically retrieves the queued shipping information (via the Shipping Connector Web Service) and stores it locally on the shipping workstation.

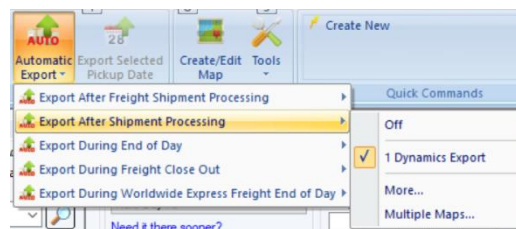
Preparing to Ship with UPS WorldShip

The UPS WorldShip (WS) application enables data exchange with external systems via its “*Data Import/Export*” feature. To enable WS data exchange with Shipping Connector you must first turn it on as follows:

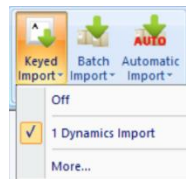
- Click the “Import-Export” menu item (the Import/Export toolbar will display)



- Click the “Automatic Export” toolbar button
- Select Automatic Export after Shipment Processing
- Select “Dynamics Export” (if you don’t see it select “More..”)

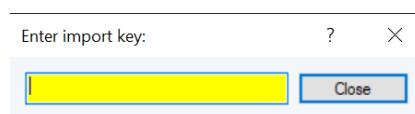


- Select “Keyed Import”
- Select “Dynamics Import” (if you don’t see it select “More..”)



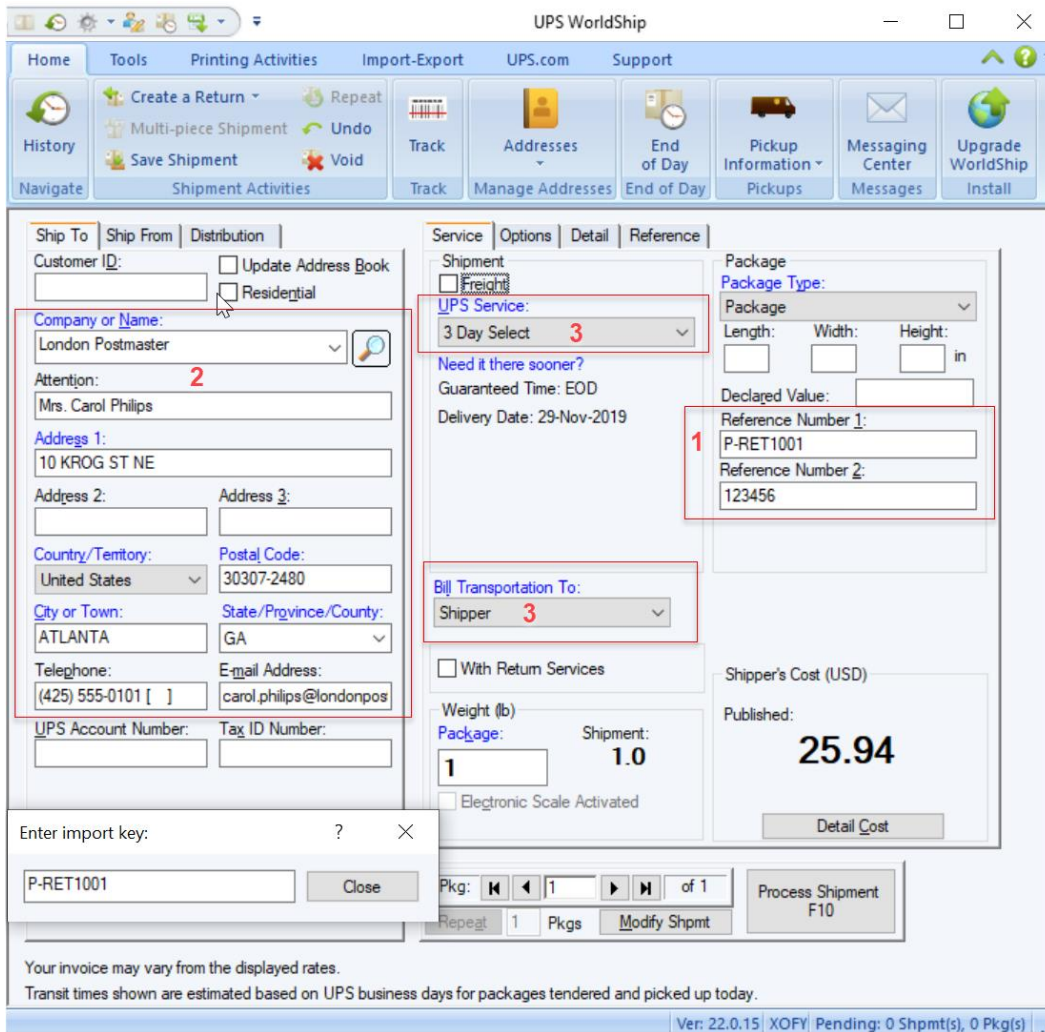
Note: The *Dynamics Import & Export* data exchange options were installed during the Shipping Connector Workstation configuration procedure. If they do not appear in the menus then you will need to rerun the configuration procedure and “Copy” the UPS WorldShip map when on the “Data Maps” step.

With Import/Export turned on WS will retrieve the shipping information from the SCW local cache and populate its data fields with the information. To initiate data exchange, enter or scan the Business Central order number into the WS Enter Import Key dialog.



Note: If the Enter Import Key dialog does not display make sure Keyed Import is set to “Dynamics Import”

Once the order number is entered the Business Central order information will populate as shown below.



In this figure the fields from the purchase return order are populated into the fields of WS with association identified by the numbering.

With the data fields populated you may now interact with WS as necessary to fully prepare the order to ship. The only restriction imposed by Shipping Connector is that the “Reference Number 1” field must not be changed – else Shipping Connector will not be able to identify the associated shipment when it is processed.

Ship with UPS WorldShip

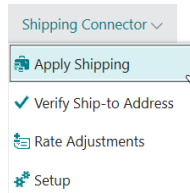
When the shipment is ready to process press the “Process Shipment” button in the lower right corner. Assuming all is in order WS will print a shipping label and (importantly to us) export the shipment details to the SCW local cache. When this happens, you will notice the SCW icon in the system tray flash green while it relaying the information back to Business Central.



Import the Shipment Details onto the Business Central Purchase Return Order

We can now switch back to the purchase return order page in Business Central.

If you have enabled “Auto Apply Shipping” in Shipping Connector Setup then the shipment details will automatically populate onto the order (you may need to refresh the page by pressing F5). Otherwise, you may initiate data exchange via the “Apply Shipping” action in the Shipping Connector menu on the Purchase Return Order page.



The shipment details will populate onto the purchase return order in the form of a shipping charge line, information (comment) lines, and updates to the Shipping and Billing fields – as shown here:

The information lines provide details for each package shipped including the ship date, shipping service, tracking number, and shipping charges.

PURCHASE RETURN ORDER | WORK DATE: 4/8/2019

P-RET1001 · London Postmaster

New Process Release Posting Request Approval Print/Send Return Order Navigate Actions Navigate Fewer options

Print... Functions Request Approval Warehouse Posting Shipping Connector

Lines	Type	No.	Description	Return Reason Code	Location Code	Quantity	Direct Unit Cost Excl. Tax	Tax Area Code	Tax Group
	Comment		Invoice No. 108011:						NONTA
	Comment		Inv. No. 108011 - Rcpt. No. 1070...						NONTA
	Item	1968-S	MEXICO Swivel Chair, black		WEST	1	148.10		FURNIT
	Comment		Shipped: 2019-11-23						
	Comment		Via: UPS 3-Day Select						
	Comment		Tracking ID: 1Z1308W012404621...						
	G/L Account	14100	Shipping Charge			1	25.94		NONTA

Subtotal Excl. Tax (USD) 174.04 Total Excl. Tax (USD) 174.04
 Inv. Discount Amount (USD) 0.00 Total Tax (USD) 0.00
 Invoice Discount % 0 Total Incl. Tax (USD) 174.04

Invoice Details >

Shipping and Payment

Ship-to: Default (Vendor Address) | PAY-TO: London Postmaster

Name: London Postmaster | Address: 10 North Lake Avenue
 Address 2: | State: GA | ZIP Code: 31772 | City: Atlanta
 Country/Region Code: US | Contact: Mrs. Carol Philips

SHIPPING CONNECTOR
 Ship-to Verification Status: Verified, 11/23/2019, USPS/UPS/FEDEX, 99, C...
 Shipping Agent: UPS | Shipping Agent Service: 3DSELECT
 Bill Shipping To: Sender
 Saturday Delivery:
 Delivery Instructions:
 Total Shipping Charges: 25.94

With single or multiple package shipments, the first package tracking number is the master tracking number and it will be written into the Package Tracking No. field on the Shipping and Billing fast-tab.

Once shipment details have populated onto the order, the user may modify, add, or delete any information.

Ship the Purchase Return Order in Business Central

At this point you can Post/Ship/Invoice the order. Doing so will create a Posted Purchase Return Shipment entry in Business Central. The pertinent shipment details from the order will be transferred onto those entries making it available for subsequent recall.

Voiding a Shipment

If a shipment is voided/deleted from the shipping software prior to manifesting, the deletion will be passed to Business Central. In that event, clicking on the Apply Shipping button will cause the associated shipment details to be removed from the order (or they will be removed automatically if “Auto Apply Shipping” is enabled).

Note: Manually removing the shipment detail from the Business Central order does not void the shipment in the shipping software. To prevent the carrier from attempting to pick up the package (and charging you to do so) you must void the shipment in the shipping software.

Shipping Connector Fields on the Purchase Return Order

There are a number of Shipping Connector fields on the Purchase Return Order page that we did not use in the above shipping scenario. We will elaborate on those now.

We first note that many of these fields are populated from the Vendor Card at the time the Purchase Return Order was created. Also, the Order Address Card, if specified, may determine the initial value of the Shipping Connector fields. The initialization of the Shipping Connector fields follows this logic:

1. Copy the Vendor Card fields onto the order when the Buy-from Vendor is specified.
2. Copy the Order Address fields onto the order when an Order Address is specified.

Thus, the Shipping Connector fields are updated when either of the above three entries are specified with a “last one wins” priority. After the fields are initialized the user may modify them as needed.

The descriptions below for the fields also applies to the same fields on the Vendor Card and the Order Address Card.

Ship-to Verification Status Provides indication of the current verification status of the Ship-to Address. Address Verification (an optional feature) can be initiated from the Shipping

Connector action menu. In this example the address has been verified with USPS, UPS and FedEx on the date indicated with a USPS “Delivery Point” of 99 and a USPS “Carrier Route” of C019. If the address was also a residential address then the status would so indicate.

Note: At this time only FedEx returns residential address indication.

Bill Shipping To	Identifies who shall pay for the shipping charges. One of: <ul style="list-style-type: none">• Sender - the Shipper's account will be used to pay the charges• Recipient - the Recipient's account will be used to pay the charges• Third Party (Pay-to Vendor) - a Third Party account associated with the Pay-to Vendor will be used to pay the charges
Bill Shipping To Account	Identifies the account to use when billing shipping (in the shipping software).
Delivery Instructions	Instructions for the shipping agent courier - displayed on the handheld
Saturday Delivery	Some shippers provide an option for weekend delivery (FedEx) for a fee. This field indicates to the shipping provider that weekend delivery is acceptable.
Total Shipping Charges	Provides a summation of the billed shipping charges (if any) on the sales order. These are the charges that have been billed to you (the sender) not including any rate adjustments – thus providing you a way to track your actual shipping costs.

Transfer Order Shipping

The Transfer Order is all about moving inventory between warehouses. It has no direct impact on the G/L – i.e., the lines of the Transfer Order do not create G/L entries.

Transfer Order Shipping Workflow

The Transfer Order shipping workflow is as follows:

1. Create a transfer order
2. Specify a transfer-from location
3. Specify a transfer-to location
4. Set or verify addressing information
5. Add inventory to transfer
6. Select shipping preferences
7. Release the order to ship

The screenshot shows a 'TRANSFER ORDER' form for 'WORK DATE: 4/8/2019'. The order number '1002' is highlighted in a red box. The form is divided into several sections:

- General:** Transfer-from Code: WEST, In-Transit Code: OWN LOG, Transfer-to Code: EAST, Posting Date: 11/24/2019, Direct Transfer: off, Status: Released.
- Lines:** A table with columns: Item No., Description, Quantity, Reserved Quantity Inbnd., Reserved Quantity Shipped, Reserved Quantity Outb. One line is visible: 1968-5, MEXICO Swivel Chair, black, Quantity 3.
- Shipment:** Shipment Date: 11/27/2019, Receipt Date: 11/27/2019, Shipping Agent Code: USPS (highlighted with red box and '2'), Shipping Agent Service: RETAILGND (highlighted with red box and '2').
- SHIPPING CONNECTOR:** Bill Shipping To: Sender (highlighted with red box and '3'), Bill Shipping To Account No., Sender Account No., Saturday Delivery: off, Delivery Instructions, Package Tracking No.
- Transfer-from:** Name: West Warehouse, State: OR, Name 2: (highlighted with red box and '4'), ZIP Code: 97223-4447, Address: 9402 SW WASHINGTON SQUAR..., Country/Region: US, Address 2, Contact: Chris Preston, City: PORTLAND.
- Transfer-to:** Name: East Warehouse, State: GA, Name 2: (highlighted with red box and '5'), ZIP Code: 30316-4100, Address: 2549 GRESHAM RD SE, Country/Region: US, Address 2, Contact: Jeff Smith, City: ATLANTA.

In the above figure the fields pertinent to shipping are marked in red outline and numbered.

When the user *Releases* the order, Shipping Connector automatically queues the shipping information for export.

Subsequently, the Shipping Connector Workstation (SCW) application, installed on the same workstation as the shipping software, periodically retrieves the queued shipping information (via the Shipping Connector Web Service) and stores it locally on the shipping workstation.

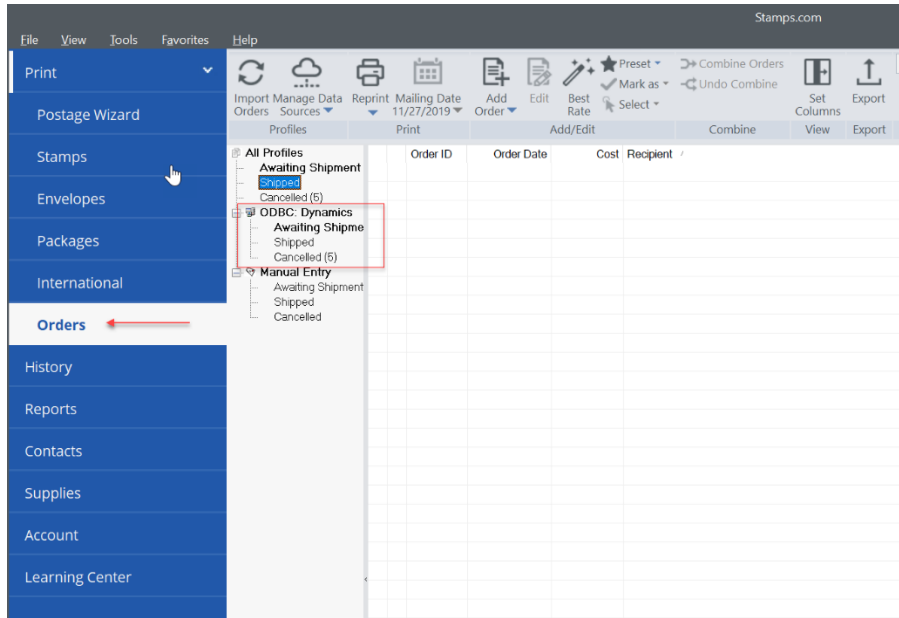
Preparing to Ship with Stamps.com

The Stamps.com application enables data exchange with external systems via its “Data Source” feature (a.k.a. “Batch”, a.k.a. “ODBC”). To enable Stamps.com data exchange with Shipping Connector you must define an “ODBC Data Source”. A thorough guide for ODBC setup in Stamps.com is available under the [Guides](#) section of the website. For this discussion we’ll assume that you have installed the “Dynamics” profile available during setup.

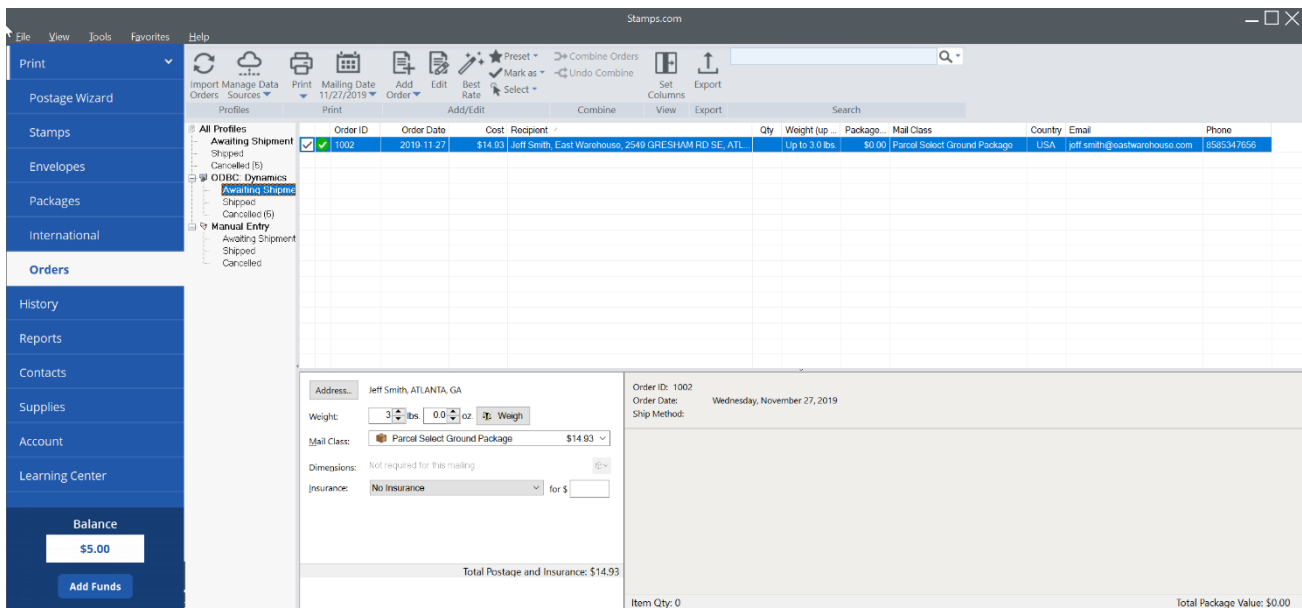
The Stamps.com application provides two options for order processing – batch processing, available on the Orders tab, and individual order processing, available on the Packages tab. To enable data exchange for individual order processing you must enroll in their “Professional Shipper” plan. We will assume that is the case for this discussion. Data exchange will work for batch order processing without the Professional Shipper plan but only on the Orders tab.

To import all orders from Shipping Connector (batch):

- Click the “Orders” menu item (the Orders management screen will display)
- The “ODBC: Dynamics” Data Source should be visible in the list of Profiles on the left-hand side

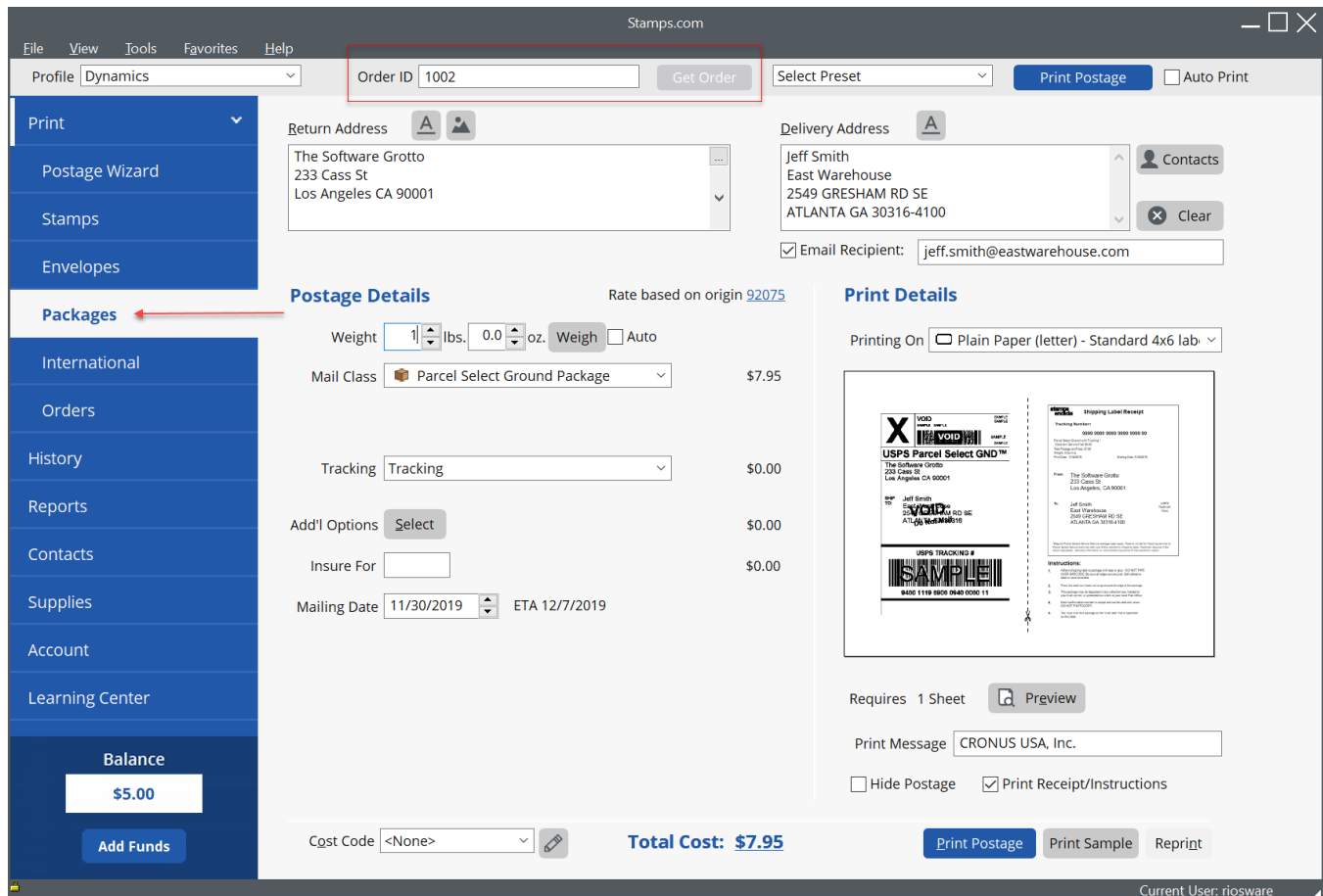


Press the “Import Orders” button at the top-left of the toolbar. You should then see the order in the list. You may then select the order and set the shipping options as necessary.



To import a single order from Shipping Connector:

- Click the “*Packages*” menu item (the Packages management screen will display)
- Scan or enter the order number into the “Order ID” field then press the “Get Order” button (the order details will populate)



You may now modify the shipment details as desired and press the “Print Postage” button when you are ready to ship the order (print a label).

Note: The only restriction imposed by Shipping Connector is when you have enabled multiple companies during Shipping Connector Workstation configuration (i.e., you selected more than one company from the list on the Companies tab). In that case you must leave the company name displayed in the “Print Message” field. Shipping Connector requires this information in order to identify the Business Central company in which the order resides.

Ship with Stamps.com

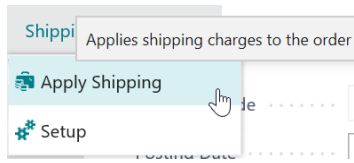
When you are ready to print the shipping label press the “Print” button – that will send the label to the printer and initiate “Postback” to the SCW data cache. The SCW icon in the system tray will flash green while it relays the information back to Business Central.



Import the Shipment Details onto the Business Central Transfer Order

We can now switch back to the transfer order page in Business Central.

If you have enabled “Auto Apply Shipping” in Shipping Connector Setup then the shipment details will automatically populate onto the order (you may need to refresh the page by pressing F5). Otherwise, you may initiate data exchange via the “Apply Shipping” action in the Shipping Connector menu on the Transfer Order page.



The shipment details will populate onto the transfer order in the form of information (comment) lines and updates to the Shipping and Billing fields – as shown here:

← ...NSFER ORDER | WORK DATE: 4/8/2019 ✎ + 🗑️ ✓ SAVED 📧

1002

New Report Release Posting Order Print/Send Navigate More options

General Show more

Transfer-from Code: WEST In-Transit Code: OWN LOG.
 Transfer-to Code: EAST Posting Date: 11/24/2019
 Direct Transfer: Status: Released

Lines | Manage More options 📄

Item No.	Description	Quantity	Reserved Quantity Inbnd.	Reserved Quantity Shipped	Reserved Qu O
→ 1968-S	MEXICO Swivel Chair, black	3	-	-	
	Shipped: 2019-11-28		-	-	
	Via: USPS Retail Ground		-	-	
	Tracking ID: 94001119690009400...		-	-	

Shipment Show less

Shipment Date	11/28/2019	Receipt Date	11/27/2019
Outbound Whse. Ha...		SHIPPING CONNECTOR	
Shipment Method Co...		Bill Shipping To	Sender
Shipping Agent Code	USPS	Bill Shipping To Acco...	
Shipping Agent Servi...	RETAILGND	Sender Account No.	
Shipping Time		Saturday Delivery	<input type="checkbox"/>
Shipping Advice	Partial	Delivery Instructions	
		Package Tracking No.	9400111969000940000011

The information lines provide details for each package shipped including the ship date, shipping service, and tracking number. Remember that Transfer Orders don't post to the G/L so shipping charge lines are not added.

With single or multiple package shipments, the first package tracking number is the master tracking number and it will be written into the Package Tracking No. field on the Shipping and Billing fast-tab.

Once shipment details have populated onto the order, the user may modify, add, or delete any information. If the user desires to display the shipping information but either not charge for shipping or add to the amount generated from the shipping software, the line may be deleted or changed prior to posting.

Service Order Shipping

If you have read the section on Sales Order Shipping then this section is going to look very similar. However, there is one significant difference between Shipping Sales Orders and Shipping Service Orders – you don't actually ship a Service Order.

In the Sales Order data model, you add shipping charges (Sales Lines) directly to the Sales Order. When you ship the Sales Order, a Posted Sales Shipment is created.

In the Service Order data model, you add work items (Service Item Lines) to the Service Order and shipping charges (Service Lines) to the Service Item Lines via the Service Item Worksheet. When you ship the Service Order you actually ship each of the Service Item Worksheets that are Released for Shipping.

The Service Order Shipping Workflow

So, the shipping workflow for the Service Order looks like this:

1. Create a new service order
2. Specify a customer
3. Set or verify addressing information
4. Set shipping preferences
5. Add work items (Service Item Lines)
6. Release to ship (Service Item Worksheet)

That might result in a service order similar to this one:

← SERVICE ORDER | WORK DATE: 4/8/2019

SO000009 The Cannon Group PLC

Warehouse Print/Send Release Posting Order Navigate Actions Navigate Fewer options

General > SO000009 10000 4/9/2019 High Open

Lines Manage Line Functions Order Fewer options

Service Item No.	Item No.	Service Item Group Code	Serial No.	Description	Repair Status Code	V
→ 7	80007	SERVER	AS764789	Enterprise Computer 667 MHz	INITIAL	

< >

Invoicing > 10000 1M(8D) 5/8/2019

Shipping Show more

Ship-to Code

SHIP-TO

Name The Cannon Group PLC

Address 2281 DEFOOR HILLS RD NW

City ATLANTA

State GA

ZIP Code 30318-2203

Country/Region US

Contact Mr. Andy Teal

Ship-to Verification S... Verified, 11/28/2019, USPS/UP...

Ship-to Phone (619) 222-3456

Ship-to Email shipping@cannongroup.com

Location Code BLUE

Shipping Advice Partial

Shipment Method C...

Shipping Agent Code FEDEX

Shipping Agent Servi... GROUND

Shipping Time

SHIPPING CONNECTOR

Free Shipping

Bill Shipping To Sender

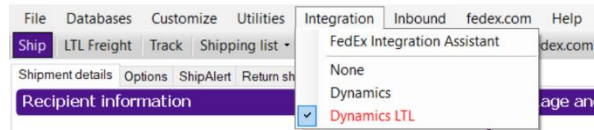
Bill Shipping To Acco...

Ship-to Residential

Preparing to Ship with FedEx Ship Manager LTL

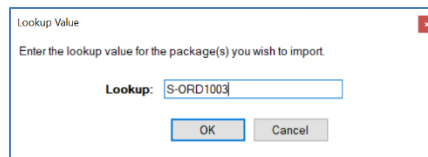
The FedEx Ship Manager (FSM) application enables data exchange with external systems via its “Data Integration” feature. To enable FSM data exchange with Shipping Connector you must first turn it on as follows:

- Click the “Integration” menu item (the Integration menu will display)
- Select the “Dynamics LTL” option

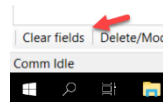


Note: The “Dynamics LTL” Integration option was installed during the Shipping Connector Workstation configuration procedure. If it does not appear in the menu then you will need to rerun the configuration procedure and select the option to copy the FedEx LTL map when on the “Data Maps” step.

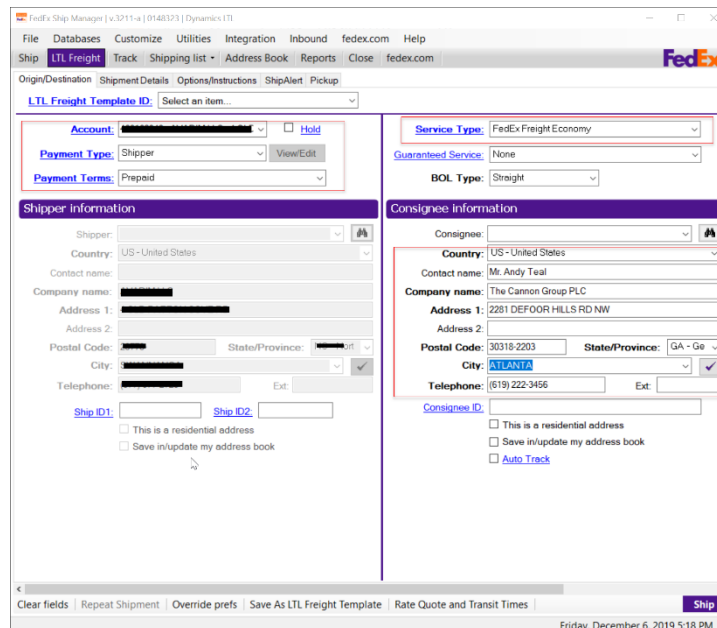
With Integration turned on FSM may then retrieve the shipping information from the SCW local cache and populate its data fields with the information. To initiate data exchange, enter or scan the Business Central order number into the FSM Lookup Value dialog.



Note: If the Lookup Value dialog does not display press the “Clear Fields” button in the lower left of the FSM interface



Once the order number is entered the Business Central order information will populate as shown below. In the figure the fields from the service order are populated into the fields of FSM with association identified by the numbering.



With the data fields populated from the Business Central order information you may now interact with the FSM data fields as necessary to fully prepare the order to ship.

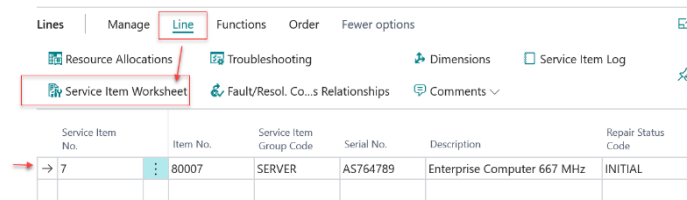
Ship with FedEx Ship Manager

When the shipment is ready to process press the “Ship” button in the lower right corner. Assuming all is in order FSM will print a shipping label and (importantly to us) export the shipment details to the Shipping Connector Workstation local cache. When this happens, you will notice the Shipping Connector Workstation icon in the system tray flash green while it relaying the information back to Business Central.

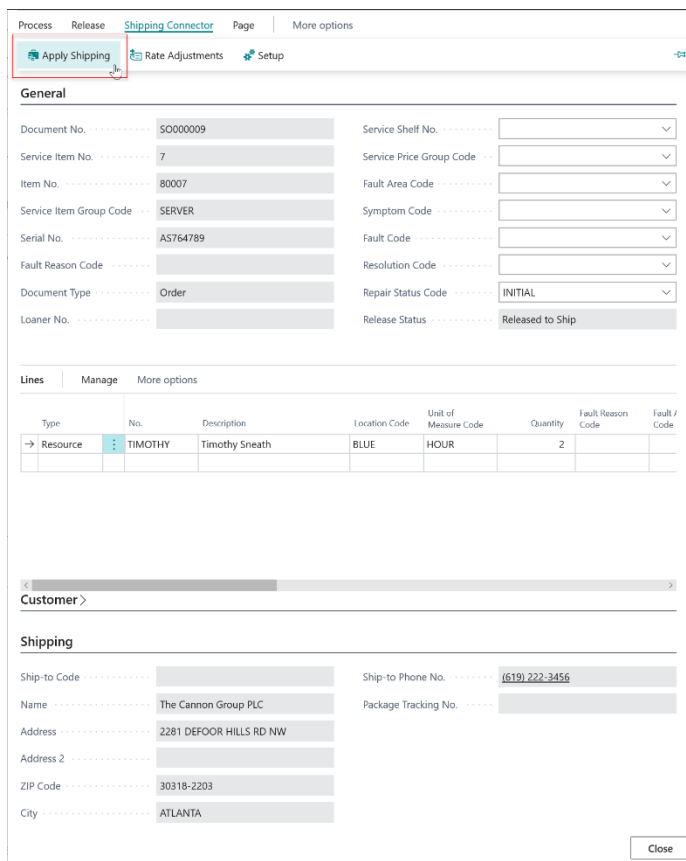


Import the Shipment Details onto the Business Central Service Order

We can now switch back to the service order page in Business Central and open the service item worksheet – select the service item line on the service order then select “Service Item Worksheet” on the Line menu item.

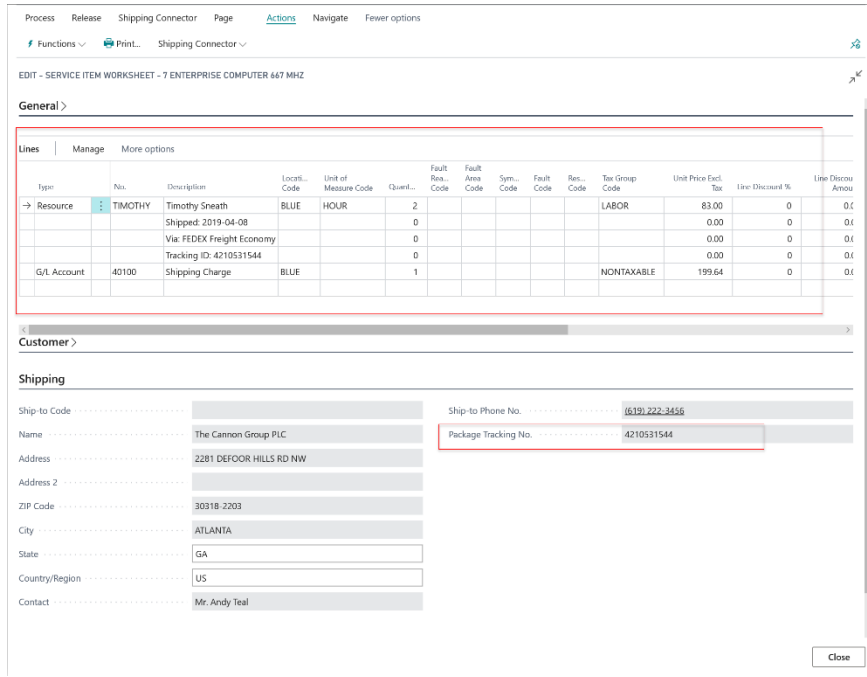


The Service Item Worksheet will display.



If you have enabled “Auto Apply Shipping” in Shipping Connector Setup then the shipment details will automatically populate onto the Service Item Worksheet (you may need to refresh the page by pressing F5). Otherwise, you may initiate data exchange via the “Apply Shipping” action in the Shipping Connector menu on the Service Item Worksheet page (shown above).

The shipment details will populate onto the service item worksheet in the form of a shipping charge line, information (comment) lines, and updates to the Shipping fields – as shown below:



The information lines provide details for each package shipped including the ship date, shipping service, tracking number, and shipping charges. For a service order, the shipping charges may be specified via a G/L Account number or a Resource - as defined in Shipping Connector Setup, discussed later.

Ship the Service Order in Business Central

At this point you can Post/Ship/Invoice the Service Order. Doing so will create Posted Service Shipment and Posted Service Invoice entries in Business Central.

Voiding a Shipment

If the LTL shipment is voided/deleted from the shipping software prior to manifesting, the deletion will be passed to Business Central. In that event, clicking on the Apply Shipping button will cause the associated shipment details to be removed from the order (they will be removed automatically if “Auto Apply Shipping” is enabled).

Note: Manually removing the shipment detail from the Business Central Service Order does not void the shipment in the shipping software. To prevent the carrier from attempting to pick up the shipment (and charging you to do so) you must void the shipment in the shipping software.

With FedEx LTL the Package Tracking No. is the tracking id for all skids in the shipment, it will be written into the Package Tracking No. field on the Shipping fast-tab (as shown above) and also to the shipment detail lines that were added to the worksheet

Type	Line Discount Amount	Line Discount Type	Line Amount Excl. Tax	Excl. War...	Est. Con... Disc...	War...	Contract No.	Planned Delivery Date	Needed by Date	Package Tracking Number	Billed Shipping Charges	Rate Adjustment Entry No.
→ Resource	0.00		166.00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		4/8/2019	4/8/2019	4210531544	0.00	0
	0.00		0.00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				4210531544	0.00	0
	0.00		0.00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				4210531544	0.00	0
	0.00		0.00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				4210531544	0.00	0
G/L Account	0.00		199.64	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		4/8/2019	4/8/2019	4210531544	199.64	0

Once shipment details have populated onto the order, the user may modify, add, or delete the informational lines. If the user desires to display the shipping information but either not charge for shipping or add to the amount generated from the shipping software, the line may be deleted or changed prior to posting.

Shipping Connector Fields on the Service Order Page

There are a number of Shipping Connector fields on the Service Order page that we did not use in the above shipping scenario. We will elaborate on those now.

This figure shows the Shipping Connector fields on the Service Order outlined in red.

The screenshot shows the 'Shipping' section of a service order page. It contains two columns of fields. The left column includes: Ship-to Code (dropdown), SHIP-TO, Name (The Cannon Group PLC), Address (2281 DEFOOR HILLS RD NW), Address 2, City (ATLANTA), State (GA), ZIP Code (30318-2203), Country/Region (US), Contact (Mr. Andy Teal), Ship-to Verification Status (Verified, 11/28/2019, USPS/UPS/FEDEX, 81, C...), Ship-to Phone ((619) 222-3456), Ship-to Phone 2, Ship-to Email (shipping@cannongroup.com), Location Code (BLUE), and Shipping Advice (Partial). The right column includes: Shipment Method Code, Shipping Agent Code (FEDEX), Shipping Agent Service Code (FREIGHTECO), Shipping Time, Free Shipping (toggle), Bill Shipping To (Sender), Bill Shipping To Account, Rate Adjustment Entry No. (0), Alt. Ship-from Id, Sender Account Id, Delivery Instructions, Ship-to Residential (toggle), Saturday Delivery (toggle), and Billed Shipping Charges (199.64). A red box highlights the 'SHIPPING CONNECTOR' section, which includes: Free Shipping, Bill Shipping To, Bill Shipping To Account, Rate Adjustment Entry No., Alt. Ship-from Id, Sender Account Id, Delivery Instructions, Ship-to Residential, Saturday Delivery, and Billed Shipping Charges.

We should first note that many of these fields can be populated from the Customer Card at the time the Service Order is created. Also note, the Ship-to Code field influences the initial value of the Shipping Connector fields. The initialization of the Shipping Connector fields follows this logic:

1. Copy the Customer Card fields onto the order when the Customer is specified.
2. Copy the Ship-to Address Card fields onto the order when a Ship-to Code is specified.

Thus, the Shipping Connector fields are updated when the above fields are specified with a “last one wins” priority. After the fields are initialized the user may modify them as needed.

The descriptions below for the fields also applies to the same fields on the Customer Card and the Ship-to Address Card.

Ship-to Verification Status

Provides indication of the current verification status of the Ship-to Address. Address Verification (an optional feature) can be initiated from the Shipping Connector action menu. In this example the address has been verified with USPS, UPS and FedEx on the date indicated with a USPS “Delivery Point” of 81 and “Carrier Route” of C061. If the address was also a residential address then the status would so indicate.

Note: At this time only FedEx returns residential address indication.

Free Shipping

If this option is enabled then no shipping charges will be added to the order.

Bill Shipping To

Identifies who shall pay for the shipping charges.

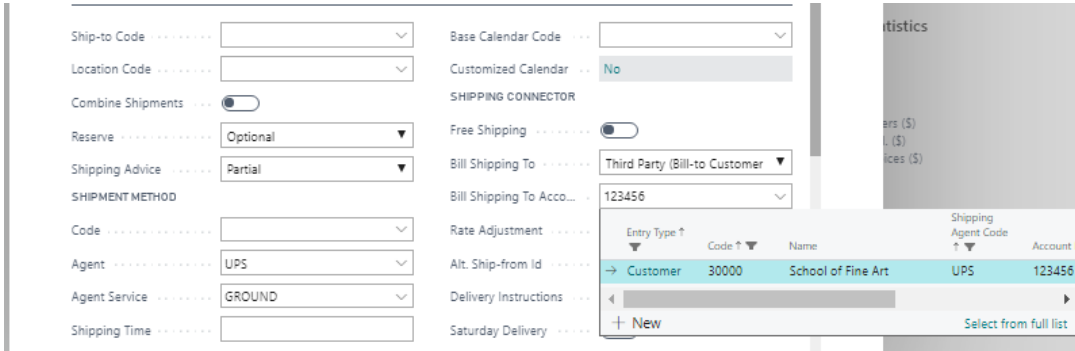
One of:

- Sender - the Shipper's account will be used to pay the charges (FSM LTL: Payment Type = Shipper, Payment Terms = Prepaid)
- Recipient - the Recipient's account will be used to pay the charges (FSM LTL: Payment Type = Shipper, Payment Terms = Collect)
- Third Party (Bill-to Customer) - a Third Party account associated with the Bill-to Customer will be used to pay the charges (FSM LTL: Payment Type = Third Party, Payment Terms = Prepaid)

Bill Shipping To Account	Identifies the account to use when billing shipping (in the shipping software).
Rate Adjustment Entry No.	Identifies a rate adjustment entry to use for all shipping charges on the order
Alt. Ship-from Address Id	Identifies an alternate return address for the shipping label. Most shipping packages provide a way to display a return address on the shipping label that is not the address where the shipment originated. This is known as “Blind Shipping”, “Drop Ship” or “Alternate Ship-from Addressing”.
Sender Account Id	Identifies a send-from account in the shipping agent software. Some shipping packages provide a way to select a carrier billing account to be used as the sender account. The carrier billing account defines the shipment originating address and billing details. Note: At this time only UPS WorldShip is known to support this option via external data exchange.
Delivery Instructions	Instructions for the shipping agent courier that are displayed on the handheld
Ship-to Residential	Allows stipulation that the Ship-to Address is a residential address. Not all shipping providers (e.g., USPS, UPS) return residential designation when verifying addresses -- however, most providers will adjust delivery cost based on this classification. If you know the recipient's address is residential you may so state here.
Saturday Delivery	Some shippers provide an option for weekend delivery (FedEx) for a fee. This field indicates to the shipping provider that weekend delivery is acceptable.
Billed Shipping Charges	Provides a summation of the billed shipping charges (if any) on the sales order. These are the charges that have been billed to you (the sender) not including any rate adjustments – thus providing you a way to track your actual shipping costs.

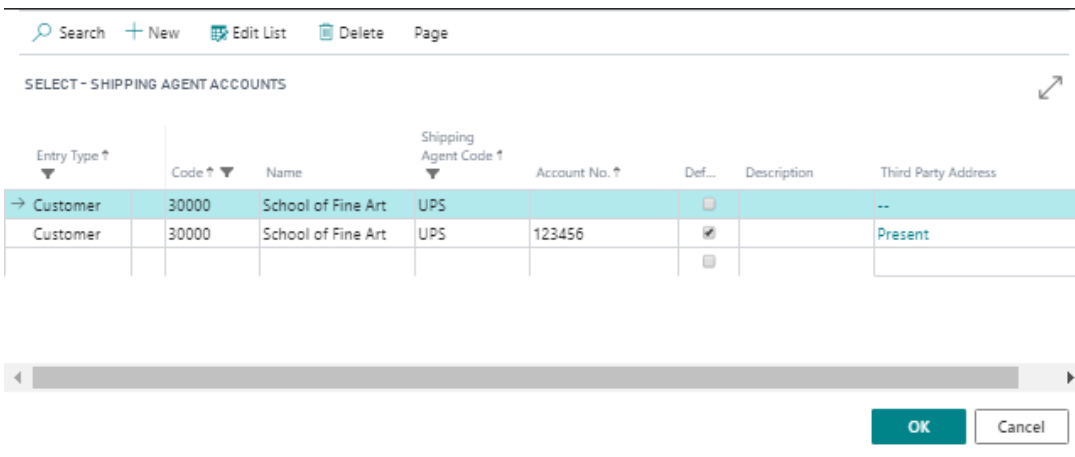
Carrier Billing Accounts

The “*Bill Shipping To*” and “*Bill Shipping to Account*” fields on the various pages allow you to specify the preferred bill-to party and associated billing account exported to the shipping software. If the bill-to party is not the “*Sender*” then the account number to be billed must be provided.



To retrieve a bill-to account first set the “*Shipping Agent*” field on the order – that filters the accounts for the selected carrier. Next, set the “*Bill Shipping To*” field to the preferred party. When set to anything other than “*Sender*” Shipping Connector will search the list of associated accounts and return the first account marked “*Default*” (or the first account if there are no accounts marked “*Default*”).

To create a bill-to account entry click on *New* – the Accounts dialog will display.



- The “*Entry Type*”, *Code*, *Name* and “*Shipping Agent Code*” fields will auto-populate from information on the page.
- Enter the billing account number in the “*Account No.*” field.
- Select “*Default*” if you prefer this account over any other accounts (Shipping Connector uses this preference to find accounts when shipping fields are updated on the page).
- Add a description for the account (optional).
- If the account is for a third-party billing scenario you should add the third-party address information by clicking the ellipses (...) in the “*Third Party Address*” field. Most carriers require this information for third-party billing.
- Click the *OK* button

Alt. Ship-from Address (Blind Shipments)

Companies who ship from their warehouse on behalf of their clients frequently need the shipping label to display a return address for their client instead of the actual address of their warehouse. This is called the “Blind Shipment” or “Alternate Return Address” scenario.

Shipping Connector supports blind shipments by allowing you to specify an “Alt. Ship-from Id” on the Sales Order.

Blind Ship Scenarios Supported

There are two blind ship scenarios currently supported:

1. Use a different return address for all shipments from a location (the “Virtual Warehouse” scenario)
2. Use a specific return address for all shipments to a customer (the “Virtual Company” scenario)

To implement the Virtual Warehouse scenario, you define an “Alt. Ship-from Id” on the Location Card for the warehouse then specify that Location Code on the Sales Order. The location’s “Alt. Ship-from Id” will be copied to the order.

To implement the Virtual Company scenario, you define an “Alt. Ship-from Id” on the Customer Card then specify that customer as the Sell-to Customer on the order. The customer’s “Alt. Ship-from Id” will be copied to the order.

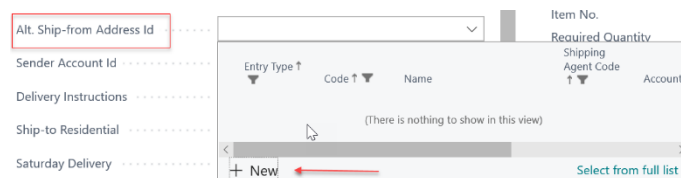
Important Note: Since both a Location Code and a Sell-to Customer can be specified on the Sales Order one must have priority over the other – we define the Location as the higher priority. Thus, if both the Location and the Customer have alternate ship-from address information defined, the information from the Location will be used.

Important Note: Blind shipping is currently only supported for Sales. It makes no sense for Transfers or Purchases. It may be useful for Services – but to-date there has been no demand for it so it is not yet implemented there.

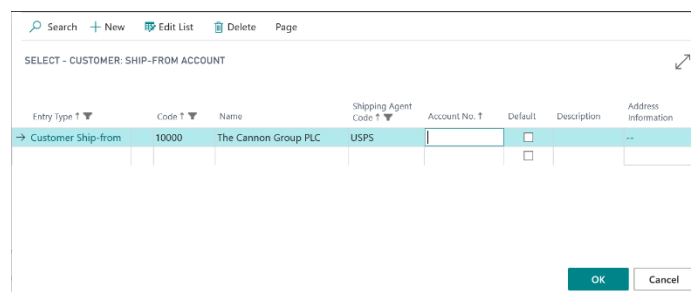
Important Note: Stamps.com and UPS/WorldShip will allow you to set the return address on the shipping label by passing the address information from Business Central. FedEx Ship Manager however requires that you predefine the return address (in the Sender Account list) and specify the Sender ID for the account as the Alt. Ship-from ID. For FedEx the Alt. Ship-from ID is limited to 15 characters. (see below)

Creating an Alt. Ship-from Address entry

To create a new entry, select the dropdown for the “Alt. Ship-from Id” field and select New



The Shipping Connector Accounts dialog will display.



Enter the Ship-from identifier in the “Account No.” column. Select “Default” (optional) if you wish for the account to auto-populate during page initialization. Enter a description (optional). Enter the address information by clicking on the ellipses in the “Address Information” column – the Address Information dialog will display

Enter the ship from address information, then select OK. The Address Information column will display “Present” to indicate that address information has been provided.

Entry Type	Code	Name	Shipping Agent Code	Account No.	Default	Description	Address Information
Customer Ship-from	10000	The Cannon Group PLC	USPS	ShipFromId	<input type="checkbox"/>		Present

Press the OK button to save the changes.

Creating a Sender Entry in FedEx Ship Manager

In FSM the return address information is displayed in the lower left area of the shipping interface – it is labeled “Sender Information” / “Change return address”.

To create a return address entry in FSM you must open the Sender database (Sender option on the Databases menu) and then click the Add button (at bottom) to open the add Sender information dialog.

The screenshot shows the "Add Sender" dialog box with the following fields and options:

- Use ONLY as a return address
- Sender ID: [Redacted]
- Country: US - United States
- Contact name: [Empty]
- Company name: [Empty]
- Address 1: [Empty]
- Address 2: [Empty]
- City: Longwood
- State: FL - Florida
- Zip: 32750
- Telephone: () - [Empty]
- Email Address: [Empty]
- Notification Language: English
- This is a residential address
- This is a Brazilian resident
- State Tax ID: [Empty]
- Tax ID: [Empty]
- Dun Bradstreet: [Empty]
- Signature release number: [Empty]
- ALC number: [Empty]
- PO number: [Empty]
- Broker ID: [Empty]
- Electronic Signature: [Empty]
- Shipping profiles:
 - Domestic: DEFAULT
 - International: DEFAULT
 - Transborder distribution: DEFAULT
- Custom label profiles:
 - Custom shipping label: None
 - Customer label: None

Buttons at the bottom: OK, Add another, Cancel

The value you specify in the “Sender ID” field is the value you must enter into the Shipping Connector “Alt. Ship-from Id” field (it is limited to 15 characters).

Rate Adjustments (a.k.a. Freight Markup)

** If you just want to see some rate adjustment usage examples then just skip down to the examples below.

Rate Adjustment Calculation

Rate adjustments are used to modify the shipping charge prior to placement on the order. Typically rate adjustments are used to *pad* the shipping charge to recoup the cost of handling the product, but they may also be used for incentives and penalties.

When a rate adjustment is used to modify a shipping charge the following adjusting logic is applied:

1. First the charge is adjusted based on Adjustment Type

Adjustment Type = None - no adjustment is applied

Adjustment Type = Flat Rate - the shipping charge is set equal to the Adjustment Value

Adjustment Type = Percent Markup - the shipping charge is increased by (Adjustment Value/100) %

Adjustment Type = Fixed Markup - the shipping charge is increased by the Adjustment Value

Adjustment Type = Free Shipping - the shipping charge is set to zero

2. Then the Additional Fee is added to the adjusted charge.

Final charge = Adjusted original charge + Additional Fee

Rate Adjustment Discovery

To determine if a shipping charge should be adjusted Shipping Connector performs a search for an applicable rate adjustment entry. This is called the "Rate Adjustment Discovery" process.

For the purpose of this discussion the terms "rule" and "rate adjustment entry" are synonymous.

Shipping Connector implements a scope-based rule discovery algorithm – that is, you define a set of rules, sort them by descending scope, then chose the first one where the rate adjustment filter and matching criteria compare positively with the details of the order.

Scope is a measure of the applicability of a rule to an order. A broadly scoped rule applies to many orders while a narrowly scoped rule applies to fewer orders. The filter criteria fields listed below are used to define the scope of a rule. For example, a rule where the "Recipient No." is set to a specific customer number is narrowly scoped to orders for just that customer. Conversely, a rule where just the "Shipping Agent Code" is set to a specific shipping agent (e.g., UPS) is more broadly scoped to all orders that ship via that shipping agent.

During the discovery process all entries not marked Active or Discoverable are ignored.

Filter Criteria

The following fields constitute the "Filter Criteria" for the rate adjustment (in descending scope order):

Ship-to Address Code	(matches the Shipping Agent Code for Sales & Service documents and the Order Address Code for Purchase documents)
Recipient No.	(matches the Sell-to Customer No. for Sales & Service documents and the Buy-from Vendor No. for Purchase documents)
Shipping Agent Service Code	
Shipping Agent Code	
Document Type	(one of All, Sales, Purchase, Service or Transfer)
Applies-to Type	(one of All, Shipment or Rate Quote)

When a shipping charge is to be adjusted the set of all rate adjustment entries is winnowed to an applicable set of rules by sorting in descending scope order then, for each rule, comparing each filter criteria field to the corresponding field of the order - the rule is ignored if there is no match.

Note: When performing comparisons, a blank rate adjustment field is treated as a wildcard – i.e., it matches all

Matching Criteria

After applying the filter criteria, the resultant (scope sorted) set of rate adjustments are then “matched” to the details of the order. The first rule that satisfies the matching criteria is then used to adjust the shipping charge.

The following fields constitute the "Matching Criteria" for the rate adjustment:

- Start Date
- End Date
- Threshold Type
- Threshold

The following logic is used to perform matching:

- If the Order Date lies within the entry Start Date, End Date range then the entry matches
 - A blank Start Date is equivalent to 2000-01-01
 - A blank End Date is equivalent to 3000-01-01
- If the rate adjustment entry Threshold Type is
 - None then the rate adjustment matches
 - Order\$LT (order amount less than) and the (total excl. tax) amount of the order is less than the entry Threshold value then the entry matches
 - Order\$GE (order amount greater than or equal to) and the (total excl. tax) amount of the order is greater than or equal to the entry Threshold value then the entry matches

Directly Referenced Rate Adjustments

Shipping Connector supports directly referencing a specific rate adjustment entry from an order. When a rate adjustment is directly referenced the discovery process is skipped - i.e., the filter criteria is not inspected. However, the matching criteria is inspected. Thus, a directly referenced rate adjustment may not be applicable if, for example, the order date falls outside of the Start/End Date range.

If a directly referenced rate adjustment fails the matching criteria inspection then the discovery process is invoked to find a suitable rate adjustment (if any).

Creating Rate Adjustment Entries

Rate Adjustments are configured in the Rate Adjustments dialog which is accessible from Shipping Connector Setup (General/Rate Adjustments action) or from any page that references a rate adjustment entry.

The Rate Adjustments dialog

SHIPPING CONNECTOR RATE ADJUSTMENTS | WORK DATE: 4/8/2019 ✓ SAVED

Search + New Edit List Delete Sort by Priority Reset Sort Order Page More options

Entry No. ↑	Label	Active	Discoverable	Applies To	Document Type	Shipping Agent Code	Shipping Agent Service Code	Recipient No.	Ship-to Address Code	Start Date	End Date	Threshold Type	Threshold Value	Adjustment Type	Adjustment Value	Additional Fee
→ 1	Basic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All	All							Order\$LT	500.00	Fixed Markup	10.00	0.00
2	Free Freight	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All	All							Order\$GE	500.00	Free Shipping	0.00	0.00

The Rate Adjustments dialog columns are arranged by scope – from broader scope (on the left) to narrower scope (on the right).

Note: The “Entry No.” column is simply an identifier for the record and has no impact on scope. Likewise, the “Label” column also has no impact.

The following describes the rate adjustment fields:

<u>Name</u>	<u>Usage</u>	<u>Description</u>
Entry No.		A unique rule identifier
Label		A user defined description for the rule
Active	Control	When disabled, the rule is ignored
Discoverable	Control	When disabled, the rule does not participate in discovery
Applies To	Filtering	ALL, the rule applies to all Shipment, the rule applies only to shipments Rate Quote, the rule applies only to rate shopping
Document Type	Filtering	?
Shipping Agent Code	Filtering	The rule applies only to rates for the specified carrier
Shipping Agent Service Code	Filtering	The rule applies only to rates for the specified carrier service
Recipient No.	Filtering	The rule applies only to the specified customer or vendor
Ship-to Address Code	Filtering	The rule applies only to the specified Ship-to Address Code or Order Address Code
Thresholding	Matching	The rule applies based on the order amount where: None, the rule applies to orders of any amount Order\$GE, the rule applies to orders whose total value is greater than or equal to the amount specified in the Threshold field. Order\$LT, the rule applies to orders whose total value is less than the amount specified in the Threshold field.
Start Date	Matching	The rule applies if the order date is on or after the Start Date
End Date	Matching	The rules applies if the order date is on or before the End Date
Adjustment Type	Adjustment	Identifies the type of adjustment to perform, one of: None, no rate adjustment will be made Flat Rate, the charge will be set to the Adjustment Value Percent Markup, the charge will be marked up by a percentage Fixed Markup, the charge will be increased by the Adjustment Value Free Shipping, the charge will be set to zero
Adjustment Value	Adjustment	The value to be used in the above formula
Additional Fee	Adjustment	An additional fee to be added to the adjusted charge

Priority Based Ordering

Rules can be created randomly and (by default) are numbered and displayed sequentially. When you have a large number of rules it may be difficult to visualize which rule applies to a given criteria. To facilitate visualization of the scope of the rules you can press the “Sort by Priority” action. This will reorder the rules such that the narrowest scope (highest priority) rule is at the top and the broadest scope rule (lowest priority) is at the bottom. You can then walk the list to find the first rule whose criteria meets the conditions in question. Pressing the “Reset Sort Order” action will clear the sorting.

Rate Adjustment Examples

Add a Handling Fee for all Sales

This is an easy one, create an entry with values:

Applies To = Shipment, Document Type = Sales, Additional Fee = \$5.00

Entry No. ↑	Label	Active	Discoverable	Applies To	Document Type	Shipping Agent Code	Shipping Agent Service Code	Recipient No.	Ship-to Address Code	Start Date	End Date	Threshold Type	Threshold Value	Adjustment Type	Adjustment Value	Additional Fee
3	Handling Fee	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Shipment	Sales							None	0.00	None	0.00	5.00

Then all shipments for sales orders will have \$5.00 added to the shipping charge.

Add a Percentage Markup for all Sales

Similar to the above but use the Adjustment Type/Value fields:

Applies To = Shipment, Document Type = Sales, Adjustment Type = Percent Markup, Adjustment Value = 10%

Entry No. ↑	Label	Active	Discoverable	Applies To	Document Type	Shipping Agent Code	Shipping Agent Service Code	Recipient No.	Ship-to Address Code	Start Date	End Date	Threshold Type	Threshold Value	Adjustment Type	Adjustment Value	Additional Fee
3	Percent Markup	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Shipment	Sales							None	0.00	Percent Markup	10.00	0.00

Discount for Large Orders

Shipping is free when the order amount exceeds \$500

Applies To = Shipment, Document Type = Sales, Threshold Type = Order\$GE, Threshold Value = \$500, Adjustment Type = Free Shipping

Entry No. ↑	Label	Active	Discoverable	Applies To	Document Type	Shipping Agent Code	Shipping Agent Service Code	Recipient No.	Ship-to Address Code	Start Date	End Date	Threshold Type	Threshold Value	Adjustment Type	Adjustment Value	Additional Fee
3	Free Shipping \$500	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Shipment	Sales							Order\$GE	500.00	Free Shipping	0.00	0.00

Free Shipping during Black Friday weekend

Black Friday weekend is 11/29/2019 – 12/01/2019

Applies To = Shipment, Document Type = Sales, Start Date = 11/29/2019, End Date = 12/01/2019, Adjustment Type = Free Shipping

Entry No. ↑	Label	Active	Discoverable	Applies To	Document Type	Shipping Agent Code	Shipping Agent Service Code	Recipient No.	Ship-to Address Code	Start Date	End Date	Threshold Type	Threshold Value	Adjustment Type	Adjustment Value	Additional Fee
3	Black Friday Free	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Shipment	Sales					11/29/2019	12/1/2019	None	0.00	Free Shipping	0.00	0.00

Address Verification

When shipping via UPS or FedEx both carriers may charge a fee when the delivery address is incorrectly specified. The Shipping Connector Address Verification feature can help you avoid such fees.

Address verification is useful if your company ships to new addresses frequently – especially residential addresses. While WS, FSM and Stamps.com have address verification built into their software the Shipping Connector equivalent is well integrated with Business Central and allows you to update the addresses on the order and customer/vendor cards.

The screenshot illustrates the address verification workflow in Business Central. It shows a customer card for '10000 · The Cannon Group PLC' with a 'Verify Address' button highlighted. Below, the original address fields are shown: Address (2281 DEFOOR HILLS RD), Address 2, Country/Region Code (US), City (ATLANTA), State (GA), and ZIP Code (30318). A red arrow points from the 'Verify Address' button to the 'Verify Address' option in the 'Shipping Connector' dropdown menu.

On the right, the 'Address & Contact' section shows the updated address fields: Address (2281 DEFOOR HILLS RD NW), Address 2, Country/Region Code (US), City (ATLANTA), State (GA), and ZIP Code (30318-2203). A red box highlights the 'Address Verification Status' field, which now displays 'Verified, 12/1/2019, USPS/UPS/FEDEX, 81, C061'.

The 'SHIPPING CONNECTOR ADDRESS VERIFICATION' dialog box provides a side-by-side comparison of the original and verified addresses:

ORIGINAL ADDRESS	VERIFIED ADDRESS
Address: 2281 DEFOOR HILLS RD	Address: 2281 DEFOOR HILLS RD NW
Address 2: [Empty]	Address 2: [Empty]
City: ATLANTA	City: ATLANTA
State: GA	State: GA
Zip / Postal Code: 30318	Zip / Postal Code: 30318-2203
Country: US	Country: US
Residential: [Off]	Residential: [Off]
Delivery Point: [Empty]	Delivery Point: 81
Carrier Route: [Empty]	Carrier Route: C061
Verification Status: [Empty]	Verification Status: Verified, 12/1/2019, USPS/UPS/FEDEX...

At the bottom of the dialog, there are 'Address Verification Service Messages' and 'OK' and 'Cancel' buttons.

Address Verification can be invoked from the “Verify Address” action under the Shipping Connector menu on the dialogs that contain addresses used when shipping:

- Customer Card
- Vendor Card
- Location Card
- Ship-to Address Card
- Order Address Card
- Sales Order/Quote
- Purchase Return Order
- Service Order, Service Item Worksheet
- Transfer Order
- Rate Shopping

When an address is verified it may be slightly modified to conform to the carrier address format. For instance, the word “Drive” may be changed to “DR”, etc. It will also be capitalized. The postal code will usually be updated to include the zip+4 value.

The *Verification Status* is displayed below the verified address and displays which carriers have verified it.

It is possible that an address may verify with one carrier but not with others. This is not an unusual situation. Some carriers have different requirements from others or may not even deliver to a specified address. Occasionally (particularly with UPS), an address can be changed slightly and reverified and it will verify. If carriers fail to verify an address, notes will appear in box *Address Verification Service Messages*.

If an address is updated with *Address Verification* on a Sales Order, when leaving the verification screen, a dialog will appear asking the user if they wish to update the Customer Card with the new address information.

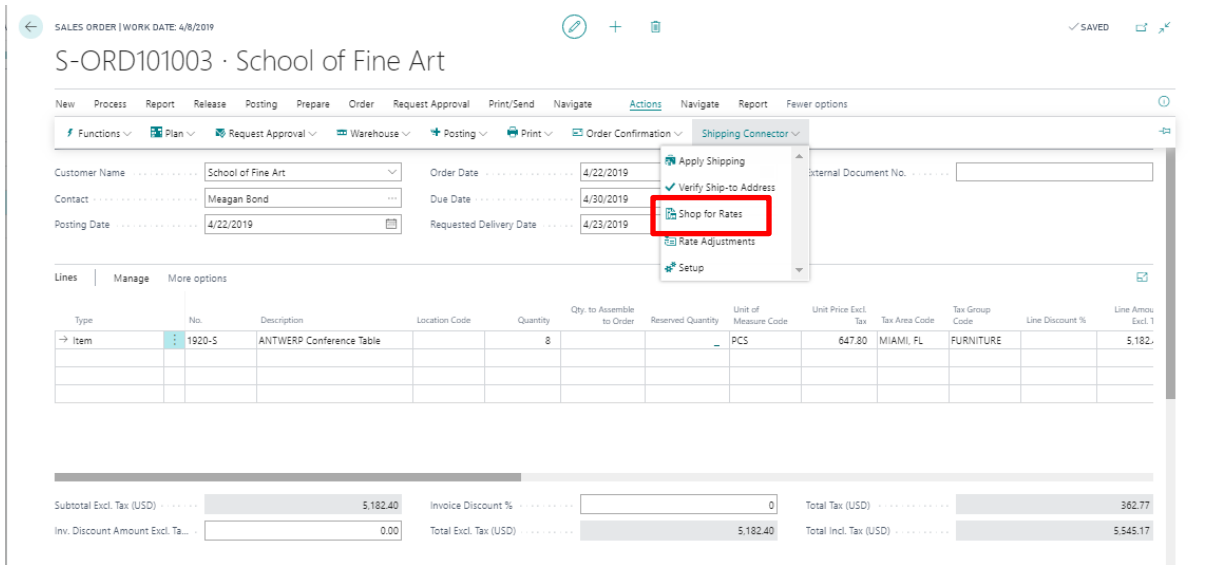
Lastly, if you are unsure as to the exact address, you can click on the hyperlink *Show on Map* to open a Bing/Google maps browser page with a search for the address. That may assist you in determining the correct address.

Rate Shopping

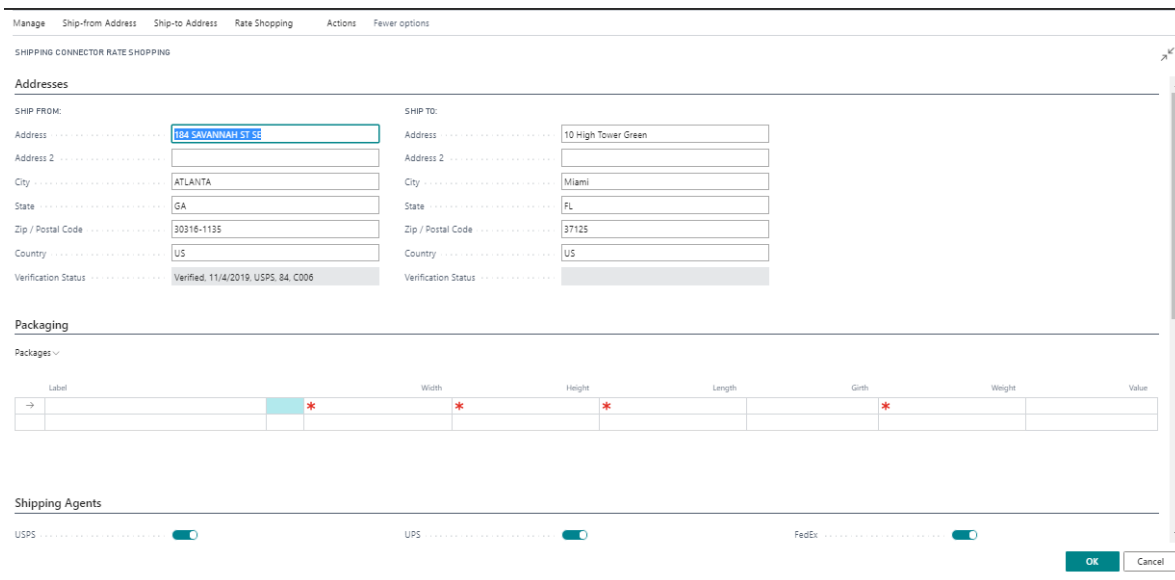
Rate Shopping enables retrieval of shipping rates from the carriers via their web service APIs. To use rate shopping, you must first register for a Web Service Account with each carrier (USPS, UPS, FedEx). Instructions for registration are provided in the [Guides](#) section on the website. You must then configure your account information in the [Setup](#) page.

To receive rates from the carrier web services the following information must be provided: sender account, ship-from address, ship-to address, and package(s) definition. The Rate Shop dialog provides interfaces to manage that information.

To invoke rate shopping for a Sales Order, click on *Actions* → *Shipping Connector* → *Shop for Rates*.



The Rating Shopping dialog will display.



Addresses

The Ship-from Address (origin) and Ship-to Address (destination) are displayed at the top of the dialog. The fields are prepopulated from the information on the Shipping Connector Setup dialog (origin) and the Sales Order (destination). The verification status for each is displayed.

In order to retrieve accurate rates, it is necessary for the origin and destination addresses to be verified by the carrier. If either of the addresses have not been verified you may invoke address verification from the action menu: Ship-from → Verify Address, Ship-to → Verify Address.

The Ship-to Address includes an option to require that the ship-to address verify with the carrier address verification service in order to retrieve rates for that carrier. This option enables you to ensure that you are retrieving accurate rates for the destination provided.

Packages & Package Templates

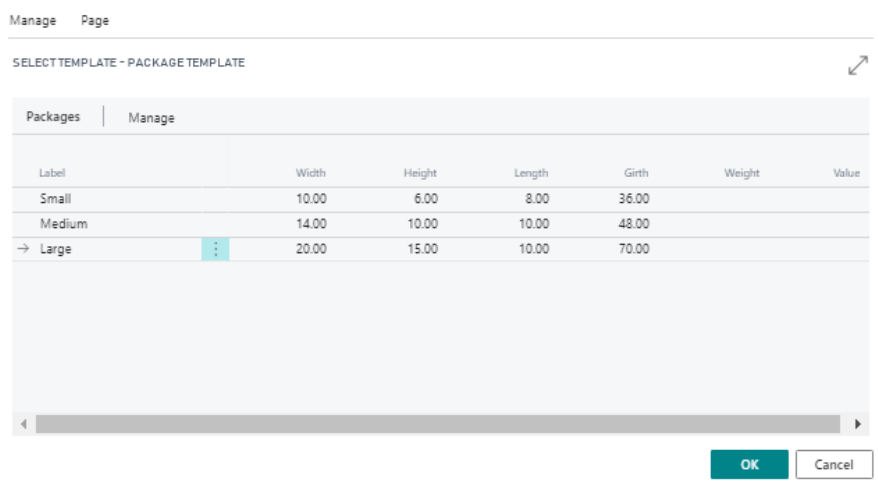
In order to shop for rates, you must define the dimensions and weights of the packages that you are shipping. You do that by adding packages. The Rate Shop dialog has a simple interface for defining packages with dimensions and weights and optionally an insured value.

Packages may be added individually or from saved templates. If you wish to enter the information manually, click on *Add a Package* from the list of actions under the **Package** header or just start entering data into the next available empty line. Enter an identifier in the *Label* field and then enter width, height, and length (inches). Girth is calculated automatically. Enter a weight (ounces) for the package. You may optionally enter a package value if you wish to include insurance in the rate. Repeat the above steps for all packages.

Package Templates

If you repeatedly enter the same package details you may find it more efficient to save the package as a *Package Template*. You may retrieve a package template which will populate a new package line with the details from the template.

To save a package template select a package in the list then select the *Save As Template* action in the *Packages* menu. The Package Template dialog will open allowing you to provide a name for the template.



To retrieve a package template, select the *Add from Template* action in the *Packages* menu. The Package Template dialog will open allowing you to select one or more templates from which to add new packages.

Package Groups

If you find that you repeatedly define the same set of packages you may wish to save that set as a *Package Group*. A package group is a collection of package templates and can be added to an order as a set.

To create a package group, select a set of packages in the list then invoke the *Save as Group* action in the *Packages* menu. The Package Group dialog will display allowing you to define a label for the group.

To add packages from a group, select the *Add from Group* action in the *Packages* menu. The *Packages* dialog will display allowing you to select the group to add.

Shipping Agents

The shipping agents (aka, carriers) from whom rates will be retrieved can be enabled or disabled by toggling them in the Shipping Agents section. The shipping agents available here are those that are enabled in the Setup page.

Rate Filtering

Rate filters provide a way to tailor the display for list of rates that are returned. Rate filters allow you to include or exclude specific shipping agent services for display.

When you exclude a service, it will not display. Exclusion filters are accumulative – i.e., more exclusion filters you define the fewer service rates will be displayed.

When you include a service, it will display (if it was returned). However, when one or more include filters are defined the services that are displayed are only those in the list of include filters. Thus, include filters could be said to be ‘exclusive’ – but that is way too confusing.



Rate Selection

When you have address information, packages and shipping agents defined, can retrieve rates. On the ribbon, click on *Rate Shopping* → *Get Rates*.

When rates are retrieved, they will be listed in the Rate Selection section.

Shipping Agent	Shipping Agent Service	Rate
FEDEX	FEDEX First Overnight	85.19
FEDEX	FEDEX Priority Overnight	44.47
FEDEX	FEDEX Standard Overnight	39.52
FEDEX	FEDEX 2 Day AM	25.46
FEDEX	FEDEX 2 Day	24.07
FEDEX	FEDEX Express Saver	21.98
→ FEDEX	FEDEX Ground	11.14

Applying a Rate

To apply a rate to the sales order, select the rate from the results list by clicking on the desired line. A small arrow will appear in the leftmost column. Click OK and a rate quotation entry will be added to the sales lines.

Note: Rate adjustments (discussed previously), if any, will be applied to the rate before the new sales line is created.

Server Messages

Any information or error messages returned from the carrier web service will be displayed in the Server Messages tab. The tab title will turn red when message have been received.

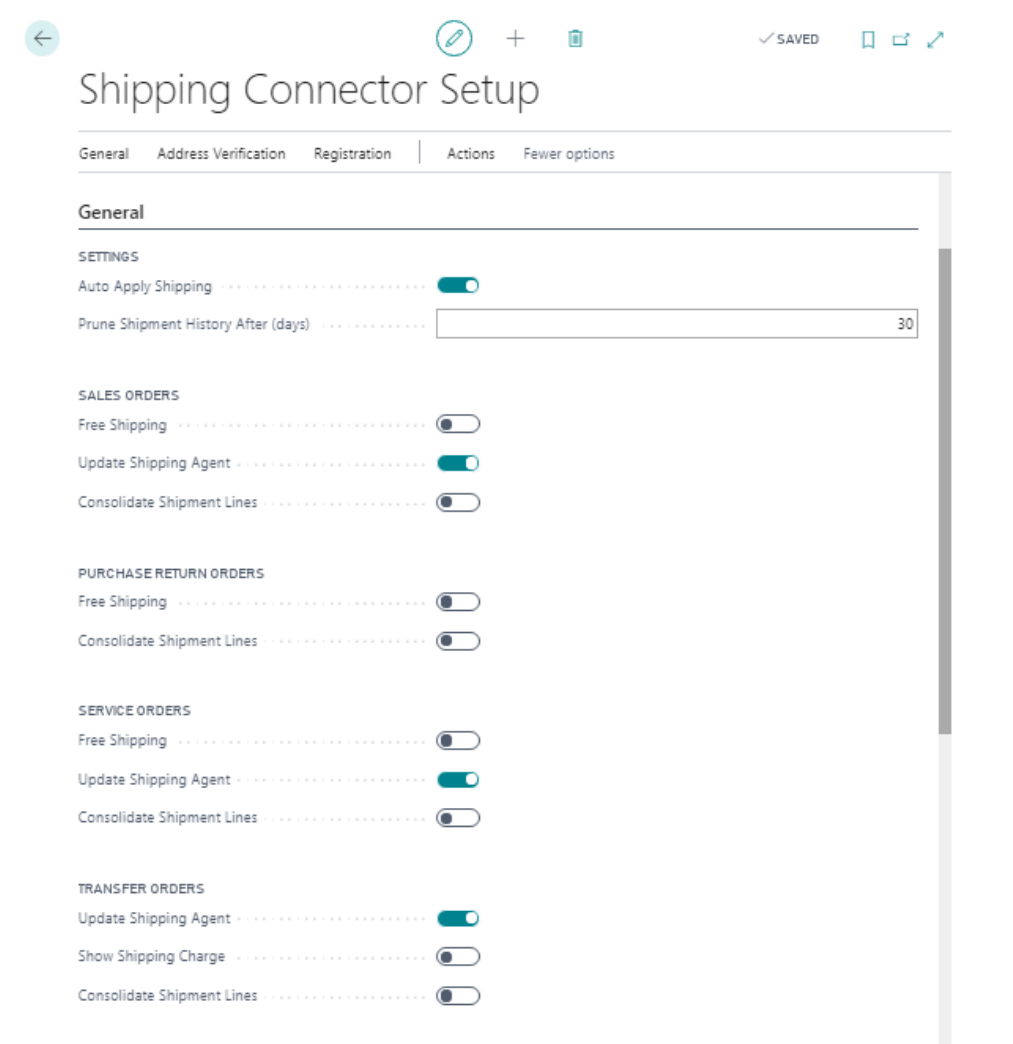
Apply Shipping to a Sales Order with an existing Rate Quotation

If you apply an actual shipment to a sales order that contains a rate quotation Shipping Connector will not modify the quoted rate, it will set the package tracking number on the rate quotation line and add the shipping details information lines. (Since updating the quoted rate would invalidate any credit authorizations already established for the order).

Shipping Connector Setup Page

The Shipping Connector Setup page exposes options that globally affect the behavior of Shipping Connector. Those options are described below.

General



Auto Apply Shipping: When enabled, shipment details will automatically populate onto the Business Central order when the shipment information is imported from the carrier software. Clicking the *Apply Shipping* action on the page is not necessary. Note: If an order is on screen when shipment details are imported and *Auto Apply Shipping* is enabled then it will be necessary to refresh the page (F5) to see the changes.

Prune Shipment History After (days): After applying shipment details to an order the Imported shipment record is preserved for a period of time for historical record. That interval is defined by this field. Processed shipment records aging beyond the defined period will be removed.

Sales Orders - Free Shipping: If enabled, shipping charges will not be added to Sales Orders.

Sales Orders - Update Shipping Agent: If enabled, the Shipping Agent Code and Shipping Agent Service Code fields on the sales order will be updated based on the shipment details returned by the carrier software. If you wish to retain the original field values unset this option. This option does not affect the informational lines added to the order.

Sales Orders - Consolidate Shipment Lines: If enabled, only the shipment charge line will be added to the order lines. Otherwise, shipment information lines containing the package tracking number, shipment date and carrier service type will be added.

Purchase Returns - Free Shipping: If enabled, shipping charges will not be added to Purchase Return Orders.

Purchase Returns - Consolidate Shipment Lines: If enabled, only the shipment charge line will be added to the order lines. Otherwise, shipment information lines containing the package tracking number, shipment date and carrier service type will be added.

Service Orders, Transfer Orders

The functions for Service Order and Transfer Orders are identical to those for the Sales Order. Note that when using Transfer Orders, shipping charges will never be injected.

Numbering

The screenshot shows the 'Shipping Connector Setup' interface with the 'Numbering' tab selected. The configuration is organized into three sections: SALES ORDERS, PURCHASE RETURN ORDERS, and SERVICE ORDERS. Each section has three dropdown menus for 'Shipping Charges Type', 'Shipping Charges No.', and 'Shipping Tax Group Code'. In the SALES ORDERS section, the values are G/L Account, 40100, and NONTAXABLE respectively. In the PURCHASE RETURN ORDERS and SERVICE ORDERS sections, the 'Shipping Charges Type' is set to G/L Account, while the other two fields are empty.

Sales Orders - Shipping Charge Type: Specifies the type of entry to use when adding a shipping charge to a Sales Order. Possible values are: G/L Account, Resource, Charge (Item).

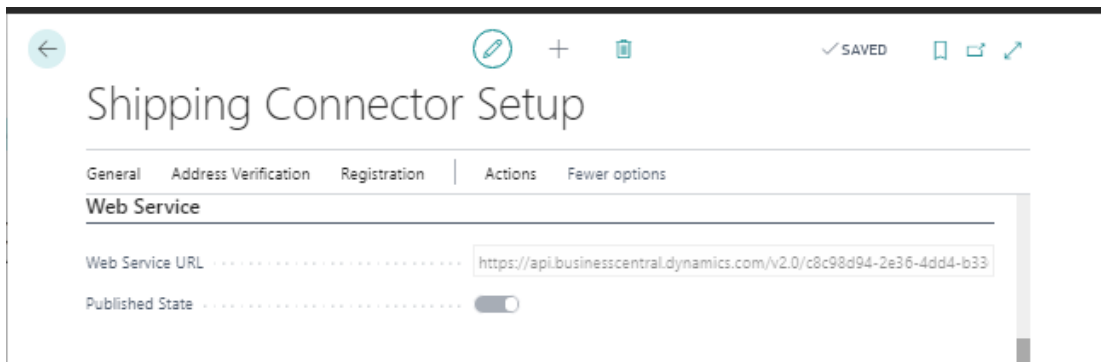
Sales Orders - Shipping Charge No.: Identifies the charge entity to use when adding a shipping charge to a Sales Order. The entity type is dependent upon the previous field value.

Sales Orders - Tax Group Code: Specifies the Tax Group Code to use when a shipping charge is added to a Sales Order.

Purchase Return Orders, Service Orders

The functions for Purchase Return Orders and Service Orders are the same as those for Sales Orders. Since no shipping charges are entered for Transfer Orders, no definitions are necessary.

Web Services



The screenshot shows the 'Shipping Connector Setup' dialog with the 'Web Service' tab selected. The 'Web Service URL' field contains the text 'https://api.businesscentral.dynamics.com/v2.0/c8c98d94-2e36-4dd4-b33'. The 'Published State' is currently turned off.

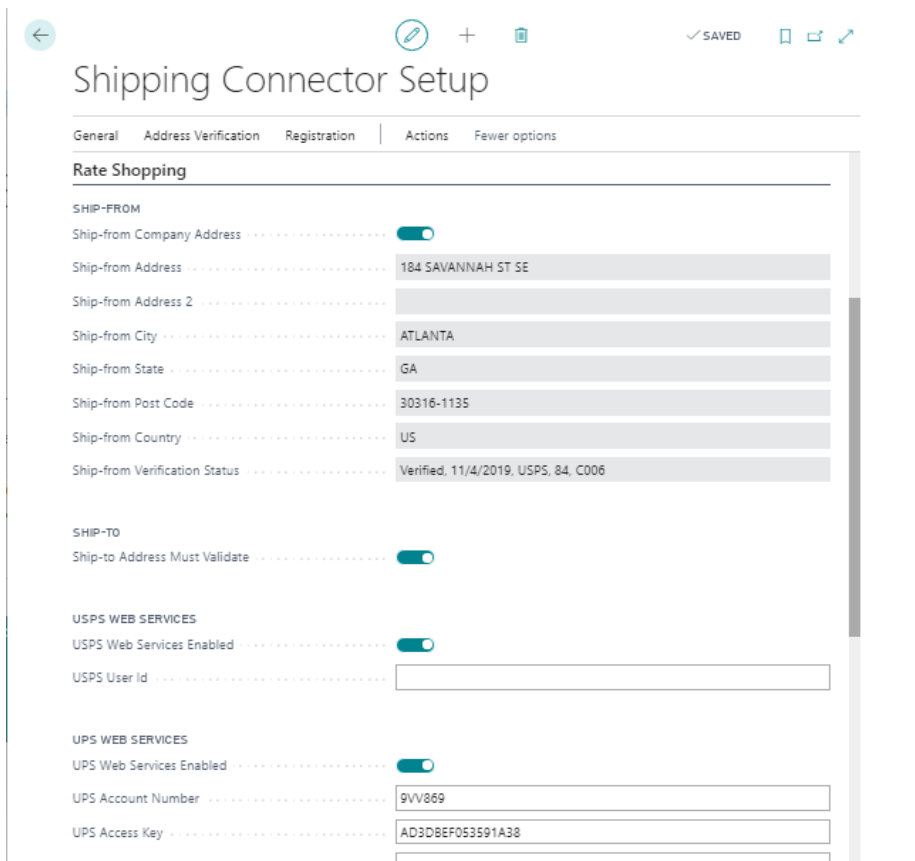
Field	Value
Web Service URL	https://api.businesscentral.dynamics.com/v2.0/c8c98d94-2e36-4dd4-b33
Published State	Off

Web Service URL: Displays the URL for the Shipping Connector Web Service. This value is used during configuration of the Shipping Connector Workstation application.

Published State: Displays the published state of the Shipping Connector Web Service. The Shipping Connector Web Service Published State must be “On” in order for data exchange to function properly. The Published State can be toggled in the Web Services Management dialog.

Rate Shopping

If Rate Shopping has been purchased, this section will be editable and must be configured.



The screenshot shows the 'Shipping Connector Setup' dialog with the 'Rate Shopping' tab selected. It contains configuration options for 'SHIP-FROM', 'SHIP-TO', 'USPS WEB SERVICES', and 'UPS WEB SERVICES'.

Section	Field	Value
SHIP-FROM	Ship-from Company Address	On
	Ship-from Address	184 SAVANNAH ST SE
	Ship-from Address 2	
	Ship-from City	ATLANTA
	Ship-from State	GA
	Ship-from Post Code	30316-1135
	Ship-from Country	US
	Ship-from Verification Status	Verified, 11/4/2019, USPS, 84, C006
SHIP-TO	Ship-to Address Must Validate	On
	USPS WEB SERVICES	
USPS WEB SERVICES	USPS Web Services Enabled	On
	USPS User Id	
UPS WEB SERVICES	UPS Web Services Enabled	On
	UPS Account Number	9VV869
	UPS Access Key	AD3DBEF053591A38

FEDEX WEB SERVICES	
FedEx Web Services Enabled	<input checked="" type="checkbox"/>
FedEx Account Number	757783304
FedEx Meter Number	110038389
FedEx Key	tqhOjNapchVooya
FedEx Password	sG9APIFwEjPjbVdF1QtmVMZg

Ship-From Company: If enabled, the address information from the *Company Information dialog* will be populated into the *Ship-From Address* fields in the Rate Shopping section.

Ship-From Address fields: Defines the originating address to be used when requesting rates from the carriers.

Ship-From Verification Status: Displays the verification status for the Ship-From Address.

Ship-To Address Must Verify: If enabled, requires that the destination address for rate requests MUST be verified by the carrier in order for rates to be returned. This option enforces the strict condition that all destination addresses must be recognized by the carrier.

USPS Web Services Enabled: If enabled, USPS rates will be returned during rate shopping.

Note: USPS Web Services are always invoked during Address Verification.

USPS User Id: USPS Web Services account User Id. Required for access to USPS Web Services.

Note: Please see the [USPS Web Services Account Setup Guide](#) for account setup details

UPS Web Services Enabled: If enabled, UPS Web Services will be used when performing Address Verification or Rate Shopping.

UPS Account Information: Account details for the UPS Web Services account to be used.

Note: Please see the [UPS Web Services Account Setup Guide](#) for account setup details

FedEx Web Services Enabled: If enabled, FedEx Web Services will be used when performing Address Verification or Rate Shopping.

FedEx Account Information: Account details for the FedEx Web Services account to be used.

Note: Please see the [FedEx Web Services Account Setup Guide](#) for account setup details

Address Verification

The screenshot shows the 'Shipping Connector Setup' interface. At the top, there are navigation icons: a back arrow, a pencil (edit), a plus sign, a trash can, a checkmark with 'SAVED', and a refresh icon. The title 'Shipping Connector Setup' is prominently displayed. Below the title is a horizontal menu with tabs: 'General', 'Address Verification' (selected), 'Registration', 'Actions', and 'Fewer options'. The main content area is divided into sections: 'Numbering >' with three 'G/L Account' buttons; 'Web Service >' with a 'Yes' button; 'Rate Shopping >' with three 'Yes' buttons; 'Address Verification' which is further divided into 'SALES ORDERS' and 'PURCHASE RETURN ORDERS'. Under 'SALES ORDERS', there are two toggle switches: 'Update the Customer Card' and 'Warn on Release', both currently turned off. Under 'PURCHASE RETURN ORDERS', there are two toggle switches: 'Update the Vendor Card' and 'Warn on Release', both currently turned off. At the bottom, under 'MAPS', there is a dropdown menu for 'Display on map using' with 'Bing' selected.

Sales Orders – Update the Customer Card: If enabled, when validated address information is updated on a Sales Order it will also be updated on the associated Sell-to Customer Card. If not enabled, a dialog will display to request if the Sell-to Customer Card should also be updated.

Sales Orders – Warn on Release: If enabled, a warning dialog will display when a Sales Order is Released with an unverified Ship-to Address.

Purchase Return Orders – Update the Vendor Card: If enabled, when validated address information is updated on a Purchase Return Order it will also be updated on the associated Buy-from Vendor Card. If not enabled, a dialog will display to request if the Buy-from Vendor Card should also be updated.

Purchase Return – Warn on Release: If enabled, a warning dialog will display when a Purchase Return Order is Released with an unverified Ship-to Address.

Maps – Display on Map Using: On the Address Validation dialog there is function to open a map web page to view an address. This field allows you to choose whether to use Bing or Google for map display.

Email and Email Message

Shipping Connector provides an option to deliver email notification to the shipping recipient. The settings in this section control the behavior of that feature.

The screenshot displays the 'Shipping Connector Setup' interface. At the top, there are navigation tabs: 'General', 'Address Verification', 'Registration', 'Actions', and 'Fewer options'. The 'E-Mail' section is currently active. It contains several settings:

- Rate Shopping >**: Three 'Yes' buttons.
- Address Verification >**: Five buttons labeled 'No', 'No', 'No', 'No', and 'Bing'.
- E-Mail**:
 - Cc to Sender when e-mail sent**: A toggle switch that is turned on.
 - Show e-mail confirmation**: A toggle switch that is turned on.
 - Send confirmation for Sales Orders**: A dropdown menu set to 'Never'.
 - Send confirmation for Purchase Return Orders**: A dropdown menu set to 'Never'.
 - Send confirmation for Service Orders**: A dropdown menu set to 'Never'.
 - Send confirmation for Transfer Orders**: A dropdown menu set to 'Never'.
- E-Mail Message**:
 - Message Type**: A dropdown menu set to 'Sales Order'.
 - Language Code**: A dropdown menu set to 'ENU'.
 - Subject Line**: An empty text input field.
 - Message Body**: An empty text area.

At the bottom of the visible area, there is a partially visible section for 'Package Tracking & Notification >'.

Cc to Sender when e-mail sent: If enabled, when an email notification is sent include the sender on the Cc list.

Show e-mail confirmation: If enabled, a confirmation dialog will display when notifications are sent.

Send confirmation for Sales Orders: This field controls when an email notification will be sent for sales orders. The choices are *Never* or *When Shipped* (when the the sales order has been posted for shipment).

Send confirmation for Purchase Return Orders

Send confirmation for Service Orders

Send confirmation Transfer Orders: Functions identically as with the above setting for Sales Orders.

Message Type: Users may set up different email messages for the four different documents that can be used with the Shipping Connector:

- Sales Orders
- Purchase Return Orders
- Service Orders
- Transfer Orders

Language Code: Messages may be configured in multiple languages. The language code of the recipient (customer or vendor) will be used when sending a notification. (The language code is defined in the *Address & Contact* section of the Customer/Vendor Card)

Subject Line: The subject line for the email notification.

Message Body: The message body for the email notification.

Note: Both the Subject Line and Message Body support a form of “mail merge” called “token replacement”. Please refer to the [online help page](#) for a description of token replacement

Package Tracking & Notification

The screenshot shows a dialog box titled "Package Tracking & Notification". It contains three sections for different carriers:

- USPS:** A text field for "USPS Package Tracking URL" containing the URL: `!!!http://trkcnfrm1.smi.usps.com/PTSIInternetWeb/InterLabelInquiry.do?or`
- UPS:** A text field for "UPS Package Tracking URL" containing the URL: `http://wwwapps.ups.com/WebTracking/processRequest?tracknum=%1`. Below it is a toggle switch for "UPS Quantum View Notify" which is currently turned off.
- FEDEX:** A text field for "FedEx Package Tracking URL" containing the URL: `http://www.fedex.com/Tracking?action=track&tracknumbers=%1`. Below it is a toggle switch for "FedEx ShipAlert Notify" which is currently turned off.

USPS Package Tracking URL: URL for USPS package tracking

UPS Package Tracking URL: URL for UPS package tracking

UPS Quantum View Notify: If enabled, UPS Quantum View will be invoked to send package delivery notification to the recipient.

FEDEX Package Tracking URL: URL for FedEx package tracking

FEDEX Ship Alert Notify: If enabled, FedEx Ship Alert will be invoked to send package delivery notification to the recipient.

Note: The package tracking URLs are used during token replacement for the “TRACKINGURL” token. If the URLs are left blank (empty) in the Setup dialog then the following default tracking URL will be used:

<https://google.com/search?q=%1>

where %1 will be replaced with the package tracking number

Installation and Configuration

Install the Shipping Connector extension application

Shipping Connector is available from Microsoft AppSource or, for on-prem users, you can download a runtime installer package from our website at <https://shippingconnector365.com/download>.

Installing Shipping Connector (SaaS)

Shipping Connector for Business Central SaaS is available from AppSource.

Install Shipping Connector by opening its listing in AppSource ([Microsoft AppSource – Shipping Connector](#)) and clicking the Free Trial link.

Installing Shipping Connector (OnPrem)

Shipping Connector for Business Central OnPrem is available from the [download page](#) on the website.

Steps to install Shipping Connector for OnPrem (BC17 or later):

1. Open the Extensions Management page
2. Upload the runtime installer package (Manage/Upload Extension)
3. Install the extension application (Manage/Install)

Steps to install Shipping Connector for OnPrem (Powershell):

1. Publish the runtime installer package
Publish-NavApp -ServerInstance BC -Path "path\to\runtime_package.app"
2. Install the extension application
Install-NavApp -ServerInstance BC -Name "Shipping Connector"

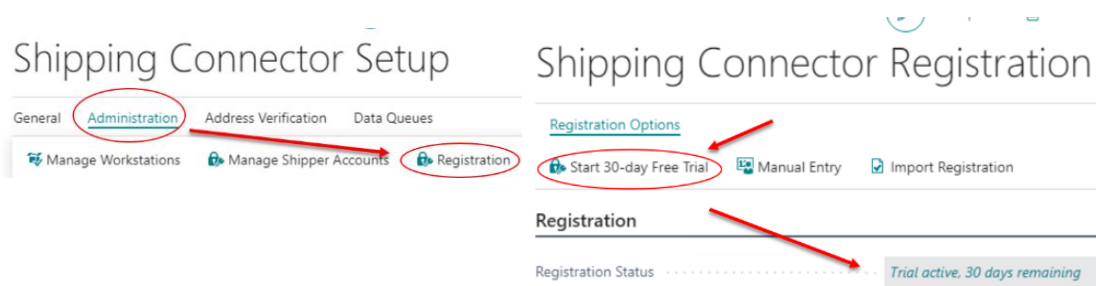
Steps to upgrade Shipping Connector for OnPrem (Powershell):

1. Publish the updated runtime installer package
Publish-NavApp -ServerInstance BC -Path "path\to\updated_runtime_package.app"
2. Synchronize to the updated extension application schema
Sync-NAVApp -ServerInstance BC -Name "Shipping Connector" -Version <new version>
3. Run data upgrade
Start-NAVAppDataUpgrade -ServerInstance BC -Name "Shipping Connector" -Version <new version>

Start a Free Trial

If installing for the first time, after installation you will need to start a 30-day free trial to obtain a registration:

- Open the Shipping Connector Setup page (type 'Shipping Connector Setup' in the Search box).
- Click on the Administration/Registration option to open the Registration page
- Select the Registration Options menu then select "Start 30-day Free Trial"



Transfer a Registration from another installation

If you are installing Shipping Connector into a second or third Business Central company then you can transfer the registration from a previously installed (and registered) company.

To do so follow these steps:

- Open the Business Central company where you have previously registered Shipping Connector
- Open the Shipping Connector Setup page (type 'Shipping Connector Setup' in the Search box).
- Click on the Administration/Registration option to open the Registration page
- Copy the "Customer Key" and the "Instance Key"
You will use it in the next step
- Open the Business Central company with the new Shipping Connector installation
- Open the Shipping Connector Setup page (type 'Shipping Connector Setup' in the Search box).
- Click on the Administration/Registration option to open the Registration page
- Select the Registration Options menu then select "Manual Entry"
If a confirmation dialog appears, confirm that you wish to change the registration settings.
- Select the Registration Options menu then select "Import Registration"
- Enter the "Customer Key" value previously copied into the "Customer Key" field
- Enter the "Instance Key" value previously copied into the "Registered Instance Key" field
- Refresh the registration by selecting the "Check for Updates" option in the Registration menu

Shipping Connector will retrieve the registration and add the new "Instance Key" to it.

Note: A single Shipping Connector registration (without the Premium option) is limited to a total of three instances. If that limit is exceeded, then a registration error will occur. If you need to remove unused instances from your registration you may do so by logging into your customer account on the Shipping Connector website. Please contact us should you encounter any difficulties.

Web Service Authentication - Web Service Access Keys vs. OAuth 2.0

Shipping Connector uses a Business Central hosted web service to exchange data with its counterpart, the Shipping Connector Workstation application (a.k.a. Workstation). To communicate with the Business Central hosted web service Workstation must authenticate itself.

Business Central supports two methods for authenticating with web services:

1. Username/Password (a.k.a., **Credential**) authentication supporting Web Service Access Keys
2. Arbitrated authentication employing the OAuth 2.0 authentication protocol (a.k.a., **OAuth2**)

Credential authentication is supported by:

- Business Central SaaS v18 or earlier
- Business Central On-Prem all versions

OAuth2 authentication is supported by:

- Business Central SaaS v17, v18 (optional)
- Business Central SaaS v19 or later (mandatory)
- Business Central On-Prem v17 or later (optional)

To use Shipping Connector with Business Central Web Service OAuth2 authentication additional configuration in the Azure Active Directory console is required. Please see the guide [Shipping Connector OAuth2 Configuration](#) for step-by-step details.

Configure a Web Service Access Key (Business Central version 18 or earlier)

Note: Skip this step if using Business Central v19 or later, or OAuth2 in Business Central v17 or later.

The Shipping Connector Workstation application (which is installed and run on the shipping workstation - we'll get to that below) communicates with Shipping Connector in Business Central via the Shipping Connector Web Service. To access the web service Business Central supports use of a Web Service Access Key. (Complete details are available [here](#)). For the purpose of this guide we'll give the condensed version – follow these steps:

In Dynamics 365 Business Central:

- Choose the Lightbulb (Search) icon, enter **Users**, choose the related link, and then open the user account that you want to edit.
- In the **Web Service Access** section, select the **Web Service Access Key** field.
- In the **Set the Web Service Access Key** window, select the **Key Never Expires** check box.
- Choose the OK button.
- The access key is automatically generated and appears in the **Web Service Access Key** field.
- Copy the key from the field, we will need the key in a later step.

Configure Shipping Connector Setup (for Sales Order shipping)

Next, you will need to configure a few options such that Shipping Connector knows how to place shipping charges onto an order. We will describe the options for Sales Orders. The complete description of all options on the Shipping Connector Setup page is found in the online help [here](#). For the purpose of this section we will keep it concise.

- Open the Shipping Connector Setup page (type 'Shipping Connector Setup' in the Search box)
- Scroll down to the "Numbering" fast-tab
- Set "Shipping Charges Type" to "G/L Account"
- Set "Shipping Charges No." to "40200" (or select an appropriate G/L income account)
- Set "Tax Group Code" to "NONTAXABLE" (or select an appropriate tax group code)

The screenshot shows the 'Shipping Connector Setup' page. At the top, there are navigation icons (back, edit, add, delete) and a 'SAVED' status. Below the title, there are tabs for 'General', 'Address Verification', 'Registration', and 'More options'. The 'Registration' tab is active, showing version '2.70.1.0', 'Trial active, 30 days remaining', and '8B227012'. Below this is the 'General' section with three 'No' buttons. The 'Numbering' section is expanded to show 'SALES ORDERS' settings: 'Shipping Charges Type' is set to 'G/L Account', 'Shipping Charges No.' is set to '40200', and 'Tax Group Code (Shipping)' is set to 'NONTAXABLE'.

While we're on this page let's also copy & save the Shipping Connector Web Services URL – we'll need it when we configure Shipping Connector Workstation in a later step.

- Scroll down to the "Web Service" fast-tab
- Copy the Web Service URL (double click to select all, then right-click and select Copy)

Save that value for the next step

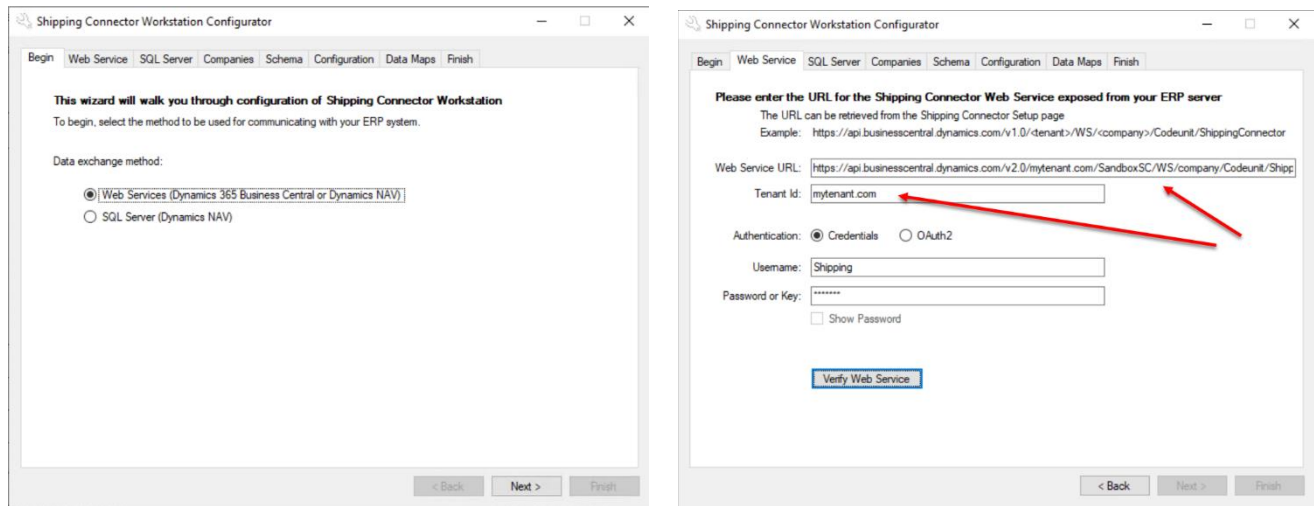
Web Service	
Web Service URL	https://api.businesscentral.dynamics.com/v1.0/c8c98d94-2e36-4dd4-b336
Published	<input type="checkbox"/>

Shipping Connector Workstation Installation and Configuration

The Shipping Connector Workstation application must be installed on each computer where UPS WorldShip, FedEx Ship Manager (or other shipping software) is installed. The Shipping Connector Workstation application manages information exchange between the shipping software and the Business Central server.

- Download the application installer from <https://shippingconnector365.com/download>.
Note: After downloading, make sure to “unblock” the file:
 - o right-click on the file, select “Properties”
 - o check the “Unblock” checkbox if it appears at the bottom of the dialog
 - o select OK to close the Properties dialog
- Run the Shipping Connector Workstation installer
(choose the option to run the configuration utility when setup completes)

When the Shipping Connector Workstation Configuration wizard appears, we’ll use it to setup a connection to the Business Central server.



- In the Configurator select **Web Services** for the data exchange method
- Select **Next** to move to the **Web Services** tab
- Paste the URL you saved in the previous step into the **Web Services URL** field
Verify the **Tenant Id** (this value may be a domain name or Guid).

Using a Password or Web Service Access Key

- Select the **Credentials** authentication method
- Enter the Business Central **Username** (do not include a domain name) for the account that Workstation will use when connecting to the web service.
- Enter the **Password** or **Web Services Access Key** for the account.

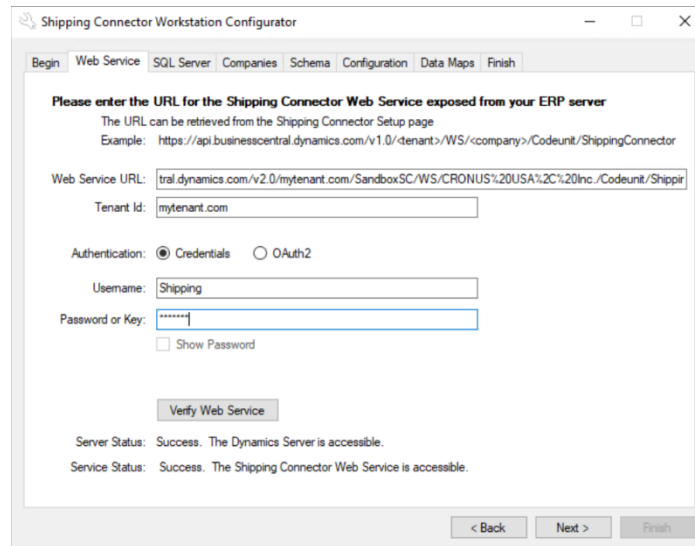
Using OAuth 2.0

- Select the **OAuth2** authentication method
- Select the appropriate hosting option for your environment
If using Business Central SaaS the **Aad App Id** field will auto-fill.
If using Business Central OnPrem then you must enter the **Aad App Id** value (Guid) for the Business Central registered app in you Azure Active Directory tenant. Please see the guide “Shipping Connector OAuth2 Configuration” for details.

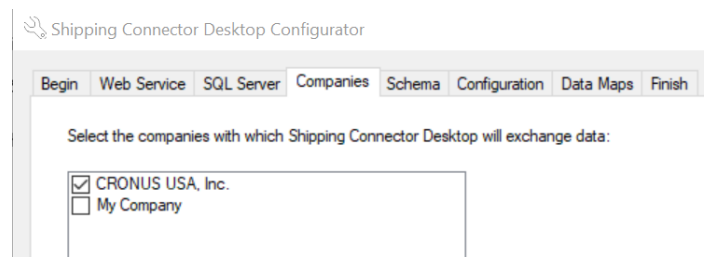
- Press the **Verify Web Service** button

Successful verification will be indicated, and you will then be able to move to the next tab.

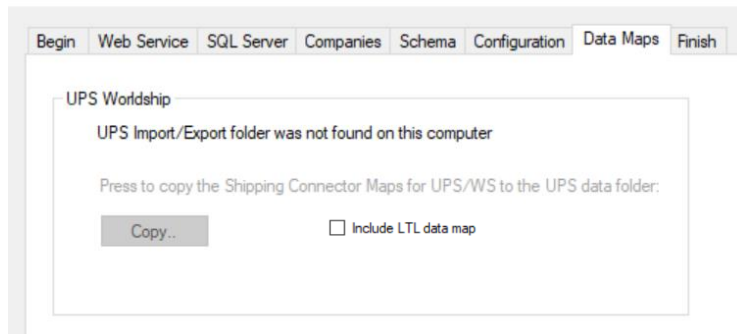
Note: The 'SQL Server' tab is present but is not used with Dynamics 365 Business Central. Shipping Connector has been around since Dynamics NAV v3.7 (back then it was called Microsoft Business Solutions Navision). The SQL Server data exchange option is used for that environment.



- Press the **Next** button to move to the **Companies** tab
- Select the companies with which you would like to exchange data



- Press the **Next** button to move to the **Schema** tab
The **Schema** tab is for informational purpose only – no changes can be made
- Press the **Next** button to move to the **Configuration** tab
The Shipping Connector Workstation configuration will be saved, confirmation will be displayed
- Press the **Next** button to move to the **Data Maps** tab
- If you will use UPS LTL freight services, select the “Include LTL data map” option
- Press the **Copy** button in the UPS WorldShip area
This will copy the import/export maps into the UPS WorldShip configuration




Note: UPS WorldShip can be configured in client/server mode. If installing into a UPS client/server environment the map configuration must be performed on the UPS server workstation.

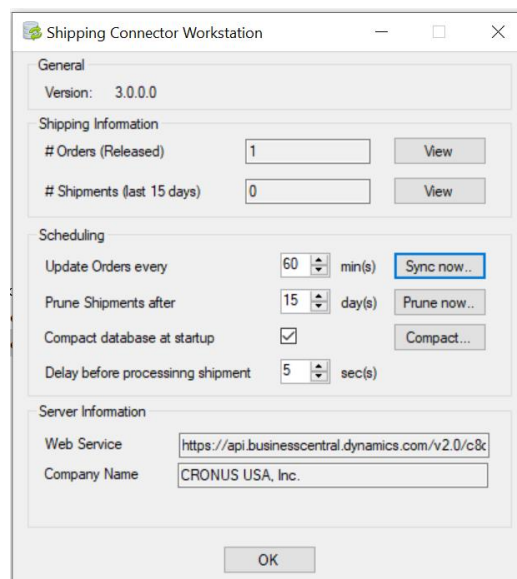
Perform similar configuration for FedEx/Ship Manager and USPS/Stamps.com.

- Press the **Next** button to move to the **Finish** tab
- Select the startup options
- Press the **Finish** button - Shipping Connector Workstation will display in the System Tray




The Shipping Connector Workstation Settings Dialog

When Shipping Connector Workstation is running its icon will appear in the tray . Double clicking on this icon will open the Shipping Connector Workstation Settings Dialog. Here you can configure a few parameters that affect the application behavior as follows.



Shipping Information / # Orders (Released) – this field displays the number of orders that have been retrieved from Business Central and are available to ship. Press the *View* button to view the list of orders.

Shipping Information / # Shipments (last 30 days) – this field displays the number of shipments received from the shipping software during the last N days. Press the *View* button to view the list of shipments.

Scheduling / "Update Orders every ..." - allows you to configure the frequency that Shipping Connector Workstation will poll for newly released orders in Business Central. The default setting is every 60 minutes but may be set for any desired frequency. Remember that this function will use system resources and shouldn't be set more frequently than necessary. A manual "synch" (poll) may be performed at any time, if necessary, by right-clicking on the icon in the tray  and selecting *Synchronize* or by holding the CTRL key while left clicking on the Shipping Connector tray icon.

Scheduling / "Prune Shipments after ..." - allows you to configure how long the Shipping Connector database will retain local records of processed shipments. The default setting will prune (delete) data after 15 days. This is done to prevent the local database from growing too large. There is really no reason to store this data after it has been processed except to visually inspect history of orders or shipments.

Scheduling / "Compact database at startup" - when enabled Shipping Connector will compact the local database each time it starts up. The default is enabled and is recommended.

Scheduling / "Delay before processing shipment" ... is the number of seconds Shipping Connector will wait after a shipment has been processed in the carrier software before it takes action to relay the shipment data to Business Central. This delay is necessary because it may take a bit of time for the carrier software to complete the shipment transaction. The default setting, 5 seconds, which is generally sufficient. The icon in the tray will flash green when data is being transacted and will return to the idle state when complete.

"Server Information / Web Service" – displays the URL used to connect to the Shipping Connector Web Service in Business Central.

"Server Information / Company Name" – display the name of the company enabled for data exchange.

--- End of Document ---