

OMS: Distributed Order Management (DOM)



The process and activities associated with sourcing a sales channel order via one or more order fulfillment models

- DOM01: Manual Sales Order Entry
- DOM02: Pending Sales Order Processing
- DOM03: Sales Order Action Rules
- DOM04: Cartonization of Sales Order
- DOM05: Initial Order Fulfillment Decision
- DOM06: Update Order Fulfillment Decision
- DOM07: Edit Sales Order
- DOM08: Duplicate Sales Order

DOM01: Manual Sales Order Entry

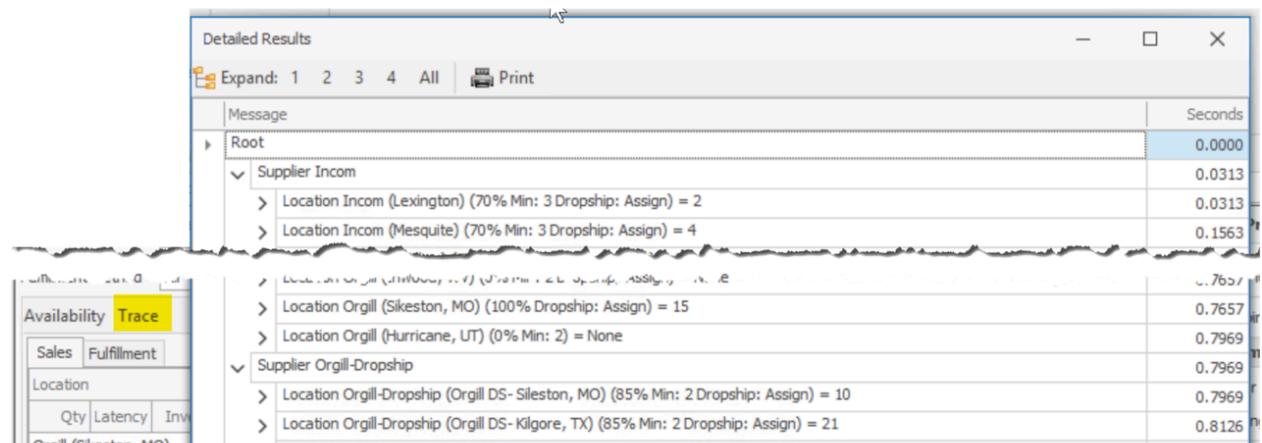
To Be Added

DOM02: Pending Sales Order Processing

Pending Sales Order Processing

When a sales order is created on a sales channel, it may not yet be in a state where it can be released for fulfillment; typically, this could be due to

awaiting payment or fraud clearance. As this can take multiple hours or even a day or two, this 'Demand' must be considered in the available-to-sale quantity. Therefore, these sales orders are downloaded as



DOM03: Sales Order Action Rules

Order Actions

The order action function allows you to set up one or more rules that evaluate a new sales order to see if any special actions need to be performed before processing. The rules can be evaluated Pre or Post Fulfillment decisions.

Pre-fulfillment rules have these selection criteria and can perform one or more of these actions:

- Create an Issue
- Set fulfillment service level
- Set an Internal Order Note
- Set a Sales Order Note

Post Fulfillment rules have more selection criteria options but cannot change the fulfillment service level

Address Type
Address State
Address Postal Code
Address Country
Weight
Dimension
Total Line Item
Shipping Service Level
Sold on Sales Channel
Total Amount
Master Sku
Quantity of Items
Order Option
Order Item Option

Order Selection Edit

Name: (new) Enabled Priority: 0

Action Timing: Pre-Fulfillment Post-Fulfillment

When This Happens:

- When ANY of these conditions are met When ALL of these conditions are met
- Add...

Do The Following:

- Don't change the order status Put the Order on Hold Cancel the Order
- Create an Issue of Type:
- Set Fulfillment Service Level:
- Set Internal Order Note:
- Set Sales Order Note:

Data changed. Save required. FormID: OSR002

Address Type
Address State
Address Postal Code
Address Country
Weight
Dimension
Total Line Item
Shipping Service Level
Sold on Sales Channel
Total Amount
Master Sku
Quantity of Items
Order Option
Order Item Option
Channel
Fulfillment Channel
Fulfillment Method
Fulfillment Distance
Fulfillment Location
Cross-Dock Source Location

Order Selection Edit

Name: (new) Enabled Priority: 0

Action Timing: Pre-Fulfillment Post-Fulfillment

DOM04: Cartonization of Sales Order

Cartonization of Sales Order

As a sales order can contain multiple quantities of the same item or multiple different items, the overall size of the order cannot just be the combined dimensions and weight of all the items; therefore, the EVP solutions support the concept of cartonization based on two different models:

- **Virtual Container** – this is the default method where the EVP solution will sum all the weights of the items in the order and then uses the dimensions of the item in the sales order to create a single virtual container for the order that will be used when looking up shipping cost for the order. This approach is acceptable for most sales orders, and any exception will be handled at the shipment manifesting station where a sales order can be associated with a specific package type
- **Recommended Container(s)** – this more advanced option will take the sales orders items and try to fit them into the smallest number of package types (associated with a fulfillment channel location). This will use a combination of item volume and maximum dimension, starting with the smallest container and working towards the largest container until all the items in the sales order fit or another

DOM05: Initial Order Fulfillment Decision

Initial Order Fulfillment Decision

Once a sales order is loaded that can be released to order processing, the ‘Initial Order Fulfillment Decision’ function is called to select the best ‘Landed Cost’ fulfillment decision based on the Ship-To Address on the Sales Order. This decision will be considered the following:

- Geolocated Order Fulfillment Location Model
 - Shipping Service Levels
 - Shipping Cost Models
- Using this configuration data and sales order information, the EVP solution performs detailed business rules-

Detailed Results	
	Seconds
Expand: 1 2 3 4 All	
Print	
Message	
Root	0.0000
Calculate Solutions	0.0000
> Find Availability	0.0000
> Build solutions	0.0469
Check for solutions below best complete tier of 1 - none	0.0469
Calculate shipping cost = 6.83 to 11.98	0.0469
Find best solution	0.7970
8 Solutions found	0.7970
> Selected solution	0.7970
> Other solutions	0.7970
Assign to line items	0.7970
> Line: 1) 1 EACH of IN-703316	0.7970
3/3/2020 3:18 PM	Initial Fulfillment Assignment - Success (pmx.service)

based decisions on how best to fulfill the order, then assign the selected fulfillment method and hold code as needed. Note while the goal is to process a single sales order in a single shipment, it is possible that it could be split into multiple shipments, i.e., sales order has one item that is stocked and another

that is drop shipped. It is possible to review the decision tree associated with this order fulfillment decision on the sales orders history tab and selecting the Spyglass button on the relevant history record

Find Availability – will scan all locations and fulfillment modes to find which have inventory available

- Line: 1) 1 EACH of IN-703316
 - > Supplier Incom
 - > Supplier Orgill
 - > Supplier Orgill-Dropship
 - Location Orgill-Dropship (Orgill DS- Siletson, MO) (85% Min: 2 Dropship: Assign) = 22
 - Availability Mode: Actual
 - Inventory cost: = 23.52 USD
 - Direct - excluded; location mode = Off
 - CrossDock - excluded; location mode = Off
 - Dropship - 22 Actual; Shipping USD
 - ThreePL - excluded; location mode = Off
 - > Location Orgill-Dropship (Orgill DS- Kilgore, TX) (85% Min: 2 Dropship: Assign) = 31
 - > Location Orgill-Dropship (Orgill DS- Hurricane, UT) (85% Min: 2 Dropship: Assign) = 36
 - > Location Orgill-Dropship (Orgill DS- Inwood, WV) (85% Min: 2 Dropship: Assign) = 10
 - > Location Orgill-Dropship (Orgill DS- Tifton, GA) (85% Min: 2 Dropship: Assign) = 10
 - > Supplier Horizon Hardware Distributors
 - Location Horizon Hardware Distributors (90% Min: 1) = 16
 - > Supplier Etail
 - Supplier Dynamics GP
 - Calculate Service Level on supplier Etail - validated Standard
 - Calculate Service Level on supplier Orgill-Dropship - found Sales (Standard) -> Supplier (Standard)
 - Calculate Service Level on supplier Incom - found Sales (Standard) -> Supplier (Standard)
 - Calculate Service Level on supplier Etail - validated Standard

Calculate shipping cost = 6.83 to 11.98

- Solution B) Orgill-Dropship: Dropship from Orgill DS- Siletson, MO = 7.70
- Solution D) Orgill-Dropship: Dropship from Orgill DS- Hurricane, UT = 11.98
- Solution F) Orgill-Dropship: Dropship from Orgill DS- Tifton, GA = 6.83
- Group 1) Orgill DS- Tifton, GA - Weight = 3.660 Pound, Mileage = 219, Cost = 6.83, FedEx Home Delivery® = 0.5157
 - Shipping Weight = 3.66 Pound
 - Shipping Weight 1 of IN-703316 = 3.65 Pound
 - Use UOM Weight EACH/1 3.650 Pound
 - Using Sales Item UOM Dimensions
 - EACH = 3.65 Pound x 1
 - Use cost model FedExZone6 from fulfillment method (11.98USD)
 - Dropship shipping cost = 11.98
- Carrier specific shipping calculations - FedEx/FedEx Home Delivery® = 6.83
 - FedEx Home Delivery® = 6.83
 - Cost Model FedEx UPS Ground = 6.83
 - Use Dim weight: 9.2160/Pound
 - Initial weight: 9.2160/Pound
 - Weight: 3.660 Pound
 - Dims (L/W/H): 36.000/8.000/8.000 Inch
 - Use Dim weight: 9.2160/Pound
 - Initial weight: 9.2160/Pound
 - Weight: 3.660 Pound
 - Dims (L/W/H): 36.000/8.000/8.000 Inch
 - Weight: 3.660 Pound
 - Dims (L/W/H): 36.000/8.000/8.000 Inch
- Adjustments
 - (unnamed) AddFeeAbsolute - not matched
 - fuel surcharge AddFeePercent = 0.31 USD
 - Resi Delivery Fee AddFeeAbsolute = 1.40 USD

Build Solutions – each available permutation is then used to build an order fulfillment decision.

- Calculate Service Level on supplier Etail - validated Standard
- Calculate Service Level on supplier Orgill-Dropship - found Sales (Standard) -> Supplier (Standard)
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- Calculate Service Level on supplier Orgill-Dropship - found Sales (Standard) -> Supplier (Standard)
- Calculate Service Level on supplier Orgill-Dropship - found Sales (Standard) -> Supplier (Standard)
- Calculate Service Level on supplier Incom - found Sales (Standard) -> Supplier (Standard)
- Calculate Service Level on supplier Etail - validated Standard

Check for solutions below best complete tier of 1 - none

> Calculate shipping cost = 6.83 to 11.98

> Find best solution

> 8 Solutions found

> Assign to line items

Message

	Seconds
Root	0.0000
8 Solutions found	0.7970
Selected solution	0.7970
F) Orgill-Dropship: Dropship from Orgill DS- Tifton, GA Total: 30.82	0.7970
1) Dropship Orgill DS- Tifton, GA Inventory: 21.99, Shipping: (219 miles) 6.83, Overhead: 2.00, Total: 30.82	0.7970
1N-703316 Ext. Cost: 21.99	0.7970
Other solutions	
A) Orgill: Cross-Dock from Siletson, MO Total: 31.09	
B) Orgill-Dropship: Dropship from Orgill DS- Siletson, MO Total: 31.69	
E) Orgill-Dropship: Dropship from Orgill DS- Inwood, WV Total: 31.69	
C) Orgill-Dropship: Dropship from Orgill DS- Kilgore, TX Total: 31.69	
D) Orgill-Dropship: Dropship from Orgill DS- Hurricane, UT Total: 35.97	
G) Incom: Dropship from Siletson Total: 36.76	
H) Horizon Hardware Distributors: Cross-Dock from Default Total: 42.45	
Assign to line items	
Line: 1) 1 EACH of IN-703316	
Dropship 1 from Orgill DS- Tifton, GA	
Assign to line item	
Allocation of 1.000/1.000 EACH = success	
Use supplier cost 23.52	

Process Solutions – then for each solution the landed cost is calculated, and the best option selected; in this case a drop location 219 miles from the customer is the best options as it shipping cost is ~\$4 cheaper than other locations.

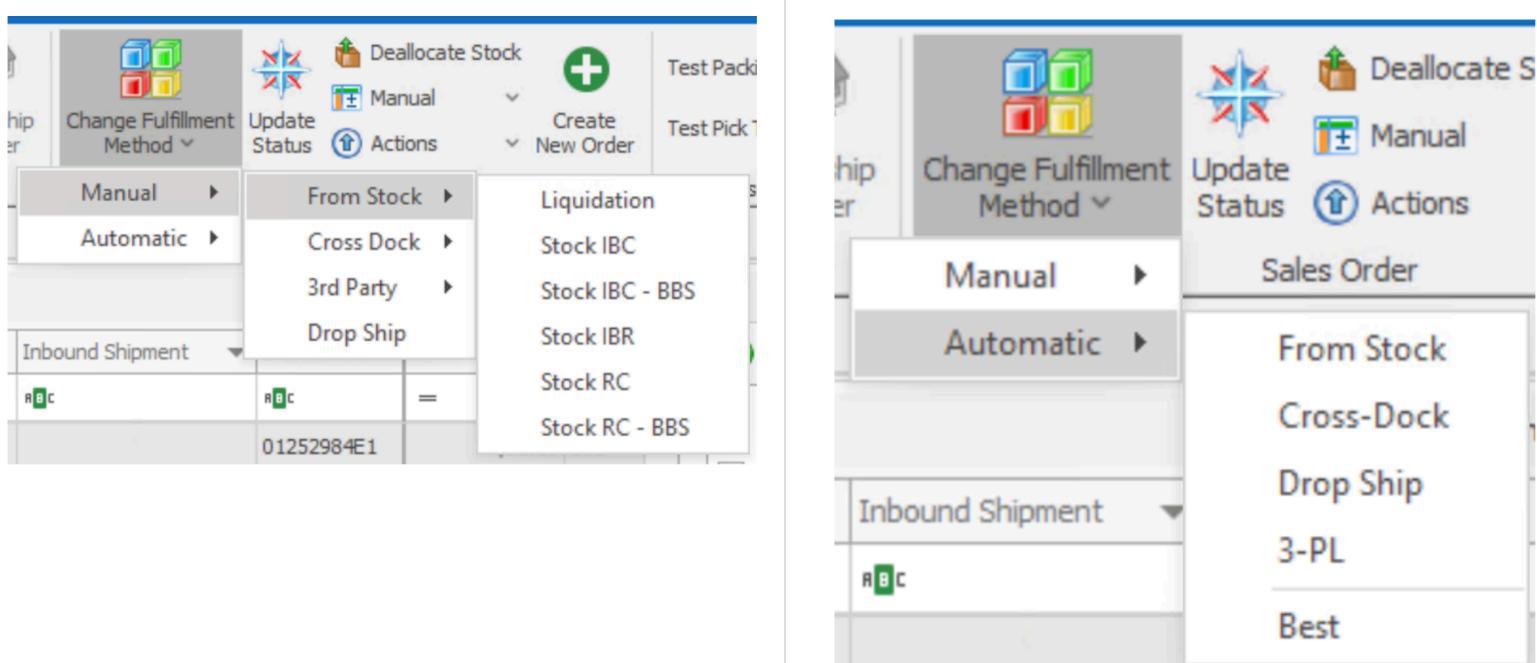
In the complicated example above, the look-up of the required details and processing of the decision took ~0.8 seconds, which can be multi-threaded as needed to handle 1,000's of orders per hour when

DOM06: Update Order Fulfillment Decision

Update Order Fulfillment Decision

If needed, the order fulfillment decision can be repeated for the sales order being fulfilled; with Stock, 3PL, and Cross-docking, this can be up to the point of shipment manifesting; for drop ship orders, it is once the Drop Ship PO is created. The action can be done via the ‘Change Fulfillment Method’ menu

option on the Sales Module. The user can either manually choose the fulfillment location other than Drop Shipping or can select the order fulfillment mode and then let EVP choose the specific location. The normal use of this function is to handle sales order processing exceptions when the order is initially loaded or if the chosen location can not fulfill the sales order for some reason



DOM07: Edit Sales Order

To Be Added

DOM08: Duplicate Sales Order

To Be Added