Infor XA

Material Logistics User Guide

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Contents

Chapter 1. INTRODUCING MATERIAL LOGISTICS

This chapter will introduce you to Material Logistics (ML). ML is designed for use with single or multiple planning warehouses within a single or multiple XA environments. Material Logistics can be used to create transfer orders with multiple lines and releases.

Material logistics allows manufacturers to track transfer orders and shipments across multiple plants, companies, servers, environments while accommodating multi-languages, and currencies.

If your processing environment contains multiple XA environments, on one or multiple servers, there will be specific communication and user setup information for this type of processing.

The basic functionality of Material Logistics will satisfy your business needs no matter how many Infor XA environments and servers you are using.

Some functionality described in this manual may not be available unless the environment is at the latest ptf levels.

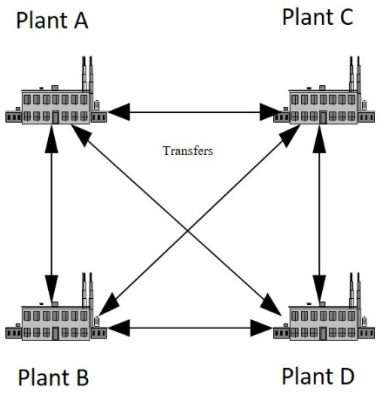
What Material Logistics Does

When using MPSP and MRP or OBPM you can plan independently in multiple warehouses. In addition, ML will allow you to turn these planned orders into orders between warehouses within an environment or between environments. You can also transfer future planned demand in advance of actual orders.

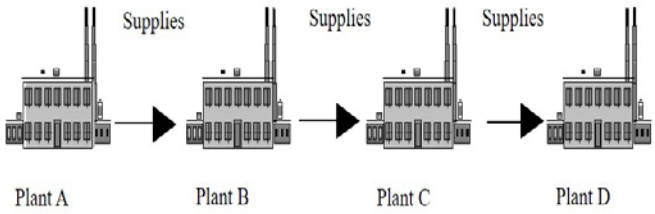
ML introduces the Transfer Order. This type of order can be created directly from MRP, Review and Approve and MRP auto release. The Transfer Order can also be created from OBPM MRP Recommendations or Reorder Recommendations. Alternatively, you can directly create and release within the ML application. The transfer orders can be sent to any XA defined planning warehouse.

ML allows your planning warehouses to define customer/supplier relationships with each other.

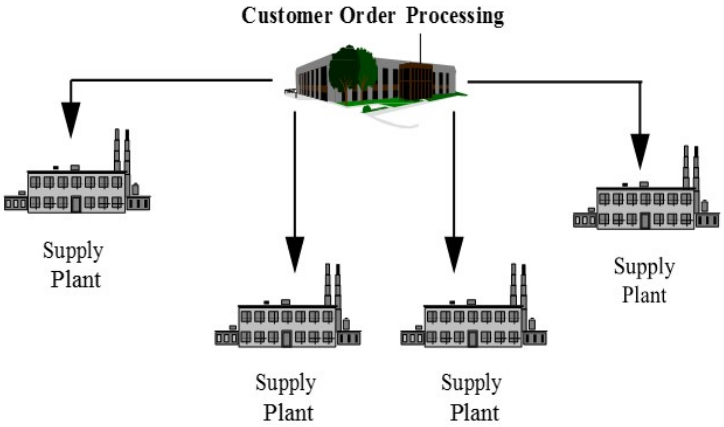
If your current business environment looks like this . . .



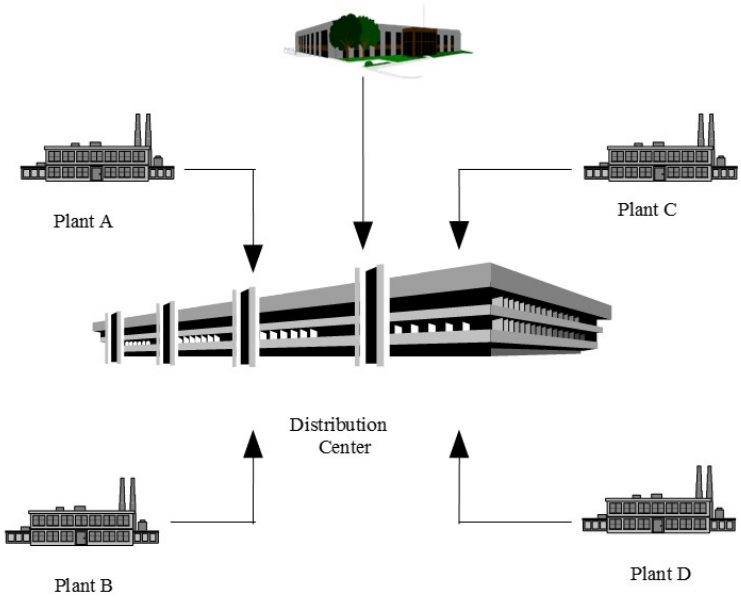
Or...
Supply chain processing like this.....



OR . . .



Or…
Customer Order Processing like this…..



The number of manufacturing and distribution enterprises to which Material Logistics applies is quite large and varied. The following will further describe some typical situations which necessitate this type of multi-facility solution:

- Manufacturing facilities act as vendors to each other to make sub-assemblies or off-load capacity.
- Products are shipped to an outside processor before being shipped to another plant.
- High volume centralized order processing, decentralized multi-plant manufacturing.
- Decentralized order processing, decentralized distribution and centralized manufacturing.
- Distribution warehouses must be planned independently from the production facility.
- Inventory orders must be placed and traced between the supplying plants and distribution facilities - DRP (Distribution Requirements Planning).

Material Logistics List of Definitions

Environment

This is the server or partition that has all of the INFOR Applications with licenses that can access all data for all of the companies, engineering sites and warehouses defined for this environment.

An enterprise can have more than one environment on more than one server. Each would have its own environment usually with all the financial and operating data unrelated to the other environment. ML can share and update important inter-environment and company data in the way of Supply Customer and Demand Transfer Orders.

Demand Enterprise Warehouse

This is the warehouse that is requesting or demanding items from a Supply Enterprise Warehouse. It is connected to an actual Planning Warehouse/In-transit warehouse pair that are set up in IM/MM.

Supply Enterprise Warehouse

This is the warehouse that is fulfilling or supplying the items for a Demand Enterprise Warehouse. It is connected to an actual Planning Warehouse/In-transit warehouse pair that are set up in IM/MM.

Planning Warehouse

This is the warehouse that is associated with the Demand and Supply Enterprise Warehouses. These warehouses are actual warehouses set up in IM/MM. This is the actual warehouse from which items are shipped and into which items are received.

Enterprise Warehouse Trade Relations

From the Enterprise Warehouse Trade Relations we can define the relationship between the Demand and Supply Enterprise Warehouses.

Transfer Demand Order

This is the transfer order that is created and released in the demand warehouse which initiates the creation of an associated customer order in the supply warehouse. At the time the transfer order is released, a scheduled receipt is generated for each item release. The scheduled receipt is what is used to receive what was shipped from the customer order in the supply warehouse.

Receiving Warehouse Location

This is a default location that is used when receiving an item into the demand warehouse. You can tailor ML to use Item Warehouse default locations. If tailored and the Item Warehouse default is blank, the receiving location specified will be used. It can be overridden upon receipt.

In-transit Warehouse

This is the controlled warehouse that is associated with the Planning Warehouse for each Demand and Supply Enterprise Warehouse.

In-transit Warehouse Location

This is the warehouse location that is associated with the Demand or Supply In-transit warehouse.

Inventory Ownership

This refers to the owner of the inventory while it is in transit. This can either be the demand or the supply. Inventory is moved into the appropriate In-transit Warehouse dependent upon this setting.

Allow Invoicing

This is a setting that determines whether the supply environment will invoice the customer order or simply ship the product without invoicing.

Supply Allocation Type

This setting determines the default for how transfer order and the associated customer order lines will be allocated (none, item warehouse, or auto discrete). This default can be overridden when creating orders from the ML application.

Major Functions of Material Logistics

From Material Logistics you can:

- Create, change and delete Transfer Orders, lines and releases: We can, subsequently, release Transfer Orders, lines and releases to make them open for shipping and receiving activity.
- Create, change and delete Enterprise Warehouses, System Link Destinations and associated XA Planning and In-transit Warehouses.
- Create, change and delete Enterprise Warehouse Trade Relations. Assigning In-transit inventory ownership, customer information, deferred release and invoicing for the relationship and location.

You can also:

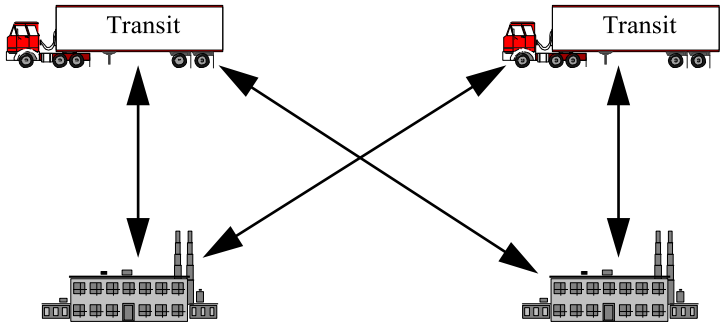
- Maintain Material Logistics application settings.
- Ship Material Logistics transfer orders through COM or CSM.
- Receive Material Logistics Orders through Material Management Scheduled Receipts or Material Logistics Open Enterprise Demand Releases.

How Information Flows Within Material Logistics

Material Logistics introduces the Enterprise Warehouse as a unique three character identifier to represent each local planning warehouse in Trade Relationships across all your XA environments.

This Enterprise Warehouse will become either the customer (Demand Enterprise Warehouse) or the supplier (Supply Enterprise Warehouse) on the ML Transfer Orders. Although the Enterprise Warehouse ID can be identified to a local XA warehouse, it cannot match any enterprise warehouse

ID in any other environment with which you will be trading. For each enterprise warehouse, you will associate an XA planning warehouse and an In-transit warehouse and location.

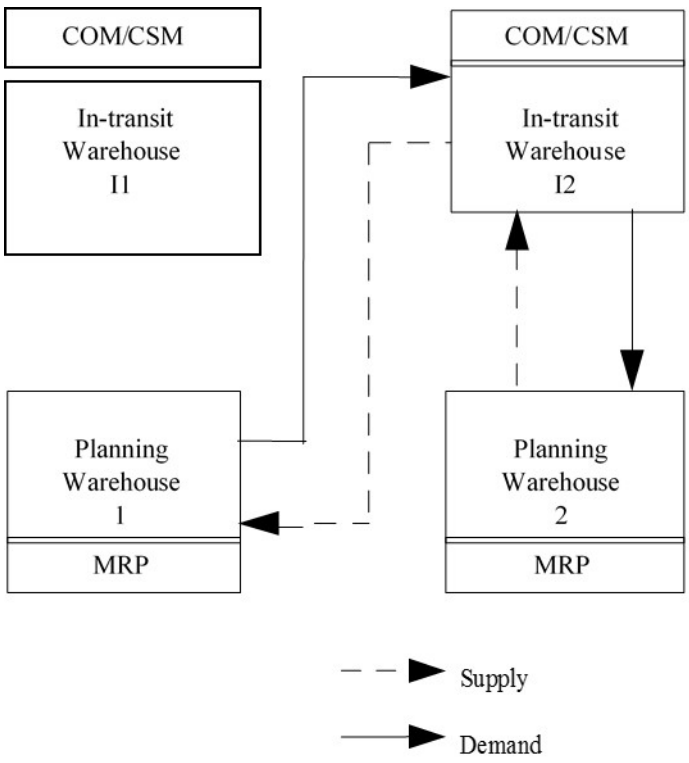


While the Enterprise Warehouse is not a physical entity, ML In-transit warehouses and locations must be real and exist in XA. They are a repository for inventory between the supply enterprise warehouse and the demand enterprise warehouse.

ML In-transit warehouses, like those used for simple transfers in MM are a place for shipped inventory to reside and be tracked while in transit. However, In-transit warehouses and locations used for ML shipments must be defined within ML by assigning them to a specific Enterprise Warehouse.

Material Logistics introduces the 'Transfer Demand Order'. The orders use the customer/vendor relationship of the demand and supplying enterprise warehouses. The orders can be created through OBPM/MRP or directly from Material Logistics. They can be "sent" to any Enterprise Warehouse defined with a trade relationship. ML transfer orders have a prefix letter "T", making them easy to distinguish from other types of orders within XA.

The following diagram shows the basic flow of information:



- Release transfer orders in the demand enterprise warehouse, and create customer orders in the XA planning warehouse associated with the supply enterprise warehouse. The demand warehouse is the customer, and uses the customer number assigned within the Enterprise Warehouse Trade Relation.
- The supplying warehouse ships the customer order that is associated with transfer order to the In-transit warehouse based upon inventory ownership (in the example above, it is supply owned). It is now, in effect, in- transit inventory. The customer order can be invoiced, if tailored, at this point.
- The demand warehouse receives the inventory from the In-transit warehouse and the cycle is complete.

How Material Logistics Works With Other Applications

Material Logistics Interfaces

ML sends information to:

COM / CSM	CSM client transactions are used to create & maintain customer orders information for released transfer orders. Maintenance is performed on the transfer order, not the customer order. ML shipping takes place in COM/CSM.
IM / MM	Material Logistics shipping and receiving creates (IW & RW) transactions and adjustments (IA) if enabled. Item Warehouse file and Item Plan file (ITMPLN) records are automatically added for the In-transit warehouse.
MRP	Future planned order demand from demand warehouses to supply warehouses for items that have ML supply enterprise warehouse defaults defined for MRP planned items.

ML receives information from:

COM /CSM	Validates customer orders and the associated order data (company, customer, item, dates, etc.).
IM / MM	Calendar, item warehouse, warehouse information, inventory locations, lead times and planning process codes.
PDM / EPDM	Item characteristics and definitions. B/L, IOR items etc.

Material Logistics Reports and Inquiries

The major ML reports are as follows:

- Transfer Order Release
  - The ML Transfer Orders (AXKP110) shows all ML orders released during the Release Order generation through ML or MRP and is automatically generated by the release.
  - Any orders that are rejected must be corrected and Order Release run again.
  - The planned order demand transfer report, (AXKP352), shows the number of records transferred to other warehouses during the MRP Planning Run.

The major ML inquiry mechanisms are as follows:

- From the Power-Link Material Logistics card we can also see ML Transfer Orders by utilizing the Power-Link features of Subset, Views and Sorts to drill down and review and edit status information.
  - When using ML you can see all the ML Transfer Demand Orders from the ML, Transfer Demand Orders card.
  - You can also enter into the Enterprise Warehouse Trade Relations object file to drill down into open Transfer orders that originated within the local environment.
- The major Ship/Receive ML Orders inquiries are as follows:
  - The ML Shipping is performed in CSM or COM where we can ship like we would for all customer orders, except that the Customer associated with the customer order represents the “Demand Warehouse” in the ML Enterprise Warehouse Trade Relation.
  - The ML Receiving is performed in the Materials Management Scheduled Receipts object or Material Logistics Open Enterprise Demand Releases.

ML compared to ISL/MISL

ML Application	ISL/MISL Application
Transfer Orders	Intersite Orders
Transfer orders have a "T" prefix	Intersite orders have an "X" prefix
Shipping: Shipment entry from the COM/CSM application	Shipping: Shipment entry from the ISL/MISL application
Use COM/CSM standard Pick/Pack shipping functions	Use ISL/MISL Manifests
Receiving: Use MM Scheduled Receipts including Quick Receive or ML Open Enterprise Demand Releases	Receiving: Use ISL/MISL receiving
Specify the default Supply Enterprise warehouse on the Item Warehouse ML card	Item Planner and Vendor defaults by ISL/MISL menu options and this is used to identify an item as ISL/MISL
Deferred Release MRP Planning	No Deferred Release
Multi-line Items & Blanket Release	One line item per one order
Demand Enterprise Warehouse	Originating or Planning Warehouse
Supply Enterprise Warehouse	Receiving or Planning Warehouse
IW and RW transactions used for transferring	TW (IW/RW), IS, RC transactions used for transferring
SA and NS transactions used for shipping transactions	No COM shipments are produced
Pass costs between warehouses. When a costing method other than standard cost is used.	Pass Standard Cost only
Use System Link and Replication processing to communicate transfer across environments	Use ISL/MISL option Remote Transfer setup that uses DDM (Distributed Data Management)

Inventory Transaction Code Definitions used by Material Logistics

Issue Sales Item (SA)

The SA transaction issues an item to a customer sales order.

This transaction updates sales information used by other XA applications.

When there is a transaction involving Material Logistics shipments and the “Allow customer order invoicing” is ‘Yes’ in “Enterprise Warehouse Trade Relations”, all the sales orders generated from this trade relationship will be invoiced.

Issue Sales Item Not Invoiced (NS)

The NS transaction issues an item to a customer sales order.

This transaction is called NS instead of SA when shipping in CSM or COM without invoicing.

When there is a transaction involving Material Logistics shipments and the “Allow customer order invoicing” is ‘No’ in “Enterprise Warehouse Trade Relations”, all the sales orders generated from this trade relationship will not be invoiced.

Receive Transferred Item (RW)

The RW transaction receives an item as part of transferring it to another warehouse location. In MM, this transaction is called an inter-warehouse receipt.

When there is a transaction involving Material Logistics shipments and an In-transit has been created and is being used in the “Warehouse Trade Relationship” an RW transaction will always be used to receive the quantity into that in-transit warehouse after the NS or SA ship transaction takes place.

An RW transaction will also take place for the receiving warehouse when a transfer order quantity is received during a Scheduled Receipts transaction.

Issue Transferred Item (IW)

The IW transaction issues an item as part of transferring it to another warehouse location. In MM this transaction is called an inter-warehouse issue.

When there is a transaction involving Material Logistics shipments and an in-transit warehouse has been created and is being used in the “Warehouse Trade Relationship” an IW transaction will always be used to issue the quantity out of that in-transit warehouse when the RW transaction takes place into the receiving warehouse.

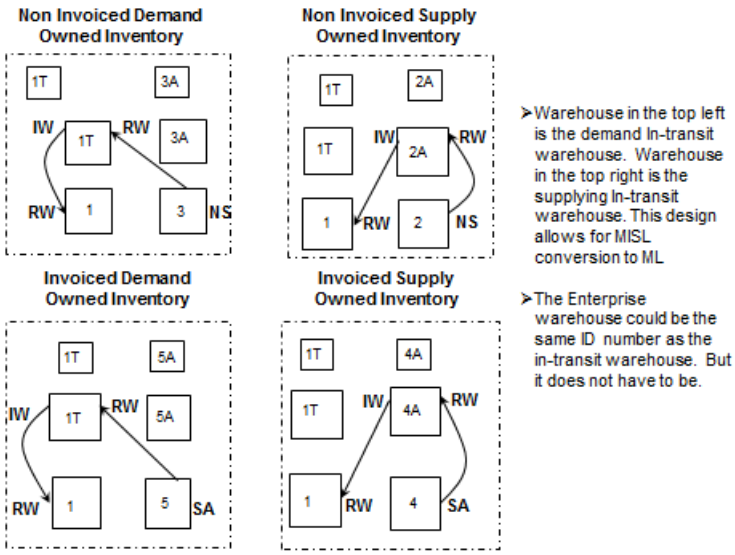
Adjust Item (IA)

When a Transfer Order is under or over received, an inventory balance will remain (+ or -) in the In-transit warehouse location. This balance will remain indefinitely, unless it is cleaned up by ML or

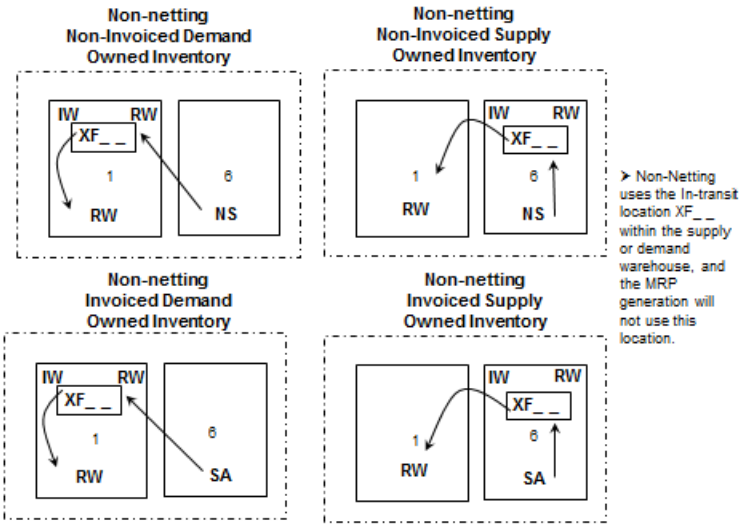
manually by the user. If tailored, ML will automatically create the correct IA transaction to reduce this inventory balance to zero.

ML Diagram Transaction Flows

In-Transit Warehouse with Location Setup



Non-Nettable Location Setup:



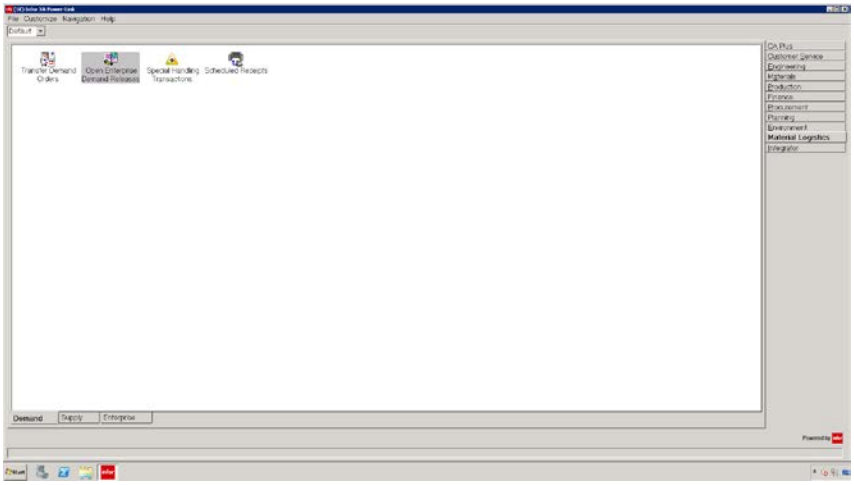
Chapter 2. MATERIAL LOGISTICS OVERVIEW

Demand card

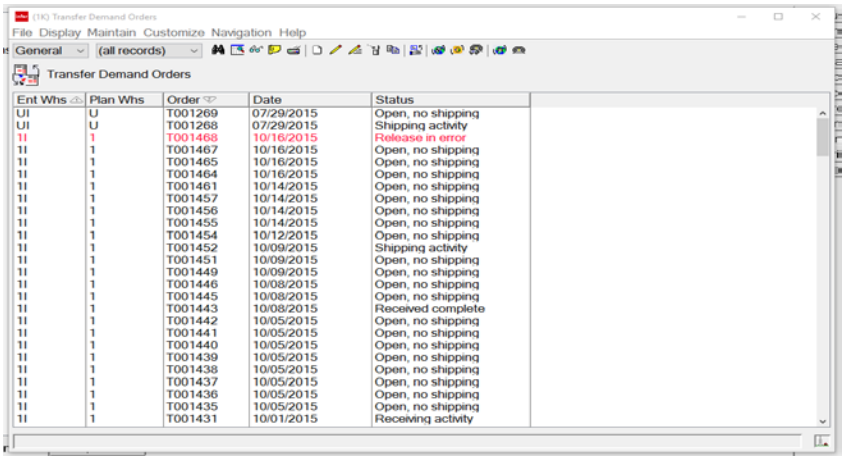
When you select Material Logistics from the Main Menu, the Material Logistics Default View appears. From this view you can select the Demand, Supply or Enterprise cards.

From the Demand card you can access the following objects:

- Transfer Demand Orders
- Open Enterprise Demand Releases
- Special Handling Transactions
- Scheduled Receipts



Transfer Demand Orders

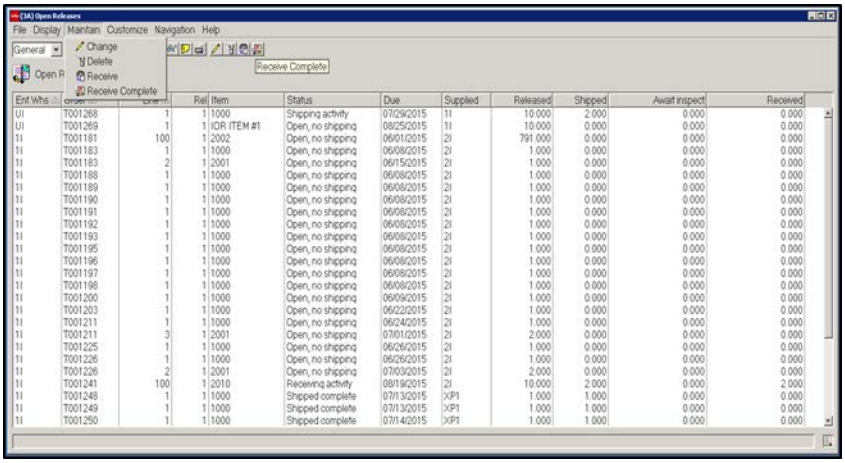


Ent Whs	Plan Whs	Order	Date	Status
UI	U	T001269	07/29/2015	Open, no shipping
UI	U	T001268	07/29/2015	Shipping activity
1I	1	T001468	10/16/2015	Release in error
1I	1	T001467	10/16/2015	Open, no shipping
1I	1	T001465	10/16/2015	Open, no shipping
1I	1	T001464	10/16/2015	Open, no shipping
1I	1	T001461	10/14/2015	Open, no shipping
1I	1	T001457	10/14/2015	Open, no shipping
1I	1	T001456	10/14/2015	Open, no shipping
1I	1	T001455	10/14/2015	Open, no shipping
1I	1	T001454	10/12/2015	Open, no shipping
1I	1	T001452	10/09/2015	Shipping activity
1I	1	T001451	10/09/2015	Open, no shipping
1I	1	T001449	10/09/2015	Open, no shipping
1I	1	T001446	10/08/2015	Open, no shipping
1I	1	T001445	10/08/2015	Open, no shipping
1I	1	T001443	10/08/2015	Received complete
1I	1	T001442	10/05/2015	Open, no shipping
1I	1	T001441	10/05/2015	Open, no shipping
1I	1	T001440	10/05/2015	Open, no shipping
1I	1	T001439	10/05/2015	Open, no shipping
1I	1	T001438	10/05/2015	Open, no shipping
1I	1	T001437	10/05/2015	Open, no shipping
1I	1	T001436	10/05/2015	Open, no shipping
1I	1	T001435	10/05/2015	Open, no shipping
1I	1	T001431	10/01/2015	Receiving activity

What to do:

- The object Transfer Demand Orders viewing screen shows a list of transfer orders and allows orders to be created, maintained and released. You can also search, view, subset and sort these transfer orders. It will also show the status of the transfer order. Valid statues are: Incomplete (unreleased), Awaiting approval (released but not yet created), Release in error, Open no shipping, Shipping activity, Receiving activity, Shipped complete and Received complete.
- From this object you can drill down into the order to inquire or maintain the information associated with the order, along with the orders line item(s) and release(s).

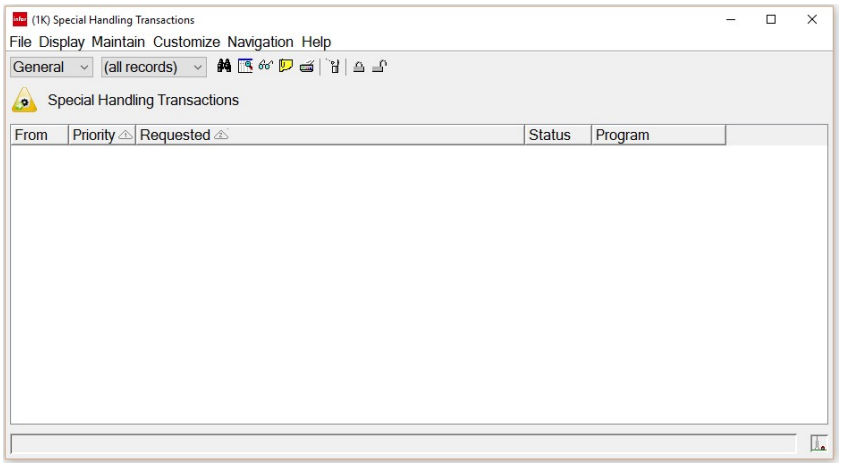
Open Releases (Demand)



What to do:

- Use this object to change a released Transfer Order release quantity, date or allocation type without having to start at the order level.
- Available transactions include change, delete, mass quantity change, mass date change, receive and receive complete. The display card shows information from each level (order, line, release) of the order.

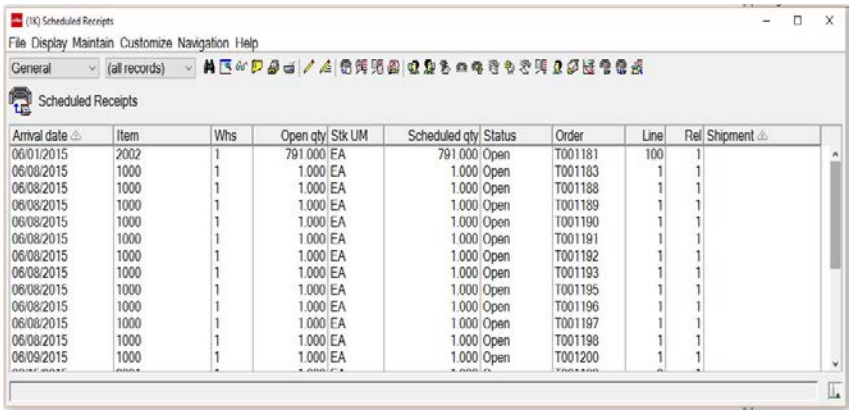
Special Handling Transactions



What to do:

- Click on this object and you will see a Material Logistics API transaction if it is in process or in error.
- API's are generated from supply side invoicing if tailored to do so in the demand to supply warehouse trade relation.

Scheduled Receipts



Arrival date	Item	Whs	Open qty	Stk UM	Scheduled qty	Status	Order	Line	Rel	Shipment
06/01/2015	2002	1	791.000	EA	791.000	Open	T001181	100	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001183	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001188	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001189	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001190	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001191	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001192	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001193	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001195	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001196	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001197	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001198	1	1	
06/09/2015	1000	1	1.000	EA	1.000	Open	T001200	1	1	

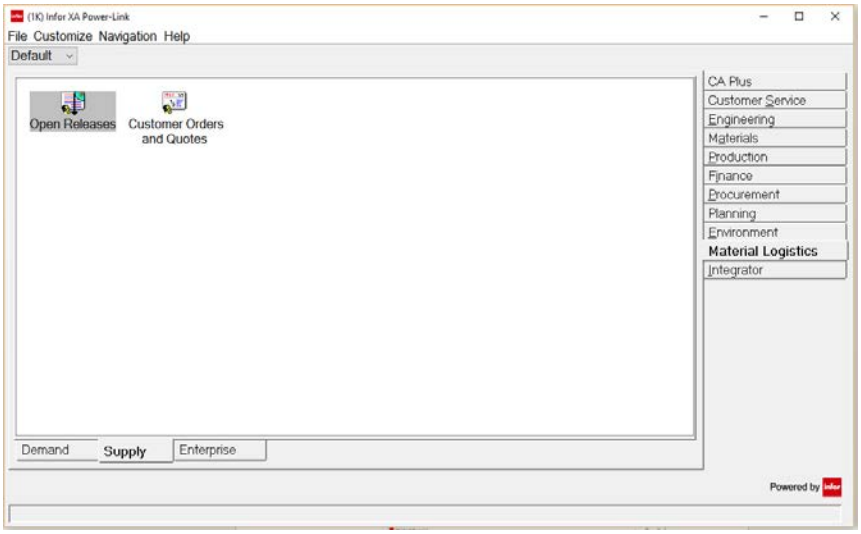
What to do:

- You will use this object to receive a Transfer Order. From the Schedule Receipts listing window you can use the subset and find the transfer order item release to be received. From the Materials Management main menu you can also drill down into the Receiving card at the bottom of the screen and then into the Scheduled Receipts object.
- From this object you can drill down into a transfer order line item release and either receive or review it. You can also directly Receive or Receive the transfer order release complete.

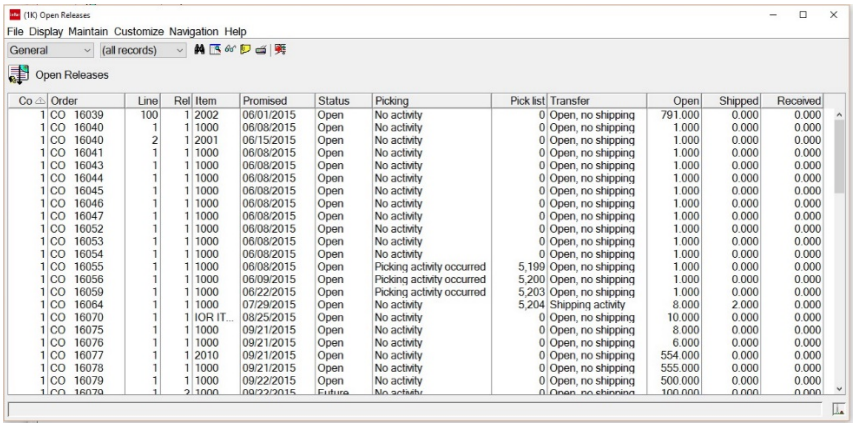
Supply card

From the Supply card you can access the following objects:

- Open Releases
- Customer Orders and Quotes



Open Releases (Supply)

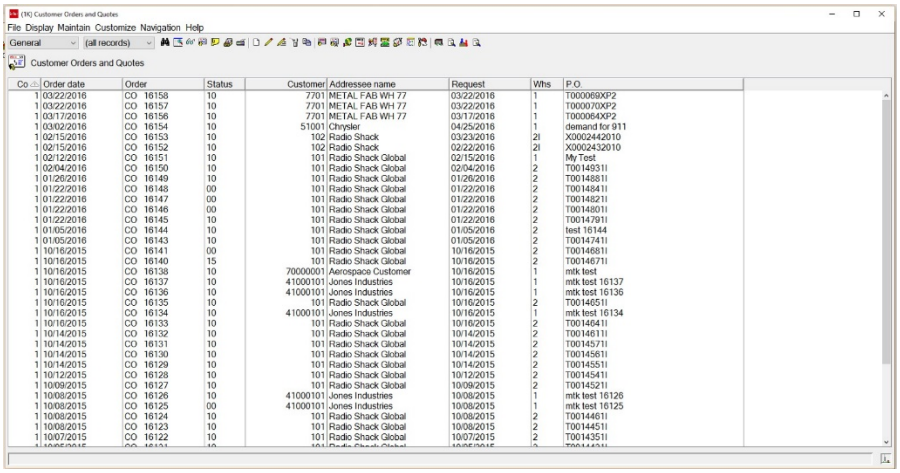


Co	Order	Line	Rel	Item	Promised	Status	Picking	Pick list	Transfer	Open	Shipped	Received
1	CO 16039	100	1	2002	06/01/2015	Open	No activity	0	Open, no shipping	791.000	0.000	0.000
1	CO 16040	1	1	1000	06/08/2015	Open	No activity	0	Open, no shipping	1.000	0.000	0.000
1	CO 16040	2	1	2001	06/15/2015	Open	No activity	0	Open, no shipping	1.000	0.000	0.000
1	CO 16041	1	1	1000	06/08/2015	Open	No activity	0	Open, no shipping	1.000	0.000	0.000
1	CO 16043	1	1	1000	06/08/2015	Open	No activity	0	Open, no shipping	1.000	0.000	0.000
1	CO 16044	1	1	1000	06/08/2015	Open	No activity	0	Open, no shipping	1.000	0.000	0.000
1	CO 16045	1	1	1000	06/08/2015	Open	No activity	0	Open, no shipping	1.000	0.000	0.000
1	CO 16046	1	1	1000	06/08/2015	Open	No activity	0	Open, no shipping	1.000	0.000	0.000
1	CO 16047	1	1	1000	06/08/2015	Open	No activity	0	Open, no shipping	1.000	0.000	0.000
1	CO 16052	1	1	1000	06/08/2015	Open	No activity	0	Open, no shipping	1.000	0.000	0.000
1	CO 16053	1	1	1000	06/08/2015	Open	No activity	0	Open, no shipping	1.000	0.000	0.000
1	CO 16054	1	1	1000	06/08/2015	Open	No activity	0	Open, no shipping	1.000	0.000	0.000
1	CO 16055	1	1	1000	06/08/2015	Open	Picking activity occurred	5,199	Open, no shipping	1.000	0.000	0.000
1	CO 16056	1	1	1000	06/09/2015	Open	Picking activity occurred	5,200	Open, no shipping	1.000	0.000	0.000
1	CO 16059	1	1	1000	06/22/2015	Open	Picking activity occurred	5,203	Open, no shipping	1.000	0.000	0.000
1	CO 16064	1	1	1000	07/29/2015	Open	No activity	5,204	Shipping activity	8.000	2.000	0.000
1	CO 16070	1	1	IOR IT...	08/25/2015	Open	No activity	0	Open, no shipping	10.000	0.000	0.000
1	CO 16075	1	1	1000	09/21/2015	Open	No activity	0	Open, no shipping	8.000	0.000	0.000
1	CO 16076	1	1	1000	09/21/2015	Open	No activity	0	Open, no shipping	6.000	0.000	0.000
1	CO 16077	1	1	2010	09/21/2015	Open	No activity	0	Open, no shipping	554.000	0.000	0.000
1	CO 16078	1	1	1000	09/21/2015	Open	No activity	0	Open, no shipping	555.000	0.000	0.000
1	CO 16079	1	1	1000	09/22/2015	Open	No activity	0	Open, no shipping	500.000	0.000	0.000
1	CO 16079	1	2	1000	09/22/2015	Future	No activity	0	Open, no shipping	100.000	0.000	0.000

What to do:

- Click on this object to view the status of open customer orders for your released Transfer Demand Orders.
- You will see the transfer order status and the status of the customer order in this view.
- From the tool bar we can access a Force Ship Complete option that can be used to ship complete a line that is not available in COM/CSM. For example: Let's say an item was partially shipped from a ship confirm company setting and the remaining quantity was not needed. COM and CSM will not allow a shipment of zero complete (backorder set to 'N') to shut down the customer order line so it can be received complete. Therefore, use the Force Ship Complete option to complete the line, then receive complete the associated transfer order scheduled receipt release complete.

Customer Orders and Quotes



Co	Order date	Order	Status	Customer	Addressee name	Request	Whs	P.O.
1	03/22/2016	CO 16158	10	7701	METAL FAB WH 77	03/22/2016	1	T000069XP2
1	03/22/2016	CO 16157	10	7701	METAL FAB WH 77	03/22/2016	1	T000070XP2
1	03/17/2016	CO 16156	10	7701	METAL FAB WH 77	03/17/2016	1	T000064XP2
1	03/02/2016	CO 16154	10	51001	Chrysler	04/25/2016	1	demand for 911
1	02/15/2016	CO 16153	10	102	Radio Shack	03/23/2016	2I	X0002442010
1	02/15/2016	CO 16152	10	102	Radio Shack	02/22/2016	2I	X0002432010
1	02/12/2016	CO 16151	10	101	Radio Shack Global	02/15/2016	1	My Test
1	02/04/2016	CO 16150	10	101	Radio Shack Global	02/04/2016	2	T0014931I
1	01/26/2016	CO 16149	10	101	Radio Shack Global	01/26/2016	2	T0014881I
1	01/22/2016	CO 16148	00	101	Radio Shack Global	01/22/2016	2	T0014841I
1	01/22/2016	CO 16147	00	101	Radio Shack Global	01/22/2016	2	T0014821I
1	01/22/2016	CO 16146	00	101	Radio Shack Global	01/22/2016	2	T0014801I
1	01/22/2016	CO 16145	10	101	Radio Shack Global	01/22/2016	2	T0014791I
1	01/05/2016	CO 16144	10	101	Radio Shack Global	01/05/2016	2	test 16144
1	01/05/2016	CO 16143	10	101	Radio Shack Global	01/05/2016	2	T0014741I
1	10/16/2015	CO 16141	00	101	Radio Shack Global	10/16/2015	2	T0014681I
1	10/16/2015	CO 16140	15	101	Radio Shack Global	10/16/2015	2	T0014671I
1	10/16/2015	CO 16138	10	70000001	Aerospace Customer	10/16/2015	1	mtk test
1	10/16/2015	CO 16137	10	41000101	Jones Industries	10/16/2015	1	mtk test 16137
1	10/16/2015	CO 16136	10	41000101	Jones Industries	10/16/2015	1	mtk test 16136
1	10/16/2015	CO 16135	10	101	Radio Shack Global	10/16/2015	2	T0014651I
1	10/16/2015	CO 16134	10	41000101	Jones Industries	10/16/2015	1	mtk test 16134
1	10/16/2015	CO 16133	10	101	Radio Shack Global	10/16/2015	2	T0014641I
1	10/14/2015	CO 16132	10	101	Radio Shack Global	10/14/2015	2	T0014611I
1	10/14/2015	CO 16131	10	101	Radio Shack Global	10/14/2015	2	T0014571I
1	10/14/2015	CO 16130	10	101	Radio Shack Global	10/14/2015	2	T0014561I
1	10/14/2015	CO 16129	10	101	Radio Shack Global	10/14/2015	2	T0014551I
1	10/12/2015	CO 16128	10	101	Radio Shack Global	10/12/2015	2	T0014541I
1	10/09/2015	CO 16127	10	101	Radio Shack Global	10/09/2015	2	T0014521I
1	10/08/2015	CO 16126	10	41000101	Jones Industries	10/08/2015	1	mtk test 16126
1	10/08/2015	CO 16125	00	41000101	Jones Industries	10/08/2015	1	mtk test 16125
1	10/08/2015	CO 16124	10	101	Radio Shack Global	10/08/2015	2	T0014461I
1	10/08/2015	CO 16123	10	101	Radio Shack Global	10/08/2015	2	T0014451I
1	10/07/2015	CO 16122	10	101	Radio Shack Global	10/07/2015	2	T0014351I

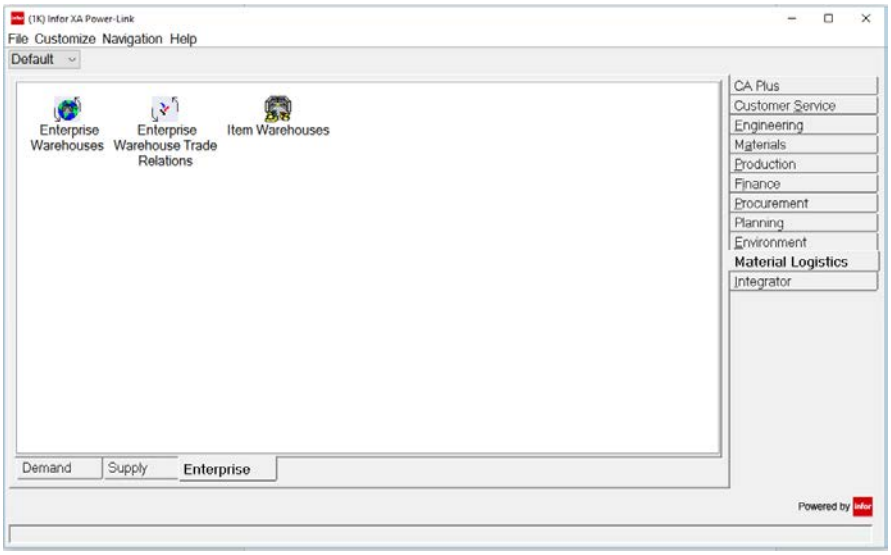
What to do:

- This listing view is the same view found in Customer Service Management.
- Click on this object to review all customer orders and quotes like you do from Customer Service Management.
- The PO attribute will identify the transfer order and the supply enterprise warehouse.

Enterprise card

From the Enterprise card you can access the following objects:

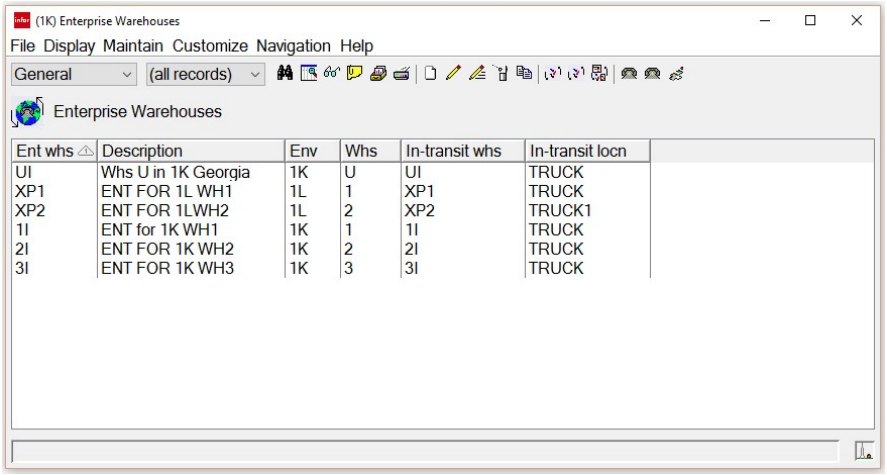
- Enterprise Warehouses
- Enterprise Warehouse Trade Relations
- Item Warehouses



What to do:

- Click on the Enterprise Warehouse or Enterprise Trade Relations or Item Warehouses object.

Enterprise Warehouse

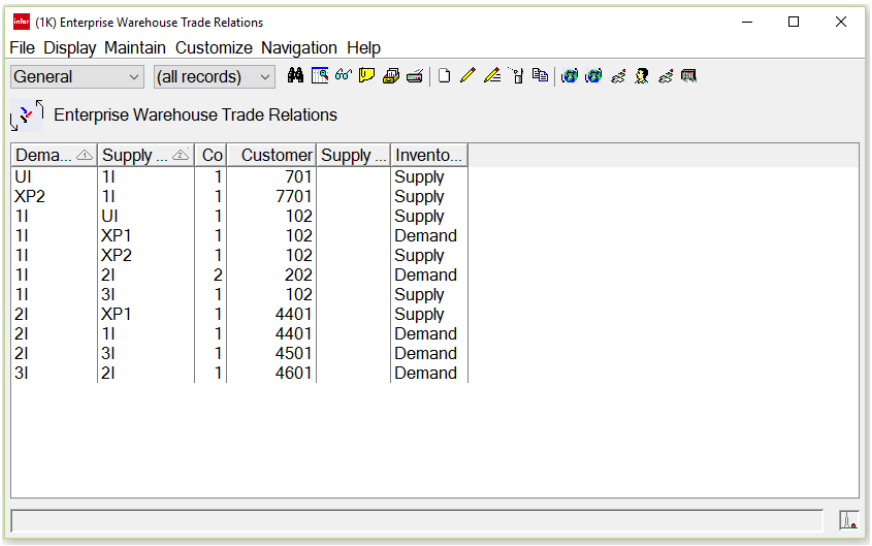


Ent whs	Description	Env	Whs	In-transit whs	In-transit locn
UI	Whs U in 1K Georgia	1K	U	UI	TRUCK
XP1	ENT FOR 1L WH1	1L	1	XP1	TRUCK
XP2	ENT FOR 1LWH2	1L	2	XP2	TRUCK1
1I	ENT for 1K WH1	1K	1	1I	TRUCK
2I	ENT FOR 1K WH2	1K	2	2I	TRUCK
3I	ENT FOR 1K WH3	1K	3	3I	TRUCK

What to do:

- The Enterprise Warehouse defines the relationship between the planning warehouse and the associated in-transit warehouse. The Enterprise Warehouse must be unique across *ALL* XA environments within the organization.
- This Enterprise Warehouse object is used to identify the XA Planning Warehouse that can be used as a supply warehouse or demand warehouse before the warehouse relations are established. An owning System Link Destination and environment is required for each Enterprise Warehouse and associated XA planning warehouse.
- For visibility purposes only (not a requirement), the recommendation is to set the In-transit warehouse to a value that is easily recognized as being associated with the planning warehouse. Note that the in-transit warehouse must be a valid IM warehouse and the In-transit location must be a valid location in the in-transit warehouse.
- From this object you can also review the supply and demand warehouse relations that exist.

Enterprise Warehouse Trade Relations



Dema...	Supply ...	Co	Customer	Supply ...	Invento...
UI	1I	1	701		Supply
XP2	1I	1	7701		Supply
1I	UI	1	102		Supply
1I	XP1	1	102		Demand
1I	XP2	1	102		Supply
1I	2I	2	202		Demand
1I	3I	1	102		Supply
2I	XP1	1	4401		Supply
2I	1I	1	4401		Demand
2I	3I	1	4501		Demand
3I	2I	1	4601		Demand

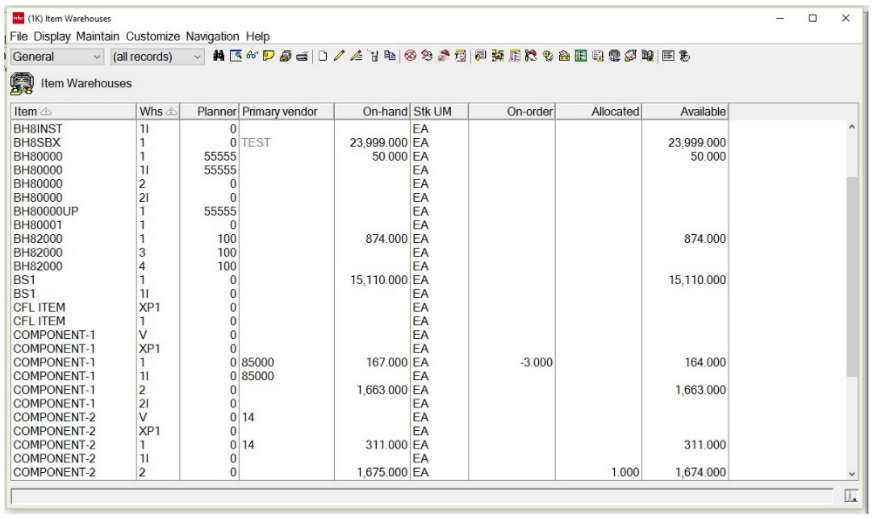
What to do:

- Use this object to create the relations between existing Enterprise Warehouses to permit the transfer of inventory between the Supply and Demand planning warehouses. In addition, Company, Customer, Inventory ownership and In-transit locations are also maintained from this view.
- From the Enterprise Warehouse Trade Relations Details we can view the relationship between the "demand" enterprise warehouse and the "supply" enterprise warehouse.
- We can view the "customer number" and associated company number that is set up for the "demand warehouse". This is the company and customer that is used when creating the associated customer order.
- How do you want to create and combine transfer orders through planning?
- You will also see the supply multisource vendor number related to the supply warehouse. *It is currently not a supported function.*
- Inventory ownership must also be assigned to determine which In-transit warehouse location will be used (Demand or Supply) to store In-transit inventory.
- It is also important to set the “Allow Customer Order Invoicing” flag to Yes or No. If you do not intend to invoice the associated transfer order customer order, this question must be answered, “No“.
- If the trade relation is across environments, the enterprise warehouse trade relation records must be set up identical in each environment. However, the API card only needs to be set up on the demand side.

Trade Relations Set Up Tips

- Company/Customer – must be a valid company/customer in XA used to represent the demand warehouse. The customer number representing the demand warehouse needs to follow all the rules required for setting up a normal customer, i.e., tax codes, addresses, state/country code, etc. must be valid.
- For visibility of inventory shipments, it is recommended to use the same customer number for all transactions representing a demand warehouse. Example: Use customer number 101 to represent warehouse 1 buying from ALL other warehouses, customer number 102 to represent warehouse 2 buying from ALL other warehouses. This type of structure makes it easier to understand the history of inventory/financial movements.
- In-transit location – must be a valid location in the in-transit warehouse. Some companies have found it easier to audit in-transit inventory if the location in the in-transit warehouse reflects the shipping (supply) warehouse. Example: Warehouse 1 has an in-transit warehouse 1I. The inventory is demand owned while in-transit. Therefore, all inventory shipped by warehouses 2, 3, and 4 is in warehouse 1I. To distinguish in-transit inventory, warehouse 2 ships into in-transit warehouse 1I into a location such as WHS2 or TRK2, warehouse 3 ships into in-transit warehouse 1I into a location such as WHS3 or TRK3, etc. Another naming convention that has been used is for the location to represent the relationship between the supply and demand warehouses. An example would be to name the in-transit location 2TO1 to represent inventory moving between planning warehouse 2 “TO” planning warehouse 1. A naming convention for the in-transit locations makes it visibly easier to audit/reconcile/account for inventory that is sitting in-transit. Also, a planner in the demand warehouse 1 can easily see what is in-transit coming into the demand warehouse and where it is coming from by looking at the in-transit location.

Item Warehouse



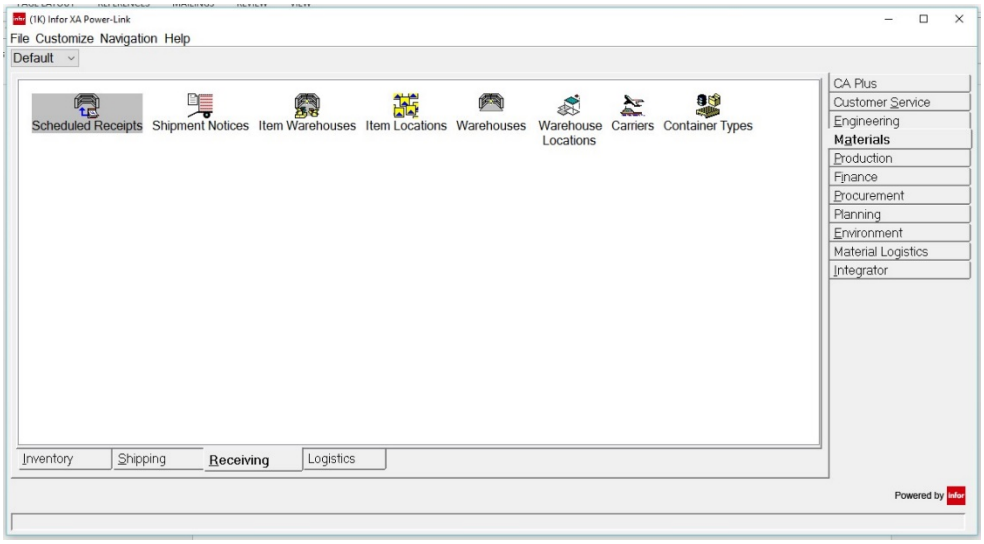
Item	Whs	Planner	Primary vendor	On-hand	Stk UM	On-order	Allocated	Available
BH8INST	1I	0			EA			
BH8SBX	1	0	TEST	23,999.000	EA			23,999.000
BH80000	1	55555		50.000	EA			50.000
BH80000	1I	55555			EA			
BH80000	2	0			EA			
BH80000	2I	0			EA			
BH80000UP	1	55555			EA			
BH80001	1	0			EA			
BH82000	1	100		874.000	EA			874.000
BH82000	3	100			EA			
BH82000	4	100			EA			
BS1	1	0		15,110.000	EA			15,110.000
BS1	1I	0			EA			
CFL ITEM	XP1	0			EA			
CFL ITEM	1	0			EA			
COMPONENT-1	V	0			EA			
COMPONENT-1	XP1	0			EA			
COMPONENT-1	1	0	85000	167.000	EA	-3.000		164.000
COMPONENT-1	1I	0	85000		EA			
COMPONENT-1	2	0		1,663.000	EA			1,663.000
COMPONENT-1	2I	0			EA			
COMPONENT-2	V	0	14		EA			
COMPONENT-2	XP1	0			EA			
COMPONENT-2	1	0	14	311.000	EA			311.000
COMPONENT-2	1I	0			EA			
COMPONENT-2	2	0		1,675.000	EA		1.000	1,674.000

What to do:

- Click on this object to drill down into the items that you have assigned to warehouses through the Materials Management application on the Material Logistics card.
- We can find and inquiry on the status of the items. We can create and edit which default supply enterprise warehouse we want to use for this item and add any extra lead time when using that warehouse.
- The Item Warehouse object can also be accessed through the Materials Management application. See the details of this object next in Materials Management application.

Materials Management Application

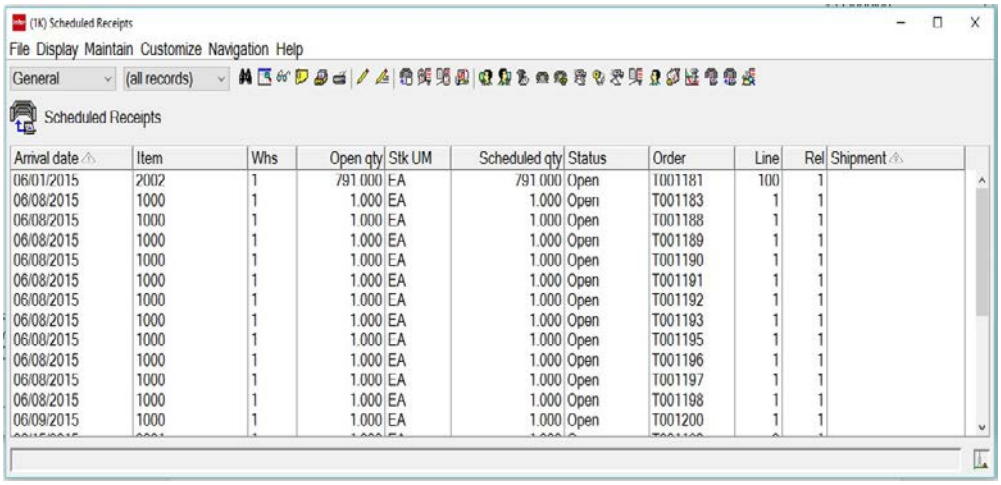
Receiving Card



What to do:

- From the Materials Management main menu on the Receiving menu card you can access the Scheduled Receipts object.

Scheduled Receipts



Arrival date	Item	Whs	Open qty	Stk UM	Scheduled qty	Status	Order	Line	Rel	Shipment
06/01/2015	2002	1	791.000	EA	791.000	Open	T001181	100	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001183	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001188	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001189	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001190	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001191	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001192	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001193	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001195	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001196	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001197	1	1	
06/08/2015	1000	1	1.000	EA	1.000	Open	T001198	1	1	
06/09/2015	1000	1	1.000	EA	1.000	Open	T001200	1	1	

What to do:

- The object Scheduled Receipts is found on the Materials Management main menu on the Receiving card, or in Material Logistics main menu on the Receiving card.
- You will use this object to receive a Transfer Order. From the Schedule Receipts listing window you can use the subset and find the item to be received.
- From this object you can drill down into a transfer order line item release and either receive or review it. You can also directly Receive or Receive the transfer order release complete.

Interface MPSP with ML

Material Logistics must interface correctly when a transfer item in the demand warehouse is controlled by MRP, but it is a MPSP item in the supply warehouse.

Planned requirements for transfer items that are generated by MRP in the demand warehouse are placed in the Transfer Order Master File (XFRMST). As required, MPSP in the supply warehouse will retrieve these planned requirements and store them asexpected customer demand. Once the demand is stored in MPSP, it will operate normally.

Interface MRP & OBPM with ML

Planned requirements for transfer items that are generated by MRP in the Demand warehouse are placed in the Transfer Order Master File (XFRMST). As required, MRP in the Supply warehouse will

retrieve these planned requirements and store them as forecasted demand. Once the demand is stored in MRP, it will operate normally.

For MRP to automatically pass demand (planned orders) to the supply warehouse, a default supply enterprise warehouse id for transfers must be entered on the material logistics card on the item warehouse record.

The interface between ML and OBPM and MRP has been enhanced to make the ML transfer orders visible in MRP Recommendation in OBPM and in MRP Review/Approve Items. ML transfer orders have a "T" prefix and can be changed and deleted through the enhanced interface. In addition, users without ISL/MISL can create the ML transfer orders through OBPM and MRP.

The Enterprise Warehouse Trade Relation can allow the planning release process to be deferred for any trade relation defined between warehouses. When deferred, the release of ML transfer orders will be performed only when a user selects the release function in the ML Transfer Demand Order object. Prior to the release, all orders created through planning for the same demand and supply warehouse pair will be combined onto the same transfer order with a single line for each item and a separate release for each originating planned order. If MRP auto release is used, the order creation will occur, but the release process will be deferred and must be run from the ML Transfer Demand Order object. After an MRP Auto Release, any subsequent transfer orders created through MRP Recommendations or MRP Review Approve items will continue to add lines and releases to any existing order for the same demand/supply warehouse pair. To stop adding lines and releases to a transfer order, it must be released through ML.

This function can be enabled on the Enterprise Warehouse Trade relations demand card. When the "Defer planning release" option is answered "Yes", all ML transfer orders created through planning and through MRP auto release will no longer be automatically released. That function will be available only through the Transfer Demand Order object on the Material Logistics application card. All order creations for ML performed through planning will result in the addition of a release record to a line item on a single transfer order for each enterprise warehouse selected to supply the items to the local warehouse. It will be necessary to run the order release process from the Transfer Demand Order object before the next MRP planning run, or the transfer orders will be deleted and re-planned.

Interface COM/CSM with ML

Material Logistics uses the customer order process in COM/CSM as a vehicle to create actual order demand for released transfer orders, in the supply warehouse. During the Order Release process initiated from MRP or ML, information is sent by client transactions to create customer orders in the supply warehouse. These orders are created for thecustomer number that was assigned in ML to the demand warehouses in EnterpriseWarehouse Trade Relations.

These orders exist in COM/CSM until they are shipped complete. For Non-Invoicing MLOrders, no booking information is created. No maintenance to these orders can be made in COM/CSM. Only ML can maintain these orders. However, you can use the COM/CSMpick list functionality, if the orders must be shipped through COM/CSM.

Material Logistics has been enhanced to allow for automatic AP invoice IFM transactions on the demand side for those supply customer orders that are configured to be invoiced and to allow

automatic AP invoice transactions. These transactions will automatically be entered and posted through IFM Legacy Bridge.

If IFM is not installed or if you are not planning on using this feature, install this APAR because it will create objects and files for future features in Material Logistics.

ML Interface ACTIVE and NOT ACTIVE

The interface between ML and OBPM and MRP has been enhanced to make ML transfer orders visible in MRP Recommendations in OBPM and in MRP Review/Approve Items. ML transfer orders have a "T" prefix and can be changed and deleted through the enhanced interface. In addition, users without ISL/MISL can create ML transfer orders through OBPM and MRP. Users with ISL/MISL will continue to create ONLY ISL/MISL orders through these applications, unless they turn on the "Activate ML Interface" option in ML application settings. At that point, they will be able to create ONLY ML transfer orders through these applications.

For users with ISL or MISL, the "Activate ML Interface" flag will do two things 1) Switch the automatic demand transfer function from using the ISL/MISL item, planner, and vendor default files over to use the new ML Supply Enterprise Warehouse ID found on the Item Warehouse ML card. 2) Change the OBPM/MRP order create and release functions to stop creating ISL/MISL orders and start creating ML transfer orders.

The "Activate ML Interface" setting should not be turned on until all Enterprise Warehouse Trade Relations have been set up and the Supply Enterprise Warehouse ID has been established on the ML card of the Item Warehouse object for all items previously defined in the default files of ISL/MISL. (It may be helpful to Subset by Warehouse, Planner, or vendor and use mass change). After activating the interface, an MRP planning run will be necessary to ensure that the default supply warehouses for transfer orders in OBPM and MRP reflect the setup for ML and not those setups in the past for ISL/MISL. This is especially important if you choose to change the way that supply warehouses are identified in ML to be any value other than the supply side In-transit ID that was previously used by ISL. For non ISL/MISL users, the "Activate ML Interface" flag does not need to be set, since it is automatically considered active when ML is installed and ISL/MISL is not installed.

Interface IM/MM with ML

ML uses IM/MM warehouse maintenance to define the In-transits central toMaterial Logistics. For controlled planning warehouses and for In-transits ML depends upon IM/MM location detail maintenance to define inventory locations for each warehouse.

IM/MM will use the location and order information generated through ML and COM/CSM in its inventory status and availability displays and reports. Open orders in demand warehouse are treated as purchase supply and in the supply warehouse as customer demand.

To begin the process a Planning Demand Warehouse and a Planning Supply Warehouse must exist. We then can build related enterprise warehouses in the MLEnterprise Warehouse object file. We then can relate these warehouses to each other for the purposes of transfer. We do this by

creating relationships with the enterprise warehouses in the object Enterprise Warehouse Trade Relations. For MRP to automatically pass demand (planned orders) to the supply warehouse, a default supply enterprise warehouse id for transfers must be entered on the material logistics card on the item warehouse record.

Material Logistics and Associated COM/CSM Dates

ML order dates when generated from MRP

Due Date = MRP due date

Requested Date = ML due date – Additional transfer lead time (found on the item warehouse ML card)

Note: When backing off the additional transfer lead time, a production calendar is NOT used.

Example: If the Due date is 11/16/2012, then the requested date is 11/06/2012.

Note: Requested Date is used to pass a date to COM/CSM to reflect the additional transfer Lead time. It is the date to be placed in the Request Date field on the COM/CSM Order Release record.

The additional transfer lead time (in the item warehouse record ML card) is used for shipping lead time that is an exception from the shipping lead time found in the customer master file. This allows for a standard shipping lead time for the demand warehouse (via customer) and an additional exception lead time by item (on the item warehouse record ML card).

Production Due = Request Date – Enterprise Warehouse Trade Relations (supply details card) Ship lead time

If the Enterprise Warehouse Trade Relations ship lead time is 0 then:

- Production Due = ML request date – the shipping days found in the customer master file.
- Start Date = MRP Start Date

Manually keyed ML orders

Due Date = manually keyed value

Or = today's date + purchasing lead time (review + vendor + safety) – This uses the production calendar.

Requested Date = ML order due date – Additional Transfer Lead Time (found on the Item warehouse ML card). Like ML orders created thru MRP/OBPM, the production calendar is not used when backing off the additional transfer lead time.

Production Due = Request Date – Enterprise Warehouse Trade Relations (supply details card) Ship lead time

If the Enterprise Warehouse Trade Relations ship lead time is 0 then:

- Production Due = ML request date – the shipping days found in the customer master file.

Note: Production Due is the request date if the supply warehouse is in a different environment.

Start Date = Today's date.

COM/CSM order line item dates

COM Request date = ML request date

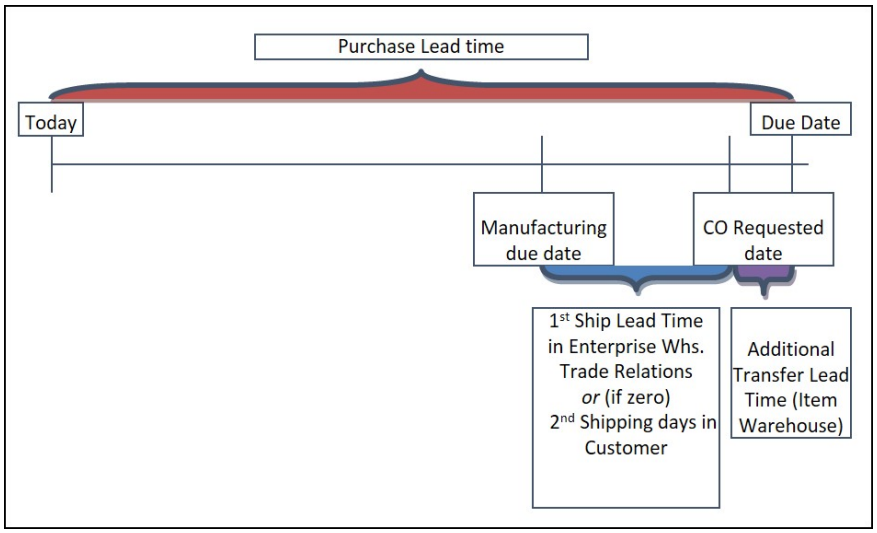
COM Promise date = ML order due date

COM Manufacture date = COM/CSM request date – Enterprise Warehouse Trade Relations (supply details card) Ship lead time

If the Enterprise Warehouse Trade Relations ship lead time is 0 then:

- COM Manufacture date = COM/CSM request date – the shipping days found in the customer ship-to file.

If the shipping days in the ship-to file is 0 then the shipping days in the customer master is used.



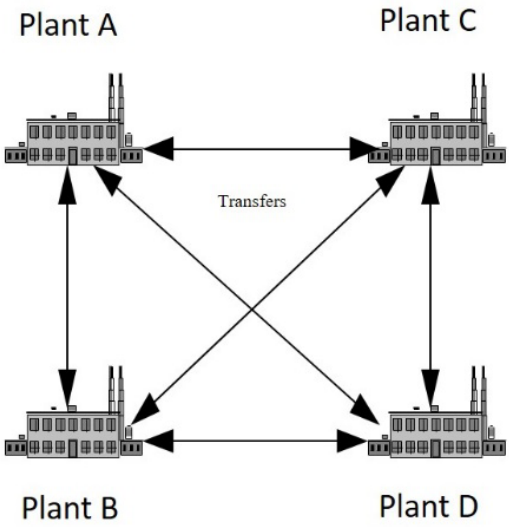
Chapter 3. MATERIAL LOGISTICS INSTALLATION

This chapter contains Material Logistics user installation information and application tailoring.

Material Logistics must already be installed. Material Logistics needs MM, COM or CSM, and their prerequisites, to be installed and interfacing. You can install ML by going into the Applications card in a given XA environment in Link Manager.

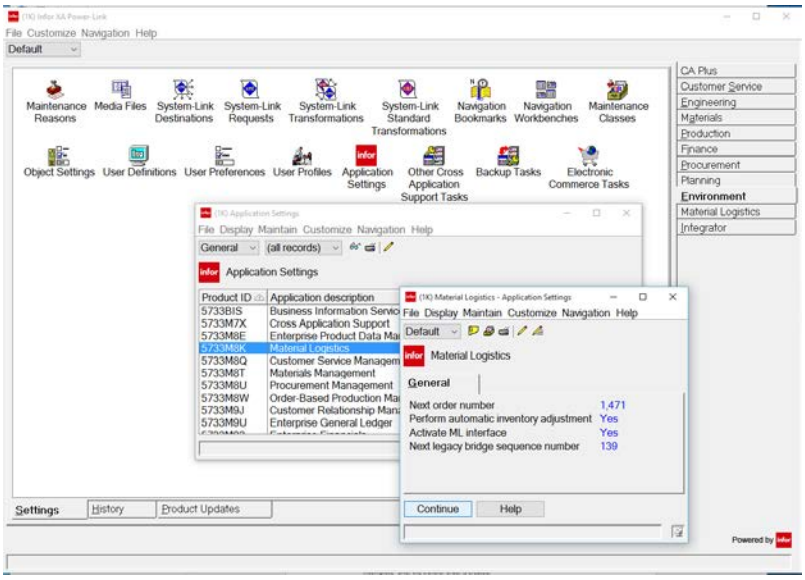
Material Logistics User Tailoring

Material Logistics requires set up of enterprise warehouses and of enterprise warehouse trade relations. This tailoring allows the user to customize Material Logistics to, as closely as possible, to match your business needs.



Material Logistics Application Settings

From the Environment application card, a user can access the object called Application Settings. Upon opening, the user can maintain the Material Logistics application settings.



By clicking on the change icon on this template the user can change the attributes.

Next order number

You can assign the starting Transfer order number that you wish to use. The number isassigned per environment. Unless there is a reason, it should be left with the installed default.

The Transfer Order number will be prefixed by a “T”. The order number operates like PO and MO order numbers. ML will automatically assign order numbers starting with the value specified and increment for each subsequent order.

Perform automatic inventory adjustment

When a Transfer Order is under or over received, an inventory balance will remain (+ or -) in the In-transit warehouse location. This balance will remain indefinitely,unless it is cleaned up by ML or manually by the user. Setting this value to ‘Yes’ will automatically create the correct “IA” transaction to reduce this inventory balance to zero.

Note: Inventory management tailoring must be set to allow inventory locations to go negative.

Activate ML interface (to planning)

ML Interface to Planning

For most users, Material Logistics will automatically interface to XA planning, and nothing will need to be done to enable the interface. So functions in Material Requirements Planning, Master Production Schedule Planning, Order-Based Production Management and Materials Planning for transfer or InterSite orders will automatically work with Material Logistics transfer orders. It will not matter whether or not the ML Interface to planning flag is turned on or off. However, if the InterSite Logistics application is installed, the ML interface to planning must be activated before certain functions in those planning applications will work with Material Logistics instead of InterSite Logistics. Until it is activated, the process of transferring planned demand and the creation on new orders through planning will continue to work with ISL and MISL as it did prior to the installation of Material Logistics. ISL X-orders will be created and normal ISL defaults will be used in determining the supply warehouses to which planned demand will be transferred.

Before Interface Activation:

When ML is installed in an environment that also contains ISL or MISL, the ML interface with MRP, MPSP, OBPM, and MP will not initially be active. So those who have been using ISL/MISL will initially see those applications and their interfaces function as in the past.

Planned demand will be transferred between the warehouses based upon ISL item, planner, and vendor defaults. So, when OBPM and MRP Review and Approve Items show a default supply warehouse, it will still be determined based upon ISL item, planner, and vendor defaults. Also in OBPM and MRP Review and Approve Items, the creation of an intersite order from another warehouse will result in the creation of an ISL/MISL X-order. The Auto Release function will also create only InterSite Logistics X-orders.

After setting up System Link Destinations, Material Logistics Enterprise Warehouses and Enterprise Warehouse Trade Relations, it will be possible to create Material Logistics transfer orders through the Transfer Demand Orders object in Material Logistics. Until the ML planning Interface is activated, that will be the only place where ML transfer orders can be created. Once created, the ML orders will be fully functional and the planning applications will recognize them as scheduled receipts. The orders can then also be maintained through OBPM and MRP Review and Approve Items.

ISL and MISL users should take care to ensure that all of their old warehouses and items that were set up for use with those applications are also set up in the Material Logistics application. The Material Logistics Enterprise Warehouses and Enterprise Warehouse Trade Relations should be set up to exactly mirror the setup in the old applications. Any previously defined item, planner, or vendor default supply warehouses should be entered on the ML card for the items in the Item Warehouse file. Although Material Logistics provides new options that allow an Enterprise Warehouse name to differ from the actual physical warehouse where in-transit inventory is stored, it is not recommended that such changes be made for established ISL/MISL users during the implementation of the new application. Warehouse setup changes may be confusing for users, and it may cause old demand transfer data to become stranded in some files. The ML demand transfer function uses some of the same files as ISL and MISL, and it is designed to cleanup old records left in those files for the same warehouses after you switch on the ML interface. If you do not use the same warehouse names, ML may be unable to accurately perform that function.

MISL users would be more likely to have problems with stranded demand records than ISL users if warehouse names are changed or eliminated, since MISL shares more files with ML. However, in all cases, if such changes are made, it would be best to try them in test environments before attempting them in production. One way to ensure that such changes will not leave records stranded under obsolete warehouse names, would be to eliminate all ISL/MISL defaults for the obsolete warehouses and run a complete MRP planning run for all warehouses with no passed demand before switching on the ML interface. Since this might be time consuming, most will find it preferable to duplicate the original ISL or MISL setup in Material Logistics.

After all Material Logistics Enterprise Warehouses and Enterprise Warehouse Trade Relations a have been set up and all default supply warehouses have been established for ML in the Item warehouse file, you can choose when to switch on the ML interface to planning in Application Settings for Material Logistics. It should not be done until you are confident that the setup for your old application has been accurately replicated in the setup files for Material Logistics. Although you can create test orders in the environment prior to activation of the interface, it would be beneficial to initially make the interface change in a test environment. This is especially true if you chose to make setup changes during the implementation of the new product.

After Interface Activation

After activation of the ML interface to planning, the planning functions that previously worked exclusively with ISL/MISL will work exclusively with Material Logistics. Planned demand will be transferred between the warehouses based upon the values on the Item Warehouse ML card. When OBPM and MRP Review and Approve Items show a default supply warehouse, it will be determined based upon the ML item default supply warehouse. Also in OBPM and MRP Review and Approve All Items, the creation of an order from another warehouse will result in the creation of an ML T-order. The Auto Release function will also create only Material Logistics Transfer orders.

All planning functions supplied by Material Logistics prior to and including the creation of an order are duplicates of those supplied by ISL and MISL, so they must replace the functions supplied by those applications. When the ML interface is activated, the switch will effectively deactivate those parts of the ISL/MISL interface for MRP, MPSP, OBPM, and MP and active the ML functions.

After activating the interface, an MRP planning run will be necessary to ensure that planned orders in MRP reflect the defaults setup in Material Logistics and not those previously defined for ISL/MISL.

After activation of the ML interface, it will still be possible to create InterSite Logistics orders through the ISL or MISL application menus. After activation, that will be the only place where InterSite X-orders can be created. Once created, the X-orders will be fully functional and the planning applications will recognize them as in the past. Any existing orders can also still be maintained through OBPM and MRP. The OBPM and MRP Review and Approve screens will continue to show both ISL/MISL InterSite Orders and ML Transfer orders. Regardless of the ML Interface setting, users can maintain both types of orders. However the demand transfer method and the type of orders created will depend upon the interface setting.

Next legacy bridge sequence number

This is an identifier for auto created API transactions that are loaded into the IFM legacy bridge. It is used only for trade relations that are tailored to exchange invoice information. Unless there is a reason, it should be left with the installed default.

Material Logistics Prerequisites

Power-Link and ML must be installed for all environments using ML. ***ALL*** current PTF's must be applied for the appropriate CUM level. This also includes the client PTF's. If necessary, submit an INFOR incident requesting the latest required Material Logistics PTF list. ***Some functionality described in this manual may not be available unless the environment is at the latest ptf levels.***

COM/CSM and their individual required modules are required for Material Logistics. The appropriate interfaces must be turned on and activated.

The IM the tailoring question "Transactions in Batch Mode" (I0002) must be answered "N".

Inventory Management tailoring must also be set to allow inventory locations to go negative. If your company policy is to not allow negative locations, the minimum requirement is that the in-transit warehouse location must be set to allow negative locations.

The Manufacturing Calendar must be set up through Inventory Management File Maintenance.

CSM must be set up to automatically assign customer order numbers in the company(s) used with Material Logistics.

If maintenance logging is selected in COM/CSM (either at the company or customer level), a valid maintenance reason code is required to maintain (change or delete) a customer order. Because a COM/CSM order is associated with each transfer order, a maintenance reason code is also required in order to change or delete an ML Transfer Order. If maintenance logging is activated in COM/CSM, then ML users MUST create a maintenance reason code of "IX" using code file maintenance in COM/CSM. This will enable the maintenance of ML orders.

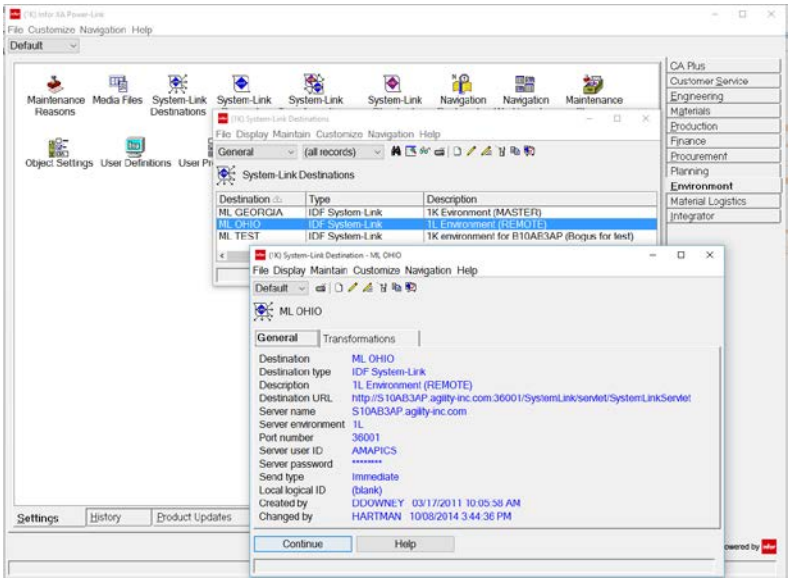
For those customers currently using ISL/MISL, ML can be installed into the same environments. As long as the ML interface is not activated in environment > Application Settings > Material Logistics, ISL/MISL will be the primary source for passing demand between warehouses/environments. You will be able to create manual transfer orders, but no planned demand will be passed based on the ML settings. ML can be activated and become the primary source of demand between warehouses/environments while you continue to ship/receive against ISL/MISL orders. Also, MRP Recommendations, MRP auto release and MRP Review Approve will continue to create InterSite ('X') orders as long as the activation flag is turned off. Once turned on, transfer ('T') orders will be created.

Validate that u-jobs in all environments are active for AXKSRV and PSVJUPxx (where xx is the environment). If planned orders from MRP demand warehouse are being passed to a supply warehouse, PSVTUS (Publish Request Processor) and PSVTUT (Materials Management) u-jobs should also be active.

System-Link Considerations

Multiple Companies and Environments

Material Logistics basic design uses a XA System Link for multi-environment communications. It is also used even if you are using ML in one environment. From the Environment card you can drill down into an object called “System Link Destinations”. From this object you must set up destinations for your own environment as well as other environments where data is being transferred.



System Link must be installed and activated in all environments. System-Link Destinations must be set up on the Environment application card of XA. The information set up on a system-link destination must be consistent among all the environments. In order to pass MRP planned demand, the Transformation – Replicate_TransferDemandForCommonLoad must be activated.

When creating a test environment by copying a production environment, validate that the system link destinations and the enterprise warehouses are pointing to the test environment rather than the production environment.

System Link Attribute Fields, Definitions

Destination – Description of the location

Destination type – Use IDF System Link

Description – Detailed description of the location. Tip: you may want to include the environment designator here. This will be a reminder of the environment being used if you refresh a test environment with live data.

Destination URL – This field is built on the fly when entering the data into the other fields.

Server name – Server name of your IBM i.

Server environment – XA Environment in which this destination exists. Always update Test System-Link destination environments with the appropriate value after doing a refresh.

Port number – Typically use 36001.

Server user ID – Key in a user ID that has XA authority, typically AMAPICS.

Server password – Password for the user (*make sure that the users password is set to NOT expire*).

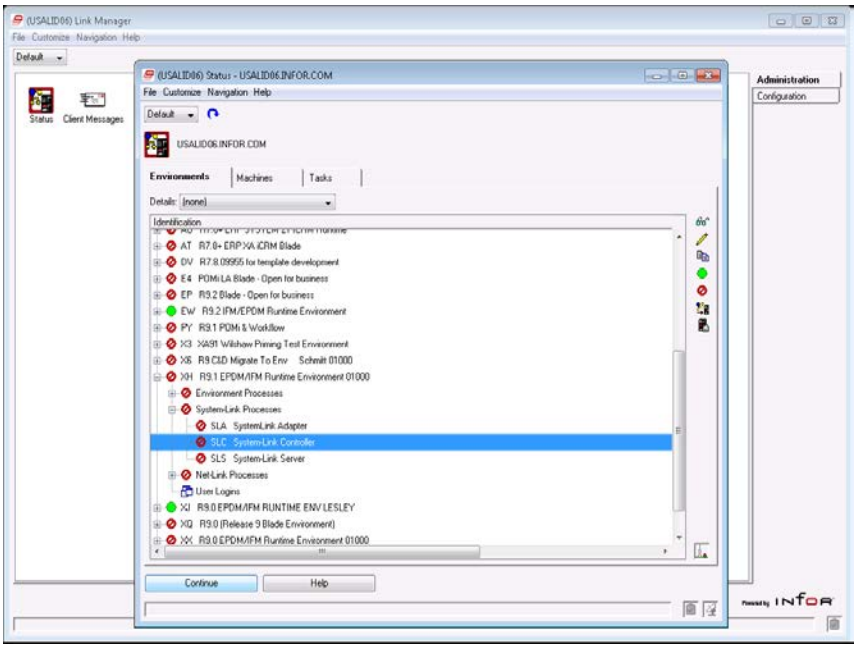
Send type – Use Immediate.

Local logical ID – Typically blank.

Material Logistics Deployment Strategy

Link Manager Setup

You must start the SLS and SLC Processes in Link Manager to support the Cross Environment Replication for Material Logistics.



Material Logistics U-Job Considerations

Key processes to have up and running for ML installations within and across environments:

1. System-Link SLC and SLS Processes.
2. AXKSRV – This u-job processes requests to replicate or update ML database files across environments via System-Link (e.g. transfer order creation, enterprise order release locations, transfer order status, quantity, etc. updates). It processes the Material Logistics Server Status File, MLSRVS.
3. PSVTUT – Materials Management u-job uses System-Link to write records to the transfer order database which writes records to the MLSRVS file across environments or are written directly to the MLSRVS file within an environment to create a CO to be processed by AXKSRV. This u-job is triggered by a post transfer order release process.
4. AXKSPH – This u-job is used in the creation of API transactions when tailored in ML. When API transactions are created across environments, records are written to the MLSRVS file via System-Link and are processed by AXKSRV which triggers the creation of MLSPHT/MLSPHS

records that generate the API legacy bridge records. When API transactions are created within an environment, records are written directly to the MLSPHT/MLSPHS files.

5 PSVTUS – Publish Request Processor u-job uses System-Link for demand distribution from MRP. The records are considered for distribution if their Item Warehouse records have a supply enterprise warehouse defined. The System-Link destination transformation XA_Replicate_TransferDemandForCommonLoad must be active.

6 PSVTUO – OBPM Transaction Processor u-job used for MRP recommendation transfer order creation/maintenance and deferred release.

Chapter 4. MATERIAL LOGISTICS ENTERPRISE WAREHOUSE SETUP

Create the Warehouse

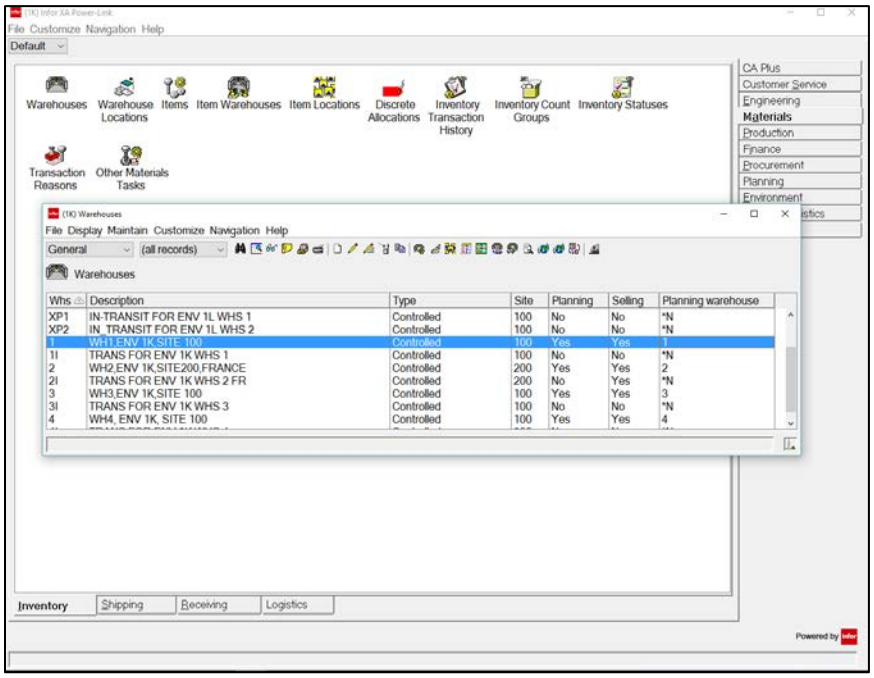
Define the actual warehouses to be used with the Material Logistics Enterprise Warehouses object.

From the Materials Management application or ML Enterprise card you can create a warehouse if it does not already exist. You can create the Demand Planning Warehouse, the Supply Planning Warehouse and the associated In-transit warehouses.

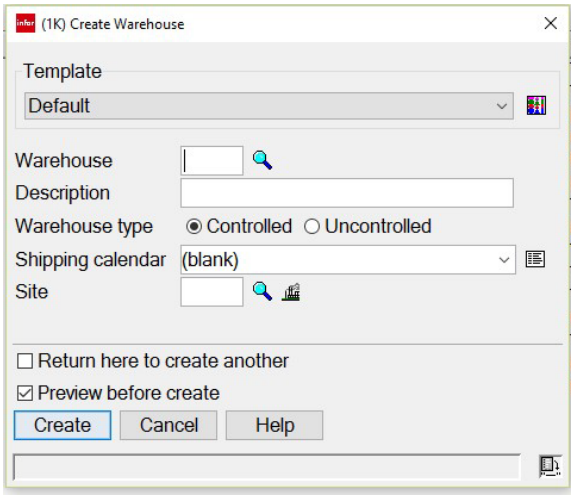
Demand and/or Supply Planning Warehouse

What to do:

- Click on the Materials Management (or ML) application, and then the Warehouses object.
- Click on the Create icon on the toolbar at the top of the Warehouse listing view to get the create template.



Warehouse Create Template

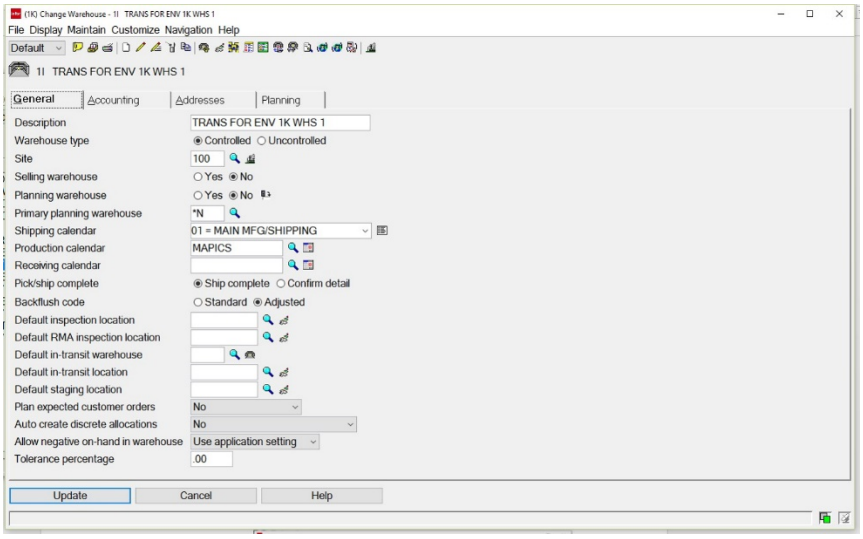


What to do:

- Fill in the warehouse ID form one to three digits. Sometimes if there are not too many warehouses you can identify a planning warehouse to its associated In-transit by using similar numbers and add the letter “T” or “I” to identify the In-transit.
- Fill in the attributes: Description (defined with details), Warehouse type (Controlled), Shipping calendar and Engineering Site.

Filling in the warehouse attributes

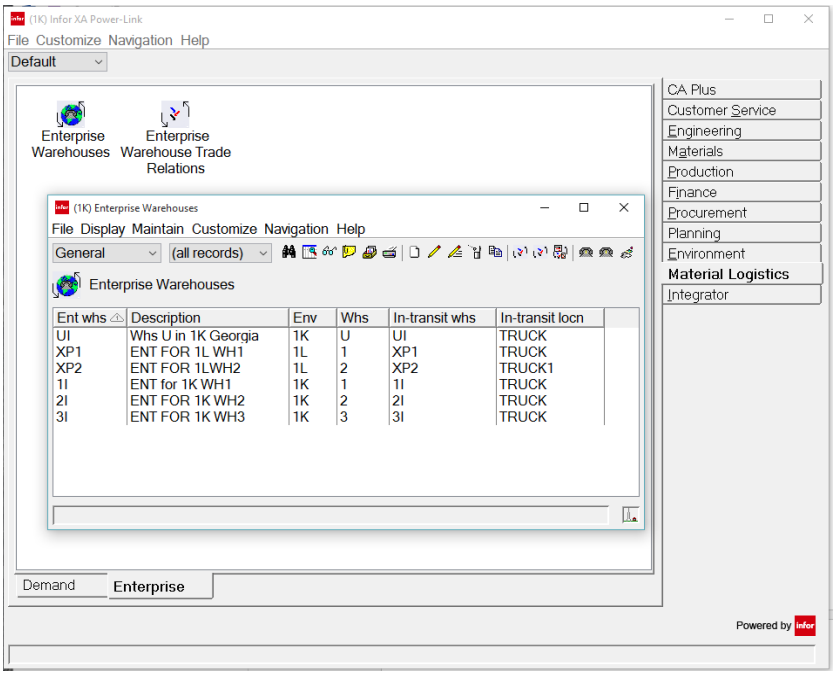
General card



- Fill in the attributes on the General card Yes for Planning and Selling if Demand or Supply, No for Planning and selling if In-transit, Primary planning warehouse should be itself if Demand or Supply, Primary should be set as *N if In-transit (if you always and only transfer all your items from the same warehouse you could identify that Primary Planning Warehouse at this time), Pick/Ship Complete (Not Complete/Confirm detail), Default Staging location.

Create the Enterprise Warehouse

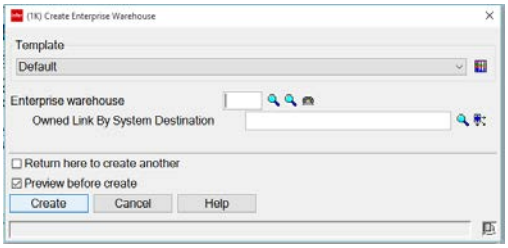
When you enter into Enterprise warehouse you have had already set up the System Link Destinations settings found in the Environments card previously discussed. From the Enterprise Warehouse object you can set up the details that are unique for an Enterprise warehouse.



What to do:

- Click on the Create icon in the toolbar at the top of the Enterprise Warehouse listing view.

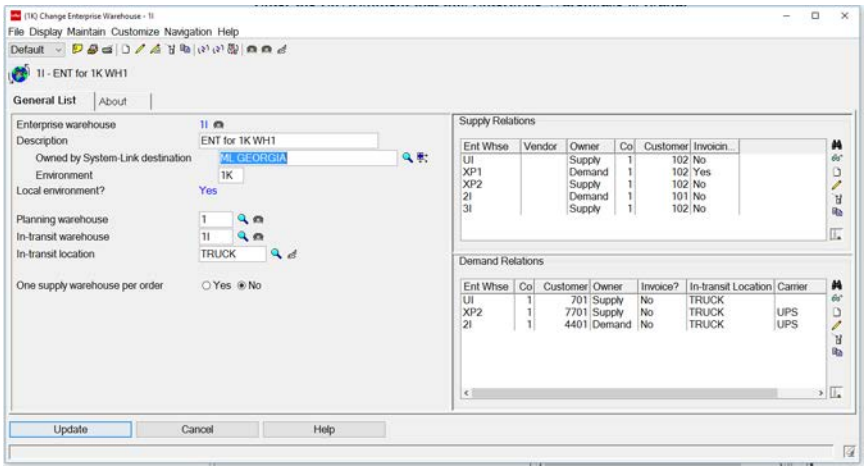
Create Enterprise Warehouse template



What to do:

- Create an Enterprise Warehouse Id. (must be unique across environments)
- Attach the System Link Destination.
- For visibility purposes only (not a requirement), the recommendation is to set the In-transit warehouse to a code that is easily recognized as being associated with the planning warehouse.
- Note that the in-transit warehouse must be a valid IM warehouse and the In-transit location must be a valid location in the in-transit warehouse.

General List card



What to do:

- Enter the Enterprise Warehouse Description
- Enter the Owning System Link Destination
- Enter the Environment that this Enterprise Warehouse is found.
- Enter the Planning Warehouse number. This is the planning warehouse for this In-transit warehouse.

- Enter the In-transit Warehouse number. This is the warehouse that represents a virtual In-transit such as a truck, ship or plane to move stock from one supply warehouse to a demand warehouse.
- Enter the In-transit Warehouse location.
- Specify whether or not ML will require on supply warehouse per transfer order. If no, you will be allowed to have multiple supply warehouses associated with one transfer order.

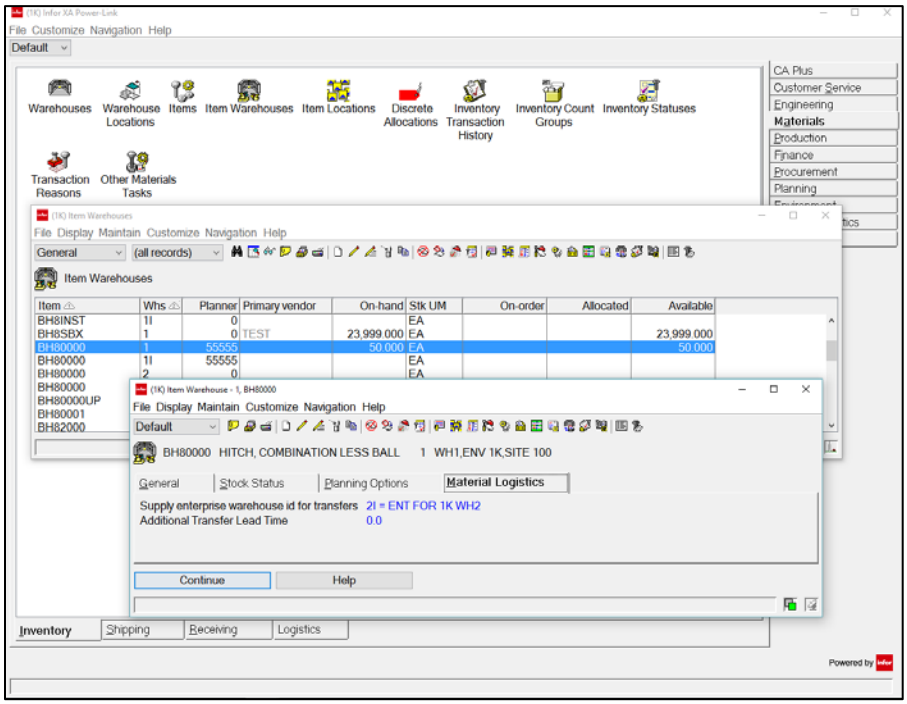
Specify the Item Warehouse Defaults

Define the item warehouse to be used with Material Logistics.

From the Materials Management or ML application you can create the item warehouse if it does not already exist. From the Item Warehouse object you can now identify from where this item will be supplied. Creating the Enterprise Warehouses before you create the Item Warehouse makes it easier when building this relationship. You may also add additional transfer Lead Time for this item warehouse at this time. Explanation of how dates are calculated are found elsewhere in this Material Logistics manual.

What to do:

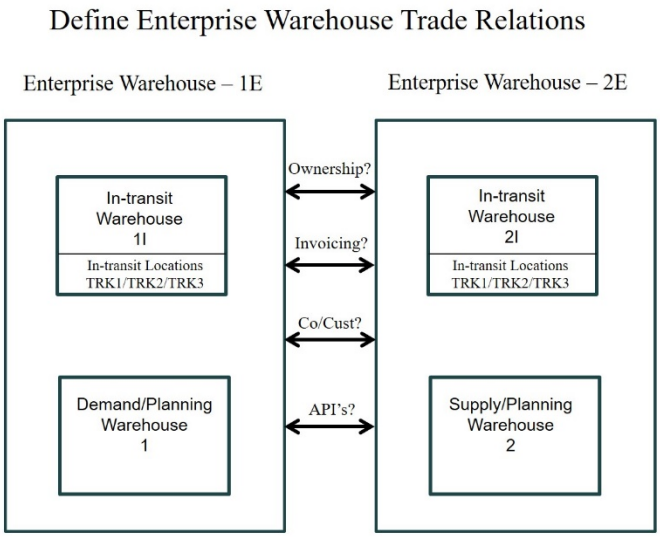
- Enter or select the supply enterprise warehouse id for transfers.
- Add any days of additional transfer lead time.



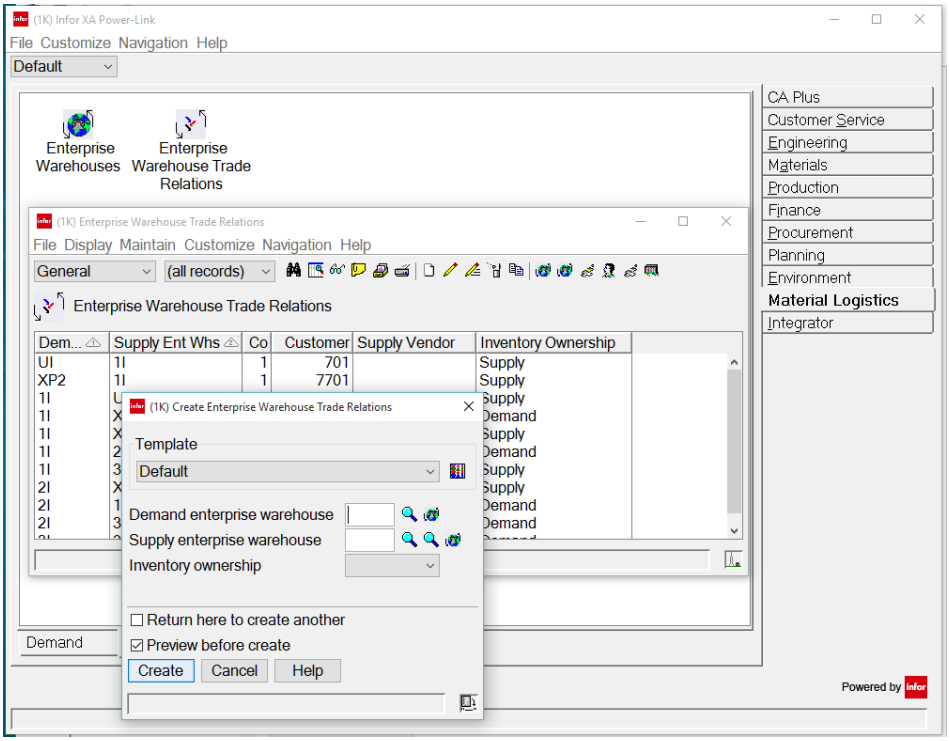
Chapter 5. MATERIAL LOGISTICS ENTERPRISE WAREHOUSE TRADE RELATIONS SETUP

Work with Enterprise Warehouse Trade Relations

Use the Enterprise Warehouse Trade Relations object on the ML Enterprise card to create the relationships between the Demand Enterprise Warehouse and the Supply Enterprise Warehouse. The Enterprise Warehouse Trade Relation defines the relationship between the two Enterprise Warehouses for things such as: Who owns the inventory while in-transit? What location in the in-transit warehouse will the supply warehouse place the material into at shipment time? How will transfer orders be created through planning? Will the supply warehouse generate invoices? Do you want the supply warehouse to automatically generate an API to the demand warehouse?

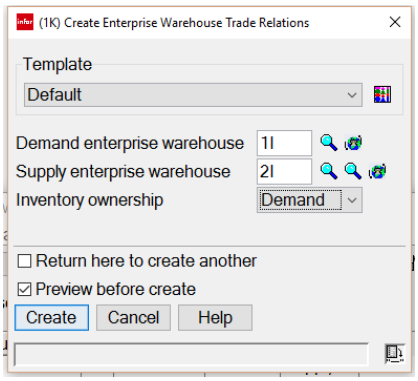


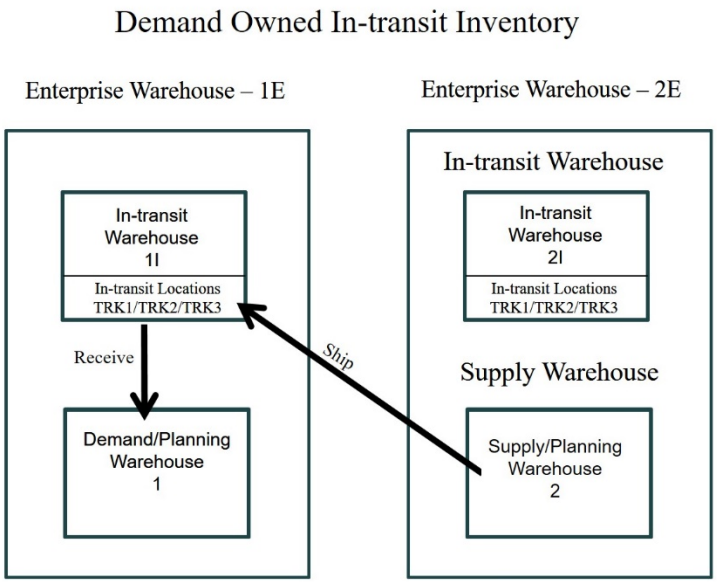
Create Enterprise Warehouse Trade Relations

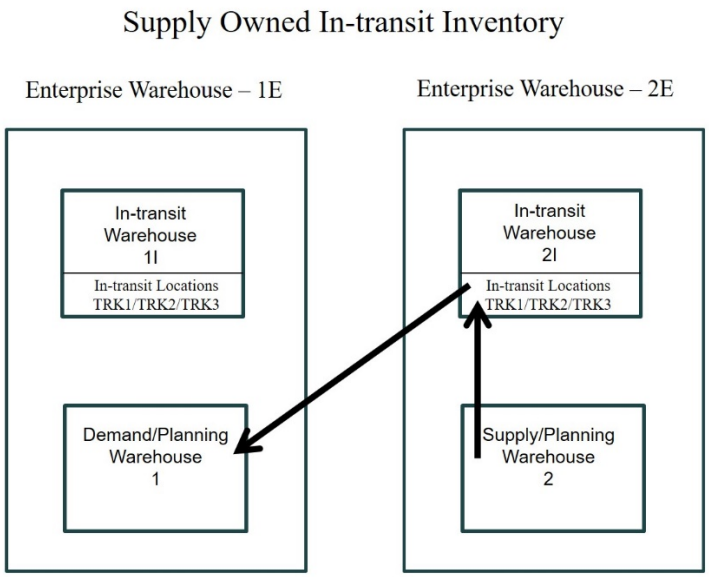


What information you need:

- The Demand Enterprise Warehouse and the Supply Enterprise Warehouse ID.
- ***Important:*** *If the trade relation is across environments, the enterprise warehouse trade relation records must be set up identically in each environment*.
- **Note:** the API card, if used, only needs to be filled in on the demand side, although the Transfer order settings must be the same (Allow customer order invoicing, Create AP invoice transactions) in both environments.
- Inventory Ownership – unless there is a legal reason to make it “supply” owned inventory, the recommendation is to make it “demand” owned. For visibility, it is easier for a “demand” warehouse planner to see (inbound) in-transit inventory from all supply warehouses in a single warehouse rather than to have to sign onto all the “supply” in-transit warehouses and subset the inventory to see what each supply warehouse has shipped to that individual demand warehouse.

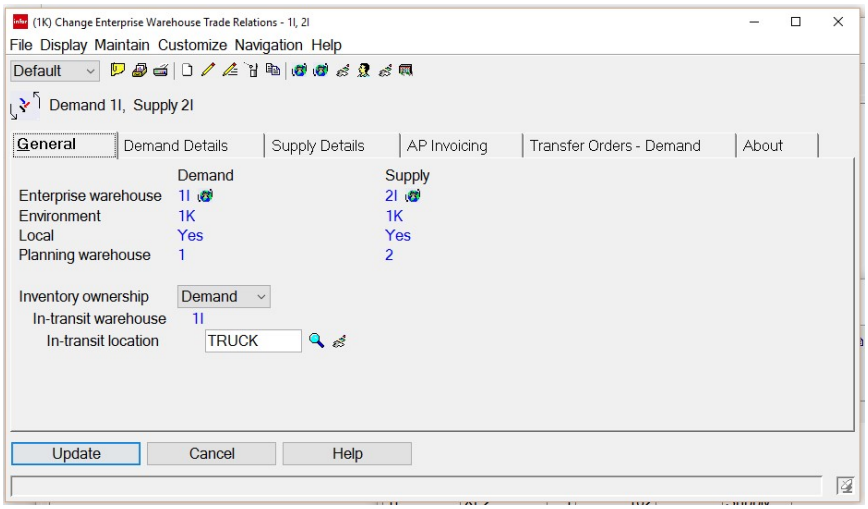

(1K) Create Enterprise Warehouse Trade Relations
Template
Default
Demand enterprise warehouse
1I
Supply enterprise warehouse
2I
Inventory ownership
Demand
Return here to create another
Preview before create
Create
Cancel
Help


Demand Owned In-transit Inventory
Enterprise Warehouse – 1E
Enterprise Warehouse – 2E
In-transit Warehouse
In-transit Warehouse 1I
In-transit Locations TRK1/TRK2/TRK3
Receive
Demand/Planning Warehouse 1
Ship
In-transit Warehouse
In-transit Warehouse 2I
In-transit Locations TRK1/TRK2/TRK3
Supply Warehouse
Supply/Planning Warehouse 2



Enterprise Warehouse Trade Relations cards

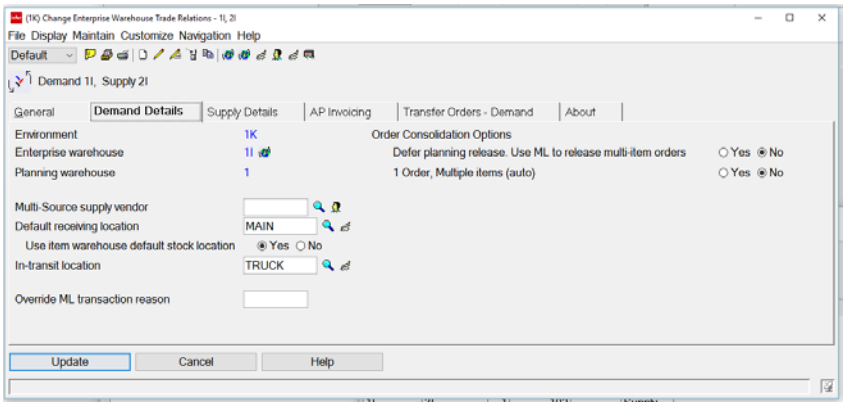
General Card



What to do:

- Inventory ownership requires you to know who should take ownership of this inventory while it is in transit. Since this is filled in on the create template it is usually already set to what you want it to be.
- The In-transit location will default from the Enterprise Warehouse, it can be overridden. This is the location in which inventory will be held after a shipment is made and until it is received.

Demand Details card

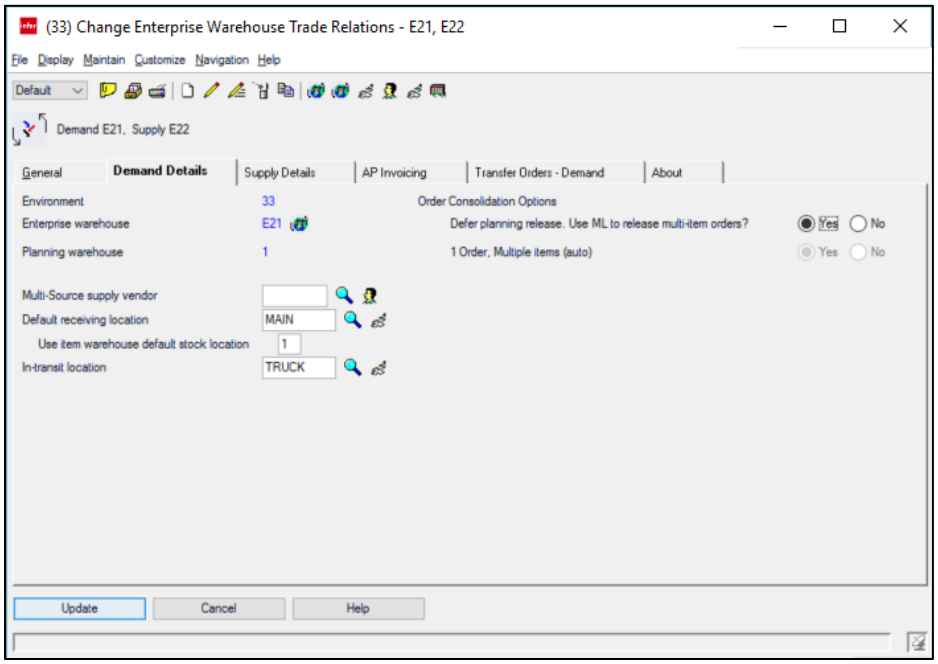


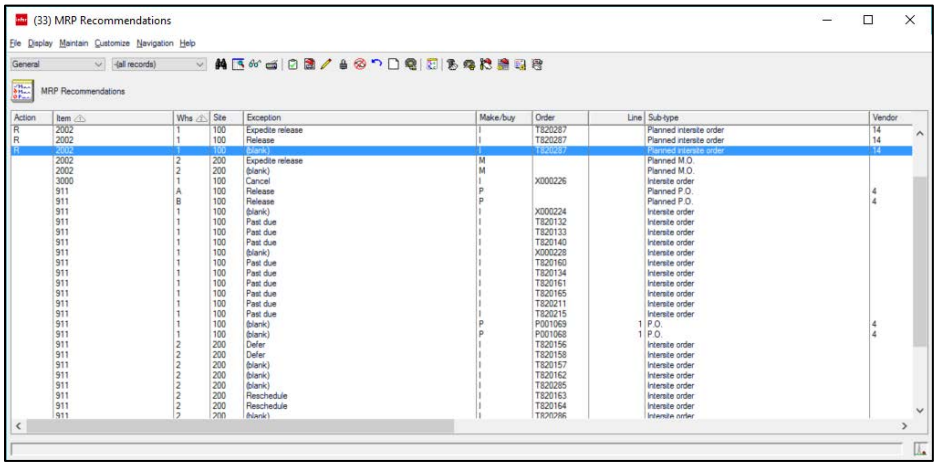
What to do:

- Multi-Source supply vendor is not a supported function.
- Default receiving location is required to be entered. This is the location into which inventory is received when using Scheduled Receipts.
- Use item warehouse default stock location. You must designate if you will be using the item warehouse default stock location for receiving. If you say no, you will use the assigned Default receiving location filled in above. If you say yes and the item warehouse default stocking location is blank, the Default receiving location will be used.
- If no default stock locations are defined, the Trade Relation Default Receiving Location will be used.
- The in-transit location defaults from the General card. Inventory ownership determines which location is used in the associated In-transit warehouse when an item is shipped and received.
- Override ML transaction reason can be used as a user defined field to define a reason for an ML transaction other than the default value. When no value is entered, the default value for ML initiated IW, RW, and IA transactions will be the Demand Enterprise Warehouse. However, when a value is supplied, the transactions will fill in the reason field with the user specified value. **Note:** This will be important if you currently have GL rules built around the current set of ISL/MISL inventory transactions.
- Defer planning release. When the "Defer planning release" option is answered "Yes", all ML transfer orders created through planning and through MRP auto release will no longer be

automatically released. Lines are added to the same transfer order that will have to be released manually through ML before the next planning run is executed.

Deferred Planning Release Per Enterprise Warehouse





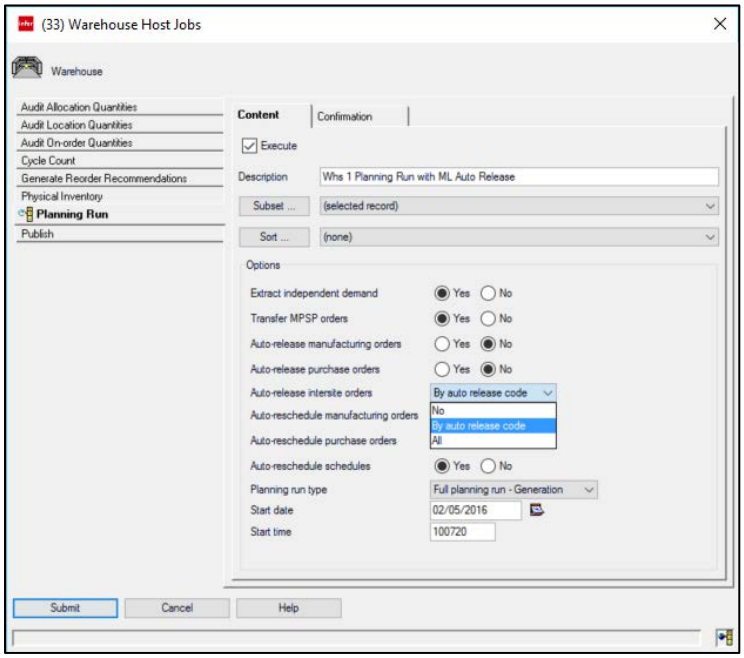
When Deferred, the release of ML transfer orders will be performed when a user selects the release function in the ML Transfer Demand Order object. The release function will be available only through the Transfer Demand Order object in Material Logistics.

Once the deferred release option has been enabled, all orders created through planning for the same demand and supply warehouse pair will be combined onto the same transfer order with a line for each item and a separate release for each originating planned order. The deferral also applies to the ML Auto Release function (1 order, Multiple lines (auto)). If MRP auto release is used, the order creation will occur, but the release process will be deferred and must be run in the ML Transfer Demand Order object. So, after MRP Auto Release has run, new transfer orders will exist, but they will not yet be released. Any subsequent transfer order creation through interactive processes in XA Planning will continue to add lines and releases to orders that were created for the same demand/supply warehouse pairs during MRP auto release. To stop adding lines and releases to a transfer order, it must be released through ML.

When Deferred Release has been enabled, it is very important and necessary to run the ML order release process from the Transfer Demand Order object before the next MRP planning run. If planning is run for the same warehouse, any transfer orders that were previously created through planning will be *deleted and re-planned*.

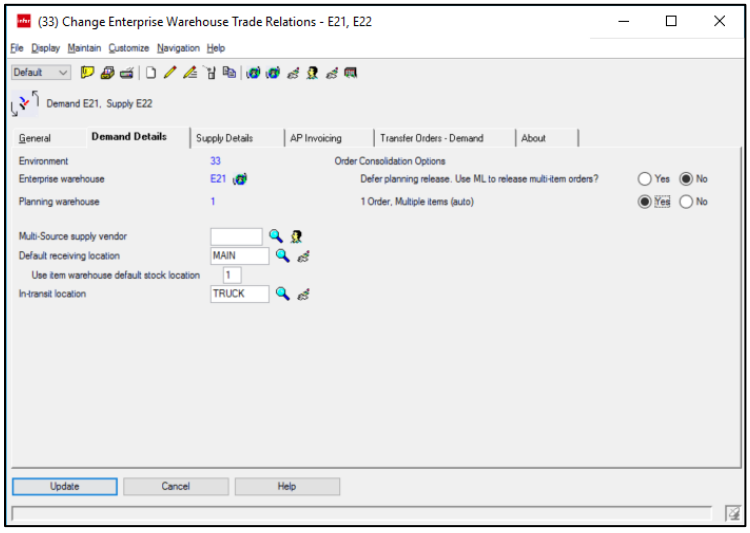
Technical Tip: It should be noted that the deferred release applies to all programs that use the ML interface program AXKR100 to create ML Transfer orders and AXKR135 to release the orders. So, if any custom programs call those ML planning interface programs, the release deferral logic will combine items onto a single planned order for each supplier and will stop the release from occurring. However, custom programs can insert a flag of '*NO' in LDA parameter positions 1017 to 1019 to make AXKR100 and AXKR135 ignore the deferred release setting.

Material Logistics Auto Release Setup



Material Logistics transfer orders can be created using the MRP or MP auto release feature. On the MRP display panel titled “Initiate Planning Run”, a prompt allows the selection of intersite transfer orders for automatic release. In Materials Planning, after selecting a warehouse, the host job Planning Run allows the same selection. The possible responses for the prompt are: 0 = No; 1 = By auto release code; 2 = All intersite orders flagged for release, regardless of the item auto release codes. By auto release code means that the intersite order is flagged for release (start date is within the MRP release horizon), and the item purchase auto release code is 2 or greater or the manufacturing auto release code is 1 or greater. When you choose to perform intersite order auto release, the release takes place at the end of the MRP planning run.

** If ISL is installed and the ML planning interface is not enabled in Application Settings, ISL “X-orders” will be auto released, not ML “T-orders”. When enabled, the ML interface to planning causes all planning order create functions to switch from the creation of ISL orders to the creation of ML transfer orders.

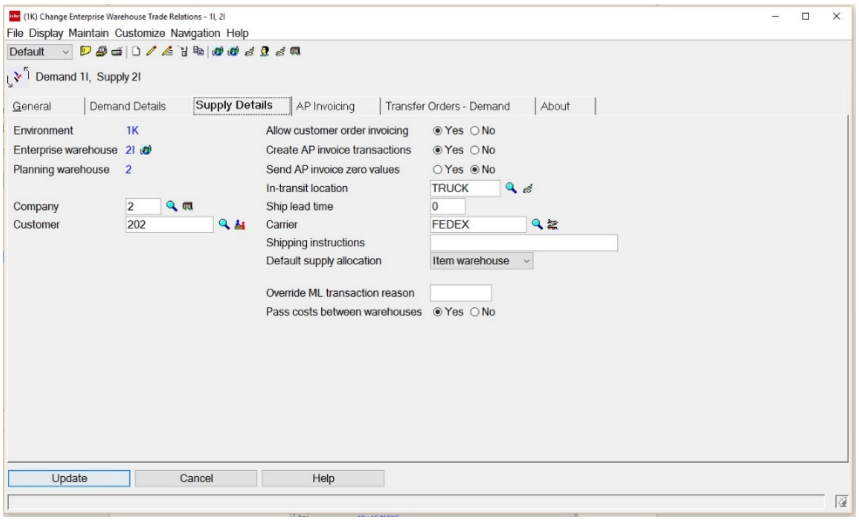


What to do:

- ML auto release, by default, creates a separate order, line, and release for each planned order. However, ML has the capability to create one single order with multiple lines and releases per supplier. The function can be enabled on the Enterprise Warehouse Trade Relations demand card.
- Select “Yes” to enable the new "1 Order, Multiple Items (Auto)" question in Enterprise Warehouse Trade Relations. Auto release will default to 1 item and release per order if that question is answered "No".
- If the Defer Release option is used, ML Auto Release will also automatically be turned on.
- When Defer release is “YES”, and Auto Release is “Yes”, the auto release function also continue to create multi-line orders, however any orders that were created will no longer be released in planning. The release function will be available only through the Transfer Demand Order object in Material Logistics.

- It will be up to the user to decide whether or not to immediately run the release option for the orders created by Auto-release.
- If they are left unreleased, additional lines and releases may be added to the orders through MRP recommendations, as long as they are for the same demand and supply warehouse.
- When all additions have been completed, the order can be released through the Transfer Demand Order object in Material Logistics.

Supply Details card



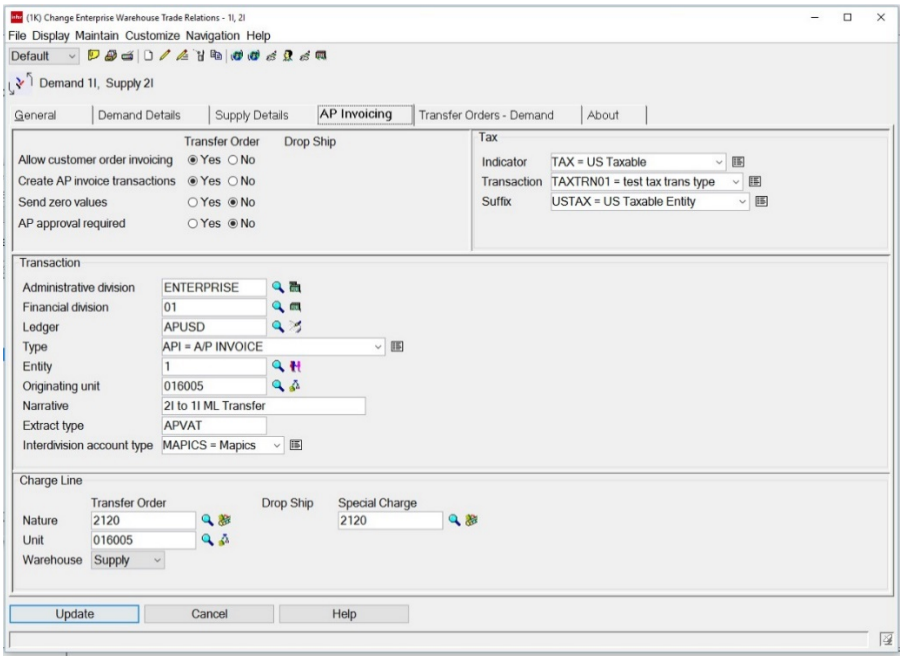
What to do:

- Company #, Customer # are mandatory to be entered. This is the company and customer used when the associated customer order is created from a released transfer order.
- Allow customer order invoicing
  - If Yes this allows the supply side to invoice shipments that are created
  - If No, this will create NS shipment transactions instead of SA's.
- Create AP invoice transactions, this needs to be answered Yes or No depending on whether or not you want auto AP transactions to be sent to the demand side.
  - This field will be enabled if invoicing is turned on for this supply enterprise warehouse.
  - Setting this to Yes will allow entry into the AP Invoicing card.
- Send AP invoice zero values, if you want zero value API's to be sent, set this to Yes.
- In-transit Location defaults from the Demand Details card. If it is overridden, it will change the Demand Details card value. Inventory ownership determines which location is used in the associated In-transit warehouse when an item is shipped and received.
- Shipping lead time, enter the number of days needed for extra ship lead time. See date calculation elsewhere in this manual to see how the lead time is used.

- Carrier (not mandatory but may save time at shipping).
- Shipping Instructions can be entered if any instructions are required for shipping.
- Default Supply Allocations
- This will set the initial default for this attribute when creating transfer orders. It can be overridden when the order is created.
- The choices of this attribute when using Material Logistics are None, Warehouse or Auto Discrete.
- Override ML transaction reason field allows a reason override for shipment and receipt transactions that are directly initiated by the Material Logistics application. This includes ML initiated IW, RW, and IA inventory transactions. However, when a value is supplied, the transactions will fill in the reason field with the user specified value. This will be important if you currently have GL rules built around the current set of ISL/MISL inventory transactions. This is the same field that is on the Demand Details card.
- Pass cost between warehouses: When a costing method other than standard cost is used, the supply side cost would be useful in the RW transaction amount. When answered "Yes", ML will send supply warehouse costs and ML initiated RW transactions will use the cost in the transaction amount. See the ML Ship/Receive chapter for further details.

AP Invoicing card (If IFM is not installed this card will not be available)

If allow customer order invoicing is set to Yes, this will allow entry into the fields associated with the AP Invoicing card.



What to do:

Material Logistics will allow for automatic AP invoice IFM transactions on the demand side for those supply customer orders that are configured to be invoiced and to allow automatic AP invoice transactions. These transactions will automatically be created and posted through IFM Legacy Bridge when invoicing is run for ML customer order shipments. The attributes specified on this card will be used when creating the API. This card does not need to be filled in on the supply side if going across environments, although the Transfer order settings must be the same (Allow customer order invoicing, Create AP invoice transactions).

The Special Handling Transactions object on Material Logistics Demand card holds the AP invoicing transactions until they are processed by the ML Special Handling Process (AXKSPH) unattached job.

AKXSPH u-job: ML Special Handling Process. This unattached job needs to be released in the demand environment if you plan to use automatic AP invoicing.

AP approval required, Yes or No:

This is used to alert accounting of an Accounts Payable Auto Invoice. Does this transfer require an approval by the Accounts Payable Administrator before paying it? If yes, an approval will be needed before the transaction will post.

Tax (drop-down codes and lists are typically assigned by finance)

- Indicator
- Transaction
- Suffix

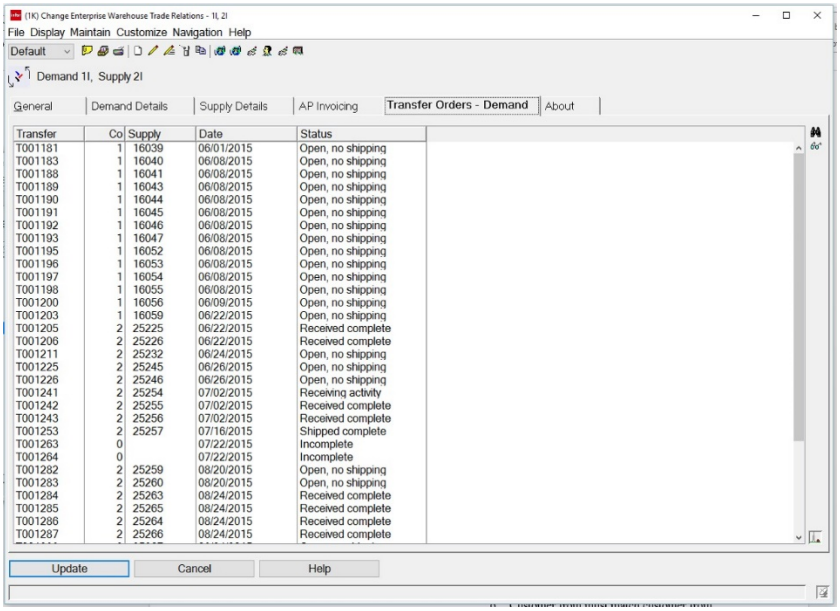
Transaction (codes and lists are typically assigned by finance)

- Administration division
- Financial division
- Ledger
- Type
- Entity
- Originating unit
- Narrative
- Extract type
- Interdivision account type

Charge Line (codes and lists created are typically assigned by finance)

- Nature
- Unit
- Warehouse
- Drop Ship Special Charge

Transfer Orders – Demand card



What to do:

- This card contains a list of all of the transfer orders that exist between the Demand and Supply enterprise warehouses.
- Transfer, is the transfer “T” number for this transfer demand order.
- Co, is the company from which this order demand is supplied.
- Supply, is the customer order number given to this transfer demand order from the supply company and enterprise warehouse.
- Date, is the transfer order date.
- Status, is the status of the transfer order.

Chapter 6. TRANSFER DEMAND ORDERS

From the Material Logistics card, when you select the Demand card at the bottom of the window, and click on Transfer Demand Orders, you can view and create transfer orders.

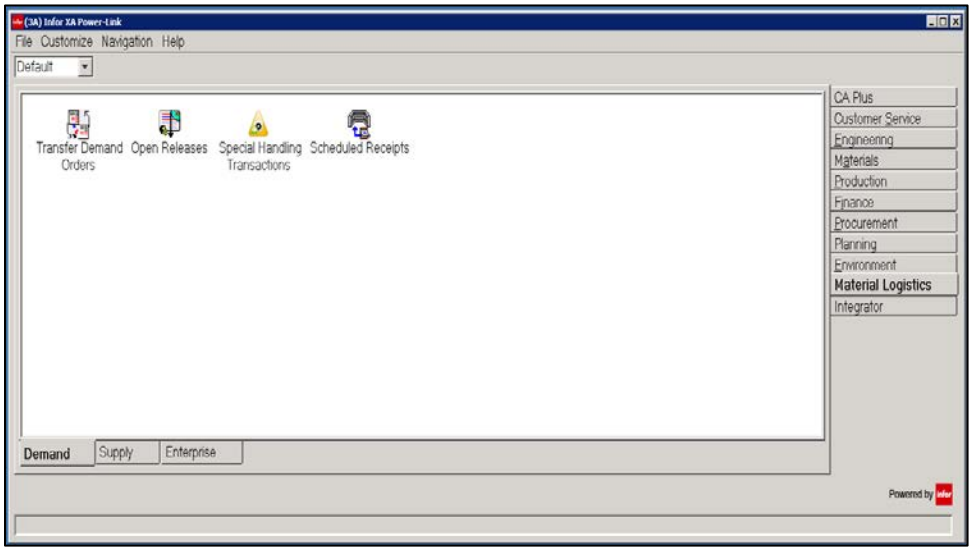
The user is allowed entry of the due date at the order, item and release levels.

The due date at the order level becomes the default due date at the item level. The due date at the item level becomes the default due date at the release level. All of these due dates may be overridden. The dates ultimately are used when creating the associated customer order releases after a transfer order has been released.

A subset called My Orders will display all transfer orders created by the current user.

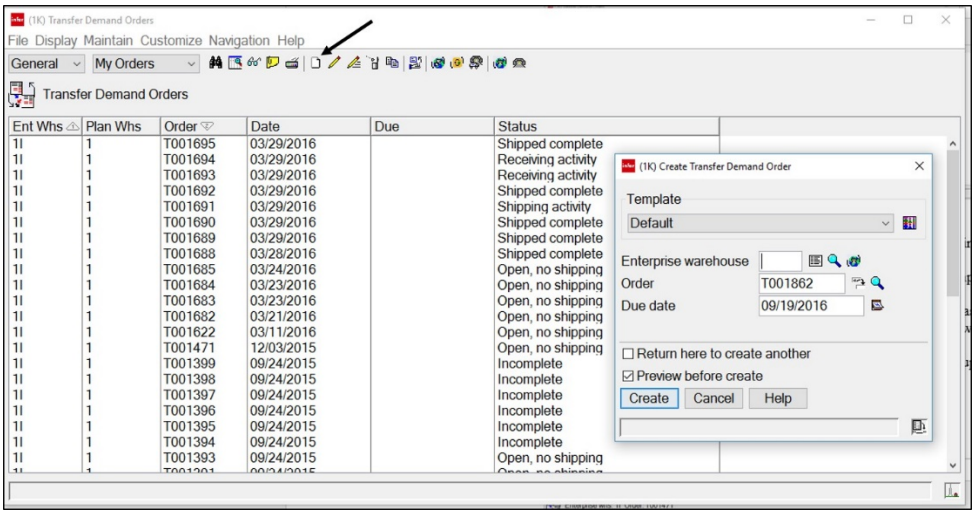
At the item and release level, there is also a "Set Due date default" button. This action will default the date to today's date plus the number of vendor lead time days as defined in Item Warehouse.

A warning will be issued when the due date entered does not satisfy the number of vendor lead time days. This is only a warning and will allow entry or change. The due date cannot be less than today's date. Change will not be allowed to the due date at the item level when it's a blanket item.



Transfer Demand Order Create

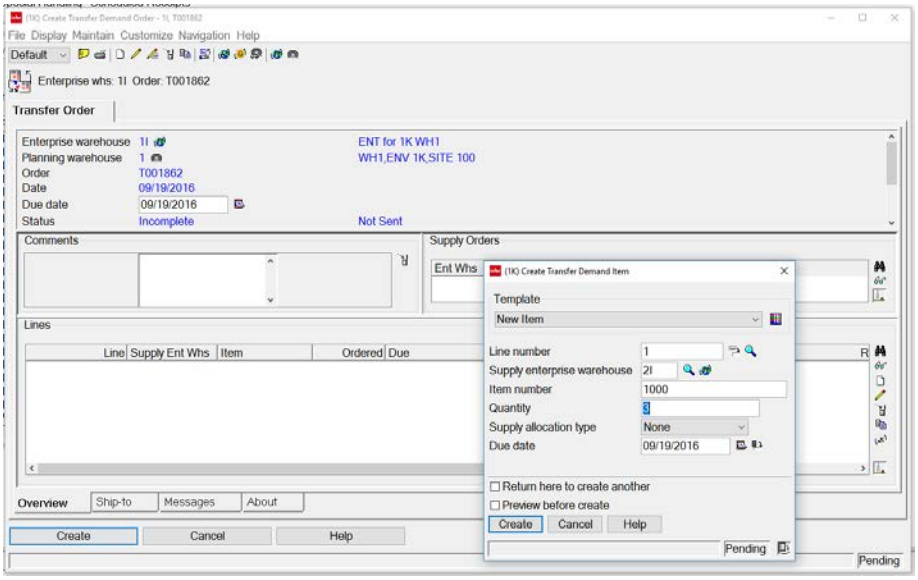
Create Transfer Demand Order



What to do:

- Click on the Order Create icon in the toolbar at the top of the window of this Transfer Demand Order list window.
- By clicking on Create icon at the top of the window, a create template window appears to allow for the creation of the new Transfer Demand Order.
- The next sequential transfer order number will automatically be assigned at this time.
- Enter the Demand Enterprise warehouse ID.
- The predefined warehouse relationship that was previously set up in warehouse trade relations will then allow for this transaction to proceed.
- Click on Create in the Create Transfer Demand Order template.

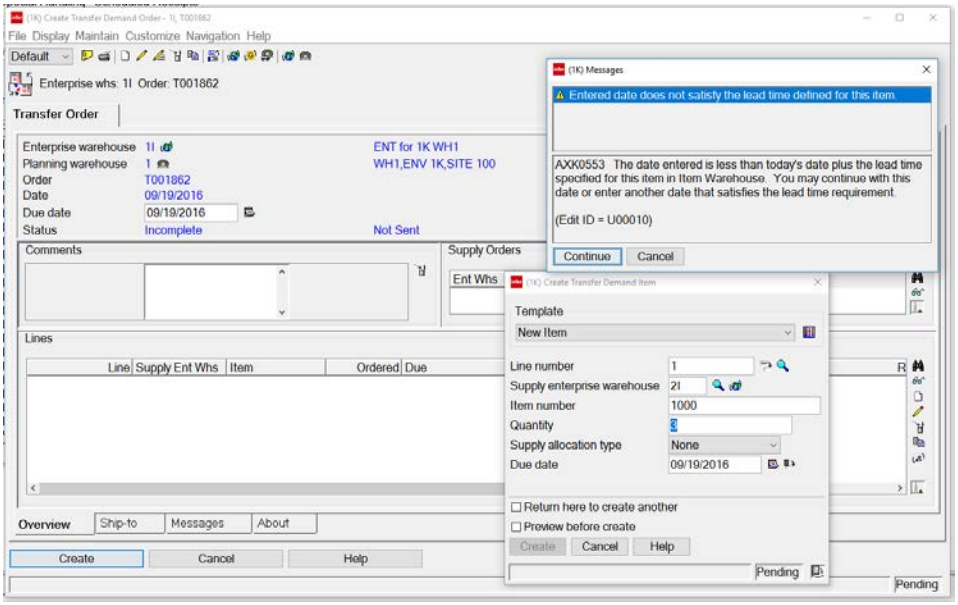
Create Transfer Demand Item



What to do:

- From the Create Transfer Demand Order window you can now create a line item.
- Click on the Create icon in the bottom right vertical toolbar.
- From the Create Transfer Demand Item template we can enter the Supply enterprise warehouse, the Item number and the Quantity. If an item warehouse has a default supply enterprise warehouse specified, the supply enterprise warehouse field does not need to be specified here as it will default after the line is created. Also, the Supply allocation type of “None, Discrete or Warehouse allocation” can be selected. After filling in the supply warehouse, item and quantity and then clicking the creation button, the item release will be created automatically.
- The item must be set up in the existing demand and supply item warehouses. Note: In-transit item warehouse records will automatically be created.
- Click on the Create button on the create template.

Message may occur to inform user if date lead time is not satisfactory.

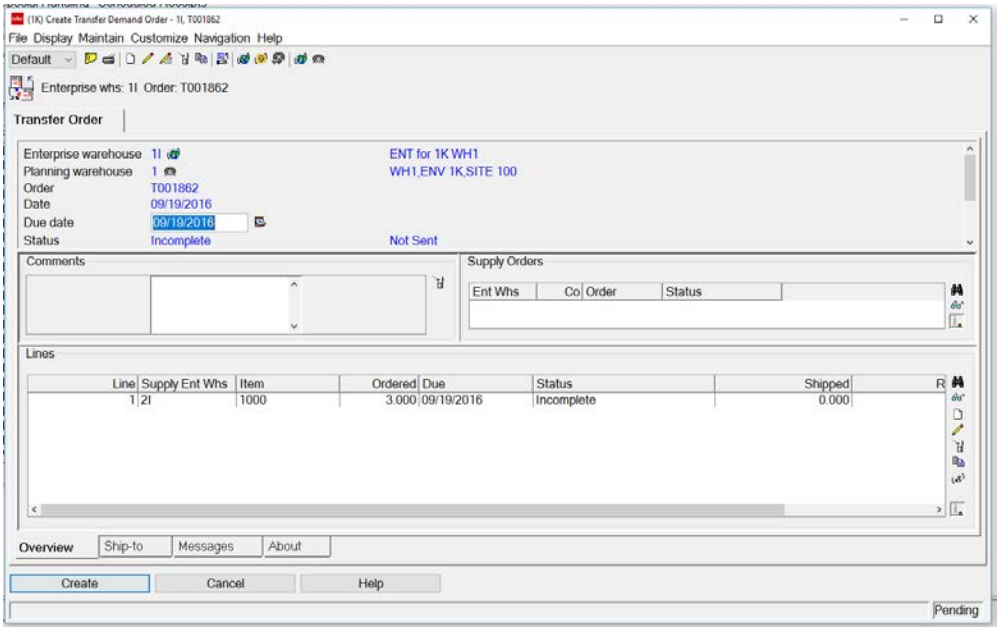


What to do:

If you cancel out of the message you can then:

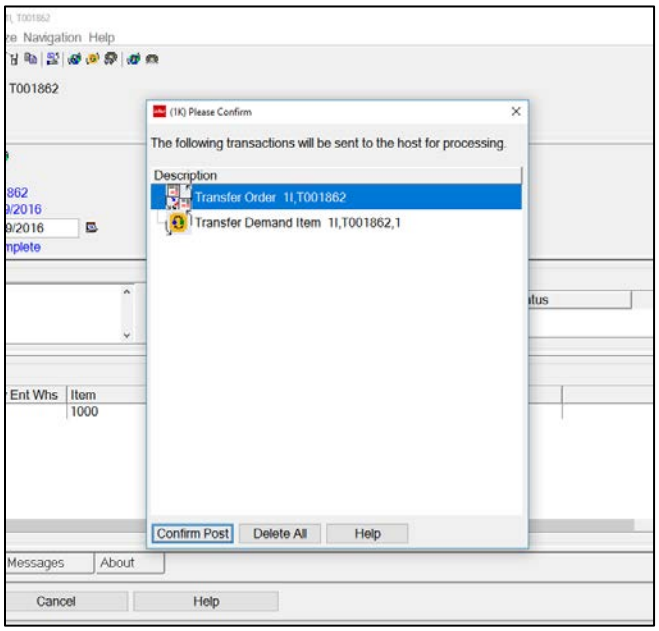
- Manually change the due date.
- Use the calendar icon to pick a due date.
- Use the Set the due date default icon to the far right of due date.

Confirm Transfer Demand Order



What to do:

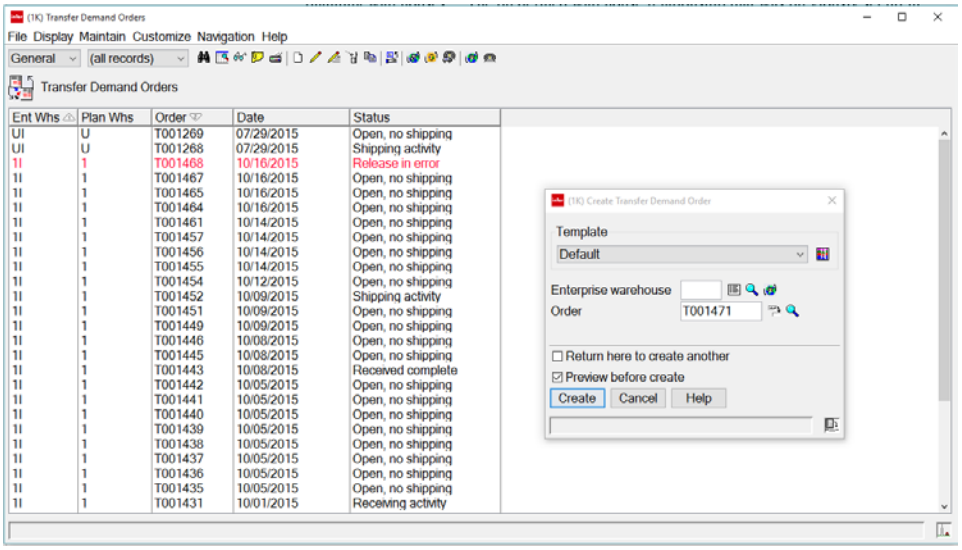
- Click on the Create button at the bottom of the screen to create the order.
- Confirm Post



What to do:

After the Create button is pressed the user needs to always click the Confirm Post button.

Transfer Demand Order Review



What to do:

- Create another transfer demand order if you had clicked on the Return here to create another radio button.
- Or you can just review any of the existing transfer orders.
- At this time the user can view the status of the orders.
- Status codes:

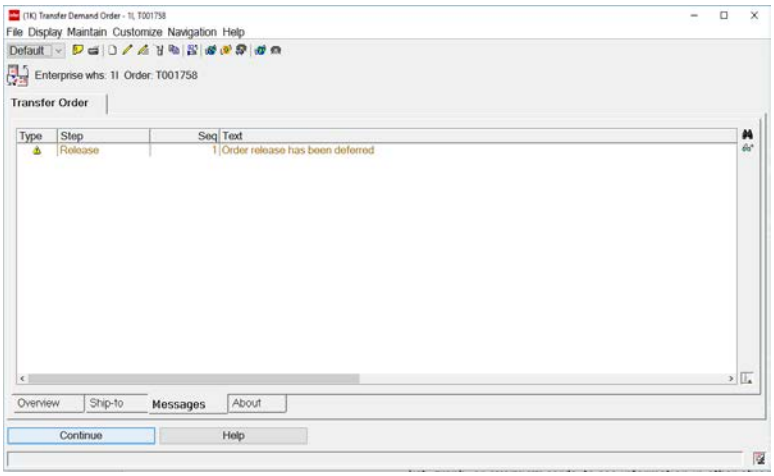
  Possible Release Status Codes:

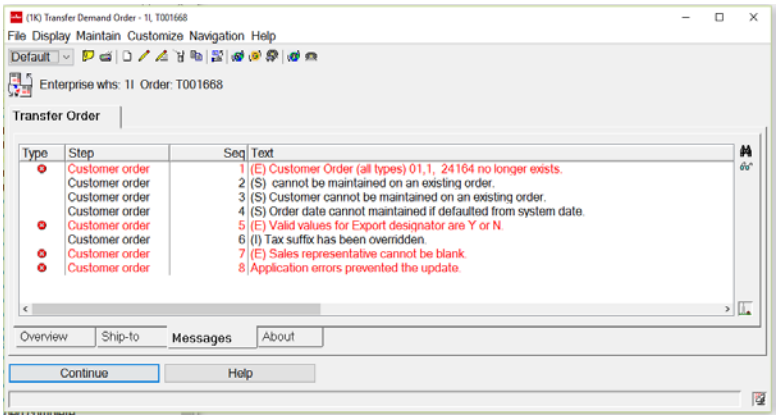
  - 00 – Incomplete
  - 06 – Awaiting approval
  - 07 – Release in error
  - 10 – Open, No shipping
  - 20 – Shipping activity
  - 25 – Receiving activity
  - 30 – Shipped complete
  - 35 – Received complete
- The user can either choose to perform the Release process at this time for status 00-Incomplete orders. Orders must be released in order to create the associated customer order(s).

Transfer Demand Order Messages

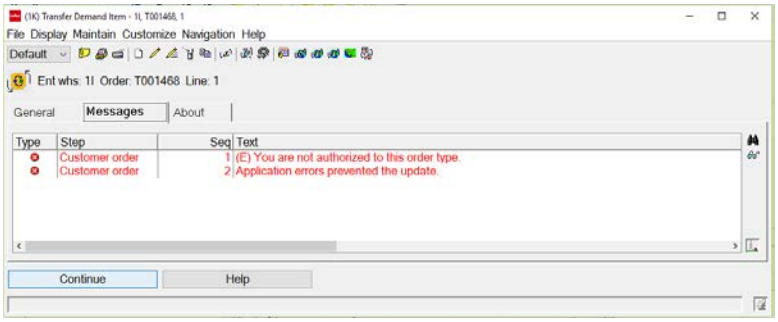
After releasing a transfer order, the resulting attempt to create the associated customer order may fail. Any messages, whether they be at an order, line or release level are passed back to the demand transfer order for review. You can either correct the associated messages and re-release the transfer order or delete it and enter a new order.

Messages Per Order

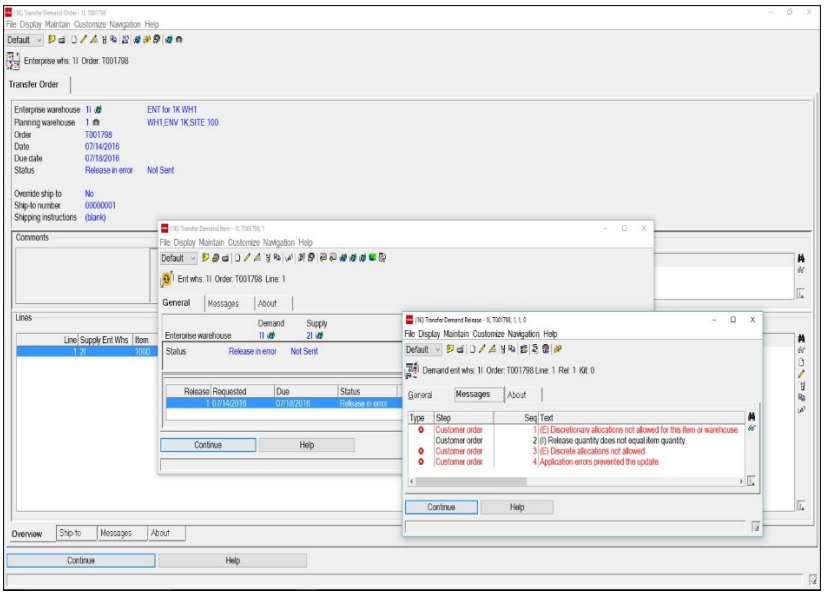




Messages Per Line Item



Messages Per Release



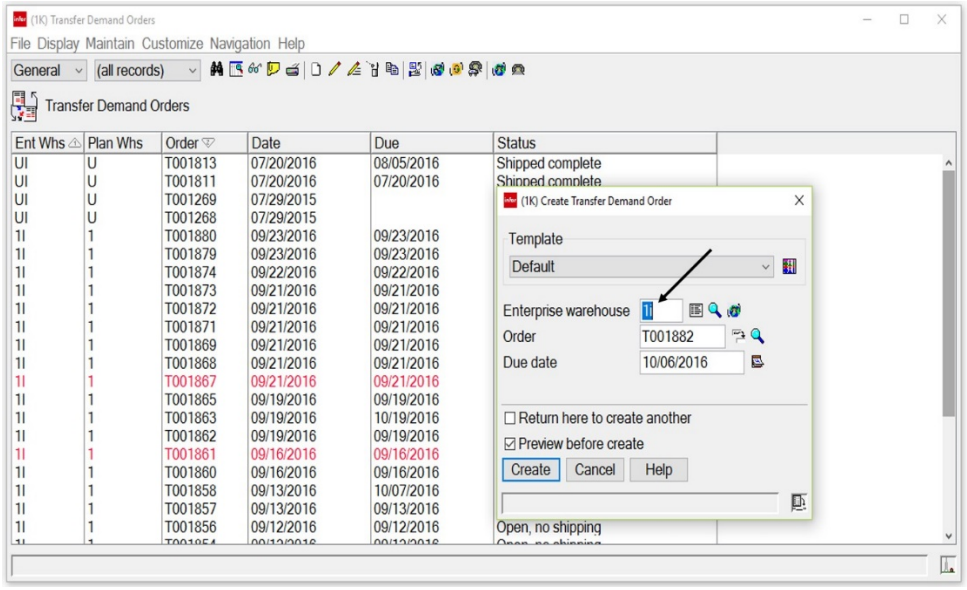
What to do:

- The Messages Card for an order, for the line item or for a line item release of the order may display a further status message that helps you understand the status of the order after being released.
- The card has Type, Step, Sequence of the message and then the message text.
- The message text will explain the information about the order or line item if you are on the line items messages.
- Fix the error condition and re-release.

Transfer Demand Order Item Blanket Creation

The user can create more than one line item release per item creation by clicking on the create icon to the right of the first line. The user may also click on the change button to the right and add release lines to each line item on the order. The quantity of releases for that line will have to total the quantity of that line item for the order. This is called a blanket order.

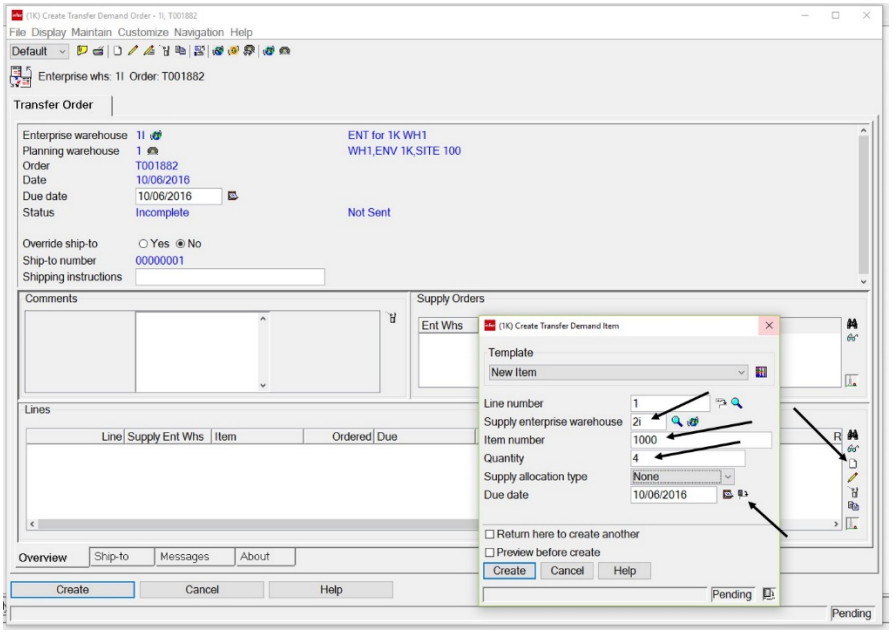
Transfer Demand Order



What to do:

- Click on the Create icon in the toolbar at the top of the window.
- Fill in the demand enterprise warehouse number in the template.
- Click on Create button in the template.

Create Transfer Demand Order Item



What to do:

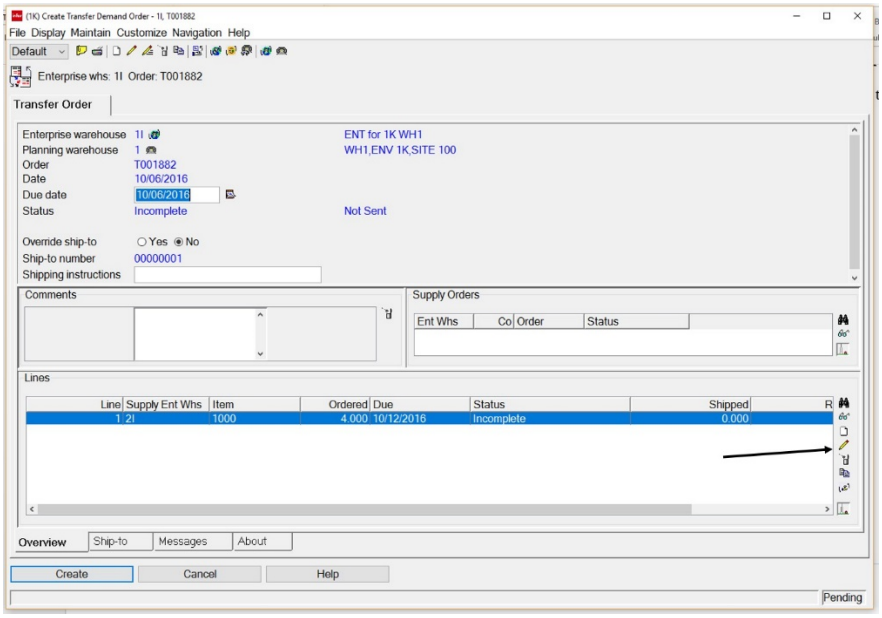
1 Click on the Create icon in the bottom right vertical toolbar.

2 From the Create Transfer Demand Item template you can enter the Supply enterprise warehouse, the Item number and the Quantity of the total blanket.

3 You can also, click on the Set Due Date Default icon if you want to use the lead time default.

4 Click on the Create button on the create template.

Add Releases



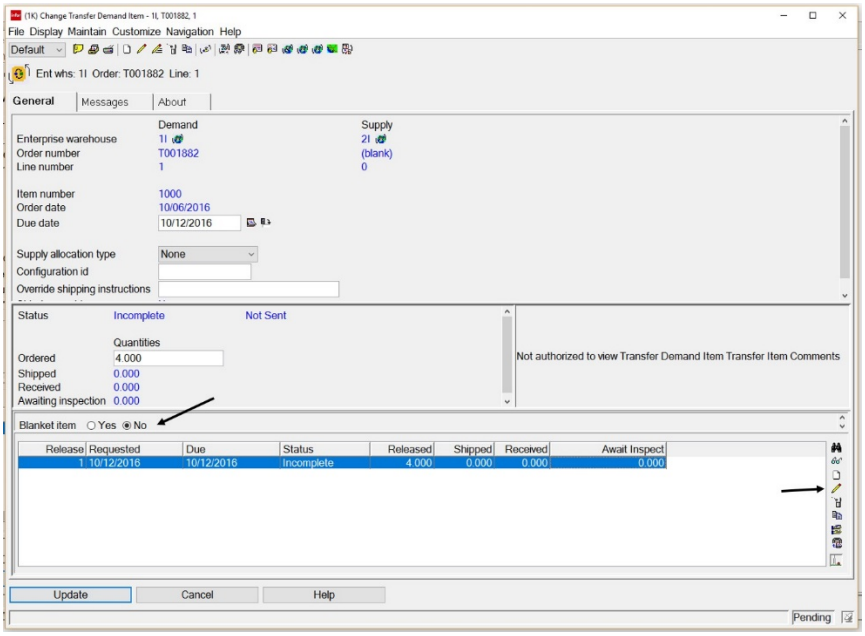
What to do:

1 Highlight the line item line.

2 Click on the change icon on the vertical toolbar to the right.

This will allow you to access the Blanket Release Lines window.

Create Blanket Item



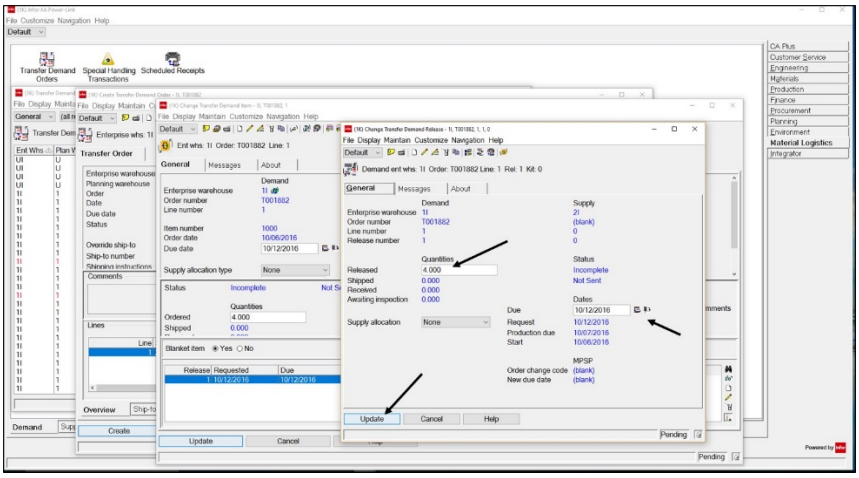
What to do:

This is the Blanket Item Release window.

1 Click on the Yes radio button for blanket. If you forget to the button will automatically change to Blanket Yes if you have more than one Release line for the item.

2 Highlight the release line and click on the change icon in the vertical toolbar to the right.

Change Transfer Demand Release



What to do:

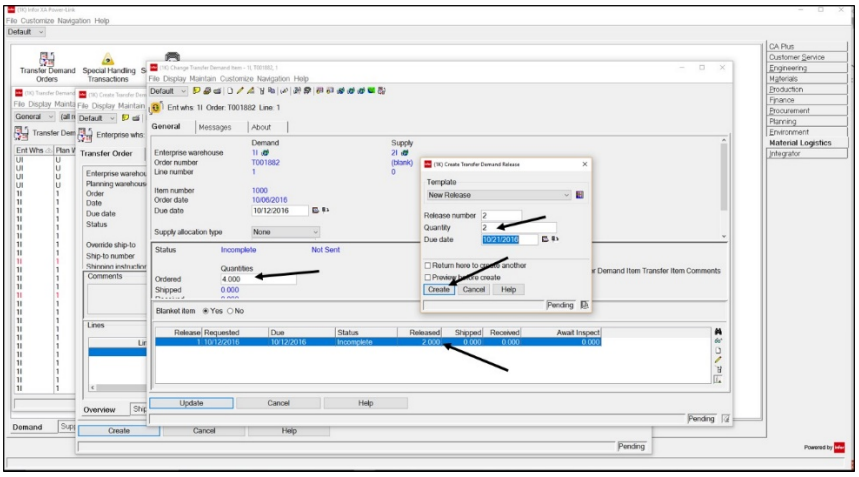
1 Fill in the quantity for the first release line.

- The line item is for quantity of 4 and we will make two releases for quantity of 2.
- All the release lines together must equal the total quantity for that line item.

2 Change the date if necessary.

3 Click on the Update button on the template.

Create the second Transfer Demand Release



What to do:

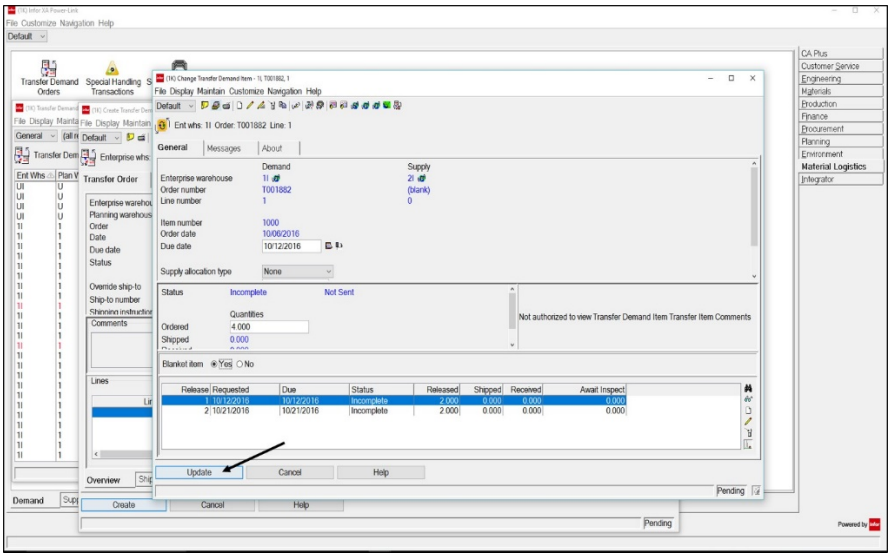
1 Click on the Create button in the vertical toolbar on the right side to create the second Release line.

2 Fill in the balance of the quantity of this release line to make the total.

3 Change the date if necessary.

4 Click on the Create button on the template.

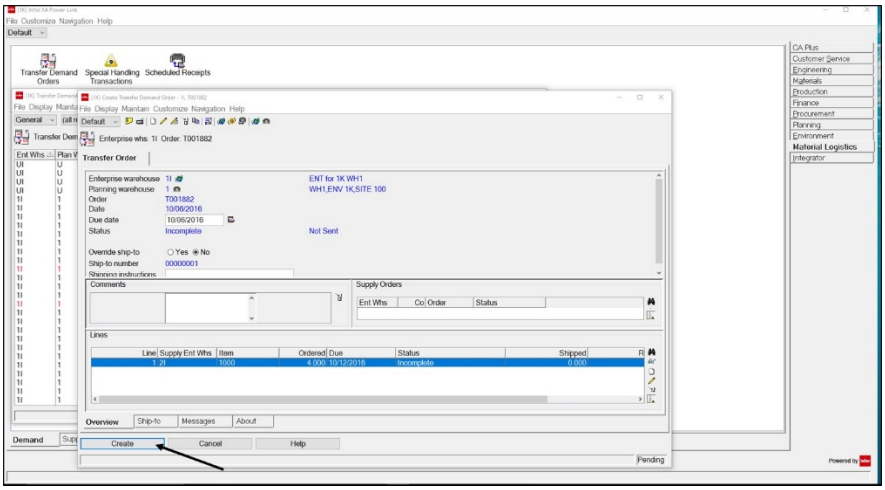
Change Transfer Demand Item



What to do:

- Click on the Update button at the bottom of the window.

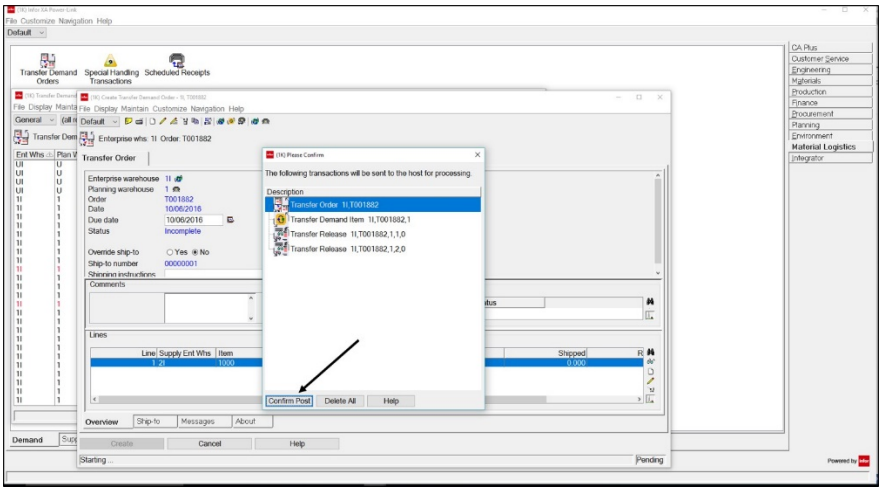
Create Transfer Demand Order



What to do:

- Click on the Create button on the bottom of the transfer demand order window.

Confirm

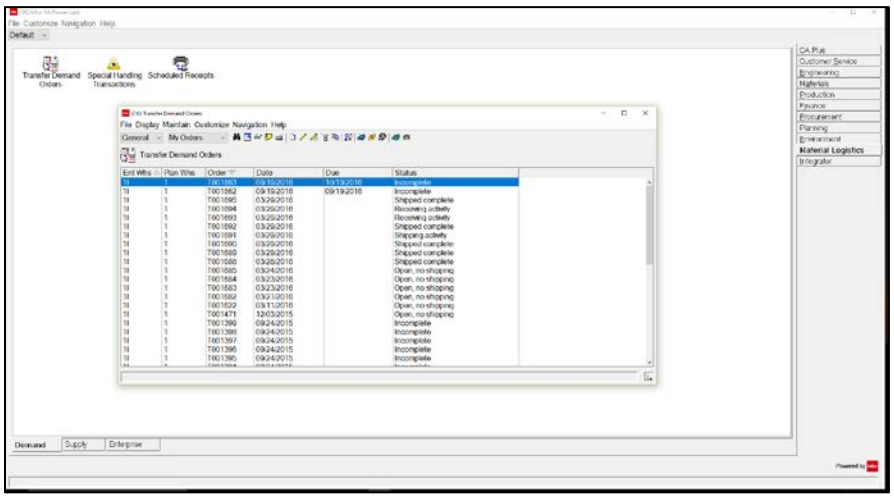


What to do:

- Click on the Confirm Post button.

  The Confirm Post of the order, the line item and any blanket release lines will update all of their status to Incomplete.

Transfer Demand Orders

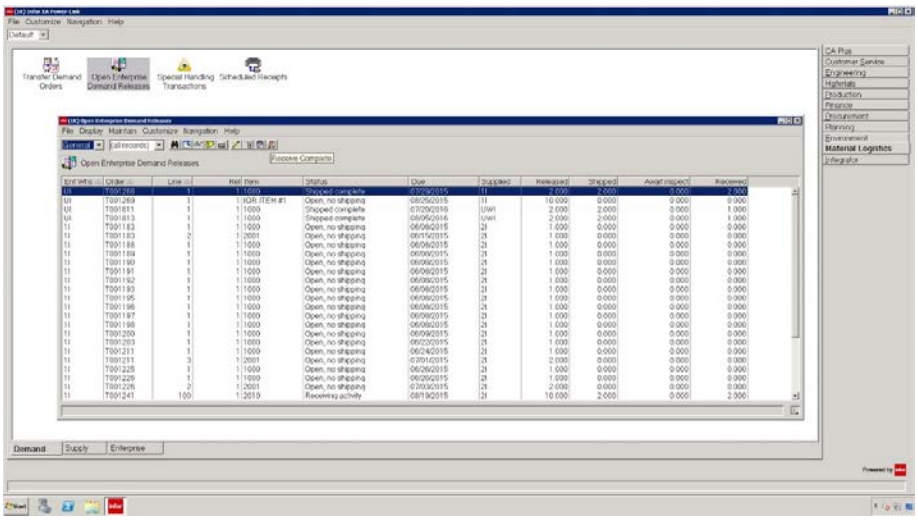


What to do:

- From the Transfer Demand Orders window you will be able to release the blanket transfer order and then see the status change for the order.
- You can now double click and drill back down into the order to view the line items and any line item releases for a blanket line and make changes when required.

Transfer Demand Order Release

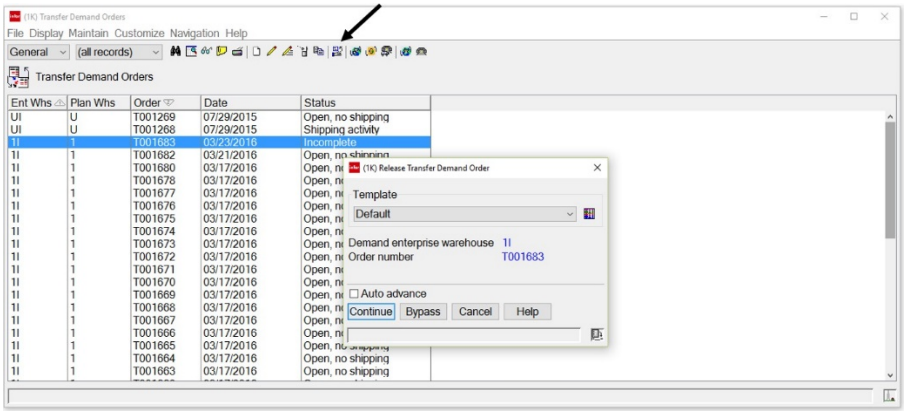
Transfer Demand Order



What to do:

- From the Release Transfer Demand Order window you can click on and highlight the orders with a status of Incomplete.
- The status of Awaiting Approval will always appear first for a few seconds until the processing of the order release is finished.
- The status of Release in error will also show if there is a problem after it has been released. You can then drill into the order to determine what the problem is, correct it and re-release the order.

Release Transfer Demand Order template



What to do:

1 At this time, the Transfer Demand Order can be highlighted and you can click on the Release Transfer Demand Order from the toolbar at the top of the Transfer Demand Order window.

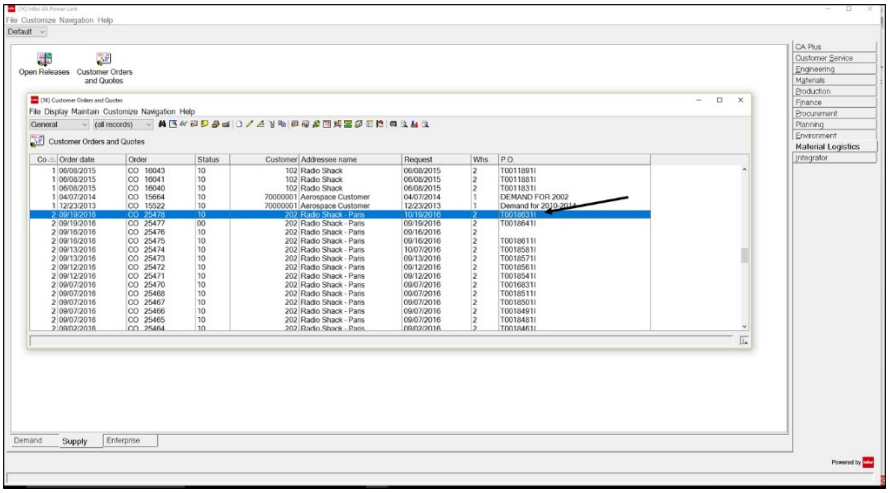
2 Click on the Continue button in the Release Transfer Demand Order template.

The Transfer Demand Order Status will be “Awaiting Approval” until the Supply Order is created, then the status will become “Open, No Shipping”.

3 Click on the refresh arrow in File, Refresh to see the status change for the listing view.

You may select more than one order at a time.

Customer Service Orders and Quotes



What to do:

1 Click on Customer Service Management application or use the object located in ML.

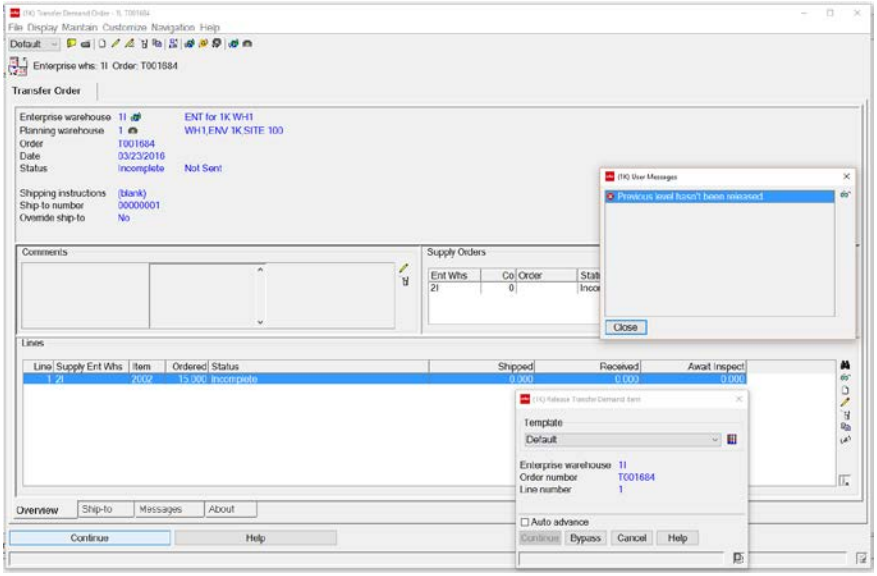
2 Click on Customer Orders and Quotes icon.

3 Find the customer order for the transfer order that you just created. Tip: the PO number contains the transfer order number.

Using Incorrect Release icon

What happens if you do not release the Transfer Demand Order but try to release the line item or release.

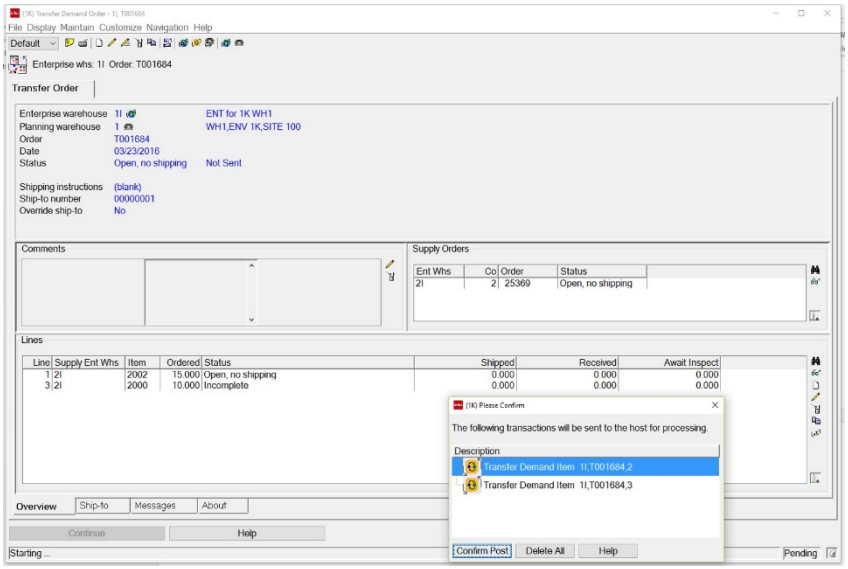
Transfer Demand Order Release – When using incorrect Release icon.



What to do:

- If the transfer order is not yet released the user cannot use the Release icon on the tollbar on the right side of the lower window to release the line item or release.
- An error message will tell you the previous level hasn't been released.
- Close these templates to release the Transfer order itself.
- The Release transfer demand item and release icons are used when adding new items or releases or during the re-release of an error condition.

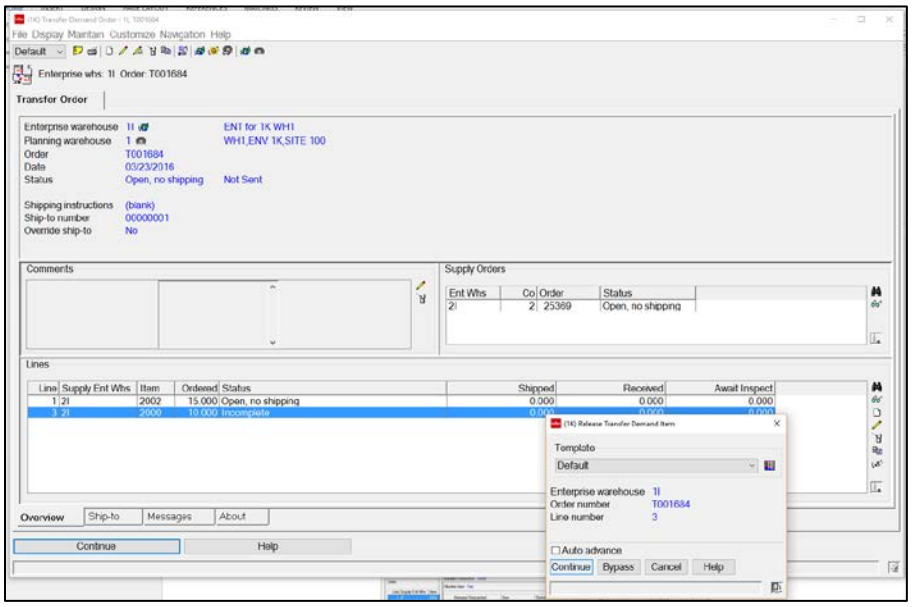
Transfer Demand Order – Adding another line item



What to do:

1. Change an existing transfer order. Create a new line.
2. Click Continue.
3. Click Confirm Post to run the transaction to add the line. Next you go back into the order and line to run release for the line item.

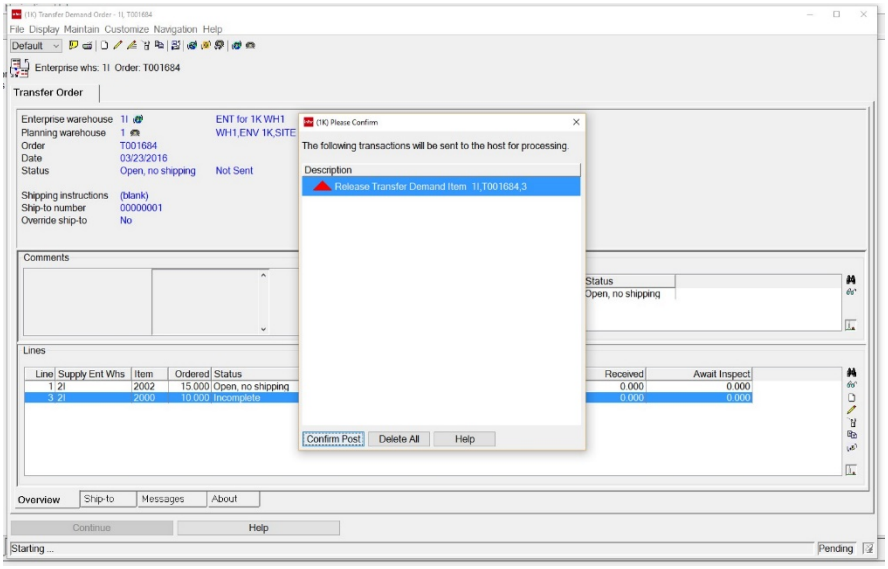
Transfer Demand Order – Release added Transfer Demand Item



What to do:

- You can click on the Release icon in the top tool bar to release the line or you can Highlight the line item and click on the Release icon on the right side toolbar.

Transfer Demand Order

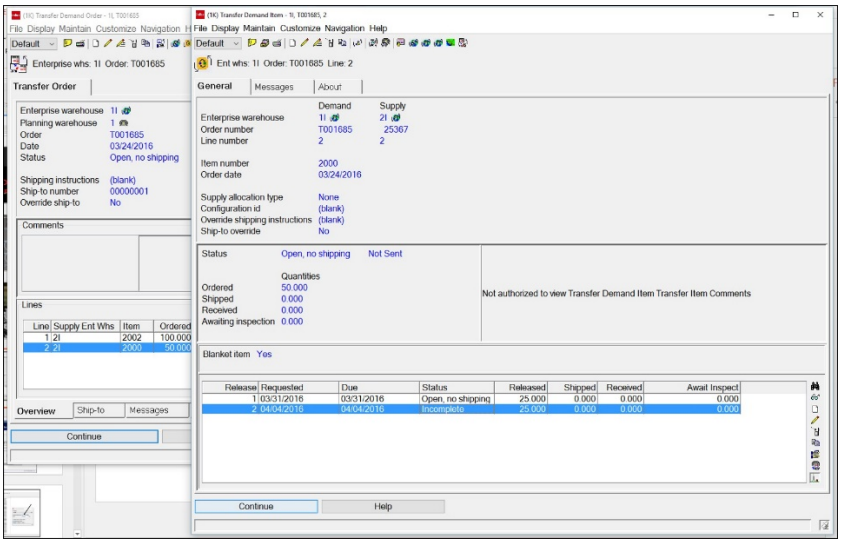


What to do:

- Click on the Confirm Post to release the line item.

Transfer Demand Order line item blanket release lines release

Transfer Demand Item Blanket Item Release



What to do:

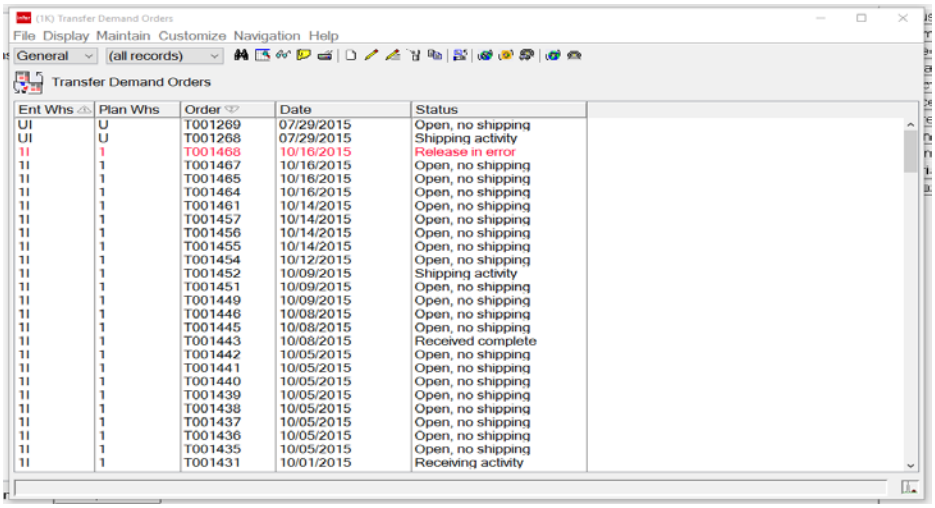
- The process to add line item releases is the same as adding a line item. First add the line item release and post the transaction. After it has been posted, release the line item release at the release level.

Transfer Demand Order Change / Delete

Transfer Demand Orders – Change

You may change transfer orders (quantities, dates) as long as the change falls within the normal edits that CSM places on customer orders.

Transfer Demand Orders – Delete



Ent Whs	Plan Whs	Order	Date	Status
UI	U	T001269	07/29/2015	Open, no shipping
UI	U	T001268	07/29/2015	Shipping activity
1I	1	T001468	10/16/2015	Release in error
1I	1	T001467	10/16/2015	Open, no shipping
1I	1	T001465	10/16/2015	Open, no shipping
1I	1	T001464	10/16/2015	Open, no shipping
1I	1	T001461	10/14/2015	Open, no shipping
1I	1	T001457	10/14/2015	Open, no shipping
1I	1	T001456	10/14/2015	Open, no shipping
1I	1	T001455	10/14/2015	Open, no shipping
1I	1	T001454	10/12/2015	Open, no shipping
1I	1	T001452	10/09/2015	Shipping activity
1I	1	T001451	10/09/2015	Open, no shipping
1I	1	T001449	10/09/2015	Open, no shipping
1I	1	T001448	10/08/2015	Open, no shipping
1I	1	T001445	10/08/2015	Open, no shipping
1I	1	T001443	10/08/2015	Received complete
1I	1	T001442	10/05/2015	Open, no shipping
1I	1	T001441	10/05/2015	Open, no shipping
1I	1	T001440	10/05/2015	Open, no shipping
1I	1	T001439	10/05/2015	Open, no shipping
1I	1	T001438	10/05/2015	Open, no shipping
1I	1	T001437	10/05/2015	Open, no shipping
1I	1	T001436	10/05/2015	Open, no shipping
1I	1	T001435	10/05/2015	Open, no shipping
1I	1	T001431	10/01/2015	Receiving activity

What to do:

1 Click on transfer order to highlight it.

2 Click on delete icon in the toolbar.

- A transfer order cannot be deleted if there has been shipping activity found on one or more of the items.
- The maintenance of a transfer order is directly related to the status of the customer order.
- There are references on the customer order identifying the transfer order and demand warehouse (see Customer PO number).
- When a transfer order is deleted, the records move into their associated history files:
  - TFRORD (TOHORD) – Transfer order
  - TFRITM (TOHITM) – Transfer item
  - TFRREL (TOHREL) – Transfer release
  - TFRCMT (TOHCMT) – Transfer comment
  - ENTOHR (EOHOHR) – Enterprise order relation
  - ENTOIR (EOHOIR) – Enterprise order item relation
  - ENTORR (EOHORR) – Enterprise order release relation

Set Up Verification / Error Resolution

Verification Steps

1. To validate that the setup has been performed properly, create and release a transfer order.
2. Create a transfer order. (Material Logistics card>Demand card) Status will show as “Incomplete” after the transfer order is created.
3. Release the transfer order. Highlight the transfer order and click on the icon “Release Transfer Demand Order” in the icon tray at the top.
4. If the customer order was created on the supply warehouse and the confirmation of the customer order number was passed back to the transfer order, the status should change to “Open, no shipping”, and the customer order number will be found on the transfer order.
5. If the status is “Awaiting approval” and never goes to status “Open, no shipping” after a refresh is performed, check to validate that the u-jobs are active.
6. If the status is “Release in Error”, the COM order processing was not successful.

Error Resolution Steps

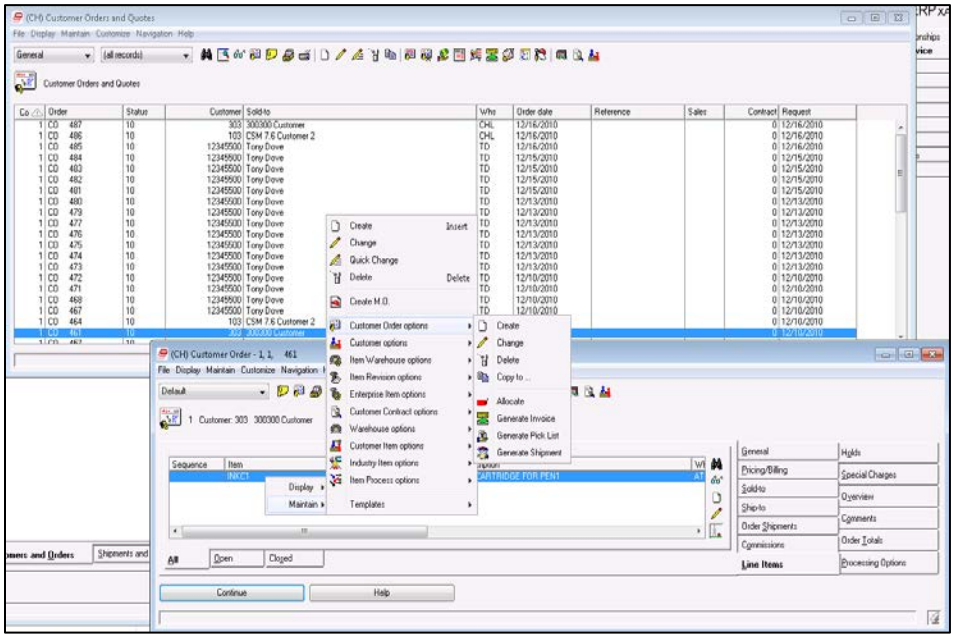
1. If the status of the transfer order is “Release in Error”, look at the transfer order, line or release messages, correct them and re-release the transfer order.
2. Another error resolution method would be to enter customer order in the “supply” environment/warehouse in CSM. Use the company/customer number associated with the trade relation and the same item number /warehouse that was on the original transfer order that is in a status of “Release in Error”. If the customer order cannot be created manually using the same parameters that ML would have used, error messages will be displayed. An example would be that the tax code information for the customer is not set up correctly.
3. If a ML order is released in error and the customer order number is 0 on the ML order and a CSM order was not created. Verify that the company is tailored to use next sequential order number and that it has been set to a valid number.

Chapter 7. SHIP/RECEIVE TRANSFER ORDERS

Ship Transfer Orders

- When you Ship Transfer Orders, the ship transaction takes place in CSM or COM depending on your preference. Additional picking and shipping options for partial quantities are available through COM.
- From CSM you can access the order for shipping through two objects.
  - One object is called Customer Orders and Quotes the other is called C.O. Line Items. Customer Orders and Quotes can also be found in ML.

CSM, Customer Orders and Quotes

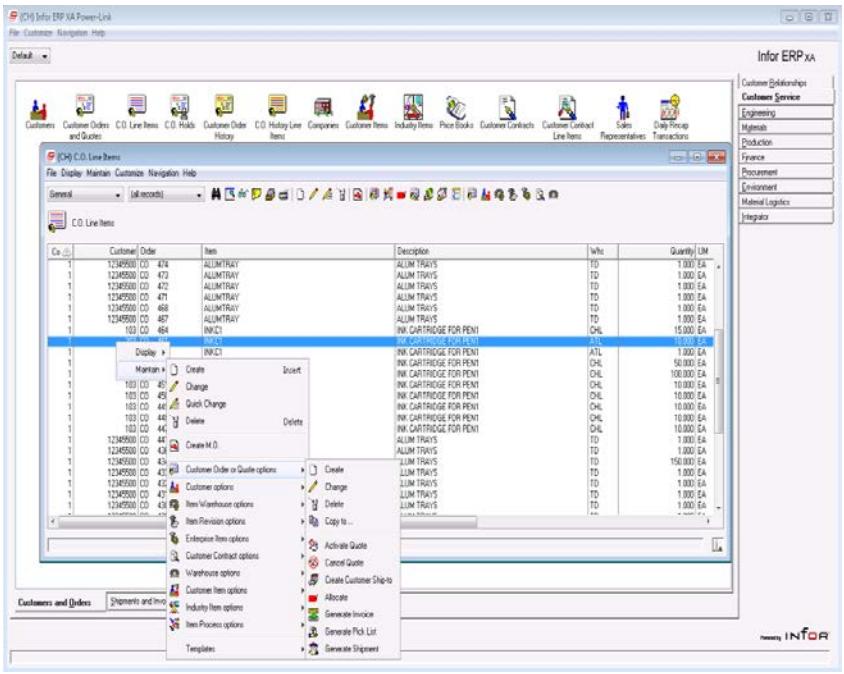


What to do:

- You need the supply warehouse from which you wish to ship a Transfer order from, the quantity, the item number and the order number you are shipping.

- From the object listing windows you can use subsets to find the associated customer order and then highlight it.
- After you highlight the line you can then right click on the line and ship the line of the order.
- Click on Maintain menu option.
- Click on Customer Order or Quotes option.
- Click on Generate Shipment option.
- Note that CSM ships ML orders in the same way as with other customer orders.
- At this time these orders must be set up as Ship Complete.

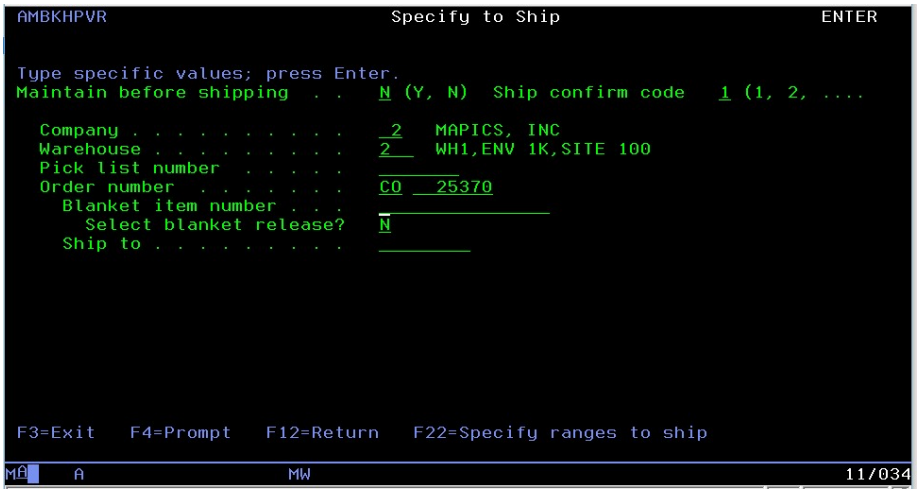
CSM, C.O. Line Items



What to do:

- You need the supply warehouse from which you wish to ship a Transfer order from, the quantity, the item number and the order number you are shipping.
- Click on Maintain menu option.
- Click on Customer Order or Quotes option.
- Click on Generate Shipment option.
- At this time these orders must be set up as Ship Complete.

COM Green Screen Shipping steps



What to do:

1 Enter correct company and warehouse and Customer Order number, pick list, etc.

2 Press enter.

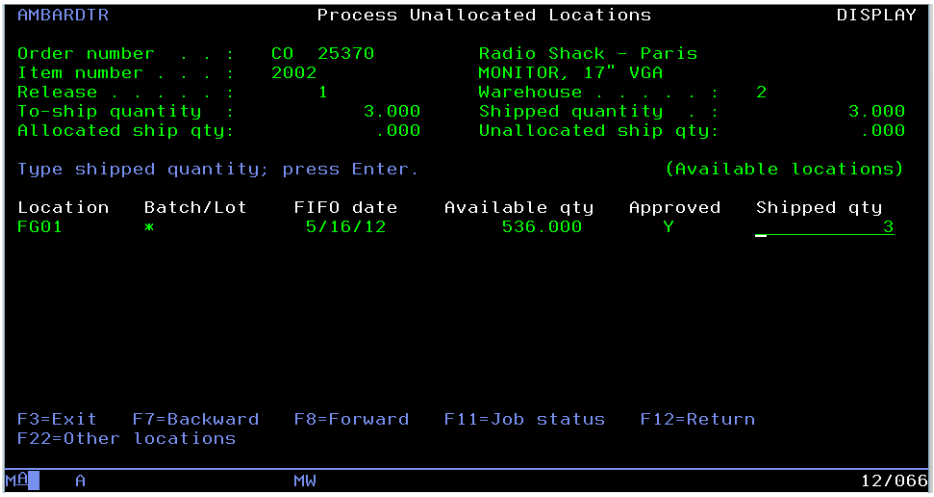
Ship

What to do:

- Enter Shipment Quantity and any other shipment details.
- If you specify a backorder flag of ‘N’, the line will be considered shipped complete.

- If you ship a quantity greater than or equal to the quantity left to ship, the line will be considered complete.
- If you have partially shipped or no longer wish to ship a line, you may leave the quantity of zero and specify a backorder flag of ‘N’. This will complete the line and allow a complete receipt.
- **Orders must be shipped complete in order to be received complete.**
- Press enter to key in location quantity for a controlled warehouse or F2 if uncontrolled.

Location quantity



What to do:

1 Enter Shipped quantity.

2 Press Enter and then F2 to complete the shipment.

Passing Costs during shipping

When shipping a transfer order release, Material Logistics transfers the shipped inventory into an in-transit location, which is usually in a special in-transit warehouse. Later, when the items are received, Material Logistics transfers the inventory out of the in-transit location into a location that the user has designated for receipts. Both of these inventory transfers are performed using an RW transaction into locations. Normally, ML does not specify an amount on these RW transactions, and XA will calculate the transaction amount based upon the current costing method setup for inventory. However, an enhancement was made to Material Logistics to provide an option in Enterprise Warehouse Trade Relations to send the supply warehouse cost to the demand warehouse for use in calculating the RW transaction amount.

To enable the function, go to Enterprise Warehouse Trade Relations in Material Logistics. The supply card, provides an option to "Pass costs between warehouses" for cross environment trade relations. When answered "Yes", ML will send a supply warehouse value, and ML initiated RW transactions will use that value in the transaction amount.

For trade relationships that do not allow customer order invoicing, the value to be passed for each item will be retrieved from the Item Warehouse standard, average, or last cost in the supply warehouse based upon the tailored costing type. However, when invoicing is allowed, the value to be sent will be taken from the shipment amount for the item on the supply side. More specifically, ML will use the shipment amount from the SA transaction in file MBCOREP and calculate the price per unit to send to the demand side.

The values taken from the supply side at shipment time will be stored for use on the in-transit and receiving warehouse RW's by including the amount with the in-transit inventory information in the Enterprise Order Release Location file, ENTLOC. File ENTLOC is not unique by shipment. If multiple shipments are made for the same transfer order release with the same batch lot and FIFO date, there will be only one ENTLOC record in which to save the values from multiple shipments, so if average costing is used the value stored in the file will be averaged when adding to an existing record. This calculation for the amount stored in ENTLOC ensures that the single value in the record represents the average for the quantities of that item that were shipped into that single location. When this occurs, the amount on the receiving RW will be the averaged amount taken from the file ENTLOC. For example, if a shipment is made for five of item-A at $10 and five of item-A at $20, then the average cost stored for the items in the ENTLOC record will be $15. So, the demand side will eventually receive those ten items at $15 each ($150) instead of five for $5 each and Five for $10 each (totaling $150). The ENTLOC value is not averaged when last cost or standard cost is in use.

Material Logistics stores the per unit amount in two fields in file ENTLOC to allow for up to eight decimal places. However, the RW transaction amount value in XA permits only four decimal places. So after the whole number value is retrieved from ENTLOC field WWA1RL and the eight decimal places are taken from field WWD1RL, the receiving transaction amount for the quantity to be received will be calculated and rounded to four decimal positions. For transactions that must cross XA environments ML also stores the default currency for the supply side environment in ENTLOC field WWCBRL. If the default currency on the demand side differs, ML will call the standard XA currency conversions to convert from the supply side currency to the demand environment currency. Exchange rates for the from/to currencies will need to be setup in the default exchange rate set. If they are not, ML will issue warning messages for the receipts. If the warnings are ignored, ML will permit the receipts to be completed, but the RW transaction amount will not be filled in for those RW's. Note that the passed RW transaction amount will not affect inventory costs for inspect on receipt (IOR) items, since they are not added to inventory at RW time. The transaction amount on the manual PQ affects those items and would need to be supplied by the user in that transaction.

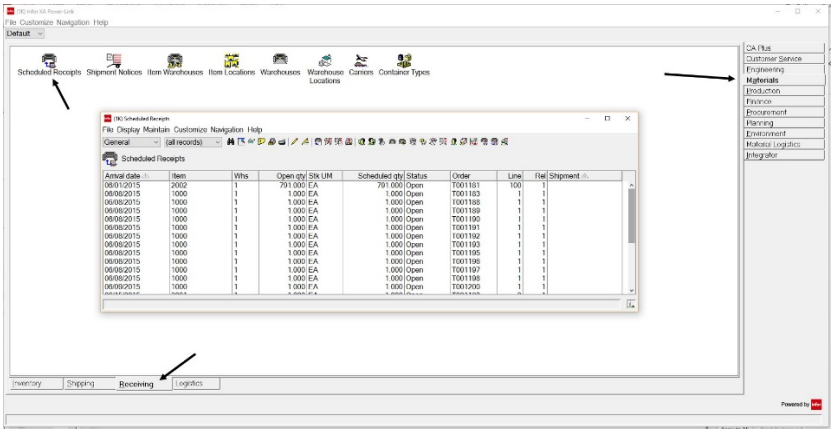
Receive Transfer Orders

The process of efficiently receiving items can be done in many ways.

Method 1 - Drill Down

From the Materials Management or ML card you can drill down into the Receiving card at the bottom of the screen and then into the “Scheduled Receipts" object.

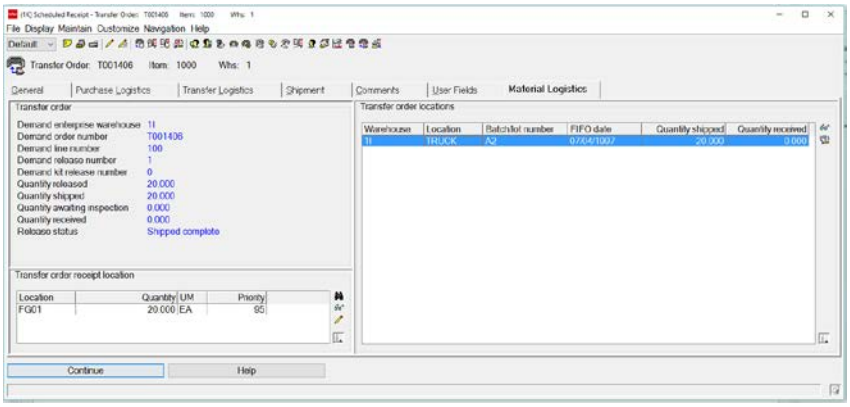
Scheduled Receipts



What to do:

- Double click on the Transfer Order that you want to receive to get into the Scheduled Receipt window.
- What Information you need: The demand warehouse and the Transfer Order that you wish to receive.

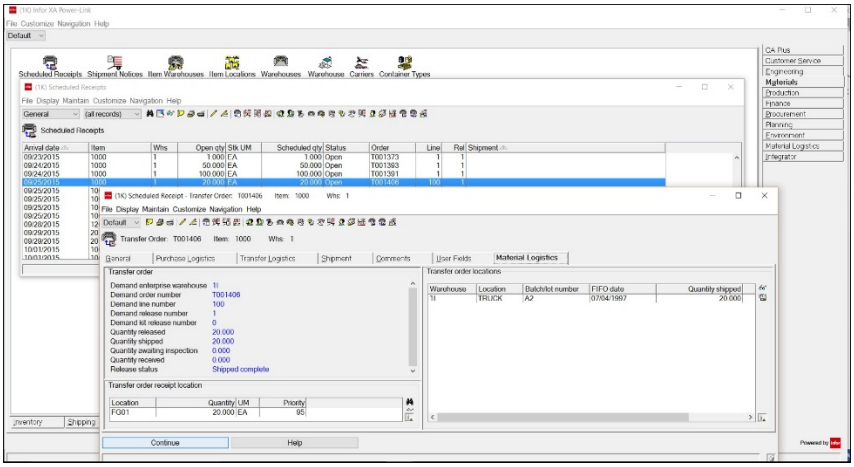
Material Logistics card



What to do:

- Transfer order section describes the details of the transfer order and its current status.
- Transfer order receipt location shows the location into which the inventory will be received. This may be overridden.
- Transfer order locations section shows the In-transit warehouse locations into which inventory was received after it was shipped.

Scheduled Receipt – Receive Transfer Order

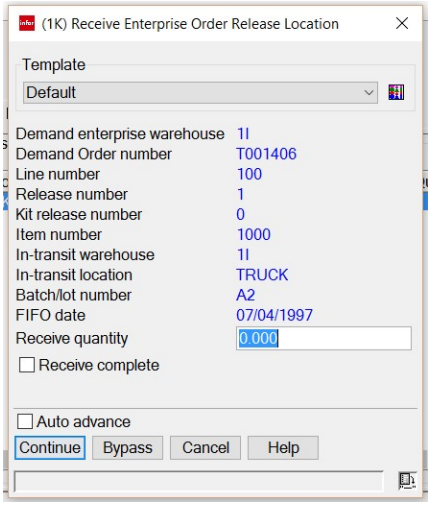


What to do:

1 Highlight the Transfer order locations line from which you want to receive.

2 Click on the Receive Enterprise Order Release Location icon on the right side of the Transfer Order Locations window. A template will appear.

Receive Enterprise Order Release Location template

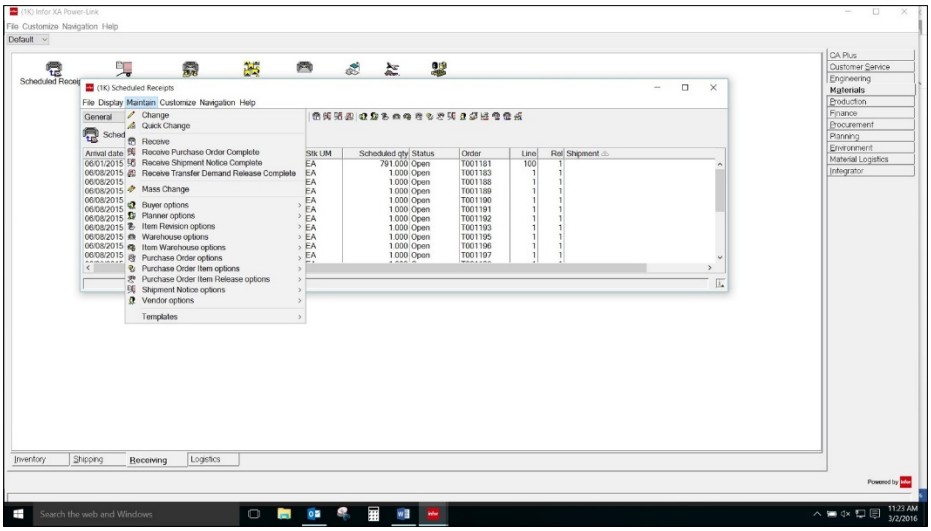


What to do:

- Type in the quantity being received and click on the Receive complete box (if shipped complete) and then click on the Continue button, Continue again and then Confirm Post to generate the receipt transaction. Note: A release can only be received complete if it was shipped complete.

Method 2 - Click Receive

Scheduled Receipts

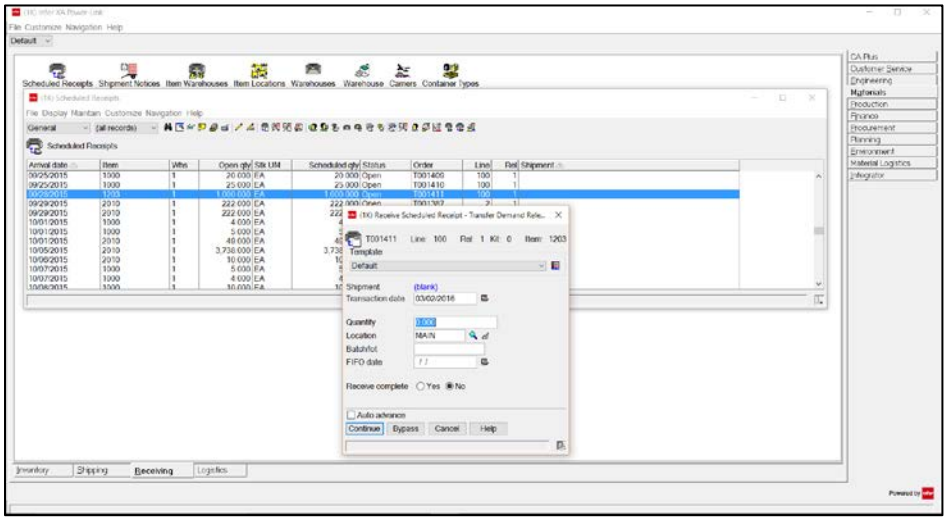


What to do:

1 Highlight the Transfer order release that you want to receive.

2 Click on the Receive menu option from the Maintain menu drop-down.

Received Scheduled Receipt – Transfer Demand Release

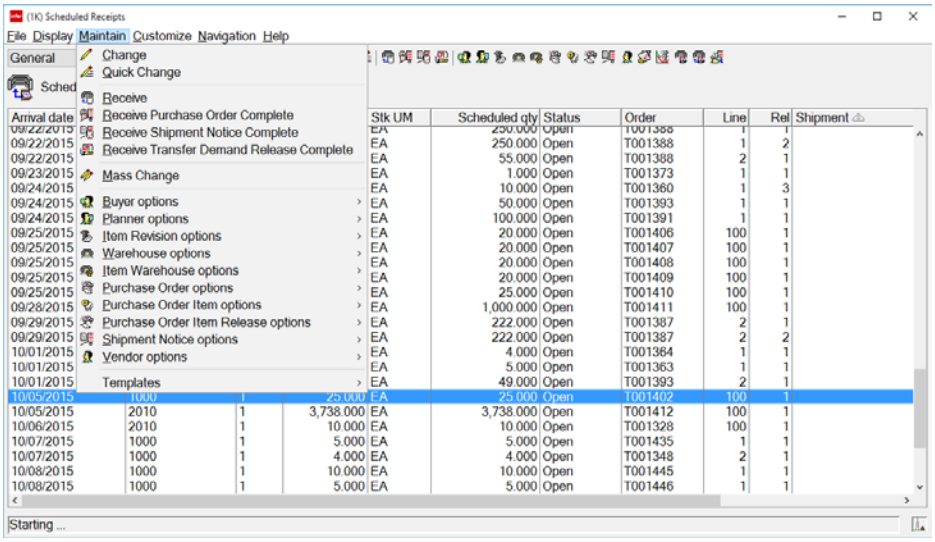


What to do:

- Type in the quantity being received.
- The location will default; it may be overridden.
- The Batch/lot and FIFO date entries are overrides of the existing batch/lot and FIFO dates found in the Enterprise release locations record. If you wish to receive an item into a different batch/lot or FIFO date than what was shipped, key it in here.
- Click on Yes or No for Receive complete and then click on the Continue button.

Method 3 - Quick Receipt

Scheduled Receipts



What to do:

1 Highlight the Transfer order release that you want to receive.

2 Click on the Receive Transfer Demand Release Complete menu option from the drop-down menu.

The release will automatically be received complete and disappear from the listing view. The item release must be shipped complete in order to use this option.

3 Receive Transfer Demand Release Complete is included on the toolbar and the Maintain menu.

4 Select the scheduled receipt(s) against a transfer order release(s) that you want to receive complete and press the Receive Transfer Demand Release Complete icon or Maintain menu option.

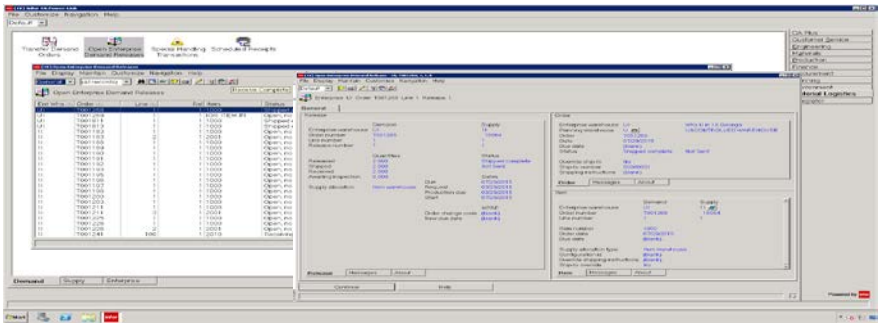
If the transfer demand release has been shipped complete, any remaining unreceived quantities will be received and marked as received complete.

5 Inspect on receipt items will be received only and will not be marked as complete.

Error messages will be issued for selections that are not transfer demand releases, not shipped complete, already received complete, and that have with no open shipments.

Method 4 - Open Enterprise Demand Release

Open Enterprise Demand Releases



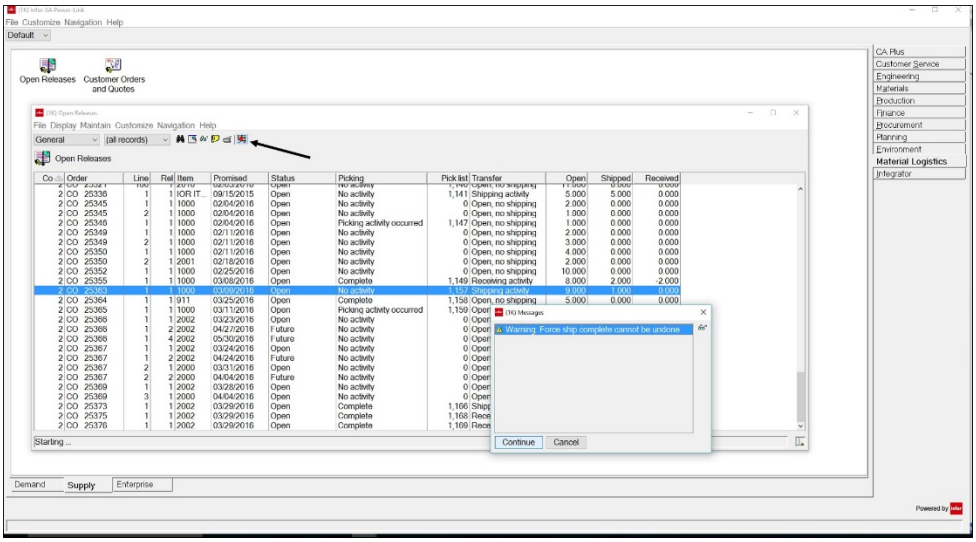
What to do:

1. Highlight the transfer order releases that you want to receive.
2. Click on the Receive Transfer Demand Release Complete menu option from the drop-down menu. The release will automatically be received complete and disappear from the listing view. The item release must be shipped complete in order to use this option.
3. OR, click on the Receive menu option from the Maintain menu drop-down.
4. Type in the quantity being received.

   The location will default; it may be overridden.
5. The Batch/lot and FIFO date entries are overrides of the existing batch/lot and FIFO dates found in the Enterprise release locations record. If you wish to receive an item into a different batch/lot or FIFO date than what was shipped, key it in here.
6. Click on Yes or No for Receive complete and then click on the Continue button.

Force Ship Complete

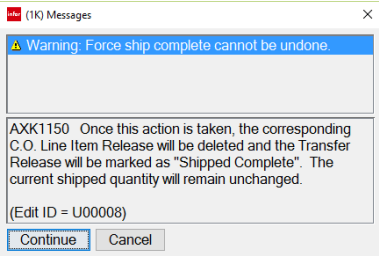
Planned Open Enterprise Supply Release - Open Releases



What to do:

- This is the default General view which shows it from the Customer Line Release perspective. The highlighted line represents shipping between what's in CSM versus ML.
- Click on Open Releases icon and open listing window.
- Highlight the release that you want to force ship complete and click the Force Ship Complete icon.
- Click Continue button on the template.
- If all goes well, the release will disappear. If the release remains, display the detail and look in the Messages view.
- This should only be used when shipping from COM or CSM is not available. For example: Say that an item was partially shipped from a company that requires shipment confirmation and the remaining quantity was not needed. COM and CSM will not allow a shipment of zero complete (backorder set to 'N') to shut down the customer order line so it can be received complete. Therefore, use the Force Ship Complete option to complete the line, then receive complete the associated transfer order scheduled receipt release complete.

Potential message warning



Shipping/Receiving Tips

1. If you have partially shipped an item but do not want to ship the remaining quantity, ship the item with a zero quantity and backorder flag of ‘N’. Then receive the scheduled receipt with zero and receive complete checked.
2. If you have shipped and received (not complete) the wrong item, you may update the scheduled receipt with a negative quantity to reverse the receipt and then delete the customer order shipment. At this point you will be able to create the new shipment for the correct order/item.

Chapter 8. DEMAND TRANSFER

Planned Demand Transfer Overview

Overview

Material Logistics makes planned order information from demand warehouses available to supplying warehouses by sending planned demand to each item's default supply warehouse.

Items must be defined as Material Logistics planned items by setting up a default supply warehouse on the Material Logistics card of the Item warehouse object. The supply warehouse must be an enterprise warehouse that represents either a local planning warehouse within the same environment or a remote planning warehouse in another environment. Once defined, planned MRP planned orders from demand warehouses are sent to the Master load file (XFRMST) for use in MPSP, MRP, OBPM, and MP. For details on how the planned demand gets from the demand side to the supply side XFRMST file, see Sending Planned Demand in the next section.

If an ML planned item at a supply warehouse is defined as a master scheduled item, the MPSP generation in the supply warehouse will retrieve, from XFRMST, planned demand from all demand warehouses and consider them expected orders in the supply warehouse. For Production planned items, the aggregation to production families will also retrieve, from XFRMST, planned demand from all demand warehouses and include the demand.

If an ML planned item at a supply warehouse is defined as an MRP planned item, the MRP generation in the supply warehouse will retrieve, from XFRMST, planned demand from all demand warehouses and consider them as held manual forecast demand in the supply warehouse. They will appear as requirements in MRP, and planned orders will be created in the supply warehouse when needed.

If an advanced planner application is in use at a supply warehouse for an ML planned item, the Refresh Process for the supply warehouse will retrieve, from XFRMST, planned demand from all demand warehouses.

Sending Planned Demand

When default supply warehouses are set up for items on the Material Logistics card in Item Warehouse, Material Logistics will copy planned demand for the item to file XFRFCL and send it to the defined supply warehouses at the end of the MRP planning run or during planning Put-Back. Then, at the start of planning in the supply warehouse, the demand will be pulled into file XFRMST to be included in supply warehouse planning. XA MPSP will update XFRMST at the start of Aggregate to Production Families and Generate Master Schedules and include the demand in planning. The XA planning Refresh Process or MRP planning, will also update XFRMST and then use the demand in planning.

The flow of planned demand is much the same whether the demand and supply warehouse are both in the same environment or if they are in two different XA environments. An extra step is needed for demand that goes across environments: Data in file Transfer Demand for Common Load, XFRFCL, must be replicated to remote XA environments. The remote destination for each demand record is in extension file TCLSOA.

Prerequisites for replication to occur:

The System Link transformation XA_Replicate_TransferDemandForCommonLoad must be active.

Unattached job PSVTUS must be active to publish and replicate the demand.

System link servers must be started for both environments.

Demand Transfer

How the ML Interface To Planning Switch Works

When ML is installed in an environment that also contains ISL or MISL, the ML interface with MRP planning and OBPM is initially not active. So those who have been using ISL/MISL will initially see those applications and their interfaces function as in the past. MRP planned demand will be transferred between warehouses based upon ISL Item, planner, and vendor defaults. In OBPM and MRP review and approve items, default supply warehouses will still be determined based upon ISL Item, planner, and vendor defaults. Also in OBPM and MRP review and approve items, the release of InterSite orders will result in the creation of ISL/MISL orders.

When users have set up Material Logistics Enterprise Warehouses, Enterprise Warehouse Trade Relations, and filled in the supply warehouses for items on the ML card of the Item Warehouse file, they can choose to “Activate the ML Interface” in Application Settings for Material Logistics. Because the planning functions supplied by Material Logistics, in many aspects, duplicate those supplied by ISL/MISL, they must replace the functions supplied by those applications. So when the ML interface is activated, the switch will deactivate the ISL/MISL interface for MRP and OBPM. MRP planned demand will be transferred between warehouses based upon the ML supply warehouses setup in Item Warehouse. In OBPM and MRP review and approve items, default supply warehouses will now be determined based ML supply warehouses. Also in OBPM and MRP review and approve items, the release of InterSite orders will result in the creation of Material Logistics Transfer orders. After activating the interface, an MRP planning run will be necessary to ensure that planned orders in MRP reflect the defaults setup in material Logistics and not those previously defined for ISL/MISL.

Note that the OBPM and MRP Review and Approve screens will show both ISL/MISL orders and ML Transfer orders. Regardless of the ML Interface setting, users will still be able to maintain both types of orders. However the method of planned demand transfer and the type of orders created will depend upon the interface setting.

Items must be defined as Material Logistics planned items by setting up a default supply warehouse on the Material Logistics card of the Item warehouse object. The supply warehouse must be an

enterprise warehouse that represents either a local planning warehouse within the same environment or a remote planning warehouse in another environment. Once defined, planned MRP planned orders from demand warehouses are sent to the Master load file (XFRMST) for use in MPSP, MRP, OBPM, and MP. For details on how the planned demand gets from the demand side to the supply side XFRMST file, see Sending Planned Demand in the next section.

If an ML planned item at a supply warehouse is defined as a master scheduled item, the MPSP generation in the supply warehouse will retrieve, from XFRMST, planned demand from all demand warehouses and consider them expected orders in the supply warehouse. For Production planned items, the aggregation to production families will also retrieve, from XFRMST, planned demand from all demand warehouses and include the demand.

If an ML planned item at a supply warehouse is defined as an MRP planned item, the MRP generation in the supply warehouse will retrieve, from XFRMST, planned demand from all demand warehouses and consider them as held manual forecast demand in the supply warehouse. They will appear as requirements in MRP, and planned orders will be created in the supply warehouse when needed.

If an advanced planner application is in use at a supply warehouse for an ML planned item, the Refresh Process for the supply warehouse will retrieve, from XFRMST, planned demand from all demand warehouses.

Interface Between ML, OBPM and MRP

The interface between ML and OBPM and MRP has been enhanced to make ML transfer orders visible in MRP Recommendations in OBPM and in MRP Review/Approve Items. ML transfer orders have a "T" prefix and can be changed and deleted through the enhanced interface. In addition, users without ISL/MISL can create ML transfer orders through OBPM and MRP. Users with ISL/MISL will continue to create ONLY ISL/MISL orders through these applications, unless they turn on the "Activate ML Interface" option in ML application settings. At that point, they will be able to create ONLY ML transfer orders through these applications.

For users with ISL or MISL, the "Activate ML Interface" flag will do two things 1) Switch the automatic demand transfer function from using the ISL/MISL item, planner, and vendor default files over to use the new ML Supply Enterprise Warehouse ID found on the Item Warehouse ML card. 2) Change the OBPM/MRP order create and release functions to stop creating ISL/MISL orders and start creating ML transfer orders.

Activating the ML Interface Special Instructions

The "Activate ML Interface" setting should not be turned on until all Enterprise Warehouse Trade Relations have been set up and the Supply Enterprise Warehouse ID has been established on the ML card of the Item Warehouse object for all items previously defined in the default files of ISL/MISL. (It may be helpful to Subset by Warehouse, Planner, or vendor and use mass change). After activating the interface, an MRP planning run will be necessary to ensure that the default supply warehouses for transfer orders in OBPM and MRP reflect those set up for ML and not those set up in the past for ISL/MISL. This is especially important if you choose to change the way that supply warehouses are identified in ML to be any value other than the supply side In-transit ID that was

previously used by ISL. For non ISL/MISL users, the "Activate ML Interface" flag does not need to be set, since it is automatically considered active when ML is installed and ISL/MISL are not installed.