#### **CHAPTER 4: LOCATION TRANSFERS**

## **Objectives**

The objectives are:

- Review the setup of location transfers.
- Explain central transfer order concepts.
- Create and post manual transfers.
- Identify the locations and quantities of items in transit.
- View the inventory value of items in transit.

#### Introduction

Many large wholesale distributors and manufacturers have a number of branch warehouse locations, each servicing a specific area or region. To minimize their total inventory level, these companies often follow the strategy of having safety stock in one main warehouse, while maintaining minimum inventory in regional warehouses. This practice requires the transfer of inventory from the main warehouse to the regional ones. Companies also move inventory from one location to another to satisfy unexpected demand.

If the company is large enough, a significant amount of inventory can be in transit at any given time. This creates problems from both a financial and a logistical perspective. Financially, it is difficult to determine the value of the inventory, because it is in transit. Logistically, it is not possible to accurately estimate total availability of the inventory.

With Location Transfers, companies use a transfer order to accurately track the movement of inventory from one location to another. To transfer items, companies create a transfer order containing a line for each inventory item being transferred. When the inventory is shipped from the source location, it is considered to be in transit until received at its destination.

## **Location Transfers Setup**

The location transfer setup consists of two elements:

- In-Transit Location Setup. To use the transfer functionality, a company must define an in-transit location, which is a temporary location created for transferring items only. When the order is shipped from the transfer-from location, the items are assigned to the in-transit location. When the order is received at the transfer-to location, the items from the in-transit location are assigned to the transfer-to location.
- Transfer Routes Setup. A company can choose to set up transfer routes between locations. This enables the company to assign a default in-transit location code, shipping agent and shipping agent service code to each route. With the shipping time defined, Microsoft Dynamics® NAV uses the information to calculate the receipt date for transfer orders at the target location.

The following example illustrates the Location Transfers functionality using the CRONUS International Ltd. demonstration company.

CRONUS is a company with many warehouses located all over the United Kingdom (UK), with one central warehouse and a number of regional warehouses, each with its own manager. To ensure a high level of customer service in terms of delivery time, the company strives to achieve maximum operational flexibility through decentralized management of its warehouses.

Refer to "Multiple Locations" in this training material to see that CRONUS has established a setup to achieve this flexibility. According to this setup, some customers are always supplied from specific warehouse(s) and some vendors deliver to certain warehouses. With such an organizational configuration, CRONUS sometimes needs to transfer inventory from one location, for example a central warehouse, to another, such as a regional warehouse.

#### **In-Transit Location Setup**

With the in-transit location, companies can track the quantity and value of items in transit at any given time after they are shipped from the source location, called a transfer-from location, up until they are received at the target location, called a transfer-to location. Companies can set up as many or as few in-transit locations as they like.

**NOTE**: To complete the following demonstrations, install a clean CRONUS demonstration database.

#### **Demonstration: Review an In-Transit Location Setup**

**Scenario:** Due to its organizational and geographical configuration, CRONUS needs to make inventory transfers from one warehouse to another. To do so in Microsoft Dynamics NAV, they must set up a temporary location where the items are placed while in-transit.

Typically, the in-transit location is a truck or van transporting the inventory from one location to another. Because the distance between different warehouses within the CRONUS distribution network varies, the company uses either its own logistics facilities or external ones to transport inventory between its different locations.

To reflect this practice in the program, CRONUS has set up two in-transit locations. Follow these steps to review the setup:

- 1. On the navigation pane, click Warehouse.
- 2. On the **Warehouse** page, click **Administration** and then click **Locations** to see the list of all locations in CRONUS.

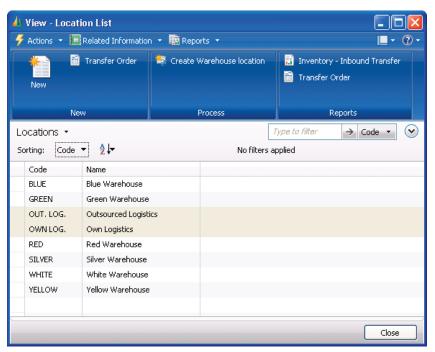


FIGURE 4.1 LOCATIONS IN CRONUS, INCLUDING TWO IN-TRANSIT LOCATIONS

There are two locations called Outsourced Logistics and Own Logistics. These locations are the in-transit locations with OUT. LOG. and OWN LOG. in-transit codes, respectively.

3. Double-click the OWN LOG. line to open the location card.

At a minimum, the **Code** and **Name** fields on the **General** FastTab must be filled in. The **Use As In-Transit** check box must be selected. This indicates that this location is used as an in-transit location.

Refer to how to set up in-transit locations in the topic called "Setting Up In-Transit Codes" in the online Help.

#### **Procedure: Review Transfer Route Setup**

A transfer route is the combination of a transfer-from location and a transfer-to location. The transfer route is used to validate location information when making transfer orders or entering lines in the requisition worksheet.

Users can assign each transfer route a default in-transit code, shipping agent code and shipping agent service code. The shipping time of the shipping agent service is used to calculate the receipt date at the transfer-to location.

Refer to how to set up shipping agents and shipping agent services in the topics called "Setting Up Shipping Agents" and "Setting Up Shipping Agent Services" in the online Help. At CRONUS, transfer routes are set up to reflect the current business processes.

Follow these steps to review the setup:

- 1. On the Warehouse, Administration page, click Transfer Routes.
- 2. On the **Options** FastTab, set filters as follows:
  - o In the **Show** field, select the transfer route specification to show in the fields in the right pane.
  - To display the names of the transfer-to locations as headings in the right pane, select the Show Transfer-to Name check box. If the field is blank, the program displays the location codes.
- 3. Click Show Matrix.

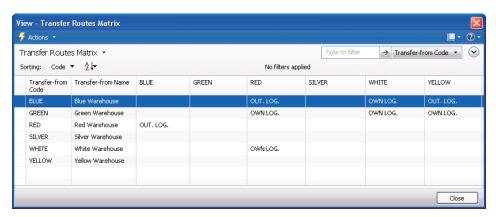


FIGURE 4.2 TRANSFER ROUTES IN CRONUS

CRONUS has set up eight transfer routes:

- The company uses an external carrier represented by the OUT. LOG. code:
  - o From the BLUE to the RED and YELLOW locations
  - o From the RED to the BLUE location
- The company uses its own logistics facilities represented by the OWN LOG. code:
  - o From the BLUE to the WHITE location
  - o From the GREEN to the RED, WHITE, and YELLOW locations
  - From the WHITE to the RED location

#### **Procedure: Create a Transfer Route**

Follow these steps to create a transfer route:

- 1. In the **Transfer Routes Matrix** page, click the intersecting restriction field.
- 2. In the **Trans. Route Spec.** page, click **Actions** and then click **New**.
- 3. In the New Trans. Route Spec. page, enter the relevant In-Transit Code, Shipping Agent Code, and Shipping Agent Service Code.
- 4. Click **OK** in both the **New Trans. Route Spec.** and the **Trans. Route Spec.** pages.

## Lab 4.1 - Set Up a Transfer Route

#### **Scenario**

CRONUS needs a new transfer route to bring items from the Red to the Green Warehouse using their own trucks.

As the warehouse manager, it is your responsibility to set up these transfer routes in Microsoft Dynamics NAV.

#### **Challenge Yourself!**

Set up a transfer route between the RED and GREEN locations as specified in the scenario.

#### Need a Little Help?

- 1. Open the **Transfer Routes Matrix** page.
- 2. Use RED as the transfer-from code.
- 3. Use OWN LOG. as the in-transit code.

#### Step by Step

- 1. On the navigation pane, click **Warehouse**.
- 2. On the **Warehouse** page, click **Administration** and then click **Transfer Routes**.
- 3. Click **Show Matrix**.
- 4. Locate the RED row, the GREEN column and then click the restriction field.
- 5. In the **Trans. Route Spec.** dialog box, click **Actions** and then click **New**.
- 6. In the **In-Transit Code** field, click the drop-down arrow and then select OWN LOG.
- 7. Click **OK** to close the **New Trans. Route Spec.** dialog box.
- 8. Click **OK** to close the **Trans. Route Spec.** dialog box.

#### **Transfer Orders**

The transfer order is the key object of the transfer functionality. With the transfer order, a company can:

- Create a transfer.
- Post the shipment of the items.
- Post the receipt of the items.

The transfer order contains information regarding how much is shipped and received in the same manner as the purchase and sales documents, using quantity shipped, quantity received, and so on.

With the location transfers functionality, companies can make transfers both manually and automatically. A company may need a manual transfer when there is lack of inventory at a certain location, and this inventory is needed to fulfill a sales order. In this case, an initiator, such as a salesperson, decides to move items from a location where the required inventory is available to the location in question.

Automatic transfer order creation is an outcome of the replenishment planning activity. To make automatic transfers, dedicated persons, typically purchasers, use the requisition or planning worksheet.

# Demonstration: Transfer Items from the Blue to the Yellow Warehouse

This demonstration illustrates a complete transfer process and how the planning system creates transfers. The demonstration is divided into the following subprocesses:

- Create a transfer order.
- Ship a transfer order.
- Receive a transfer order.

### **Steps: Create a Transfer Order**

The following demonstrates how to create a manual transfer between locations.

**Scenario:** CRONUS customer 40000 is expected to place an order for 50 units of item 70002 to be delivered within one week. According to the company's established procedure, this customer's orders normally come from the Yellow Warehouse.

When creating a sales order for this customer, Susan, the order processor, finds out that the quantity of item 70002 in stock in the Yellow Warehouse is not sufficient to fulfill this order. To ensure order fulfillment, she decides to make a transfer from the Blue Warehouse, where the needed items are available, to the Yellow Warehouse, from which the order ships to the customer. This customer has only agreed to pay any transportation costs that occur when the complete order ships from the Yellow Warehouse.

The first thing that Susan must do is create a transfer order. Follow these steps to create the transfer order:

- 1. On the **Warehouse** page, click **Planning & Execution** and then click **Transfer Orders**.
- 2. Click **New** to create a new transfer order and then press ENTER or TAB to assign a number.
- 3. In the **Transfer-from Code** field, enter BLUE.
- 4. In the **Transfer-to Code** field, enter YELLOW.

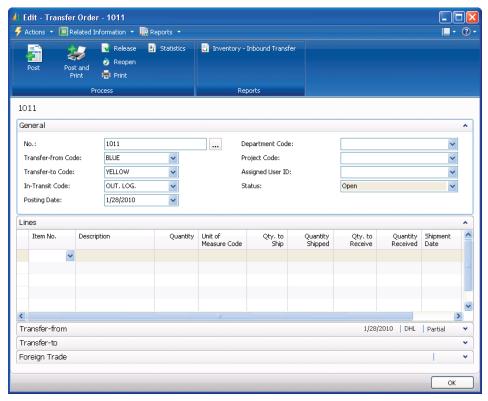


FIGURE 4.3 GENERAL FASTTAB ON THE TRANSFER ORDER FILLED IN

The **In-Transit Code** field is automatically populated with the in-transit code OUT. LOG. This code is a default in-transit code for the transfer route between the BLUE location and the YELLOW location.

The name and address information for the BLUE and YELLOW locations is also populated in the corresponding fields on the **Transfer-from** and **Transfer-to** FastTabs, respectively.

5. Expand the **Transfer-from** FastTab.

The right side of the **Transfer-from** FastTab contains fields that specify shipping details for this transfer. The **Shipping Agent Code**, **Shipping Agent Service Code** and the **Shipping Time** fields are populated automatically from information defined for this transfer route.

6. Expand the **Transfer-to** FastTab.

The **Receipt Date** field indicates when the items are to be received at the YELLOW location. This calculation is based on the outbound warehouse handling time at the BLUE location (0 days), the shipping time set up for this transfer route, which is two days, and inbound warehouse handling time at the YELLOW location, which is one day.

If the user enters GREEN as the location code in the **Transfer-to Code** field, the program does not suggest a default in-transit location. This is because the transfer route that permits transfers from BLUE to GREEN is not a valid route in the program.

In this case, the user must manually enter an in-transit code in the **In-Transit Code** field. Because there are no shipping agent and shipping agent service set up for this transfer route, the program uses only the outbound warehouse handling time for the transfer-from location and the inbound warehouse handling time for the transfer-to location to estimate the receipt date. To estimate the receipt date more accurately for this transfer order, the user must select a specific shipping agent and shipping agent service or enter a shipping time in the corresponding fields on the **Transfer-from** FastTab.

Follow these steps to complete the transfer order from the BLUE to the YELLOW location by filling in the transfer order lines with the item number and quantity to be transferred:

- 1. On the **Lines** FastTab, enter 70002 in the **Item No.** field.
- 2. In the **Quantity** field, enter 50.

The transfer order is now ready to be released. Some companies may have an authorized person responsible for releasing transfer orders. Follow these steps to release the transfer order:

- 1. On the Action Pane, click **Release**. The **Status** field on the **General** FastTab changes from Open to Released.
- 2. Click **OK** to close the Transfer Order and go back to the **Transfer Orders** list page.

All transfer orders from a given location can be released in one batch from the **Transfer Orders** list page or the **Transfer List** page. If it is necessary, on this page, set a table filter for the transfer orders to be released, such as those shipping from the BLUE location.

**NOTE**: For this demonstration, do not perform the batch release transfer order process.

Follow these steps to release transfer orders in one batch:

- 1. Select the transfer order lines to release.
- 2. On the Action Pane, click Release.

#### Steps: Ship a Transfer Order

**Scenario:** The transfer order is now released. John, the warehouse worker who has authorization to ship transfer orders to the BLUE location, proceeds to post the transfer order. John is permitted to post only one transfer order shipment at a time.

Follow these steps to post a transfer shipment:

- 1. Open the transfer order created in the "Create a Transfer Order" section of this demonstration.
- 2. On the Action Pane, click Post.

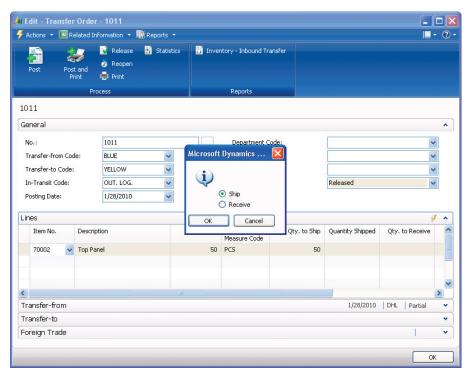


FIGURE 4.4 TRANSFER SHIPMENT READY TO BE POSTED

3. With **Ship** selected, click **OK**.

The transfer order ships out of the BLUE location and 50 units of item 70002 are currently in transit.

Follow these steps to view the posted transfer shipment document for this specific transfer:

- 1. On the **Transfer Order** page, click the **Related Information** menu, point to **Order** and then click **Shipments**.
- 2. Navigate to gain more detailed information about this transaction.

Follow these steps to access this posted shipment and all other posted transfer shipments directly from the navigation pane:

- 1. On the **Warehouse** page, click **History**, and then under Posted Documents, click **Posted Transfer Shipments**.
- 2. Browse to the posted transfer shipment for the transfer order that just shipped.
- 3. Navigate to gain more detailed information about the transaction.

#### **Steps: Receive a Transfer Order**

Receiving the transfer order at the target location is the final step in the transfer process.

**Scenario:** Two days after the Blue Warehouse shipped the transfer order, 50 units of item 70002 arrive at the Yellow Warehouse, which is the target location for this transfer. Sammy, in shipping and receiving at the Yellow Warehouse, must open the transfer order that corresponds to the arrived items and post the transfer receipt.

As in the case of posting the transfer shipment, Sammy can use a table filter to filter the transfer orders according to certain parameters, for example, the transfer-to code.

Follow these steps to post the transfer receipt:

1. On the **Transfer Orders** list page, open the shipped transfer order for 50 units of item 70002. The **Quantity Shipped** field now contains 50.

**NOTE**: If the transfer order is shipped from a location that requires picking, or if the order is received at a location that requires receiving, Microsoft Dynamics NAV requires that the shipping or receiving be processed through dedicated warehouse documents and gives the message "There is nothing to post." This process can be skipped by entering the corresponding amounts in the **Qty. To Ship/Qty. to Receive** fields on the transfer lines and then accepting the warning messages.

The receiving/shipping processes of the Warehouse Management functionality are described in detail in "Basic Warehouse Tasks" in this training material.

- 2. In the **Qty. to Receive** field, type 50 and then press ENTER or TAB.
- 3. Click **OK** to close the message stating that the YELLOW location is set up to use dedicated warehouse receiving documents.
- 4. On the Action Pane, click **Post**.

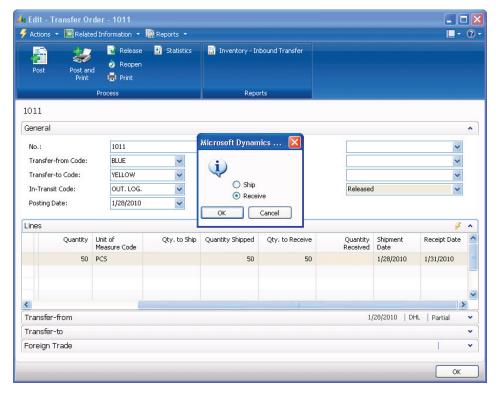


FIGURE 4.5 TRANSFER RECEIPT OF 50 UNITS READY TO BE POSTED

5. With **Receive** selected, click **OK**.

The 50 units are now transferred from the BLUE to the YELLOW location and the transfer order is therefore deleted.

6. Click **OK** and the close the **Transfer Order** page.

Follow these steps to review the posted transfer receipt:

- 1. On the **Warehouse** page, click **History**, and then under Posted Documents, click **Posted Transfer Receipts**.
- 2. Open and review the transfer order that just posted.
- 3. Navigate to gain more detailed information about the transaction.

#### Lab 4.2 - Transfer Items Between Locations

#### **Scenario**

CRONUS customer 50000 places an order for:

- 1000 units of item 70200.
- 30 units of item 1908-S.
- 10 units of item 1964-W.

The order is for delivery in five days.

Due to certain considerations, the order ships to this customer from the Red Warehouse. As the order processor at CRONUS, you check item availability and find out that there are not enough items in stock at the Red Warehouse to fill the order and no receipt of new stock is scheduled or planned within the next five days. At the same time, there is enough stock available at the Blue Warehouse to fulfill this sales order.

You decide to transfer the required quantity of the above items from the Blue to the Red Warehouse. For the purpose of this lab, perform the ship and receive process.

**NOTE**: Do not receive the ten units of item 1964-W; the outcome of this lab is used in the following lesson.

#### **Challenge Yourself!**

- 1. Transfer the items from the BLUE location to the RED location.
- 2. Release and ship all items in full.
- 3. Receive all items in full, except for 1964-W.

#### **Need a Little Help?**

- 1. Create one transfer order for the required quantity of items 70200, 1908-S, and 1964-W.
- 2. Release and ship the transfer order with the full quantity of all three items from the Blue Warehouse.
- 3. Receive the full quantity of items 80100 and 1908-S at the Red Warehouse
- 4. Do not receive the ten units of item 1964-W at the Red Warehouse.

#### Step by Step

Follow these steps to create and ship the transfer order:

- 1. On the **Warehouse** page, click **Planning & Execution** and then click **Transfer Orders**.
- 2. Click **New** to create a new order and then press ENTER or TAB.
- 3. In the **Transfer-from Code** field, enter BLUE.
- 4. In the **Transfer-to Code** field, enter RED.
- 5. Create three transfer lines with this information:
  - a. Item No. = 70200, Quantity = 1000
  - b. Item No. 1908-S, Quantity = 30
  - c. **Item No.** 1964-W, **Quantity** = 10
- 6. On the Action Pane, click **Release**.
- 7. On the Action Pane, click **Post**.
- 8. With **Ship** selected, click **OK**. The three transfer shipments are posted.

Follow these steps to post the two transfer receipts:

- In the Qty. to Receive field, leave 1000 and 30 in the first two transfer lines, but remove 10 on the last transfer line for item 1964-W.
- 2. On the Action Pane, click **Post**.
- 3. With **Receive** selected, click **OK**.

The transfer order is not deleted because the last line is not yet received.

#### **View Items in Transit**

Constant movement of inventory between different locations creates a need in companies with multiple locations to determine the status of a specific item(s). With the location transfers functionality in Microsoft Dynamics NAV, a multisite company is able to track the quantity and value of inventory currently in transit at any time.

Companies can view items in transit for each in-transit location code and for each item. Furthermore, all the reports that relate to item availability include quantities in transit.

## Demonstration: View the Quantity of Item 1964-W in Transit

**Scenario:** Recently, items were transferred from the BLUE location to the RED location. Ellen, the warehouse manager at CRONUS, needs to check the status of item 1964-W, which was not received with the other items on 01/28/10.

Follow these steps to view items in transit:

- 1. On the **Warehouse** page, click **Planning & Execution** and then click **Items**.
- 2. Select item 1964-W.
- 3. On the **Related Information** menu, point to **Item** and then click **Items by Location**.
- 4. Select the **Show Items in Transit** check box to show item quantities for each in-transit location code.
- 5. Click **Show Matrix**. The **Items by Location Matrix** page opens with all items and the in-transit location codes.

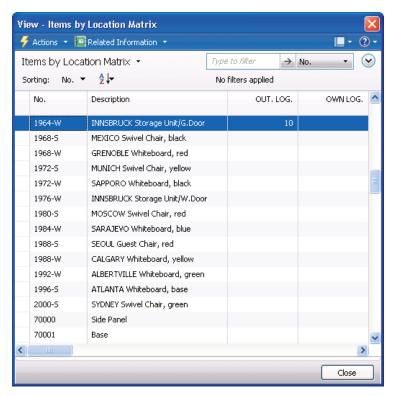


FIGURE 4.6 ITEMS BY LOCATION MATRIX SHOWING THE INTRANSIT QUANTITIES AND LOCATION CODES FOR ITEM 1964-W

Follow these steps to view the quantity in transit for item 1964-W in the period through 01/29/10 (one day after the work date).

- 1. On the **Items by Location Matrix** page, select the line for item 1964-W.
- 2. On the **Related Information** menu, point to **Item**, then to **Item Availability by**, and then click **Location**.

- 3. Use the Choose Columns function to add the **Qty. in Transit** field. Re-open the **Item Availability by Location** page to activate the changes.
- 4. Click the **Item Availability by Location** button and select **Limit totals**.
- 5. In the **Date Filter** field, type 01/29/10 and press ENTER.
- 6. In the **View as** field, click the drop-down arrow and select **Balance at Date** to see the balance through 01/29/10.

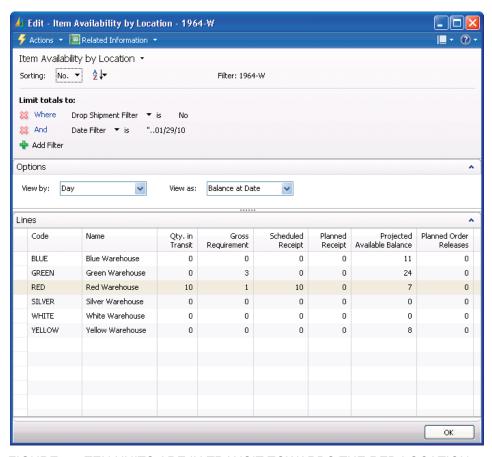


FIGURE 4.7 TEN UNITS ARE IN TRANSIT TOWARDS THE RED LOCATION ON 01/29/10

The **Item Availability by Location** page now shows the total quantity of an item that is in-transit on a specific date towards a specific location.

As indicated by the contents of the **Qty. in Transit** field, ten units of item 1964-W are still in-transit to the Red Warehouse on 01/29/10.

Quantities in transit are also included in all the reports that specify inventory availability. The Inventory - Inbound Transfer report shows items in transit that are to be received at the transfer-to location.

#### **Procedure: View Inventory Value of Items in Transit**

To view the value of items in transit, use the Inventory Valuation report.

Follow these steps to preview the Inventory Valuation report:

- 1. On the navigation pane, click **Financial Management** and then click **Inventory**.
- 2. Under Reports, click Inventory Valuation.
- 3. On the **Item** FastTab, under Limit totals to, click **Add Filter**.
- 4. Click the drop-down arrow and select **Location Filter**.
- 5. In the **Enter a value** field, click the drop-down arrow and select an in-transit code, such as OUT. LOG.
- 6. Click **Preview** to view the inventory value of items in transit at OUT. LOG.

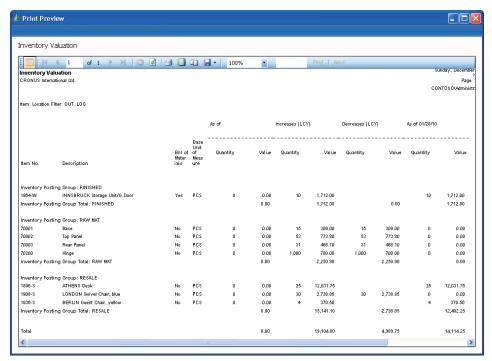


FIGURE 4.8 INVENTORY VALUATION REPORT SHOWING IN-TRANSIT VALUES AT OUT. LOG.

The Inventory Valuation - Cost Spec. and the Item Age Composition - Value reports also show the value of items in transit.

## **Summary**

Transfer orders are used to manage and track the movement of inventory from one location to another. When the inventory item is shipped from the source (transfer-from location), it is considered to be in transit until received at its destination (transfer-to location). Both the transfer shipment and the transfer receipt are posted from one transfer order to ensure a simple and stable workflow of such inventory items.

Microsoft Dynamics NAV also offers functionality for tracking where and when items are in transit.

## **Test Your Knowledge**

Test your knowledge with the following questions.

1.	Besides standard multiple location setup, what two elements must be set up before location transfers can be used? (Select all that apply)					
	() Responsibility centers					
	( ) In-transit locations					
	() SKUs					
	() Transfer routes					
2.	How is a location specified for it to be used as an in-transit location?					
3.	Which of the following pages assists in determining what quantity of an item is in-transit? (Select all that apply)					
	() Item Availability by Periods					
	() Items by Location Matrix					
	() Item Availability by Variants					
	() Item Availability by Locations					

## **Quick Interaction: Lessons Learned**

Take a moment and write down three key points you have learned from this chapter:						
1.						
2.						
<b>.</b>						
3.						

#### **Solutions**

#### **Test Your Knowledge**

- 1. Besides standard multiple location setup, what two elements must be set up before location transfers can be used? (Select all that apply)
  - () Responsibility centers
  - $(\sqrt{})$  In-transit locations
  - () SKUs
  - $(\sqrt{})$  Transfer routes
- 2. How is a location specified for it to be used as an in-transit location?

MODEL ANSWER: By selecting the Use As In-Transit check box on the Location Card.

- 3. Which of the following pages assists in determining what quantity of an item is in-transit? (Select all that apply)
  - () Item Availability by Periods
  - $(\sqrt{})$  Items by Location Matrix
  - () Item Availability by Variants
  - $(\sqrt{\ })$  Item Availability by Locations