CHAPTER 3: ITEM TRACKING – INTEGRATION

Objectives

The objectives are:

- Ensure that WMS and inventory are synchronized.
- Reverse serial/lot numbers in returns processing.
- Outline the use of serial/lot numbers in jobs and services.

Introduction

Integration of item tracking functionality across the whole application is important to provide consistent usability for all users and trustworthy creation of entries for item tracking. Item Tracking in Microsoft Dynamics™ NAV 5.0 introduces several improvements and new features with the common purpose of increasing the integration of item tracking functionality to other application areas in the system.

Item tracking functionality is integrated tighter with Warehouse Management Systems (WMS) by redesigning the adjustment bin mechanism and introducing blocking functionality in selected item journals. This eliminates synchronization errors between warehouse entries and item ledger entries – regarding items in general and serial/lot numbers in particular.

In returns processing, the item tracking entries of the document line to reverse are automatically copied to return orders or credit memos. The renewed Item Tracking Lines window integrates to relevant documents, journals, or worksheets of both the Service Management and Jobs application areas.

This chapter provides training on all the new features within the theme of item tracking integration and is taught as part conceptual description and part demonstration of actual use, and exercise labs on selected functionality.
Synchronization between Warehouse and Inventory

Adjustment Bin

The adjustment bin is designed to contain warehouse entries which are not yet synchronized with item ledger entries. Such warehouse entries typically come from manual adjustments of warehouse quantities in physical or reclassification journals. At set intervals, such as every Friday, a user who has finance/inventory responsibilities empties these entries into the corresponding item ledger entries by running the Calculate Warehouse Adjustment function from an item journal. The system creates item journal lines for the corresponding warehouse entries that are then synchronized upon posting the journal. Refer to step 2 of the demonstration titled "Serial/Lot Number Reclassification in WMS."

In earlier versions, the flow through the adjustment bin was two-way, and emptying was a manual process to be performed by a knowledgeable user. The adjustment bin must only be filled with warehouse entries – through warehouse journals. But because it allowed both directions, it was also filled with item ledger entries which users created for WMS locations through item journal lines.

Also, it was possible to post the same physical inventory journal line several times. This created positive entries in the adjustment bin which cannot be balanced by the single line created in the warehouse physical inventory journal. Therefore, synchronization can be offset and lead to availability errors that are only detected in the Whse. Adjustment Bin report (7320).

In the current version, the flow through the adjustment bin, including serial/lot number reclassification, is one-way – warehouse to inventory – and the process is automated.

Reclassifying Serial/Lot Numbers in WMS

In earlier version, reclassification of serial/lot numbers in warehouse reclassification journals was never synchronized with item ledger entries as this information was not included in the adjustment bin entries.

In the current version, when registering serial/lot number reclassification in a warehouse reclassification journal, those changes will be posted directly to the corresponding item ledger entries. Although the button in the warehouse reclassification journal is called Register, this new design means that when reclassifying serial/lot numbers in a WMS location, the registration also executes a posting to inventory. Refer to the demonstration titled "Serial/Lot Number Reclassification in WMS."

**DEFINITION:** The use of WMS and WMS location in this topic refers to locations set up for Directed Put-Away and Pick.
Chapter 3: Item Tracking – Integration

Blocking in Journals
In the current version, the risk of offsetting the synchronization of entries is eliminated by blocking or diverting users from creating entries in the wrong journals. The blocking rules only apply when both of the following conditions are true:

- The involved location is set up for Directed Put-Away and Pick
- The item uses warehouse tracking

When Users Try to Adjust a WMS Location
The item journal and the physical inventory journal are blocked if users try to enter a location code that is set up for Directed Put-Away and Pick, and the user receives the following message.

![Figure 3-1: Blocking Adjustment of Item in a WMS Location](image)

This makes sure that no item ledger entries can be created on such a location without warehouse entries first being registered in appropriate warehouse journals.

Regarding Serial/Lot Numbers
Although manual entry is disallowed, both the physical inventory journal and the item journal may be auto-filled with journal lines for WMS locations, and such generated journal lines may include serial/lot numbers. This can occur when the following journal functions are used:

- Calculate Inventory, in the physical inventory journals (before counting)
- Calculate Whse. Adjustments, in the inventory journal (before emptying the adjustment bin)

If the item uses warehouse tracking, the system will block users from trying to change serial/lot numbers under such generated journal lines, and the user receives the following message.
Reclassify a WMS Location into a Non-WMS Location

The item reclassification journal and the warehouse reclassification journals are blocked if users try to reclassify an item from a basic location to a WMS location or vice versa. Blocking occurs if users try to enter a conflicting value in any of these fields:

- Location Code
- New Location Code
- Bin Code
- New Bin Code

The user receives the following message:

This guarantees that item ledger entries and warehouse entries are not exchanged without synchronization. Location change between basic and WMS locations must be done in transfer order transactions that guarantee synchronization of entries between the two ledgers.

Regarding Serial/Lot Numbers

If the item uses warehouse tracking, the system will block users from trying to change serial/lot numbers under reclassification journal lines for WMS locations, and the user receives the following message:

This guarantees that item ledger entries and warehouse entries are not exchanged without synchronization. Location change between basic and WMS locations must be done in transfer order transactions that guarantee synchronization of entries between the two ledgers.

Regarding Serial/Lot Numbers

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This guarantees that item ledger entries and warehouse entries are not exchanged without synchronization. Location change between basic and WMS locations must be done in transfer order transactions that guarantee synchronization of entries between the two ledgers.
When Reclassifying Serial/Lot Numbers in WMS Location

The warehouse reclassification journal will post directly to item ledger entries in addition to registering warehouse entries if any of these fields are changed in the Item Tracking Lines window:

- Lot No.
- Serial No.
- Expiration Date

This dialog box text is displayed when clicking the Register button:

![Register and Post in One Routine](image)

Notice that the posting routine both posts and registers. This guarantees that serial/lot number reclassification performed on WMS locations is synchronized with item ledger entries directly.

Demonstration – Serial/Lot Number Reclassification in WMS

NOTE: Continue in the Cronus database created during the Transparency chapter.

This demonstrates that the warehouse reclassification journal will post serial/lot number changes directly to item ledger entries in addition to registering warehouse entries.

Scenario: In a WMS installation using Directed Put-Away and Pick, John, the warehouse worker, must change one serial number on a hard disk. He performs this work in the warehouse reclassification journal as he does any other reclassification task. However, because this particular reclassification relates to serial/lot numbers, the system synchronizes his change with the corresponding item ledger entry directly – by posting it to inventory.

Steps

Start the demonstration by registering one serialized hard disk in WHITE location, and then empty the adjustment bin to synchronize the new warehouse entry with inventory. The synchronization step is needed in order to complete the warehouse reclassification in the actual demonstration steps:
1. In a warehouse item journal, create and register the following positive adjustment in the default WMS location, WHITE:

<table>
<thead>
<tr>
<th>Item</th>
<th>Bin</th>
<th>Qty</th>
<th>Serial No</th>
<th>Lot No</th>
</tr>
</thead>
<tbody>
<tr>
<td>80218-T</td>
<td>W-01-0001</td>
<td>1</td>
<td>SN1</td>
<td>LOT1</td>
</tr>
</tbody>
</table>

2. Open a (basic) item journal and then click **FUNCTIONS** → **CALCULATE WHSE. ADJUSTMENT** with default settings.

![Figure 3-6: Contents of the Adjustment Bin](image)

Notice that this item journal reflects the warehouse entries in the adjustment bin that need synchronization. The last line stems from the registration performed in step 1 of this demonstration.

3. Post the item journal in order to synchronize WMS with inventory.

Continue to reclassify SN1 and SN2.

4. Click **WAREHOUSE** → **GOODS HANDLING MULTIPLE** → **PERIODIC ACTIVITIES** → **WHSE. RECLASS. JOURNALS**.

5. Create the following warehouse reclassification line:

<table>
<thead>
<tr>
<th>Item</th>
<th>From Bin</th>
<th>To Bin</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>80218-T</td>
<td>W-01-0001</td>
<td>W-01-0001</td>
<td>1</td>
</tr>
</tbody>
</table>

6. Define the following item tracking line:

<table>
<thead>
<tr>
<th>Serial No</th>
<th>New Serial No</th>
<th>Lot No</th>
<th>New Lot No</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>SN1</td>
<td>SN2</td>
<td>LOT1</td>
<td>LOT1</td>
<td>1</td>
</tr>
</tbody>
</table>
Chapter 3: Item Tracking – Integration

7. Close the **Item Tracking Lines** window and register (plus post) the warehouse reclassification journal.

As indicated in the dialog box, the warehouse reclassification of the serial/lot number is both registered (as warehouse entries) and posted (as item ledger entries). Continue to verify this.

8. Review the item ledger entries of item 80218-T.

![Figure 3-7: Item Ledger Entries Created from Whse. Reclassification](image)

Notice that the warehouse reclassification has also been posted to inventory. This guarantees that item entries and warehouse entries are synchronized.

This completes the description of improvements in item entry synchronization and a demonstration of how serial/lot number reclassification is handled in WMS locations. With these integration improvements, the risk of differences in item availability data is minimized in environments that have a mix of basic and advanced warehousing.

**Serial/Lot Numbers and Cost Reversal**

The ability to copy item tracking lines between documents was a frequently requested improvement within item tracking. This is now partly provided together with usability improvements of the exact cost reversal feature, namely the ability to copy item tracking entries from posted sales and purchase documents to related credit memos and return orders.

In earlier versions, serial/lot numbers on posted document lines to be reversed were not carried automatically to return documents. Instead, users had to create one document line per serial/lot number and then manually enter the outbound entry number to reverse in the **Appl.-from Item Entry** field on the sales return/credit memo line.

In the current version, serial/lot numbers assigned to the posted document lines being reversed are automatically carried to return documents when users use the Get Posted Document Lines to Reverse function or the Copy Document function. Refer to the What's New in Costing chapter titled "Usability."
To avoid the splitting of document lines per serial number, the exact cost reversing link is established per item tracking line. This guarantees that serial/lot numbers are recreated in the return document in the same manner they were in the original posted document.

**Serial/Lot Numbers in Jobs**

The Item Tracking Lines window can be called from job journal lines of type item, and it functions as for any other inbound or outbound document line.

When a job journal line with serial/lot numbers is posted, both the job ledger entries and the corresponding item ledger entries will hold the item tracking entries in question.

All functionality in the Item Tracking Lines window is supported. However, bins are not supported in job journal lines and therefore, no information is provided about serial/lot number availability in bins.

**Serial/Lot Numbers in Services**

The Item Tracking Lines window can be called from a line in the Service Item Worksheet window.

This means that the system provides full item tracking functionality for inventory items consumed through service contracts.
Conclusion

Microsoft Dynamics NAV 5.0 provides increased integration between features and application areas regarding serial/lot number handling. This helps provide consistent usability for all users and trustworthy creation of entries for item tracking. The most important improvements relate to synchronization between warehouse entries and item ledger entries.

The risk of differences in item availability data is therefore minimized in environments that have a mix of basic and advanced warehousing. Automatic copy of item tracking lines is facilitated with a feature improvement in inventory costing, and the modules of Jobs and Service Management now support serial/lot number handling in the same manner as other modules.
Test Your Knowledge – Item Tracking – Increased Integration

1. Which main conceptual change is made to the adjustment bin function?

2. List at least two journal interactions that imply synchronization control.

3. Which significant feature applies to serial/lot number reclassification in WMS locations?

4. Outline the concept of reversing serial/lot numbers in a returns process.

5. What distinguishes serial/lot number handling in service orders?
Quick Interaction: Lessons Learned

Take a moment and write down three key points you have learned from this chapter:

1. 
   
   
   
   

2. 
   
   
   
   

3. 
   
   
   
   
