CHAPTER 2: SETTING UP WAREHOUSE MANAGEMENT SYSTEMS

Objectives

The objectives are:

- Set up a warehouse.
- Set up locations.
- Set up put-away templates.
- Set up items.
- Set up zones.
- Set up bin types.
- Set up bin rankings.
- Create bins.
- Use bin creation worksheet template.
- Create bin content.
- Create warehouse classes.
- Assign warehouse classes to zones, bins, and items.

Introduction

To use the Warehouse Management Systems (WMS), it must first be adjusted to meet business requirements. This chapter covers the WMS setup options that help to handle items in the best possible way.

In Microsoft Dynamics® NAV 2009, the RoleTailored client comes with pre-configured Role Centers to fit many of the fundamental roles in companies. When you set a certain Role Center as default, you will start from a single navigational window that displays information pertinent to your role in the company. From the Role Center, you can navigate to additional information and open separate windows for performing tasks and viewing data. The Role Center is easily customizable in that you can add to the starting page the links to the program entities that you use most often.

For warehouse personnel, the Shipping and Receiving – WMS profile is recommended for working at. Its starting page contains direct links to the documents and reports the warehouse managers and other employees tend to work with.
To be able to use the Role Center, set it up as a default one:

1. In the Navigation Pane, click Departments>Administration>Application Setup>RoleTailored Client>Profiles.
2. Open the card for the Shipping and Receiving - WMS profile.
3. Select the Default Role Center check box.

FIGURE 2.1 THE SHIPPING AND RECEIVING - WMS ROLE CENTER
Warehouse Setup

To set up WMS, companies must specify details about how the program manages certain aspects of their warehouse(s). The settings can be defined in the Warehouse Setup window.

1. In the Navigation Pane, click Departments > Administration > Application Setup > Warehouse > Warehouse, and then in Tasks, click Warehouse Setup.

![Figure 2.2: The Warehouse Mgt. Setup Window]

The first four fields on the General FastTab specify the warehouse activities that may constitute the warehouse handling processes for location blank. In general it is not recommended to use warehousing processes for location blank. When using WMS, these requirements are to be filled out on the specific location card.

In the Receipt Posting Policy and Shipment Posting Policy fields, specify the policy that the program follows when it posts warehouse shipments and receipts:

- **Posting errors are not processed** – select this option to have the program post all source documents, without stopping, even if any errors occur in the posting process.
- **Stop and show the first posting error** – set this option to have the program post source documents until the first error occurs. The posting process is cancelled upon the first error and the rest of the source documents will not be posted.

2. Expand the Numbering FastTab.
The fields on the **Numbering** FastTab specify the number series the company will be using for various documents, for example, receipt, ship, and put-away.

**Locations Setup**

Multiple locations provide the possibility to set up each location (warehouse) in a specific way. By defining different parameters for the individual location, work processes can be varied from one location to another, and thereby give more freedom of choice according to surroundings and/or customs.

**NOTE:** At Cronus, the White warehouse is set up by default to use WMS, and thereby WMS functionality and processes. Specific demonstration data is already created to support the WMS functionality.

To review settings for the White location, do the following:

1. In the Navigation Pane, click the **Reference Data** button, and then click **Locations**.
2. Browse to the White location and double-click the location name to open its card. Expand the **Warehouse** FastTab.

![Image of Warehouse Settings for White Location](image-url)
The following table explains what the values in the fields on the **Warehouse FastTab** indicate.

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directed Put-away and Pick</td>
<td>If this check box is selected, this location will use Warehouse Management Systems (replenishment according to the bin type and bin ranking, instructions when creating put-aways and picks, etc.) When you select the check box, the <strong>Require Receive</strong>, <strong>Require Shipment</strong>, <strong>Require Put-away</strong>, <strong>Require Pick</strong>, and the <strong>Bin Mandatory</strong> check boxes all are selected by default and become non-editable.</td>
</tr>
<tr>
<td>- Require Receive</td>
<td>Select these check boxes if you require the location to use the receive, shipment, put-away, and pick functionalities respectively, and if you want to use bins in all transactions with items. These functionalities can be used regardless of the value in the <strong>Directed Put-away and Pick</strong> field.</td>
</tr>
<tr>
<td>- Require Shipment</td>
<td></td>
</tr>
<tr>
<td>- Require Put-away</td>
<td></td>
</tr>
<tr>
<td>- Require Pick</td>
<td></td>
</tr>
<tr>
<td>- Bin Mandatory</td>
<td></td>
</tr>
<tr>
<td>Use Put-away Worksheet</td>
<td>Select this check box to use a worksheet for creating a put-away. Deleted put-away lines can be retrieved through this worksheet to create a new put-away. No put-away document will be created automatically upon posting the warehouse receipt, but the posted receipt will become a source document for the put-away worksheet to select for creating a many-to-one put-away process.</td>
</tr>
<tr>
<td>Use ADCS</td>
<td>If this check box is selected, the location can use the automated data capture system.</td>
</tr>
<tr>
<td>- Outbound Whse. Handling Time</td>
<td>These fields relate to the date calculation and order promising functionality. In these fields, you can enter a date formula for the warehouse handling time for the location. These fields are also used for lead time calculation. These functionalities can be used regardless of the value in the <strong>Directed Put-away and Pick</strong> field.</td>
</tr>
<tr>
<td>- Inbound Whse. Handling Time</td>
<td></td>
</tr>
<tr>
<td>Base Calendar Code</td>
<td>In the <strong>Base Calendar Code</strong> field, you can enter the code for the base calendar that must be assigned to the location. This functionality can be used regardless of the value in the <strong>Directed Put-away and Pick</strong> field.</td>
</tr>
</tbody>
</table>
### Field | Explanation
--- | ---
**Customized Calendar** | The Customized Calendar field indicates, whether or not a customized calendar is set up for the location. This functionality can be used regardless of the value in the Directed Put-away and Pick field.

**Use Cross-Docking** | If this field is selected, the location can use the cross-docking functionality.
This option is automatically enabled when the Directed Put-away and Pick check box is selected. However, the check mark can be removed, if you want to prevent users from using this feature.

3. Expand the Bins FastTab.

![FIGURE 2.4 SPECIFYING BINS FOR THE LOCATION](image)

Whenever the Directed Put-away and Pick check box is selected, the fields on this FastTab can be edited.

Bins specified on this FastTab are used as a default when receiving, putting away, adjusting, and shipping the items.

The bins specified in the Inbound BOM Bin Code and Outbound BOM Bin Code fields are the default bins used by the Bill of Material (BOM) journals. When the BOM journal is posted, a negative adjustment is made to the inbound BOM bin for the components, and a positive adjustment is made to the outbound BOM bin for the output of the BOM.
4. Expand the Bin Policies FastTab.

![Figure 2.5: The Bin Policies FastTab in the Location Card Window](image)

The following table explains the meaning of the fields on the Bin Policies FastTab.

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bin Capacity Policy</td>
<td>This field shows the capacity policy for bins. You can choose among three options: Never Check Capacity, Allow More Than Max. Capacity, and Prohibit More Than Max. Cap.</td>
</tr>
<tr>
<td>Always Create Pick Line</td>
<td>If this check box is selected, the program will create a pick line even though it cannot find items to pick, and it will create a blank zone and bin fields, leaving it up to the user to locate and insert values manually.</td>
</tr>
<tr>
<td>Always Create Put-away Line</td>
<td>If this check box is selected, the program creates a put-away line, even though it fails to find a suitable space to store items at and leaves it up to the user to determine the zone and bin.</td>
</tr>
<tr>
<td>Allow Breakbulk</td>
<td>If this check box is selected, pallets are allowed for breaking up, for example, into smaller units when picking. The remaining items not used for picking will be left in the area where the larger unit of measure is taken from. To move these items (that may now be misplaced due to a different unit of measure defined in that bin) use the bin replenishment or the movement worksheet to create a movement.</td>
</tr>
</tbody>
</table>
To fulfill further tasks, select both the **Always Create Put-away Line** and the **Always Create Pick Line** check boxes.

Refer to the scenarios in "Internal Warehouse Processes."

**Put-away Template Setup**

Warehouse Management Systems within Dynamics NAV allows for optimizing the put-away process through using put-away templates. With this facility, you place goods to certain places the first time and then have the program retrieve the goods from the appropriate place whenever required.

A company can create a number of put-away templates to suit different business needs and then select one of them to govern put-aways in general in the warehouse. The program will then use the templates to determine the most appropriate zone and bin for storage of the item after receipt.

Do the following to open a window with put-away templates and view the existing templates.

1. In the Navigation Pane, click **Departments**>**Administration**>**Application Setup**>**Warehouse**>**Warehouse**, and then in **Lists**, click **Put-away Templates**. Double-click the STD put-away template to open it.

![FIGURE 2.6 PUT-AWAY TEMPLATE WITH PUT-AWAY ACTIVITIES](image)

The put-away template consists of a list of instructions of how to handle items received. Each line represents a command with instructions the program must fulfill. If they cannot be fulfilled, the program must go to the next line.

The STD put-away template which is presented in the following illustration, reads as follows:
Line 1: Find a fixed bin containing the same item, with the same unit of measure and with the quantity less than pre-defined minimum quantity. If all the criteria matches, then put the item away but do not exceed the pre-defined maximum quantity.

The following lines represent variations of the above, but with fewer requirements, until the program is instructed to find an available empty space in a floating bin.

Normally, a put-away template is defined for a warehouse (on the Bin Policies FastTab of the location card). However, some situations require that certain items be put away in a specific manner, and this can be determined on stockkeeping unit cards and item cards. For those cases, specify an alternative put-away template code in the Put-away Template Code field on the cards.

To specify which put-away template will be used for the item, follow these steps:

1. Click the Reference Data button, then click Items.
2. Browse to item no. LS-2 and double-click it to open its card.
3. Expand the Warehouse FastTab and fill in the Put-away Template Code field with the appropriate code.

![Image](image.png)

FIGURE 2.7 THE ALTERNATIVE PUT-AWAY TEMPLATE ASSIGNED TO THE ITEM
NOTE: By default, some fields are invisible in Microsoft Dynamics NAV 2009. To make them visible, right-click the lines and select **Choose Columns**. Select the field that is to be visible from the **Available columns** section, and then click **Add**, and click **OK**.

**Item Setup**

To make the most of the WMS functionality and to fully use the available space in the warehouse, provide the program with additional information about the items weight, height, and so on. This helps the program make the calculations necessary to suggest the most efficient and effective ways to conduct warehouse activities.

1. In the Navigation Pane, click the **Reference Data** button, and then click **Items**.
2. Browse to item no. LS-81, and on the menu bar, click **Related Information, Item**, and then click **Units of Measure**.

NOTE: Alternatively, you can access the **Item Units of Measure** window by clicking the **AssistButton** next to the **Base Unit of Measure** field on the **General FastTab** of the LS-81 item card.

3. Fill in the fields in the window to define the different units of measure in which the item may be transacted. Be sure to also fill in the height, width, length, cubage, and weight for the unit of measure.

![Figure 2.8: Additional Information About the Item's Units of Measure](image-url)

**FIGURE 2.8 ADDITIONAL INFORMATION ABOUT THE ITEM’S UNITS OF MEASURE**
Chapter 2: Setting Up Warehouse Management Systems

Specifying as much information about an item as possible ensures using more adequate space within the warehouse.

Zone Setup

Zones and bins comprise the basic structure of the warehouse. The zones are used to subdivide the warehouse into logical parts, and they are then divided into bins.

When defining a zone in the warehouse by various parameters, every bin created within this zone inherits those parameters, unless choosing to define them specifically for a given bin.

Zones are created in the Zones window, which can be accessed from the location card. To create a zone, do the following:

1. In the Navigation Pane, click Reference Data, Locations.
2. Browse to the White location and click Related Information, Location, Zones.
3. In the Zones window, on the menu bar, click New. Fill in all the fields with the relevant information.

Now bins can be created for this zone.
NOTE: When a zone parameter is changed, all new bins created thereafter in that zone will take over the new characteristics, but the already existing bins will not be changed.

Bin Types Setup

In WMS, a bin is the smallest unit in which to place and register items. The bin is the backbone of the warehouse structure. To make the architecture more complete and to build up business logic, the company can define bin types that are a combination of warehouse actions indicating the purpose of the bins.

Moreover, the bin type is a kind of high-level business process qualifier that allows the program to build up some code logic to perform fast. It works together with:

- Zone that acts as a geographical qualifier.
- Bin content that acts as a content qualifier, coupling bin and item together.
- Warehouse class code that acts as a bin content qualifier but as such can distinguish the warehouse in specific workflows.
- Bin ranking that is a qualifier for selecting a bin while putting away or picking items, when several bins have similar bin contents defined.

There are five warehouse activities used in Microsoft Dynamics NAV 2009:

1. Receive
2. Put-away
3. Pick
4. Ship
5. None

Each of these activities can be combined and defined as a bin type code. Each bin type code is then assigned to a bin type. A bin type can work with one warehouse activity or a combination of two activities at the same time.
To view the bin types and available warehouse activities, in the Navigation Pane, click Departments>Administration>Application Setup>Warehouse>Warehouse, and then in Lists, click Bin Types.

![BIN TYPES AND WAREHOUSE ACTIVITIES](image)

Check marks next to the bin types indicate which actions are allowed to be performed within the given bin type. For example, to put away in a bin of the PICK bin type is not possible, while the PUTPICK bin type code allows for both picking and putting away.

Each time a new bin is created, a bin type must be assigned to it. Bin types can be assigned or changed in the Bins window. To open it and view bins and bin types for the PICK zone, follow these steps:

1. Click the Reference Data button, Locations.
2. Browse to the White location and then on the menu bar, click Related Information, and then click Location, Zones.

**NOTE:** Open the Zones window by clicking the Zones button on the Action Pane.
3. Select the PICK zone, click Related Information, Zone, and then click Bins.

![Bin Ranking Setup](image)

**FIGURE 2.11 BIN TYPES IN THE PICK ZONE**

### Bin Ranking Setup

Bin ranking is a method of prioritizing replenishment movements, picks and put-aways, indicating which bin needs to be replenished or needs to have items picked or put-away first. A bin with a high-ranking number has a higher priority than the one with a low number. When bins are created, they inherit the ranking from the zone for which they are created. For example, if a zone has the ranking of 100, the bins created within that zone will also get a ranking of 100.

To define the bin ranking on individual bins, follow these instructions:

1. In the Navigation Pane, click Reference Data, Locations.
2. Browse to the White location, click Related Information, Location, and then click Zones.
3. Select the PICK zone, click Related Information, Zone, and then click Bins.
4. Select bin code W-01-0001, click **Related Information, Bin**, and then click **Contents**.

5. Enter the rating in the **Bin Ranking** field. In this specific bin, the value is set to 100.

![FIGURE 2.12 BIN RANKING SPECIFIED](image)

### Creating Bins

Bins are created in two ways:

- Manually
- Automatically, by using the Bin Creation Worksheet

If only a few bins are being created, then the manual bin creation method is most appropriate. If a large number of bins are being registered, then the automatic approach is more suitable. Usually this method is used at the startup phase of the warehouse setup, when a large number of bins are being registered.

To manually create bins, select the location zone in which to set up a new bin.

1. In the Navigation Pane, click **Reference Data, Locations**.
2. Browse to the White location, click **Related Information, Location**, and then click **Zones**.
3. Select the PICK zone, click **Related Information, Zone**, and then click **Bins**.

4. Scroll down to an empty line.

5. Create a new bin by filling in the fields with the appropriate information.

Remember that values from the **Maximum Cubage** and **Maximum Weight** fields are used by the program to calculate the warehouse space used by items when putting away, moving, or calculating replenishment. The value in the **Bin Ranking** field is inherited by default from the zone ranking and entered automatically. However, the value can be manually changed, so that information can be entered for as many bins that are needed.

**NOTE:** To make the necessary fields visible, right-click the lines and select **Choose Columns**. Select the field(s) you want to be visible from the **Available columns** section, and then click **Add, OK**.

Now the newly created bins are listed in the **Bins** window.
Chapter 2: Setting Up Warehouse Management Systems

Creating Multiple Bins

The bin creation worksheet is an easy-to-use tool for creating bins. It is used for the manual creation of individual bins by filling in the same fields as in the Bins window. However, this tool is mostly used for creating multiple bins.

Whenever companies want to create multiple bins, for example, when setting up WMS or for a new section in the warehouse, the bin creation worksheet provides the fastest and easiest method for doing this. This worksheet offers the calculate bins functionality, which helps define options when creating multiple bins. It also helps to define at what rack, section, and level the bins must be created.

To use the calculate bins functionality, first create a bin template. It will serve as the basic pattern for a number of bins. To create a bin template, follow these steps:

1. In the Navigation Pane, click the Departments button, then go to Administration>Application Setup>Warehouse>Warehouse, and then in Lists, click Bin Templates.

   ![Figure 2.14 Creating a Bin Template](image)

   **FIGURE 2.14 CREATING A BIN TEMPLATE**

   2. Create a bin template by filling in the fields appropriately. Make sure the Zone Code field is visible. The preceding screenshot presents an example of the bin template.

Demonstration: Create Multiple Bins

Now it is time to create multiple bins with the calculate bins functionality which is available from the bin creation worksheet. Use the following steps to create multiple bins:

1. In the Navigation Pane, click Departments>Warehouse>Goods Handling Multiple Orders, and then under Tasks, in Periodic Activities, click Bin Creation Worksheet.
2. On the menu bar, click **Actions**, **Functions**, and then click **Calculate Bins**.

3. On the **Calculate Bins** request form, set the **Bin Template Code** field to NSB.

   The information from the NSB bin template code is entered on the **Calculate Bins** request form.

4. In the fields of the **Rack**, **Section** and **Level** sections, enter information as shown in the following screenshot.

   The specified values will make up the codes for the new bins. The bin code will go as follows: Rack value-Section value-Level value. Information in the fields in the **Rack**, **Section**, and **Level** sections indicates how many bins of each section and level need to be created. If using a letter(s) as an identifying combination, the same letter(s) must be used in the **From No.** and **To No.** fields. For example, if the **Rack** section of the code is defined as A01 in the **From No.** and A10 in the **To No.**. The program cannot generate codes with letter sequences, for example, from A01 to F05. To use a character, such as a hyphen "-" to separate the category fields defined as part of the bin code, fill in the **Field Separator** field with this character.

   ![FIGURE 2.15 THE CALCULATE BINS WINDOW](image-url)
5. To prevent the program from creating a line for a bin that already exists, select the **Check on Existing Bin** check box.

6. Click **OK** to make the program generate bins according to the options that are defined.

![FIGURE 2.16 NEW BINS ARE GENERATED](image)

The generated bins are inserted in the **Bin Creation Worksheet** window.

7. In the **Bin Creation Worksheet** window, click **Actions**, **Functions** and then click **Create Bins**, and the program will create the bins. Note that the lines in the bin creation worksheet are deleted.

To view the bins created by the program, do the following:

1. In the Navigation Pane, click **Reference Data, Locations**.
2. Browse to the White location and on the menu bar, click **Related Information, Location**, and then click **Zones**.
3. Select the STAGE zone, click Related Information, Zone, and then click Bins. The program opens the Bins window for the location, and the newly created bins are highlighted.

FIGURE 2.17 NEW BINS ARE CREATED FOR THE SPECIFIED ZONE

Bin Creation Worksheet Template

The bin creation worksheet template is used by the bin creation worksheet when creating a bin. Bin creation worksheet templates are already set up in Microsoft Dynamics NAV. However, templates can be created to serve specific needs. To create a bin creation worksheet template, use the following steps:

1. In the Navigation Pane, click Departments>Administration>Application Setup>Warehouse>Warehouse, and then in Lists, click Bin Creation Worksheet Templates.

![Default Bin Worksheet Templates](image)

**FIGURE 2.18 DEFAULT BIN WORKSHEET TEMPLATES**

3. Click New on the Action Pane to create a new bin creation worksheet.
   In the Name field, enter the name of the new bin template.
   In Description, enter the bin description.
   In the Location Code field, select the location for that bin creation worksheet.

4. Click OK.

Now that the new bin creation worksheet template is created, it can be selected in the Name field of the Bin Creation Worksheet window.

*NOTE: If there is more than one bin creation worksheet template set up, a selection can be made from the list of available templates when the Bin Creation Worksheet window is being opened.*
Creating Bin Content

Bin content can be set up in two ways:

- Manually
- Automatically

Setting up bin content manually can be done from the location card. To set up content for a bin manually:

1. In the Navigation Pane, click **Reference Data, Locations**.
2. Browse to the White location and on the menu bar, click **Related Information**, and then click **Location, Bins**.
3. Select bin W-01-0001 and click **Related Information, Bin, Contents**. The **Bin Content** window appears.
4. Fill in the fields with the appropriate information.

The following table explains the meaning of the fields in the **Bin Content** window.

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fixed</strong></td>
<td>This field indicates that a certain item is fixed to this bin. Items can and will be entered by the program according to the setup of the put-away template, but items with this field selected have priority over other items.</td>
</tr>
<tr>
<td><strong>Default</strong></td>
<td>The field indicates that this bin is the default bin for the item in question. The system of default bins is not used with Warehouse Management Systems.</td>
</tr>
</tbody>
</table>
| **Block Movement** | The field is used to block any movement within the specific bin. This functionality is normally used to prevent movement from or to a specific bin during bin replenishment. This feature is also used for turning a bin into a storage area for the item. There are three options to select from:  
  - Inbound - no items can be moved into the bin  
  - Outbound - no items can be moved out of the bin  
  - All - no movements are allowed |
| **Quantity** | The field shows the quantity of the items that is currently in the bin. This field cannot be edited. |
FIGURE 2.19 BIN CONTENT

To create bin content automatically, use the bin content creation worksheet. Follow these steps to set up bin content:

1. In the Navigation Pane, click Departments>Warehouse>Goods Handling Multiple Orders, and then in Periodic Activities, under Tasks, click Bin Content Creation Worksheet.
2. In the Bin Code field, specify the bin for which to create the content. Fill in other fields on the line with the relevant information.
3. On the menu bar, click Actions, Functions, Create Bin Content. Click Yes to confirm the intention about creating bin content.

The new content is set up for the bin. To view the content just created, do the following:

1. In the Navigation Pane, click Reference Data, Locations.
2. Browse to the White location and click Related Information, Location, Bins.
3. In the Bins window, select the bin content is created for and then click Related Information, Bin, Contents. The Bin Content window displays the content set up for the bin.
Lab 2.1 - Creating Zones and Bins

In this lab, you will practice creating a new location zone and bins. This zone will be used in future chapters of this training material.

Scenario

The company received items for internal usage and placed them to the White location. Create a zone specially for using the items internally. Salespeople cannot take these items from the zone for selling but can use them in internal movements.

For different operations, the company uses individual bins. Create five bins for such purposes with number series from one to five.

Challenge Yourself!

1. Create a new zone for the White location.
2. Within the new zone, create five new bins.

Need a Little Help?

1. Create a new zone for the White location with the following values:
   o Zone Code: Internal
   o Description: Internal Use
   o Bin Type Code: Ship
   o Zone Ranking: 0

2. Inside this new zone, create five new bins using the number series from W-15-001 to W-15-005, with the bin ranking of 0.

Step by Step

Create a new zone named Internal

1. In the Navigation Pane, click Reference Data, Locations.
2. Browse to the White location and click Related Information, Location, Zones.
3. Click New, and in the Code field, enter Internal, in the Description field, enter Internal Use.
4. In the Bin Type Code field, select Ship. In the Zone Ranking field, enter 0.
Create 5 bins in the Internal zone

1. Select the Internal zone and click Related Information, Zone, Bins.
2. Click New and in the Code field, enter W-15-001. Repeat this step for four more bins. Leave the bin ranking set to 0 for all the bins.

Warehouse Class Setup

Warehouse classes are used for ensuring that each item is stored in bins that meet its storage needs. Not all items are stored under the same conditions. Warehouse classes provide the way of handling different storage conditions.

Creating Warehouse Classes

To mark bins with different storage conditions, first create warehouse classes. To do this, use the following steps:

1. In the Navigation Pane, click Departments>Administration>Application Setup>Warehouse>Warehouse, and then in Lists, click Warehouse Classes.
2. On the menu bar, click New to create a new warehouse class.
3. Fill in the fields and click OK.

Now everything is ready for assigning a warehouse class to a zone, bin, or item.

Assigning Warehouse Classes

Warehouse classes can be assigned to a zone, bin or item.

NOTE: Remember that when a warehouse class code is assigned to a zone, all bins created for that zone will inherit the code.
To assign a warehouse class to a zone:

1. In the Navigation Pane, click **Reference Data, Locations**.
2. Select the White location and click **Related Information, Location**, and then click **Zones**.
3. On the line for the Stage zone, select **DRY** in the **Warehouse Code** field.

![Figure 2.20: The Warehouse Class Defined for a Zone](image)

Optionally, the warehouse class can be assigned to individual bins on the bin contents card.

**NOTE:** To be able to receive items, for the **RECEIVE** zone, each warehouse class must be assigned to at least one bin. Otherwise, items cannot be received.

To define a warehouse class for a bin:

1. In the **Zone** window, select the **STAGE** zone.
2. Click **Related Information, Zone**, click **Bins**, and then select bin W-06-0006.
3. In the **Warehouse Class Code** field, select DRY.
4. Click **Related Information, Bin**, and then click **Contents**. The value of the warehouse class code is copied to the **Bin Contents** window.

![FIGURE 2.21 THE WAREHOUSE CLASS INHERITED BY THE BIN CONTENT](image)

The warehouse class code can be defined for individual items on item cards to indicate to the program that this specific item is to be stored under a certain warehouse condition.

To define a warehouse class code for an item:

1. In the Navigation Pane, click **Reference Data, Items**.
2. Select item no. LS-MAN-10 and double-click the item name to open the item card. Expand the **General** FastTab.
3. Click the AssistButton next to the Product Group Code field. In the window that appears, click Advanced to open the Product Groups window.

4. Enter DRY for both the Code and the Warehouse Class Code fields. Click OK.

FIGURE 2.22 ASSIGNING THE WAREHOUSE CLASS TO AN ITEM

For the program to properly handle the items with a warehouse class code assigned, bins where these items are received, stored, and shipped from must carry the same warehouse class code as the items. To assign the same warehouse class code to bins from the different zones, for example Receive and Ship, perform the following actions:

1. In the Navigation Pane, click Reference Data, Locations, and then browse to the White location.
2. On the menu bar, click **Related Information, Location**, click **Zones**. Select the Receive zone and click **Related Information, Zone**, and then click **Bins**.

3. Select a bin, for example W-08-0004, and in the **Warehouse Class Code** field, select DRY.

![Image](image-url)

**FIGURE 2.23 THE WAREHOUSE CLASS SPECIFIED FOR A BIN OF THE RECEIVE ZONE**

4. Close the **Bins - Location WHITE Zone RECEIVE** window.

In a similar way, assign the DRY warehouse class to bin W-09-0006 of the Ship zone.

Now the program is prepared to receive, store, and ship items with the DRY warehouse class code.
Summary

Microsoft Dynamics NAV 2009 provides a highly effective tool for handling items: the Warehouse Management System. To meet business needs, the Warehouse Management System must be set up. There are several steps involved in the set up of the WMS including the following:

- Providing for Warehouse Management setup.
- Defining warehouse policies for locations.
- Providing additional information about the item units of measure.
- Creating put-away and bin creation worksheet templates.
- Setting up bins
- Setting up zones.
- Setting up warehouse classes.

Different combinations of setup options correspond to different business needs.
Lab 2.2 - Setting Up Zones and Bins with Special Conditions

The lab tests the basic knowledge on how to create bins using the bin templates and bin creation worksheet.

Scenario

The Cronus Company starts using a zone of fast frozen food for storing raw food materials at the White warehouse location. The company will use five similar cooling plants with the maximum cubage of 150. This group of plants belongs to section one. Goods of the Frozen-food Producers group will be stored in this zone.

Challenge Yourself!

Your tasks are as follows:

1. Create a new warehouse class for marking bins.
2. Create a new warehouse zone for the WHITE Location.
3. Create a bin template.
4. Create bins for the new zone through the bin creation worksheet.
5. Set up a new product group with the new warehouse class code.

Step by Step

Creating a warehouse class

1. Click Departments>Administration>Application Setup>Warehouse>Warehouse, and in the Lists, click Warehouse Classes.
2. Click New, and on the new line, fill in the Code field with FASTFROZEN and the Description field with Frozen-food goods.

The new class is created.

Creating a warehouse zone for the White location

1. In the Navigation Pane, click Reference Data, Locations.
2. Browse to the White location and click Related Information, Location, Zones.
3. In the Code field enter FREEZEZONE.
4. In the Description field enter Freeze Zone.
5. In the Bin Type Code field select value PUTPICK.
6. In the Warehouse Class Code field select value FASTFROZEN.
7. In the Zone Ranking field, type 100.

The new zone for the WHITE location is created.
Create a bin template

1. Click Departments>Administration>Application Setup>Warehouse>Warehouse, and click Bin Templates.
2. Click New, and in the Code field, enter FREEZEBINTEMPL, in the Description field, enter Bin Template for FREEZE Zone, in the Location Code field, select WHITE, and in the Zone Code field select FREEZEZONE.
3. In the Maximum Cubage field enter 150, in the Bin Description field, enter Freeze Zone, and in the Bin Ranking type 50.

The new bin template is created. The values for the Bin Type Code and Warehouse Class Code fields are copied from the Zone window.

Create bins for the new zone through the bin creation worksheet

1. Click Departments>Warehouse>Goods Handling Multiple Orders, and click Bin Creation Worksheet.
2. Click Actions, Functions, Calculate Bins.
3. In the Bin Template Code field, select FREEZEBINTEMPL.
4. In the From No. and To No. fields in the Rack section, enter WHITE1.
   In the From No. and To No. fields in the Section section, enter 1.
   In the From No. and To No. fields in the Level section, enter 1 and 5 correspondingly.
   In the Field Separator field enter "-.
   Leave the Check on Existing Bin field empty.
5. Click OK.

Microsoft Dynamics NAV 2009 generates bins. Proceed to create them.

6. On the Bin Creation Worksheet window, click Actions, Functions, Create Bins.

The new bins are created.

Setup a new product group with the new warehouse class

1. In the Navigation Pane, click Reference Data, Items. Browse to item SPK-100 and open the item card. Click the AssistButton next to the Products Group field.
2. On the Product Groups list, click New. In the Code field, enter FREEZE, and in the Warehouse Class Code field, select FASTFROZEN.
Test Your Knowledge

1. Which field must contain a check mark on the location card to indicate that a location should use Warehouse Management Systems?
   ( ) Allow Breakbulk
   ( ) Directed Put-away and Pick
   ( ) Use Cross-Docking
   ( ) Use As In-Transit

2. What is the fastest and easiest method for creating multiple bins within a given zone?

3. Bin A-01-0001 is of bin type PICK and contains 12 pieces of item 70000. What can be done to prevent the warehouse personnel from using this bin as picking source?
4. Can bin content be created automatically? If yes, what functionality must be used?

5. What are warehouse classes used for?

6. In which places must the warehouse class information be specified to make the program use this functionality? (Select all that apply)
   - The warehouse class codes must be assigned to product groups, which are then assigned to items and SKUs.
   - The warehouse class codes must be assigned to zones.
   - The warehouse class codes must be assigned to a location.
   - The warehouse class codes must be assigned to bins.
Quick Interaction: Lessons Learned

Take a moment and write down three Key Points you have learned from this chapter

1. 

2. 

3. 

Solutions

Test Your Knowledge

1. Which field must contain a check mark on the location card to indicate that a location should use Warehouse Management Systems?
   - ( ) Allow Breakbulk
   - (●) Directed Put-away and Pick
   - ( ) Use Cross-Docking
   - ( ) Use As In-Transit

2. What is the fastest and easiest method for creating multiple bins within a given zone?

   **MODEL ANSWER:**

   The calculate bins functionality on the Bin Creation Worksheet is used to easily set up a large number of bins.

3. Bin A-01-0001 is of bin type PICK and contains 12 pieces of item 70000. What can be done to prevent the warehouse personnel from using this bin as picking source?

   **MODEL ANSWER:**

   For bin A-01-0001, set the value of the Block Movement field to Outbound or All.

4. Can bin content be created automatically? If yes, what functionality must be used?

   **MODEL ANSWER:**

   Yes, it is possible to create bin content automatically, by using the bin content creation worksheet.

5. What are warehouse classes used for?

   **MODEL ANSWER:**

   Warehouse classes are used if the warehouse carries items that need specific storage conditions. The program considers the warehouse class codes when it suggests item placement in bins.
6. In which places must the warehouse class information be specified to make the program use this functionality? (Select all that apply)

(✓) The warehouse class codes must be assigned to product groups, which are then assigned to items and SKUs.

(✓) The warehouse class codes must be assigned to zones.

( ) The warehouse class codes must be assigned to a location.

(✓) The warehouse class codes must be assigned to bins.