Voxware Overview and Integration

Purpose of this document

This document will illustrate the setup and functionality of Voxware with Ceres. Voxware is a WMS supplement to Ceres to provide Voice device support for common warehouse tasks. Currently Voxware integrates with Ceres to support Agency Order Picking – hence a common reference to Voxware is "Voice Pick." In later releases, Voxware and Ceres may be setup to support other common warehouse tasks.

Ceres Object release 5.00.00 is required for the functionality described in this document.

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Voxware Integration

The setup of the Voxware integration can be accessed from Departments → Financial Management → Inventory → Administration → Setup → Voxware Setup.
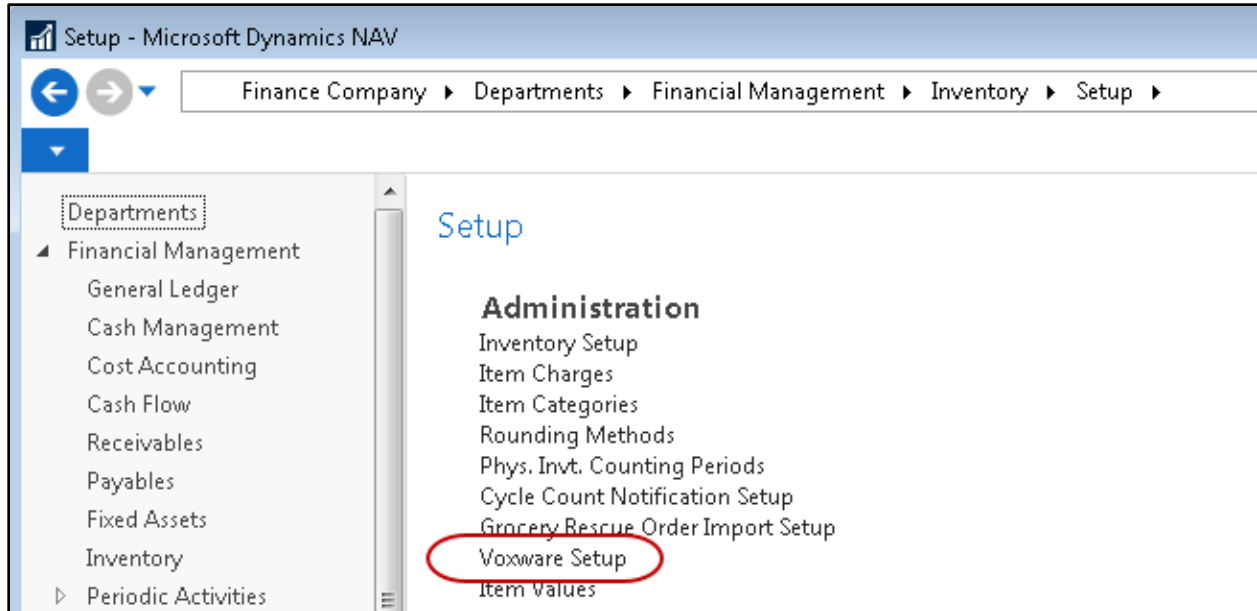
The Voxware setup card is displayed where the various parameters are set to control Ceres integration with Voxware.

> **Note:** Ceres is designed currently to link with Voxware release 5. There is substantial Voxware software setup and training required as well. Contact Voxware for assistance on these related tasks.

Voxware Setup

General

Enable VOX Communications:	☐		Pick Check Digit Color Code:	Red ▾
NST Outbound VOX Directory:	c:\temp\outbou...		Send To Voxware Default:	☑
Outbound VOX Directory:	c:\temp\ob\		Append FBC Sorting Sequence:	☐
Inbound VOX Directory:	c:\temp\in\		Shorts / Cuts Handling Method:	▾
Processed Inbound VOX Dir.:	c:\temp\process...		Auto Post Negative Adj.:	☐
VOX Pick Hdr Outbound Code:	HEAD		Journal Template Name:	ITEM ▾
VOX Pick Line Outbound Code:	LINE		Journal Batch Name:	VOX ▾
VOX Pick Hdr Inbound Code:	HEAD		Send Full Pallets to VOX:	☐
VOX Pick Line Inbound Code:	LINE		Rounding:	☐
Pallet Cubic Feet:	0.00		Rounding Precision:	0.00
			Rounding Type:	Nearest ▾

Shipping

Special Shipping Instructions:		%3 . . . . Shipment Method Code
%1 . . . . Agency No.		%4 . . . . Order Handling Group Code
%2 . . . . Agency Name		%5 . . . . Order Routing Group Code

OK

Note: Voxware comes with a message configuration utility called VoxConnect. The Voxware system communicates with external systems by exchanging "messages". The VoxConnect user interface provides the tools to manage message communication between the Voxware system and Dynamics NAV for a portion of the integration. Please refer to the VoxConnect manual for details on configuration of the VOX side of the integration. It is important that the same setup is done on both sides to ensure successful transmissions between the two systems.

Enable VOX Communications: Check this box to enable the NAS (Navision Application Server) to process VOX files via the "Outbound VOX Directory" and "Inbound VOX Directory".

Note: Depending upon your Network and Active Directory configuration, additional setup may be required to enable file sharing for Ceres. File sharing is necessary to provide for the translation of outbound files to the Outbound VOX Directory. Refer to the link below for additional information.

http://blogs.msdn.com/b/nav/archive/2011/12/22/managing-network-files-in-rtc.aspx

NST Outbound VOX Directory: This specifies the location of the folder where Ceres generated messages intended for Voxware will be placed temporarily. The NST (Navision Service Tier) is the machine that executes the Ceres business logic on behalf of the RTC Client. The directory specified here needs to exist on the NST in order to temporarily hold the messages (files) before they are relocated to the Outbound VOX Directory for eventual processing into the Voxware system.

Outbound VOX Directory: This specifies the location of the folder where all Ceres generated messages intended for Voxware will be placed. This directory is generally a network share where messages (files) are written to await processing into the Voxware system.

Inbound VOX Directory: This specifies the location of the folder where Ceres will look for transactions sent from the Voxware system. As files are found in this folder, Ceres will process the file and move it to the "Processed Inbound Vox Dir" folder.

Processed Inbound VOX Dir: This specifies the location of the folder where Ceres will place processed inbound transactions from the Voxware system

Inbound VOX File Nos.: This specifies the numbering series to use when renaming the inbound VOX files in the "Processed Inbound Vox Dir". The number series specified should not have an ending number for the series as this process is handled by the system VOX NAS with no user intervention.

VOX Pick Hdr Outbound Code: This field is used to specify the first field value in the outbound files sent to Voxware to indicate that the record is an order header record.

VOX Pick Line Outbound Code: This field is used to specify the first field value in the outbound files sent to Voxware to indicate that the record is an order line record.

VOX Pick Hdr Inbound Code: This field is used to specify the first field value in the inbound message files received from Voxware to indicate that the record is an order header record.

VOX Pick Line Inbound Code: This field is used to specify the first field value in the inbound message files received from Voxware to indicate that the record is an order line record.

Pallet Cubic Feet: Average pallet size used to calculate number of pallets being exported to Voxware.

Pick Check Digit Color Code: This field indicates which color coded check digit is currently being used. If multiple color-coded check digits are used on the slots, this parameter is normally changed periodically. Single check digits do not change day to day. Choosing multiple check digits allows management to change which location check digit will be used each day, so as to prevent pickers from memorizing the check digits. For example, a warehouse may define three sets of check digits by color code and let the pickers know which color to look for that day. The three available options are:

Yellow – Yellow check digits on Bins will be utilized.
Red – Red check digits on Bins will be utilized.
Green – Green check digits on Bins will be utilized.

Scan Frequency (Seconds): This field specifies in seconds how often the NAS will look for and process files from the Inbound VOX Directory

Send to Voxware Default: This field sets the default for Agency Orders when orders are created or the Allocation Journal. When the Send to Voxware Default field is checked the Send to Voxware field on an Agency Order will default as checked (Yes) when Orders are created manually or through allocation journals.

Append FBC Sorting Sequence: Ceres provide the ability to append Sorting Sequence No. as specified for the FBC Storage Requirement. When checking this option Ceres will perform a check to ensure that a Sorting Sequence No. other than zero has been specified for all FBC Storage Requirements. Conversely, when un-checking this option a check will be performed to ensure that there are no FBC Storage Requirements with a Sorting Sequence No. other than zero. A similar check is performed prior to pick creation to ensure setup integrity with regard to the setting of this option and the Sorting Sequence numbers as specified on the FBC Storage Requirements.

Shorts / Cuts Handling Method: This field indicates to Ceres how to handle "Shorts" and "Cuts" sent from the Voxware system. The options are as follows:

{Blank} - do nothing

Negative Journal Entry - Write and post a negative item journal entry for the short/cut product

Cycle Count Notification - Send a Cycle Count email

Both - Negative Journal Entry and Cycle Count Notification

Auto Post Negative Adj.: If checked, the journal created by the shorts /cuts handling will automatically be posted. Leave this field unchecked to disable this function. The journal will still be created, but will require review and manual posting.

Journal Template Name: This field indicates to Ceres which journal template the negative adjustments will be entered in.

Journal Batch Name: This field indicates to Ceres which journal batch the negative adjustments will be entered in.

Send Full Pallets to VOX: The setting of this field controls whether pallets that have been suggested on a pick document as a "full pallet" will be written to the Voxware Export file. This option is useful for some sites to send full pallet drops to Voxware. Sites that have full pallets picked by Voxware users should check this box. If your site has full pallets picked by other warehouse workers, this box should be left unchecked and full pallet drops will not be sent to Voxware for picking.

Rounding: Place a checkmark here to indicate that rounding for the total pallet count calculation should be applied utilizing the Rounding Precision and Rounding Type specifications.

Rounding Precision: Here you can specify the rounding precision to be applied during the total pallet count calculation; for example, specify 0.01 to have Ceres round to two decimal places.

Rounding Type: Here you can specify the rounding type to be applied during the total pallet count calculation; choose for the following options: Nearest, Up, or Down.

Special Shipping Instructions: Here you can specify a message which includes place holders for information that will be determined at run-time.

Five placeholder substitutions are available:

1. **%1** – Use this placeholder in a message of your design to have Ceres substitute the Agency No. associated with the Agency Order when creating or updating the Warehouse Request.
2. **%2** – Use this placeholder in a message of your design to have Ceres substitute the Agency Name associated with the Agency Order when creating or updating the Warehouse Request.
3. **%3** – Use this placeholder in a message of your design to have Ceres substitute the Agency Order "Shipment Method Code" when creating or updating the Warehouse Request.
4. **%4** – Use this placeholder in a message of your design to have Ceres substitute the Agency Order "Order Handling Group Code" when creating or updating the Warehouse Request.
5. **%5** – Use this placeholder in a message of your design to have Ceres substitute the Agency Order "Order Routing Group Code" when creating or updating the Warehouse Request.

For example, the message of: "Agency No.=%1 and Agency Name=%2" will be translated to Warehouse Request and Inventory Pick document as: "Agency No.= A-0004 and Agency Name= Emergency Food Network"

> **Note:** A Warehouse Request is created or updated with each Release of an Agency Order. The Special Shipping Instructions on the Warehouse Request will flow to the Inventory Pick document created for the request and to the Voxware outbound header file.

Note: The Special Shipping Instructions field on Voxware Setup is limited to 250 characters. The Special Shipping Instructions as translated (with expansion via substitutions) to the Warehouse Request, Inventory Pick document, and the Voxware outbound header file are also limited to 250 characters.

Bin Check Digits

1. The setup of the bins now includes the fields for the different colored check digits. The bins can be accessed from Departments → Administration → Application Setup → Warehouse → Locations.
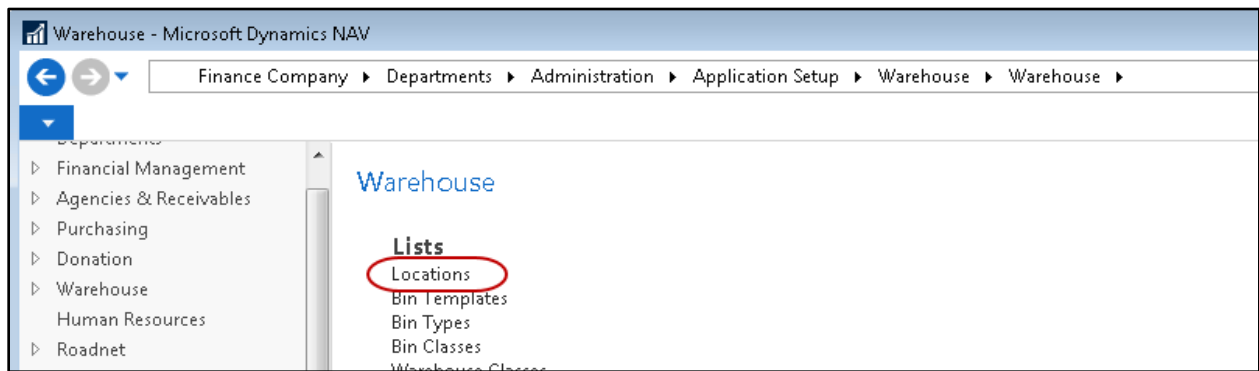
2. A list of available locations will be displayed. Click on the location you wish to work with.
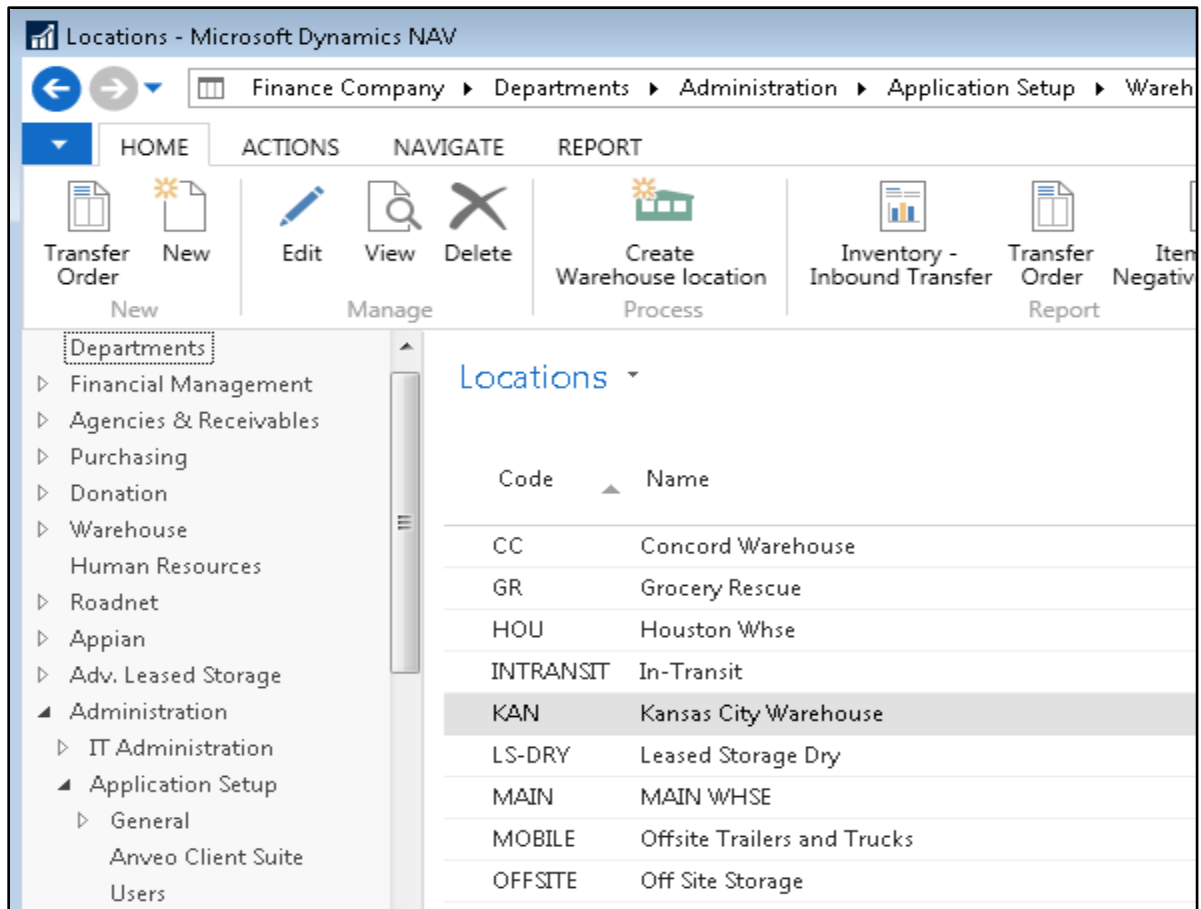
3. Click Home → Bins
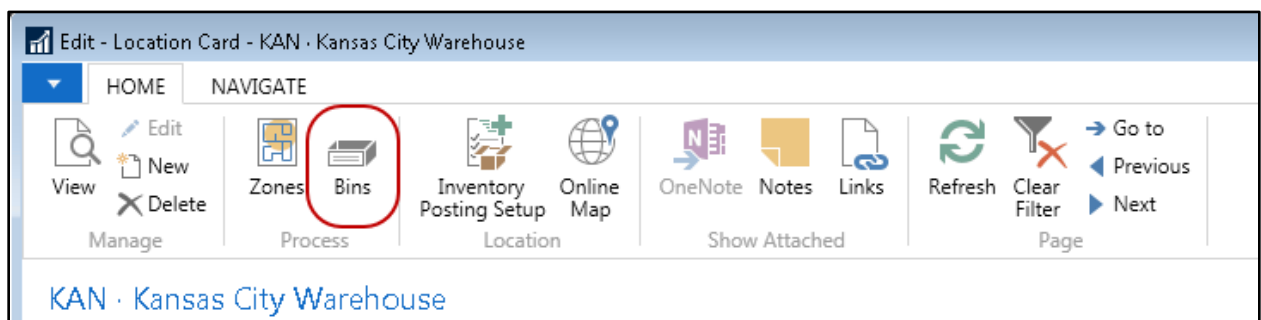
4. A list of the bins for this location is displayed. Find the three columns "Red Check Digit", "Yellow Check Digit" and "Green Check Digit". In each of these fields enter the correct code for each for the specified bin slot.

Locat... Code	Zone Code	Code	Bin Type Code	Bin Ranking	Row No.	Bin Class Code	Red Check Digit	Green Check Digit	Yellow Check Digit
KAN	DRY	01-103-A	STORAGE	0	1	DRY	863	453	271
KAN	DRY	01-103-B	STORAGE	0	1	DRY	787	037	418
KAN	DRY	01-103-C	STORAGE	0	1	DRY	027	518	086
KAN	DRY	01-103-D	STORAGE	0	1	DRY	564	358	548
KAN	DRY	01-105-A	STORAGE	0	1	DRY	226	507	957
KAN	DRY	01-105-B	STORAGE	0	1	DRY	268	235	949
KAN	DRY	01-105-C	STORAGE	0	1	DRY	838	498	863
KAN	DRY	01-105-D	STORAGE	0	1	DRY	371	864	125
KAN	DRY	01-107-A	STORAGE	0	1	DRY	477	998	540
KAN	DRY	01-107-B	STORAGE	0	1	DRY	468	310	026
KAN	DRY	01-107-C	STORAGE	0	1	DRY	968	110	524
KAN	DRY	01-107-D	STORAGE	0	1	DRY	028	807	327
KAN	DRY	01-109-A	STORAGE	0	1	DRY	073	325	128
KAN	DRY	01-109-B	STORAGE	0	1	DRY	427	869	954
KAN	DRY	01-109-C	STORAGE	0	1	DRY	240	671	426

5. Find the three columns "Red Check Digit", "Yellow Check Digit" and "Green Check Digit". In each of these fields enter the correct code for each for the specified bin slot.

Cycle Count Notifications

1. When using Voxware you have the option to notify users of inventory issues due to shorts and cuts on recording of picks. See Location Overview for more information on this option. The setup of the user's emails to notify is done through the Cycle Count Setup screen. To access this setup screen go to Departments → Financial Management → Inventory → Setup → Cycle Count Notification Setup.
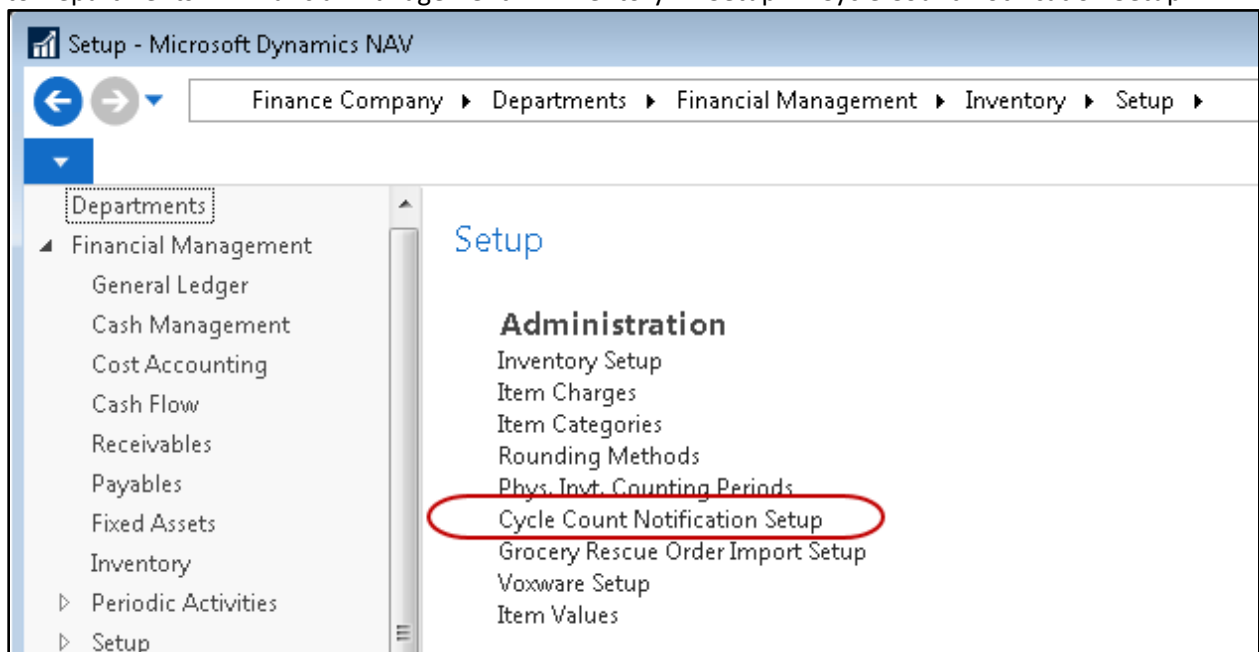
2. The cycle count screen wille be displayed. Enter the required information as shown below. You may enter up to 3 email addresses for notifications

Enabled: Check this field to enable email notification of cycle count warnings to users. If this field is turned off, emails will not be generated regardless of the setting in "Voxware Setup.

Notify Email Address 1: Enter a valid email address of the 1st user you wish to receive notification of required cycle counts.

Notify Email Address 2: Use this field if additional email addresses are required for cycle count notifications.

Notify Email Address 3: Use this field if additional email addresses are required for cycle count notifications.

Email Subject: Use this field to enter a short email subject line to indicate to the email recipient the reason for the email address.

Email Body: Use this field to enter an email body message for the recipient. The actual item # will be appended to the end of the email body message.

Supplemental Voxware Setup (Optional)

3. Ceres provides three optional configuration settings related to Voxware. The Exclude from Voxware setting is available on the Location, Zone, and FBC Storage Requirement records.

4. If you do not wish for Ceres to create a Voxware export file for pick documents related to a given Location, place a checkmark in the Exclude form Voxware field.

5. If you do not wish for Ceres to create a Voxware export file for pick documents related to a given zone or storage requirement, place a checkmark in the Exclude from Voxware field.

Note: The Exclude from Voxware option applies only to pick documents at the header level; not to individual pick document lines. Thus the option at the Location level applies to an entire pick document (based on the Pick Document header's Location Code) and for all Zones in the Location. Likewise, the option at the Zone and FBC Storage Requirement level only applies when the related Location has been configured to create pick by Zone or FBC Storage Requirement.

Depending upon whether you create picks by Zone or FBC Storage Requirement Ceres will reference the appropriate Exclude from Voxware option to determine whether the pick document should be export to Voxware.

Sending Data to Voxware for Picking

When Voxware is being used and Ceres has been configured appropriately as discussed in this document, Ceres will create and export a text file based representation of the inventory pick documents (one text file per pick document). The text file is created and exported to the configured directory upon the successful completion the Create Inventory Pick process. Once exported, the file is available for Voxware import and processing. After the picking instruction has been handled in Voxware, Voxware will create and export another text file based representation of the picking instruction. An instance of the Navision Application Server (NAS) will monitor the directory for Voxware generated exports and process them into Ceres to update the pick documents with information such as Assigned User ID, Start and End dates and times, Qty. to Handle, etc. The pick documents may then be reviewed and posted from within Ceres.

Throughout the Ceres / Voxware interactions, Ceres is responsible for providing directed picking instructions. Thus, only pick document lines containing fully qualified inventory suggestions (Location, Zone, Bin, Pallet, and Lot level) will be exported to Voxware.

Should a pick document be generated with line(s) void of a fully qualified inventory suggestion, inventory will need to be made available (movement to a pick bin or inclusion on the WAP), the pick document or line(s) (depending upon your Location setup configuration of the "Create Picks by" setting) deleted, and the Create Invt. Put-away / Pick process rerun for related Agency Orders in order to generate an export file for Voxware processing.

Viewing Voxware Errors for Pick

As Ceres processes inbound transaction from Voxware, any errors are trapped and recorded on the pick document they relate to. The following errors are trapped and recorded. Any errors will prevent the pick from being posted.

- Invalid Doc No
- Invalid Picked by
- Invalid Start times and dates
- Invalid End times and dates
- Invalid Line no
- Invalid Item no
- Invalid Quantity
- Invalid Bin code
- Invalid Lot no
- Invalid Pallet no

1. To view the errors on a pick document access the pick documents from Departments → Warehouse → Goods Handling Order by Order → Lists → Inventory Picks.
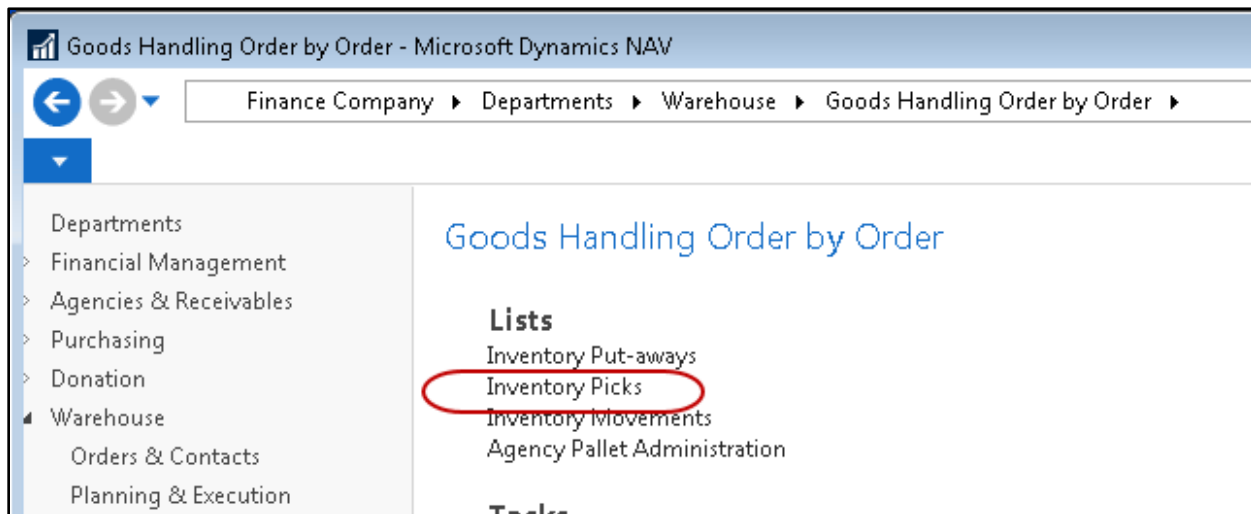
2. Select the appropriate pick from the list and then click Home → Edit to edit the inventory pick document.
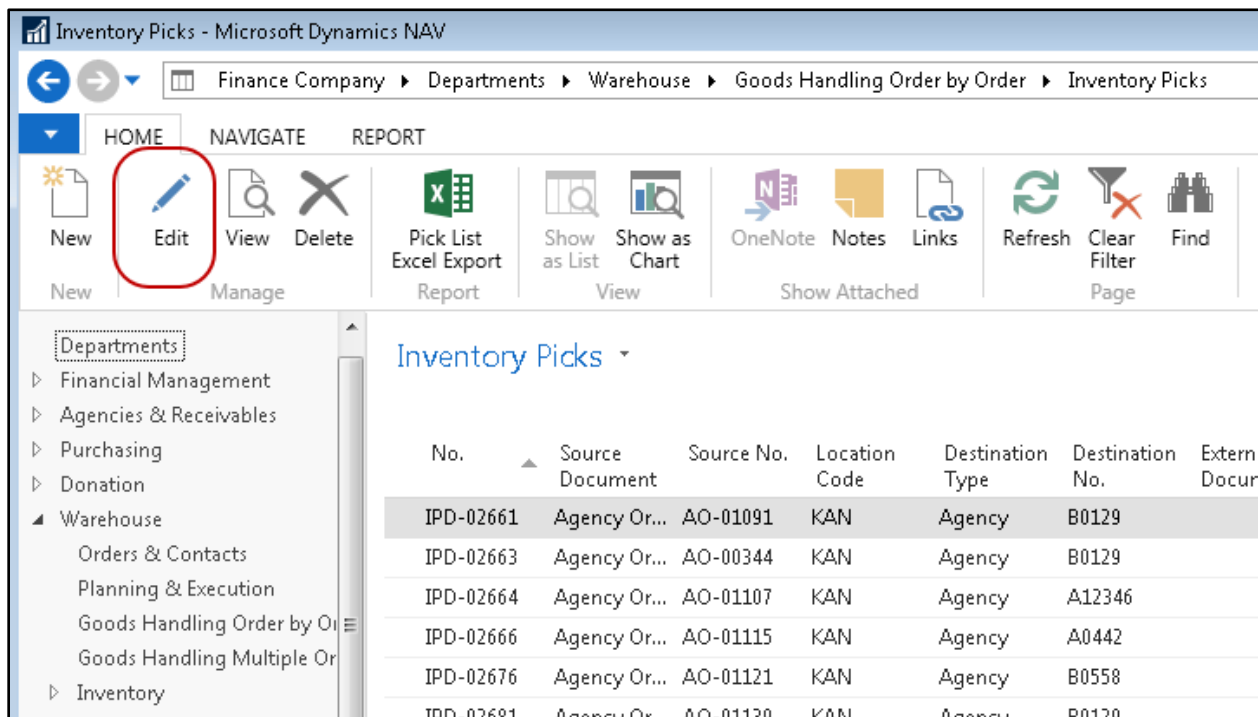
3. The inventory pick document will be displayed. If there are any VOX errors you should see a number (in blue) in the field "No. of VOX Errors". In this example there are 2.

4. If there are errors, click on the blue number of errors (this is a hyperlink) and this will open another window displaying all the VOX errors associated with this pick that must be corrected prior to the pick being posted.

5. You must resolve the errors and delete the VOX error messages before posting of the pick is allowed. To delete a VOX error, click Home → Delete.

6. Ceres will ask you to confirm to deletion of the error message.
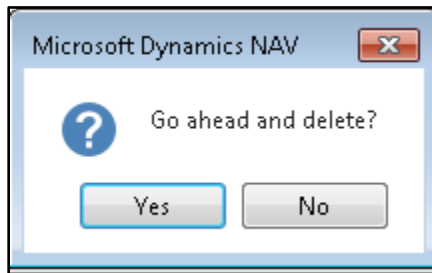
7. Select "Yes" to delete the entry.

8. If you attempt to post the pick without resolving and/or deleting all the VOX errors, the process will be halted with the following error.
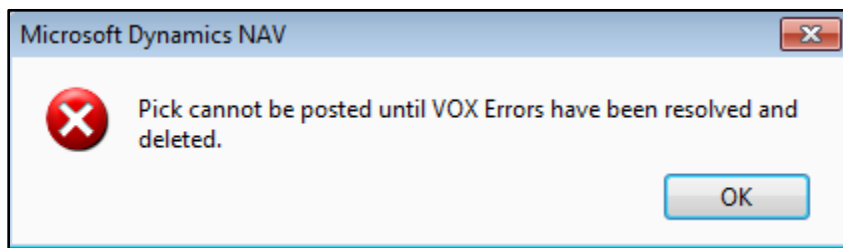
Related Topics

1. Inventory Picks
2. Agency Order Overview
3. Bin Overview
4. Item Overview
5. Location Overview
6. Order Handling Groups, Order Routing Groups
7. Warehouse Activity Plan - WAP
8. Warehouse Activity Plan and Default Bin Picking.
9. Zone Overview