

Managing Serial Numbers and Batches in Bin Locations

October 2013



- Welcome to the course: Managing Serial Numbers and Batches in Bin Locations.
- This course is a part of a series of courses available for the Bin Locations topic.
- In this course we will cover the processes of purchasing, selling and managing serial number or batch managed items in a bin location managed warehouse.

Objectives



At the end of this course, you will be able to:

- Describe how to allocate bin locations for serial numbers and batches in the sales process.
- Describe how to allocate bin locations for serial numbers and batches in the purchasing process.

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Agenda

- Business example
- Purchasing process
- Sales process
- Differences in Batches
- Additional Changes

- This is the agenda for this course.
- Let us start with the business example.

Business Example

Introducing OEC Computers



You have finished configuring the bin location setup at OEC Computers.

You have also guided OEC Computers employees through performing allocation processes and executing inventory reports for bin locations.

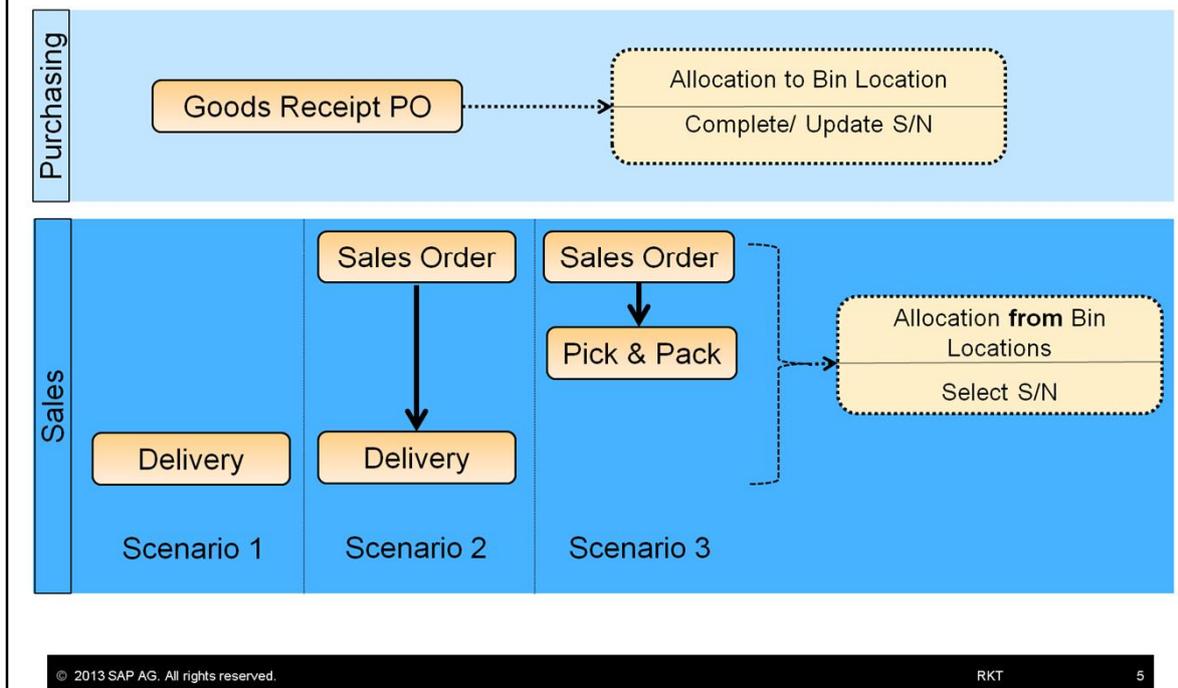
Since OEC Computers purchases and sells many items managed by serial numbers and even batches, you show George, the warehouse manager, and his employees the changes made in the allocation process of these items.

You also introduce them with the changes made in the serial and batch management windows and in the serial numbers and batches transaction reports.

- You have finished configuring the bin location setup at OEC Computers.
- You have also guided OEC Computers employees through performing allocation processes and executing inventory reports for bin locations.
- Since OEC Computers purchases and sells many items managed by serial numbers and even batches, you show George, the warehouse manager, and his employees the changes made in the allocation process of these items.
- You also introduce them the changes made in the serial and batch management windows and in the serial numbers and batches transaction reports.

Business Example

Business Process integrated with Bin Locations and Serial Numbers



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5

- In this course we will look at some typical business scenarios in OEC Computers.
- These scenarios include purchasing, selling and picking items managed by serial numbers in a bin location managed warehouse that can be implemented at OEC Computers.
- We will start by adding a *Goods Receipt PO* for **Tablet** devices which are also managed by serial numbers.
- In the *Goods Receipt PO* we will allocate the **Tablets** to the desired bin locations and update their serial numbers.
- After that, we will create three sales scenarios. Through these sales scenarios we will explore two issue methods. One is to first select the items by their bin locations and then select the serials. The second method is reversed – first select the serials and then the associated bin locations.
- We will examine the following scenarios:
 - In scenario 1, we will issue a *Delivery* document that is not based on another sales document.
 - In scenario 2, we will see what happens when the *Delivery* document is based on a *Sales Order*.
 - In scenario 3, we will see how the pick and pack process is influenced by the two issue methods.
- Please note,
 - To simplify the explanations in this course, the scenarios refer to serial numbers and not to batches throughout the training. Nevertheless, most explanations are relevant also to batches. We will however cover the key differences between serial and batch related processes.
 - In addition the scenarios in this training refer to *Goods Receipt PO* and *Delivery* documents. The majority of the incoming and outgoing inventory processes are the same as demonstrated in this training by the *Goods Receipt PO* and the *Delivery* documents respectively.

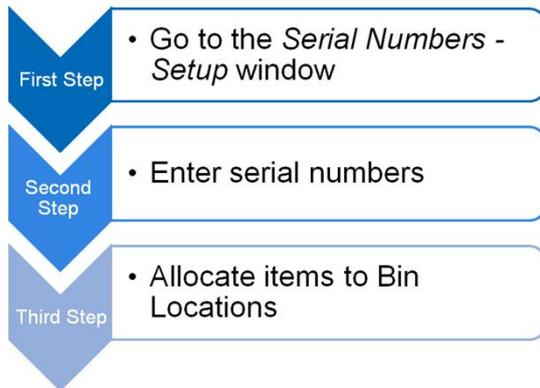
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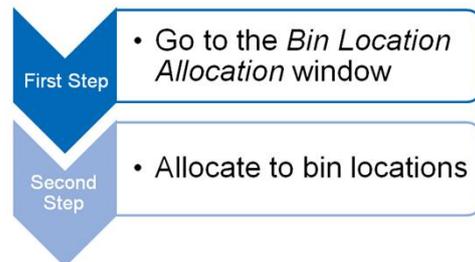
- Let us examine a short purchasing process that demonstrates allocation of items managed by serial numbers in bin locations.

Serial Numbers in Incoming Bin Location Allocation

Method 1 – On every transaction
(Serial numbers are mandatory)



Method 2- Release only
(Serial numbers are not mandatory)



- This is a general schema of the working processes for incoming bin location allocation of serial numbered items.
- As you are likely familiar, all items managed by serial numbers or batches have a management method assigned. The management method controls when serial numbers or batches are required.
- The two methods are: On every transaction and Release Only.
- As the graphic shows and as you might expect, the first method “On every transaction” will require you to assign a serial number when items are received into stock.
- When you create a goods receipt for the serial numbered item, the Serial Number – Setup window will appear. You assign the serial numbers and then the bin locations in this window.
- When you have a serial numbered item that is managed by “Release only”, there is no requirement to enter a serial number when the item is received into stock. Therefore, when you create a goods receipt PO, you do not need to open the Serial Number – Setup window. Instead, you will use the Bin Location Allocation window, as you would with any other item not managed by serial numbers.
- If you do decide to add serial numbers when receiving an item managed by “Release Only” you can manually open the Serial Number – Setup window to enter serial numbers
- Note,
This is a general process only. The detailed working processes are affected when automatic allocations rules apply. In addition the Automatic Serial creation definition in the item master data, also affect working processes. Let us examine these working processes together in the next slides.

Serial Numbers in Incoming Bin Location Allocation Method 1 - On Every transaction (1/2)

The screenshot displays two SAP windows. On the left is the 'Item Master Data' window for item T00001, with the 'Serial Numbers' field set to 'On Every Transaction'. On the right is the 'Goods Receipt PO' window for vendor V10000, showing a line item for 'Tablet 12' 32G' with a quantity of 5 and a bin location allocation of 01. A callout box highlights the 'Bin Location Allocation' field in the Goods Receipt PO window.

In Method 1 - Bin location allocation is done only via the *Serial Number Setup* window

- In the graphic we see an item which has the serial number management method *On Every Transaction*.
- When this item is added to a goods receipt PO, as shown on the right of the graphic, we no longer have the option to open the Bin Location Allocation – Issue/Receipt window with the link arrow from the Bin Location Allocation field, like we would normally with other items.
- As mentioned previously, we need to enter the allocation for the bin location from the *Serial Number – Setup* window after entering the mandatory serial numbers.
- However, after serial numbers are assigned and the allocation is made, we will be able to change the allocation by using the link in the *Bin Location Allocation* field to open the *Serial Number – Setup* window.
- Let us see how the allocation process is done in the next slide.

Serial Numbers in Incoming Bin Location Allocation Method 1 - On Every transaction (2/2)

Method: On Every Transaction



• Enter a serial number

First Step

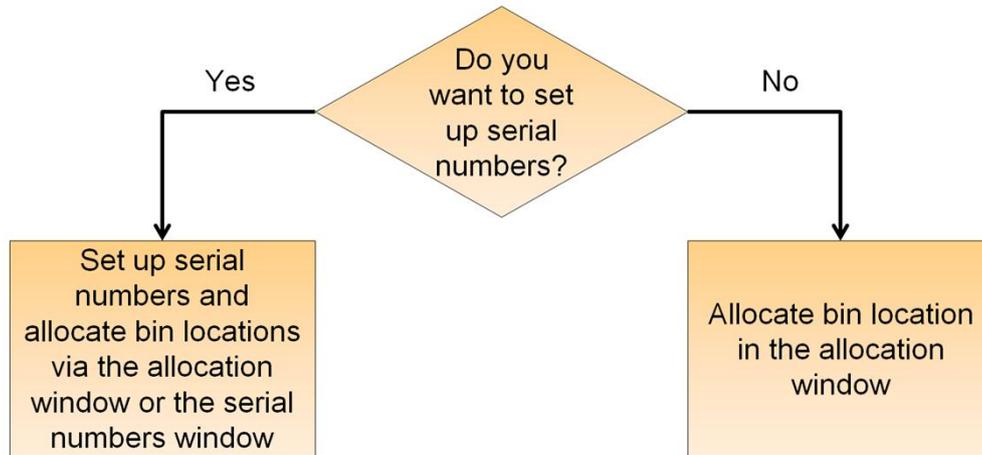


• Bin location allocation

Second Step

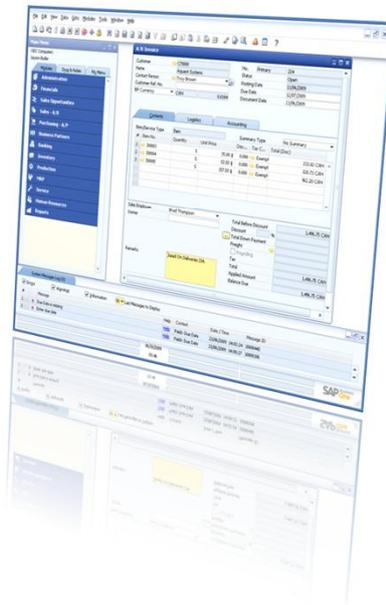
- Here we see a graphic showing the two steps needed when receiving items with the management method, On Every Transaction
- For every row of the document with an item requiring serial numbers, you enter the *Serial Number* – *Setup* window.
- You enter the serial numbers. Once serial numbers are assigned, the system allocates a bin location automatically (assuming automatic allocation rules apply).
- You can also allocate a bin location manually.
- Note,
 - Documents may contain several rows. Some may be serials and some may not. When entering the *Serial Numbers* – *Setup* window, we see only the serial managed items.
 - Further more, when choosing a non bin location managed warehouse row in the *Rows from Documents* grid, none of the bin location related fields, changes or buttons are visible in the window.

Serial Numbers in Incoming Bin Location Allocation Method 2 – Release Only



- For serial numbered items with the management method *Release Only*, you can assign numbers either in the usual way in the *Bin Location Allocation* window or when assigning the optional serial number through the *Serial Numbers – Setup* window
- If the *Serial Number Management* field in the item master record is set to *On Release Only* and the *Automatic Serial Number Creation On Receipt* box is checked, the system will automatically assign a bin location when adding the document, assuming automatic allocation rules apply. If no automatic receipt allocation rules apply then the incoming item is assigned to the system bin location.

Demo: Purchasing Serial Numbered Items



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11

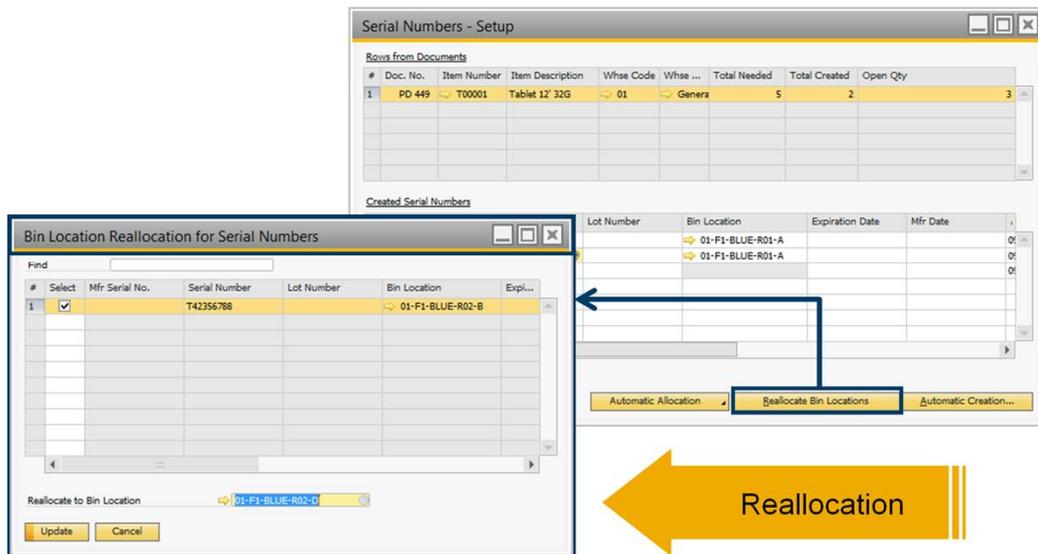
Enter a goods receipt PO

Enter the following items:

- A regular item – no serials - allocate bin location regularly
- Serial – On every transaction:
 - Show you can't access the bin location allocation window from the bin location field
 - Enter the serial number setup window
 - Show the new bin location column and show it's blocked
 - Enter a serial number and then go back to the bin location field and enter a bin location
 - Explain a default bin would have appeared automatically after entering a serial number
- Serial – On release only without automatic serial creation
 - Show you can access from both the bin location allocation window and the serial numbers setup window.
 - Explain the bin locations or serial numbers have no special priority

Serial Number Setup (2/3)

Reallocate Bin Locations



- Sometimes a large quantity of an item is received and you would like to redistribute the quantity into multiple bin locations.
- In the *Serial Numbers – Setup* window there is a way to distribute items from the *Created Serial Numbers* grid into bin locations.
- Choose the *Reallocate Bin Locations* button to open the *Bin Location Reallocation for Serial Numbers* window.
- This window contains the same grid as the *Created Serial Number grid*.
- To trigger the reallocation, just select the serial numbers to reallocate and choose the target bin in the *Reallocate to Bin Location* field.
- After update, the new bin location appears in the *Serial Numbers – Setup* window.
- Here is an example of how this functionality can be used: OEC Computers purchases large quantities of a **Tablets**. Each **Tablet** has a unique serial number and the quantity is too large for just one bin location. The warehouse employee enters the *Serial Numbers – Setup* window and updates the serial numbers for the whole quantity. When he finishes, he enters the *Bin Location Reallocation for Serial Numbers* window. Here he selects about 20 units and allocates them to a bin location. Then he selects another 20 and allocates them to another bin. The employee repeats this action until everything is allocated. This is an easy way to allocate large quantities of the same item rather than choosing the bin location in every serial row in the *Created Serial Numbers* grid.
- Note, reallocation is possible both for items which were already allocated and those which were not allocated yet.

Serial Number Setup (3/3)

Automatic Serial Number Creation

The screenshot displays the 'Serial Numbers - Setup' window in SAP. The main window shows a table with the following data:

#	Doc. No.	Item Number	Item Description	Whse Code	Whse	Total Needed	Total Created	Open Qty
1	PD 449	T00001	Tablet 12' 32G	01	Genera	5	1	

Below the table, the 'Created Serial Numbers' section shows:

#	Mfr Serial No.	Serial Number	Lot Number	Bin Location	Expiration Date	Mfr Data
1	T42363678			01-F1-BLUE-R01-A		
2						

The 'Total Created' field shows 1. The 'Automatic Creation...' button is highlighted with a blue box and an arrow pointing to the 'Automatic Serial Numbers Creation' dialog box. The dialog box contains the following fields:

- Item Number: T00001
- Item Description: Tablet 12' 32G
- Warehouse: 01
- Bin Location: (empty)
- Quantity: 5
- Mfr Serial No.: (empty)
- Serial Number: (empty)
- Lot Number: (empty)
- System No.: (empty)
- Admission Date: 09/10/2013
- Manufacturing Date: (empty)
- Expiration Date: (empty)
- Mfr Warranty Start: (empty)
- Mfr Warranty End: (empty)
- Location: (empty)
- Details: (empty)

The 'Create' and 'Cancel' buttons are visible at the bottom of the dialog box.

- As always with receiving serialized items, you have the option to have the system generate serial numbers for incoming items so that you do not need to enter the numbers manually.
- To do this, choose the *Automatic Creation* button to open the *Automatic Serial Numbers Creation* window.
- Two new fields were added to this window:
 - The first is the *Warehouse* field which displays the warehouse code taken from the header of the *Serial Number – Setup* window.
 - The second is the *Bin Location* field which allows selecting a bin location from a list filtered by the *Warehouse* field.
- Entering data in this field is optional. If it is populated then the same bin location code will be applied to all serial number rows created by this window.
- The *Bin Location* field will be updated automatically with the *Default* bin location if one exists.

Complete Serial Numbers

From the incoming inventory document

Inventory → Item management → Item serial Numbers → Serial Number management → Complete Mode

Bin Location Allocation - Receipt

Document No. 424
 Row No. 1
 Warehouse Code 01
 Item No. T00001
 Quantity 3
 Total Allocated 3
 Remaining

#	Bin Location	Allocated
1	01-F1-BLUE-R01-A	1,000
2	01-F1-BLUE-R01-B	1
3	01-F1-BLUE-R01-C	1
4		

Serial Number Management - Complete

Rows from Documents

#	Doc. No.	Item Number	Item Description	Whse Code	Whse ...	Total Needed	Total Created	O...
1	PD 420	T00001	Tablet 12' 32G	01	Genera	1		
2	PD 422	T00001	Tablet 12' 32G	01	Genera	1		
3	PD 423	T00001	Tablet 12' 32G	01	Genera	2		
4	PD 424	T00001	Tablet 12' 32G	01	Genera	3	1	

Created Serial Numbers

#	Mfr-Serial No.	Serial Number	Lot Number	Bin Location	Expiration Date
1		T425298			
2					

List of Bin Locations

#	Bin Location	Alternative Sort Code
1	01-F1-BLUE-R01-A	
2	01-F1-BLUE-R01-B	
3	01-F1-BLUE-R01-C	

Available bins to choose from

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- Some items that OEC purchases, such as tablet computers, are received into the warehouse without serial numbers. However, the company likes to assign serial numbers to them shortly thereafter for tracking purposes.
- In those cases, the items are set up with the management method *On Release Only* and received without serial numbers into a bin location.
- Later, George assigns serial numbers to these items using the *Serial Number Management – Complete* window.
- This window is accessed from the menu path: **Inventory → Item management → Item serial Numbers**.
- The bin location remains unchanged from the location specified in the *Goods Receipt PO*
- We can see an example of this in the image.
- A *Goods Receipt PO* number **424** was created for **3 Tablet** units.
- Those 3 Tablets were allocated to 3 different bins – one **Tablet** in each bin.
- The next step is to complete the serial numbers for the items and relate each serial to the relevant bin.
- In the *Serial Number Management – Complete* window, in the *Created Serial Numbers* grid we first enter the serial number and then we can choose the relevant bin location from the list of bins entered for the item in the *Goods receipt PO*.
- After the serial number is entered, if only one bin was chosen in the *Goods Receipt PO* for the whole quantity then this bin is updated automatically in the *Bin Location* column of the *Created Serial Numbers*.

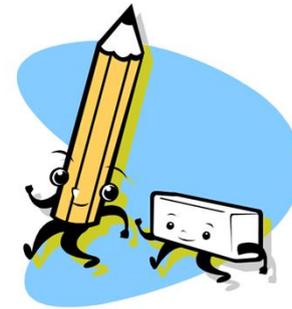
Update Serial Numbers

Serial Number Management - Update

Rows from Documents							
#	Doc. No.	Item Number	Item Description	Whse Code	Whse ...	Quantity	Total Created
63	DN 81	S10000	Server Point 10000	01	Genera	20	20
64	PD 419	T00001	Tablet 12' 32G	01	Genera	5	5
65	PD 421	T00001	Tablet 12' 32G	01	Genera	1	1
66	PD 417	T00002	Tablet 8' 32G	01	Genera	1	1
67	PD 418	T00002	Tablet 8' 32G	01	Genera	1	1

Created Serial Numbers					
#	Mfr Serial No.	Serial Number	Lot Number	Bin Location	System No.
1		T2025869		01-F1-GREEN-R01-A	6

OK Cancel Global Update...



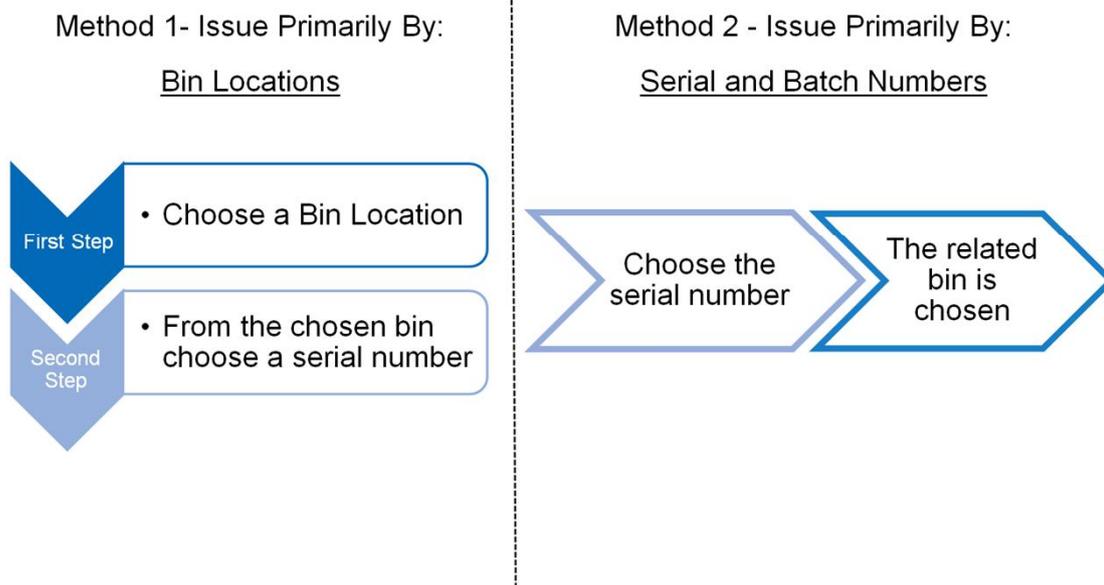
- Changes or updates to existing serial numbers created can be done in the *Update* mode of the *Serial Number Management* window.
- The bin location code however can not be changed.
- A new read only *Bin Location* column was added to the *Created Serial Numbers* grid. This column allows you to view in which bin location each serial is located.

Agenda

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- Let us see the changes made in the sales processes.

Priority of Number or Bin Location Selection Introducing the New Issuing Methods



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17

- In OEC Computers, most items are picked for delivery from the bin location recommended by the system according to the automatic allocation rules specified for the warehouse. The customer does not care which serial number is attached to the item he purchased. The serial numbers are managed only for warranty follow-up and service purposes.
- However, some items are picked according to their serial numbers and not according to their bin location. For example, OEC Computers resells custom-made servers according to special configuration ordered by the customer. All these servers have the same item code and every unique server is identified by its serial number. When the server is delivered to the customer, the server is picked according to its serial number.
- In SAP Business One we can identify the picking method needed for these items by indicating the appropriate issuing method on the item master data record:
 - *Method 1 – Issue Primarily By Bin Locations.*
In this method you first choose the bin location to allocate from and then choose a specific serial item stored within the chosen bin.
 - *Method 2 - Issue Primarily By Serial and Batch Numbers.*
In this method you choose the serial number and then consequently the bin location the item is stored in.
- In OEC Computers, almost every item issue method is set to method 1 – Issue Primarily by Bin Locations, due to the following reasons:
 - First, as already mentioned, in most cases when selling products, it does not matter to the customer nor to OEC Computers which exact serial number to issue.
 - Second, this method allows easy and fast picking because there is no need to look for a specific serial number. For example, one bin location may contain hundreds of memory cards. Each one have a serial number. Looking for serial numbers on each one is extremely time-consuming.
 - In addition, this method enables maximum control of the storage arrangement in the different bin locations.
- Note that these two methods also affect scenarios where serial number selection and bin location allocation are not performed in the same document. For example, issuing a *Sales Order* with serials and then copying it to a *Delivery* where the bin location allocation is done. We will explore this scenario and another scenario involving the *Pick and Pack* procedure later on in this training.

Priority of Number or Bin Location Selection New Definitions

The screenshot displays two SAP windows. The 'General Settings' window is open to the 'Items' tab, showing the 'Serial Numbers and Batches' section. The 'Issue Primarily By' dropdown is set to 'Bin Locations'. The 'Item Master Data' window is also open, showing the 'General' tab. The 'Issue Primarily By' dropdown in this window is also set to 'Bin Locations'. A blue arrow points from the 'Bin Locations' selection in the General Settings window to the corresponding selection in the Item Master Data window.

- Let us see how we define the issue method in the system.
- A new definition was added to the **General Settings** → **Inventory** → **Items** window called *Issue Primarily By*.
- Here we can choose one of the methods: *Bin Locations* or *Serial and Batch numbers*.
- Although in OEC Computers, most items are set up with *Issue Primarily by Bin Locations* method, the default in the General Settings is *Issue Primarily by Serial and Batch Numbers*.
- The same definition exists in the **Item Master Data** → **General** tab. This definition is copied to existing serial or batch managed items when enabling bin locations in a warehouse. This definition is also copied when new items are created while bin location is already active.
- Note,
 - Changing the default in *General Settings* after the item is added will not change the item definition.
 - In addition, the settings of this field in *Item Master Data* cannot be changed if open *Sales Orders* with serial or batch allocations exist.

Scenario 1 – Issuing a Delivery Not Based on a Sale Order

The screenshot shows a SAP Delivery document window with the following details:

- Customer:** C23900 (Parameter Technology)
- Contact Person:** Daniel Brown
- BP Currency:** \$
- No.:** Primary 364
- Status:** Open
- Posting Date:** 02/27/2013
- Delivery Date:** 02/27/2013
- Document Date:** 02/27/2013

Item/Service Type	Item	Summary Type	No Summary
1	S19999 Server - Custom mad		2,760.00 \$ Manual
2	T00002 Tablet 8.32G		1 1 Manual

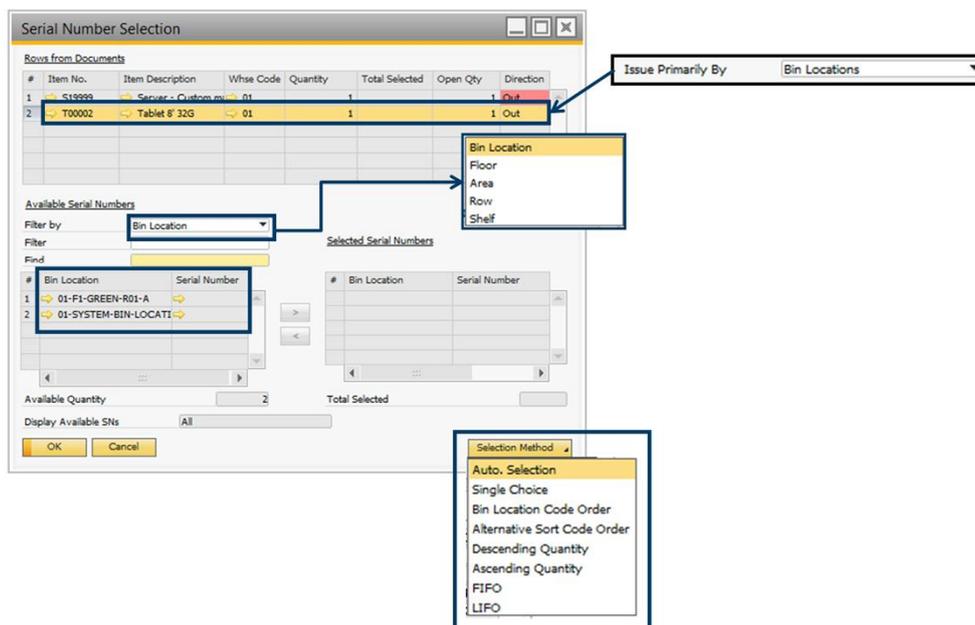
Below the table, the **Total Before Discount** is 2,760.00 \$, and the **Total** is 2,925.60 \$.

- Let us go back to OEC Computers. Look at the Delivery document.
- OEC Computers sells **Parameter Technology** two items.
- The first is a custom-made **Server** that is issued primarily by serial numbers.
- The second item is a **Tablet** item which is also managed by serial numbers but with an issue method primarily by bin locations.
- Let us see the differences in the allocation processes of these items.
- Look at the **Server** item row. The *Bin Location* column is blocked and the only way to allocate the item from a bin location is by entering the *Serial Number Selection* window through the *Quantity* field.
- In contrast, the **Tablet** item can be allocated from a bin location also by choosing the link arrow in the *Bin Location Allocation* column. It can also be allocated automatically assuming automatic allocation rules apply. In the image we see the Tablet item was already allocated automatically.
- Note that the automatic allocation rules apply when the item issue method is set to *Primarily by Bin Location*. When working with issue method *Primarily By Serials and Batches*, you need to first choose the serial numbers. Then, the associated bins will be allocated as well.
- In the next slide we will see how the allocation is made for each item.

Scenario 1 – Issuing a Delivery Not Based on a Sale Order Serial Numbers Selection Window – Issue Primarily By SN

- The *Serial Number Selection* window was adjusted to support allocating bin locations for both issue methods.
- New fields were added to the form settings of the *Available Serial Number* grid. These fields include the different sub level codes, bin location attributes and alternative sort code.
- The primary purpose of adding all of these fields is to assist the *Auto Select* functionality. The *Auto Select* simply selects serial numbers for the quantity required according to the current sort order of the *Available Serial Numbers* grid. Thanks to the new columns, serial number selection can be managed by bin location sort sequences or attributes, even for an item which is set to issue primarily by serial number.
- The different functionalities available in the window behave differently according to the issue method of the item chosen in the *Rows from Documents* grid.
- In the image the **Server** item is chosen which is issued primarily by serial numbers.
- Look at the available serial numbers for the **Server**. The *serial Number* column is displayed followed by the *Bin Location Column*.
- New *Filter* and *Find* functions were added to the *Available Serial Numbers* header that allow selecting the relevant field to be filtered by and filtering the list displayed accordingly. The *Filter by* field supports the selection of the different serial number properties: Serial Number, Lot Number, Manufacturer Serial Number and System Number.
- When selecting the serial number the associated bin location is selected automatically.

Scenario 1 – Issuing a Non-Based Delivery Document Serial Numbers Selection Window – Issue Primarily By Bin Locations



- Let us examine what happens to the *Serial Number Selection* window when choosing an item with the issue method *Primarily by Bin Location* method.
- In our example we have chosen the **Tablet** item.
- Here, the new *Filter* fields allow filtering by the bin location codes or warehouse sublevels.
- The *Bin Location Column* is displayed first followed by the *serial Number* column.
- Another new field was added to the form settings called *Item Quantity in Bin Location*. The field displays the entire quantity of the item held in the bin location (not broken out by serial numbers).
- Instead of the *Auto Select* button there is a *Selection Method* button. This button provides the regular bin location selection options in addition to the *Auto Selection* option. Note that the *Ascending Quantity* and *Descending Quantity* options relate to the item quantity in the bin location.
- The *Auto Select* option selects bin locations according to their order of appearance in the *Available Serial Numbers* grid.

Scenario 2 – Delivery Based on a Sales Order

	Issue Primarily by Bin Location	Issue Primarily by SN and Batches
Serial selection in a Sales Order	Not possible	Possible
Allocation of serial numbers and bin locations in a delivery based on a sales order	Regular allocation according to the Issue Primarily by Bin Location rules	If serials <u>were not</u> selected then select serials and the associated bin location If serials <u>were</u> selected in the Sales Order then the Bin Location is selected automatically in the document.

- In most cases, the process for allocating bin locations in a delivery will remain the same whether or not the delivery is based on the sales order. However there can be circumstances that affect allocation in the delivery.
- First let us look at issuing items primarily by bin location. It is not possible to select serial numbers in a sales order for items set to be issued primarily by bin location. Therefore the allocation process in a *Delivery* document based on the *Sales Order* remains the same as described in the former slides.
- For items that are issued primarily by serial numbers, it is possible to select the serial numbers in the *Sales Order*.
- If serial numbers are not selected in the sales order, then nothing changes. The allocation process for the delivery remains the same as described in the former slides.
- However, if serial numbers were selected in the sales order, then the bin locations associated with the selected serial numbers are automatically allocated in the document.

Scenario 3 - Serial Numbers in *Pick and Pack*

Function	Primarily By Serial and Batch Numbers	Primarily By Bin Location
Select Serials in the <i>Pick and Pack Manager</i>	Possible	Not possible
Generation wizard	Generates pick list only for orders lines already containing serials	Generates pick list for all order lines
Generation wizard filtering	Filter bin locations by selected serial numbers	Subject to the regular wizard filtering
<i>Released Qty</i> field in the <i>Released Drawer</i>	Pick list cannot be edited or processed unless there is a full allocation of both SN and bin locations	Regular pick list behavior, without serial allocation
Creating a Delivery based on a picked <i>Sales Order</i>	Serial numbers should be selected first for the <i>Sales Order</i>	Serial numbers are selected when creating the <i>Delivery</i>
Bin location allocation changes in the pick list before the items are picked	Possible to open the <u>Select Serial Number</u> window and edit the selection of both serial numbers and bin locations	Possible to open the <u>Bin Location Allocation</u> window and edit the bin location allocation

- The pick and pack process changes according to the “Issue primarily by” method of each item involved in the process.
- The table displayed here lists the main differences between each issuing method in the pick and pack processes.
- For items issued primarily by serial numbers, all pick and pack functions can be performed only if serial numbers have been selected. For example, generating pick lists and creating a delivery is only possible when the serial numbers have already been specified in the sales order. If serials were not selected and the *Release to Pick List* button was chosen then the system opens the *Serial Number Selection* window and thus enables selecting serials during the Pick and Pack procedure.
- For items issued primarily by bin locations, most pick and pack functions can be done in the regular way. It is not possible, however, to select serial numbers before a delivery document is created.
- Note that any differences that refer to creating deliveries are relevant also for creating invoices.

Agenda

- Business example
- Purchasing process
- Sales process
- Differences in Batches
- Additional Changes

- In the following slides we will go over the main differences in processes involving batch numbers instead of serial numbers.
- In addition we will examine a scenario for working with Batches using the FIFO allocation method.

Functionality differences for Batch related items (1/2)

	Batches	Serials
Difference No. 1	<p>First Bin Location column</p>	<p>Bin Location column</p>
Difference No. 2	<p>Batches are entered via the allocation window</p>	<p>Serial numbers are entered directly in the setup window</p>

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- The new purchasing and sales processes for batch-managed items in a bin location managed warehouse have been adjusted in a similar way to the processes of serial number managed items. In this section, we will review some of the differences between processes based on batch items and processes based on serial items.
- Look at difference number one. This is one of the more obvious differences. For batch managed items, the *First Bin Location* column is used instead of the *Bin Location* column. Since one batch number represents a group of items and not just a single item as in serial numbers. We can find the *First Bin Location* column in several places like the *Batch Management* window and the *Batch Details* window. When choosing the link arrow of the *First Bin Location* the *Bin Location Content List* opens filtered by the chosen batch.
- Look at difference number two. Since one batch can be stored in multiple bin locations, in the *Batch - Setup* window as well as in the *Batch Complete* and *Update* windows, the batch selection is done via the *Bin Location Allocation – Receipt* window. In the *Batch Setup* window, the link arrow in the *Bin Location* field opens the *Bin Location Allocation – Receipt* window.

Functionality differences for Batch related items (2/2)

	Batches	Serials
Difference No. 3		
	No Reallocation option	Reallocation is possible
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- The last difference discussed in this training is the reallocation option in the setup window. The reallocation option we saw earlier in this training in the Serial Numbers – Setup window, does not exist in the *Batches - Setup* window.
- The main reason for this behavior is that unlike serial numbers, where each item purchased has its own serial number, a few batch numbers are usually associated with large quantity of items.
- For example, in OEC Computers, the **Printer Label** item is batch managed. The printer labels are purchased in dozens but each 10 units batch has one batch number. Therefore, in the example shown here, there are only five rows in the Created Batches grid and the allocation function is redundant.

First Bin Location in Batch Number Selection

#	Item No.	Item Description	Whse C...	Quantity	Total Needed	Total Selected	Total Batches	Direction
1	B10000	Printer Label	01	1		1	1	Out

#	Available	First Bin Location
1	0067	01-FI-YELLOW-R08-I
2	0068	01-FI-YELLOW-R08-H
3	0069	01-SYSTEM-BIN-LOCATION
4	0070	01-SYSTEM-BIN-LOCATION

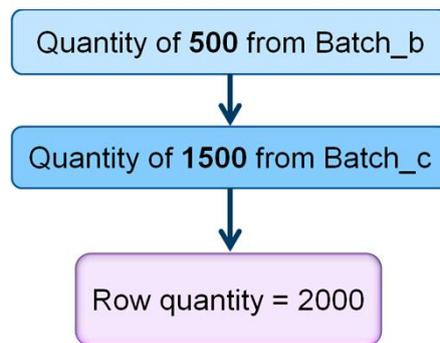
#	Selected Qty	Bin Location Allocation
1	1	1

- New First Bin Location column for items managed by batch number first.
- Enable choosing items by both batch number and bin location

- In some cases, when working with batch managed items, there is a need to pick items by both issuing methods: bin location first and batch number first.
- Therefore a *First Bin Location* column was added to the *Available Batches* table in the *Batch Number Selection* window – even for items which are primarily selected by batch and serial numbers.
- The *First Bin Location* column is also available in the *Sales Order*.
- Please note that this column is not visible by default.

Using the FIFO Automatic Allocation Method with Batches

Bin #	Batch#	Stored QTY of Item A	Entrance date of the batch
Bin_1	Batch_a	1000	1.7.13
	Batch_b	500	1.5.13
Bin_2	Batch_c	2000	1.6.13



- In the **Using Bin Locations in Business Processes** course, we were introduced to the FIFO-LIFO automatic allocation methods for outbound transactions.
- Companies that work mainly with items managed with batch numbers, can find these methods very useful.
- If the company's policy is to issue the oldest items first then a good solution will be to use the FIFO allocation method.
- In the FIFO method the items are allocated according the entry date of the item per bin location per batch or serial number.
- Let us examine the scenario demonstrated here.
- Item **A** is stored in two bin locations.
- **Bin_1** contains two batches: **batch_a** and **batch_b**.
- **Bin_2** contains **batch_c**.
- Let us say we need to issue a quantity of 2000 units of item A and we are using the FIFO method.
- The system looks for the batch with the earliest entry date. This will be **Batch_b**.
- Next, the system should allocate another 1,500 units and it looks for the batch with the next earliest date in sequence which is **Batch_c**.
- Even though **Batch_a** is located in the same bin location as **Batch_b** the system knows how to trace the specific batch.

Agenda

- Business example
- Purchasing process
- Sales process
- Differences in Batches
- Additional Changes

- Let us finish this training by looking at the changes made in the *Serial/Batch Number Transaction Reports* and in the *Serial Number/ Batch – Details* window.

Serial/ Batch Number Transactions Reports

Inventory->Inventory Reports

The image shows two SAP report windows. The first is the 'Serial Number Transactions Report' for item T42363680. It displays a list of serial numbers and a table of transactions. The second is the 'Batch Number Transactions Report' for batch B5698968, showing a list of batches and a table of transactions with a 'First Bin Location' column.

Serial Number Transactions Report

#	Item No.	Item Description	Mfr Serial No.	Serial Number	Lot Number	Expiration Date	Mfr Date
580	T00001	Tablet 12' 32G	T42363678	T42363678			
581	T00001	Tablet 12' 32G	T42363679	T42363679			
582	T00001	Tablet 12' 32G	T42363680	T42363680			
583	T00001	Tablet 12' 32G	T42363681	T42363681			
584	T00001	Tablet 12' 32G	T42363682	T42363682			

Transactions for Serial Number: T42363680

#	Document	Doc. Row	Date	Whse	Bin Location	Director	G/L Acct/BP
1	PD 419	1	02/20/2013	01	01-F1-GREEN-R01-A	Acme Assc	Acme Assc

Batch Number Transactions Report

#	Item No.	Item Description	Batch	Whse	Quantity	Allocated	Batch At...	Bat...
74	B10000	Printer Label	B1-00074	01	50			
75	B10000	Printer Label	B1-00075	01	50			
76	B10000	Printer Label	B1-00076	01	50			
77	B10000	Printer Label	B5698968	01	10			
					510			

Transactions for Batch: B5698968

#	Document	Doc. ...	Date	Whse	First Bin Location	G/L Acct/BP Na...	Qty	Allocated	D
1	PD 430	2	02/27/2013	01	01-F1-BLUE-R01-A	Acme Associate	10		in

Display Batches with Zero Qty Whse From: [] To: []

- A new Bin Location field was added to the *Serial Number Transaction* report.
- The field displays the bin location the serial number movement occurred in.
- In the Batch Number Transaction report a first Bin Location column was added.

Serial/ Batch Number details

The image shows two SAP windows: 'Serial Number Details' and 'Batch Details'. A magnifying glass is positioned over the 'Batch Details' window.

Serial Number Details

Item Number	A00006		
Item Description	HP 600 Series Inc		
Warehouse	01	Status	Available
Bin Location	01-F1-BLUE-R01-B		
Mfr Serial No.			
Serial Number	A6-000283		
Lot Number			
System No.	283		
Admission Date	02/06/2007		
Manufacturing Date			
Expiration Date			
Mfr Warranty Start			
Mfr Warranty End			
Location			
Details			

Buttons: OK, Cancel

Batch Details

Item Number	B10000
Item Description	Printer Label
Status	Released
First Bin Location	01-F1-BLUE-R01-A
Batch	B5698968
Batch Attribute 1	
Batch Attribute 2	
Admission Date	02/27/2013
Manufacturing Date	
Expiration Date	12/31/2014
Details	
System Number	77

Buttons: OK, Cancel, Quantities...

- A new *Bin Location* field was added to the *Serial Number Details* window.
- This field displays the bin location where the serial number is currently located.
- In the *Batch Details* window a *First Bin Location* field was added.

Summary



You should now be able to:

- Describe how to allocate bin locations for serial numbers and batches in the sales process.
- Describe how to allocate bin locations for serial numbers and batches in the purchasing process.

You should now be able to:

- Describe how to allocate bin locations for serial numbers and batches in the sales process.
- Describe how to allocate bin locations for serial numbers and batches in the purchasing process.

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