



User Guide

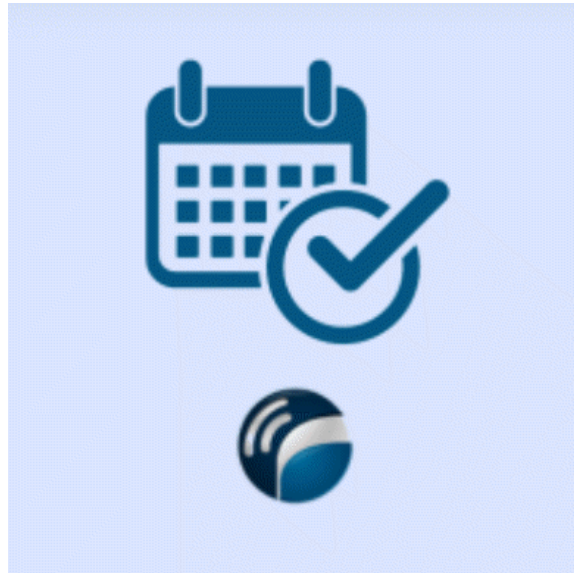
Reservation Enhancer

Last Update: June 19, 2024

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1. ABOUT



Improve fulfillment rates, reduce stockouts, optimize inventory levels, and eliminate human error. The Reservation Enhancer application facilitates the automated reallocation of reserved inventory for open sales orders and the calculation of Safety Stock via AI.

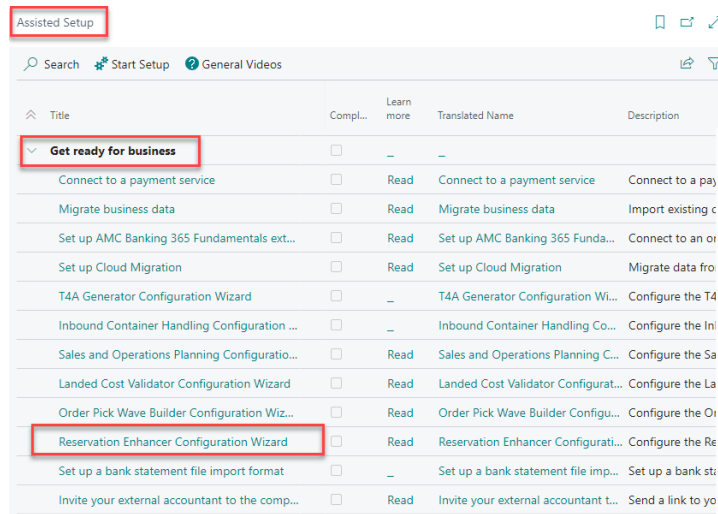
For more information, please go to <https://www.websan.com/mrp-enhancer>.

2. BASIC SETUP

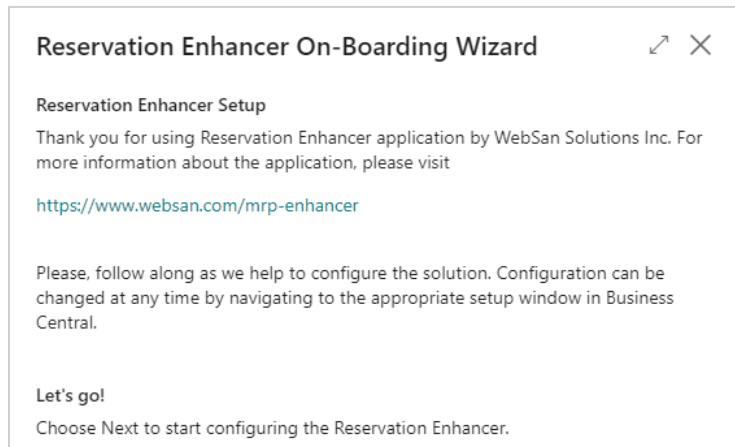
This section covers the configuration required to start using the Shipment Builder for Dynamics 365 Business Central. The steps outlined in this section should be completed before using the application.

To configure the application using a guided step-by-step wizard:

1. Use the magnifying glass tool to go to the Assisted Setup window.
2. In the Assisted Setup window, go to the section “Get ready for business”, and select the Reservation Enhancer Configuration Wizard.



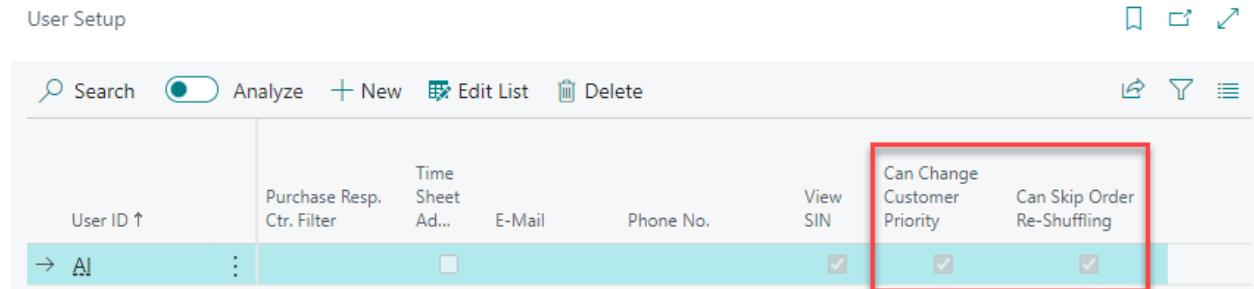
3. Follow the instructions in the wizard. You will be ready to start using the application.



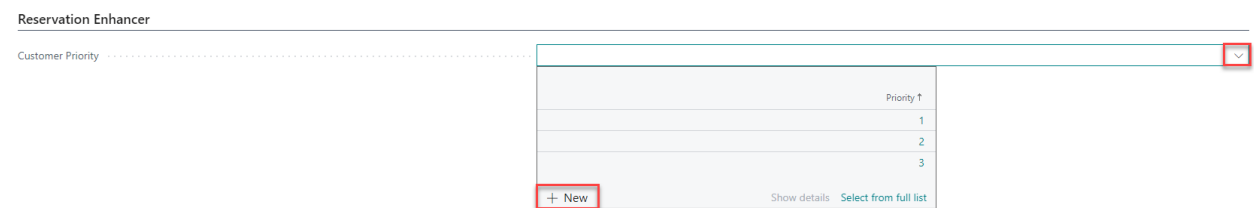
To manually configure the application, refer to the remaining topics of the Basic Setup section in this user guide.

General Settings

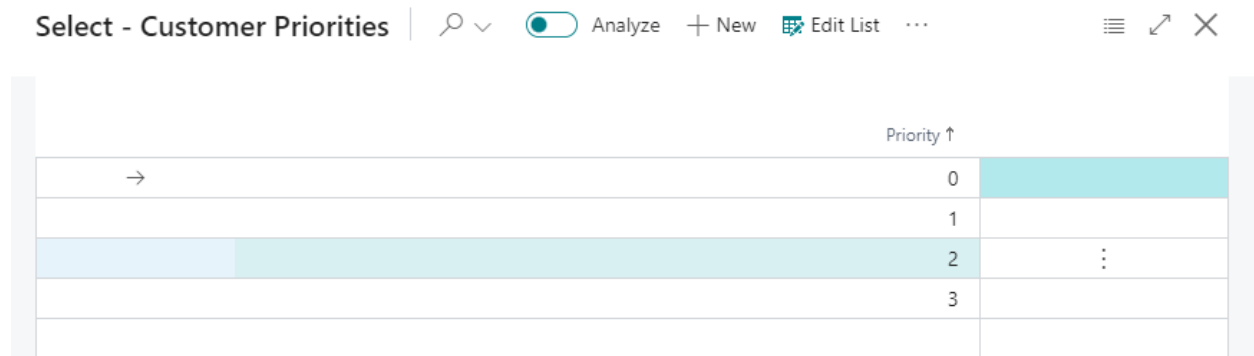
To configure the users that can make changes to the system using the Reservation Enhancer application, use the magnifying glass tool to go to the User Setup page. Check the boxes “Can Change Customer Priority” and “Can Skip Order Re-Shuffling” for the desired users.



Customer priorities are used by the reservation reshuffling feature of this application. To assign Customers priorities, go to the Customers List page and select a Customer. At the bottom of the Customer Card, expand the Customer Priority drop-down menu; select New.



In the Customer Priorities page that appears, enter as many priority levels as needed. Customers with a priority level “1” take first priority, while the largest priority value falls last. The Priority field is defaulted to 0, which means that no priority has been assigned to the customer.



Once priority levels have been created, select a priority value for the customer. Repeat for all the customers that should have a priority not zero.

The automatic item reservation feature of this application uses the Inbound Warehouse Handling Time and the Default Safety Lead Time to calculate the Allow Reservation Date. To populate these fields:

1. Go to the Inventory Setup page. Locate the Inbound Warehouse Handling Time field and enter the corresponding value.

Inventory Setup

General Posting Journal Templates More options

General Show less

Automatic Cost Posting	<input checked="" type="checkbox"/>	Outbound Whse. Handling Time	<input type="text"/>
Expected Cost Posting to G/L	<input type="checkbox"/>	Inbound Whse. Handling Time	<input type="text" value="1D"/>
Automatic Cost Adjustment	Always	Prevent Negative Inventory	<input type="checkbox"/>
Default Costing Method	FIFO	Variant Mandatory if Exists	<input type="checkbox"/>
Average Cost Calc. Type	Item & Location & Variant	Skip Prompt to Create Item	<input type="checkbox"/>
Average Cost Period	Day	Copy Item Descr. to Entries	<input type="checkbox"/>
Copy Comments Order to Shpt.	<input checked="" type="checkbox"/>	Allow Inventory Adjustment	<input checked="" type="checkbox"/>
Copy Comments Order to Rcpt.	<input checked="" type="checkbox"/>	General Safety Stock Quantity	<input type="text" value="5"/>

2. Go to the Manufacturing Setup page. Locate the Default Safety Lead Time field and enter the corresponding value.

Manufacturing Setup

General >

Numbering >

Planning

Current Demand Forecast	<input type="text"/>	Combined MPS/MRP Calculation	<input checked="" type="checkbox"/>
Use forecast on locations	<input type="checkbox"/>	Components at Location	<input type="text"/>
Use forecast on variants	<input type="checkbox"/>	Default Dampener Period	<input type="text"/>
Default Safety Lead Time	<input type="text" value="1D"/>	Default Dampener %	<input type="text" value="0.0"/>
Blank Overflow Level	Allow Default Calculation		

Items must be configured to allow the automatic reservations and the MRP Override. To configure Items, go to the Items list page and select an item. In the Item Card:

1. Set the Reordering Policy field to Lot-for-Lot and Reserve to Always.

Planning

Reordering Policy	<input type="text" value="Lot-for-Lot"/>
Reserve	<input type="text" value="Always"/>
Order Tracking Policy	<input type="text" value="None"/>
Stockkeeping Unit Exists	<input checked="" type="checkbox"/>

2. Set the Replenishment System to Purchase.

Replenishment

Replenishment System	<input type="text" value="Purchase"/>
Lead Time Calculation	<input type="text" value="5D"/>

3. Assign a Lookback Period to determine the how far back the application will go when calculating the Safety Stock inventory level.

Costs & Posting

Cost Details

Lookback Period 1M

Costing Method FIFO

4. Assign a Safety Lead Time and Safety Stock Quantity for the Item if needed. Otherwise, the Default Safety Lead time will be used. Note that Safety Stock Quantity values are replaced by the Safety Stock Calculation function of the application.

Safety Lead Time 2D

Safety Stock Quantity 5

If a Stockkeeping Unit exists:

5. Assign the Replenishment System of Purchase, Reordering Policy of Lot-for-Lot, and a Safety Lead Time and Safety Stock Quantity if needed. Otherwise, the Default Safety Lead time will be used. Note that Safety Stock Quantity values are replaced by the Safety Stock Calculation function of the application.

Planning

Reordering Policy Lot-for-Lot

Safety Lead Time 2D

Safety Stock Quantity 3

Automatic Item Reservation, Backorder Reservation & Reservation Reshuffling

To configure Automatic Item Reservations, in the Reservation Enhancer Setup page, under the General section of the page, enable the toggle “Allow Reservation”.

Reservation Enhancer Setup

Safety Stock Scheduler Setup
 Back Order Reservation Scheduler Setup
 Reservation Reshuffling Scheduler Setup
 ...

General

Backorder Reservation ..
 Reservation Reshuffling ..

Allow Reservation
 Partial Reservation

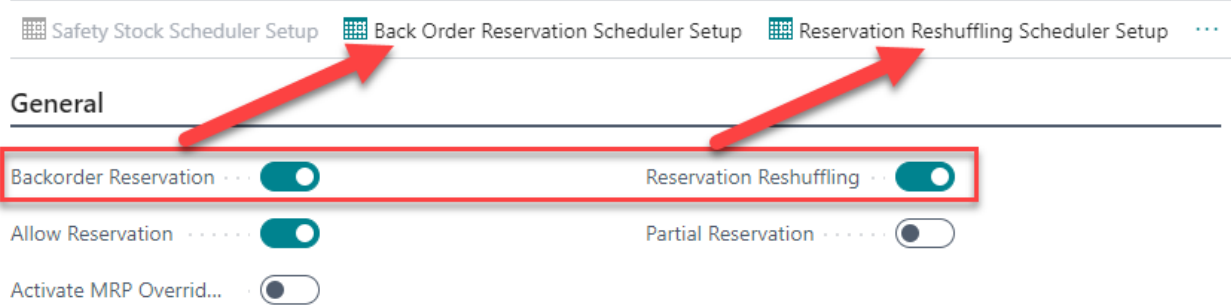
Activate MRP Overrid...

When Allow Reservation toggle is enabled, the application will automatically reserve SO lines where "Allow Reservation Date" is less than TODAY. The Allow Reservation Date is calculated as

follows: Shipment Date – (Inbound Warehouse Handling Time (Inventory Setup) + Lead Time Calculation (Stockkeeping Unit) OR Default Safety Lead Time (Manufacturing Setup)).

The Allow Reservation toggle must be enabled to enable the Backorder Reservation and Reservation Reshuffling features.

Reservation Enhancer Setup



When the Backorder Reservation toggle is enabled, the Back Order Reservation Scheduler Setup Job Queue can be configured to automatically reserve inventory that is on a back ordered SO lines based on the shipment date using FIFO where "Allow Reservation Date" is less than TODAY. To configure the job queue, select the button "Back Order Reservation Scheduler Setup".

When Reservation Reshuffling toggle is enabled, the Reservation Reshuffling Scheduler Setup Job Queue can be configured to automatically cancel the reservation of open sales order lines and re-reserve based on customer priority. The re-reservation process will run from highest priority to lowest priority customers. Customers with a priority level "1" take first priority, while the largest priority value falls last. Priority field is defaulted to 0, which means that no priority has been assigned to the customer.

Turn on the toggle Partial Reservation to reserve quantities even if not full quantity is not available for reservation.

Safety Stock & MRP Override

The MRP override feature overrides the MRP schedule whenever a safety stock violation exists. To enable this feature, turn on the toggle "Activate MRP Override Logic" located in the General section of the Reservation Enhancer Setup page.

Items must be properly configured to support the MRP Override feature. Go back to the [General Settings](#) section of this user guide to learn how to configure items.

To calculate the Safety Stock Quantities that will be utilized for each specific item, open the Reservation Enhancer Setup page, and locate the Scheduled Safety Stock Setup section. In this section:

1. Turn on the Enable Safety Stock Scheduler toggle. This will enable the Safety Stock Scheduler Setup button located in the main menu of the window. Click on Safety Stock Scheduler Setup button to configure the Job Queue that will automatically calculate Safety Stock Quantities.

Reservation Enhancer Setup

[Safety Stock Scheduler Setup](#) [Back Order Reservation Scheduler Setup](#) [Reservation Reshuffling Scheduler Setup](#) ...

General

Backorder Reservation Reservation Reshuffling
Allow Reservation Partial Reservation
Activate MRP Override

Go to the User Setup page to choose the users allowed to apply changes to Customer priorities and Sales Orders reshuffling. [User Setup](#)

Scheduled Safety Stock Setup

Scheduled Safety Stock Setup

Enable Safety Stock Scheduler Safety Stock Calculation

Location Filter ... [Safety Stock Calculation Methods](#)

Forecast Type Last Run Completed

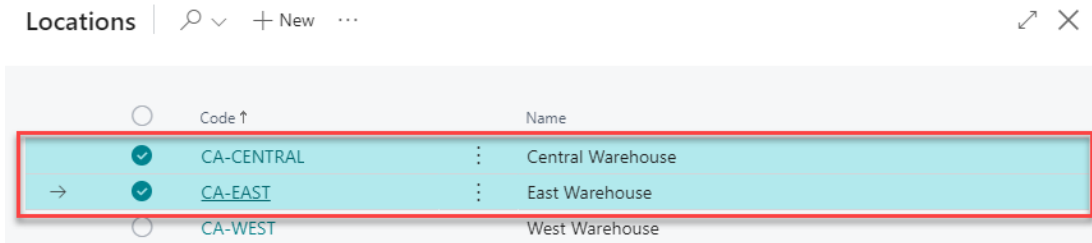
Service Level Used Processing Time

Rounding Method

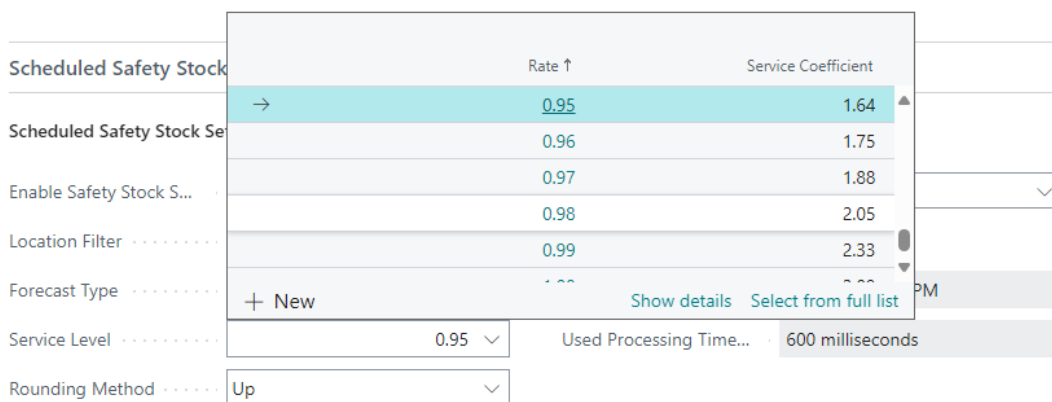
2. To calculate Safety Stock Quantities only using transactions that occurred in specific location(s), open the Location Filter field and select one or more locations. Note that the

Safety Stock Quantity for Stockkeeping Units is always calculated filtering transactions by Location, even if the Location filter is not populated.

- a. If the Location filter is left empty, the Safety Stock Quantity is calculated for all the existing Location/Item SKUs combinations. The Item Card’s Safety Stock Quantity is calculated without applying a Location filter, which means that transactions for all Locations will be combined & used in the calculation. Note that the Lookback Period filter is still applied.
- b. If more than one location is selected in the Location filter, the Safety Stock Quantity is calculated only for the eligible Location/Item SKUs combinations. The Item Card’s Safety Stock Quantity is calculated by combining all the transactions linked to the Locations selected in the Location filter and applying the Calculation Method selected.

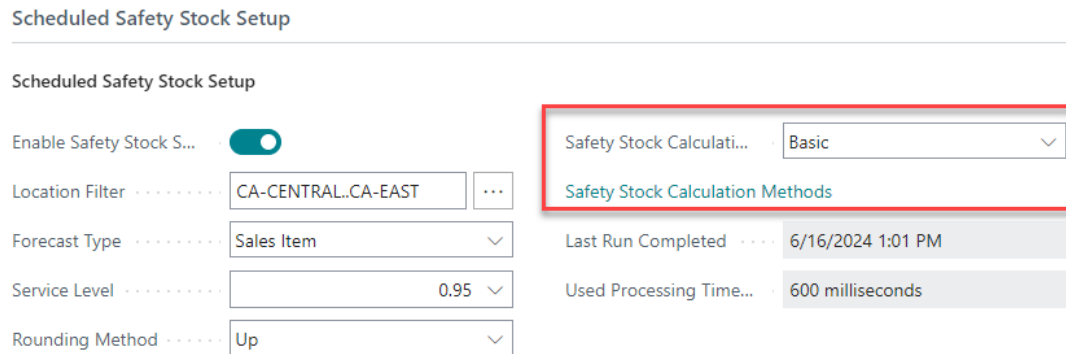


3. Select a Forecast Type, Service Level, and Rounding Method to use for the calculation of the Safety Stock.



4. Use the Safety Stock Calculation Method field to choose the calculation method that will be used to determine Safety Stock levels. Click the link “Safety Stock Calculation

Methods” to learn what are the calculations that each method runs to determine Safety Stock levels.



The image below shows the calculations run by each method to determine Safety Stock levels.

Safety Stock Calculation Methods

Basic	$Average\ Daily\ Sales * Safety\ Lead\ Time$
Average	$(Maximum\ Sales * Maximum\ Lead\ Time) - (Average\ Sale * Average\ Lead\ Time)$
Normal Uncertain Lead Time	$Z * Average\ Sale * Lead\ Time\ Standard\ Deviation$
Normal with Uncertain Demand	$Z * Demand\ Standard\ Deviation * SQRT(Average\ Lead\ Time)$
Normal Distribution with Uncertainty On-demand ...	$Z * SQRT [(average\ lead\ time * standard\ deviation\ of\ demand)^2 + (avg\ demand * standard\ deviation\ of\ lead\ time)^2]$
Normal Distribution with Uncertainty On-demand ...	$[Z * Demand\ Standard\ Deviation * SQRT(Average\ LT)] + [Z * Average\ Sales * Lead\ Time\ Standard\ Deviation]$

3. FUNCTIONALITY

Automatic Item Reservations

The automatic item reservation feature of this application automatically reserves items when Allow Reservation toggle is enabled and the "Allow Reservation Date" is less than TODAY. The Allow Reservation Date is calculated as follows: Shipment Date – (Inbound Warehouse Handling Time (set in the Inventory Setup page) + Lead Time Calculation (set in the Stockkeeping Unit/Item Card/ Inventory Setup page) OR Default Safety Lead Time (set in the Manufacturing Setup page)).

To learn more about the setup of the Automatic Item Reservations feature, refer to the [Basic Setup](#) section of the present user guide.

To automatically make an item reservation, fill out the General section details in a Sales Order. In the Lines section, after the “Quantity” field is populated, the “Allow Reservation Date” field will be automatically populated. If the Allow Reservation Date is less than the system working date, the Item is reserved automatically. Items are not reserved automatically otherwise.

Lines | [Manage](#) | Line | Order

New Line Delete Line Select items...

Type	No.	Purchasing Code	Item Reference No.	Description	Location Code	Quantity	Qty. to Assemble to Order	Reserved Quantity	Allow Reservation Date
→ Item	1896-S			ATHENS Desk	MAIN	1		1	6/13/2024
Item	1900-S			PARIS Guest Chair, black	MAIN	1		-	6/26/2024

MRP Override

This feature overrides the MRP schedule when a safety stock violation exists. The following is an example that uses a Sales Order with three Items, Location Main, and Quantity 1.



Lines | [Manage](#) | Line | Order

New Line Delete Line Select items...

Type	No.	Purchasing Code	Item Reference No.	Description	Location Code	Quantity
→ Item	1988-S			SEOUL Guest Chair, red	MAIN	1
Item	1996-S			ATLANTA Whiteboard, base	MAIN	1
Item	2000-S			SYDNEY Swivel Chair, green	MAIN	1


Safety Stock Quantities for each Item are as follows:

Item 1988-S has a Stockkeeping Unit, which has the highest hierarchy in the MRP override logic.

Stockkeeping Unit Card  



MAIN · 1988-S

[Home](#) | [Item](#) | [SKU](#) | [More options](#)

 Calculate Counting Period





Reordering Policy	Lot-for-Lot
Safety Lead Time	
Safety Stock Quantity	25

Item 1996-S does not have a SKU. A Safety Stock Quantity is found at the Item level. Note that Item-level Safety Stock Quantities take the second-highest priority in the MRP override logic.

Item Card  

1996-S · ATLANTA Whiteboard, base

[Home](#) | [Request Approval](#) | [Item](#) | [Prices & Discounts](#) | [More options](#)

 Copy Item  Adjust Inventory  Create Stockkeeping Unit  Apply Template

Planning

Reordering Policy	Lot-for-Lot
Reserve	Always
Order Tracking Policy	None
Safety Stock Quantity	15

2000-S does not have a SKU. No Safety Stock Quantity has been assigned at the Item level. General Safety Stock Quantity is assigned in the Inventory Setup page. This is a System-wide setup; it takes the last priority level in the MRP override logic.

Inventory Setup

General Posting Journal Templates More options

General Show less

Automatic Cost Posting	<input checked="" type="checkbox"/>	Outbound Whse. Handling Time	<input type="text"/>
Expected Cost Posting to G/L	<input type="checkbox"/>	Inbound Whse. Handling Time	<input type="text" value="1D"/>
Automatic Cost Adjustment	Always	Prevent Negative Inventory	<input type="checkbox"/>
Default Costing Method	FIFO	Variant Mandatory if Exists	<input type="checkbox"/>
Average Cost Calc. Type	Item & Location & Variant	Skip Prompt to Create Item	<input type="checkbox"/>
Average Cost Period	Day	Copy Item Descr. to Entries	<input type="checkbox"/>
Copy Comments Order to Shpt.	<input checked="" type="checkbox"/>	Allow Inventory Adjustment	<input checked="" type="checkbox"/>
Copy Comments Order to Rcpt.	<input checked="" type="checkbox"/>	General Safety Stock Quantity	<input type="text" value="3"/>

In the Requisition Worksheets page, select Home > Calculate Plan:

Requisition Worksheets

Name:

Analyze
 Manage
 Home
 Drop Shipment
 Special Order
 Line
 Item Availability by
 Report
 More options

Carry Out Action Message...
 Calculate Plan...
 Reserve

Select the required options & filters and click Ok to proceed.

Options

Starting Date:

Ending Date:

Use Forecast:

Exclude Forecast Before:

Respect Planning Parameters for ...

Filter: Item

× No.:

× Search Description:

[+ Filter...](#)

Filter totals by:

× Location Filter:

[+ Filter...](#)

The values in the Quantity column of the Requisition Worksheet lines are updated based on the Safety Stock Quantities assigned at the SKU, Item, and System levels.

Requisition Worksheets

Name DEFAULT

Analyze Manage Home Drop Shipment Special Order Line Item Availability by Report | More options

Carry Out Action Message... Calculate Plan... Reserve

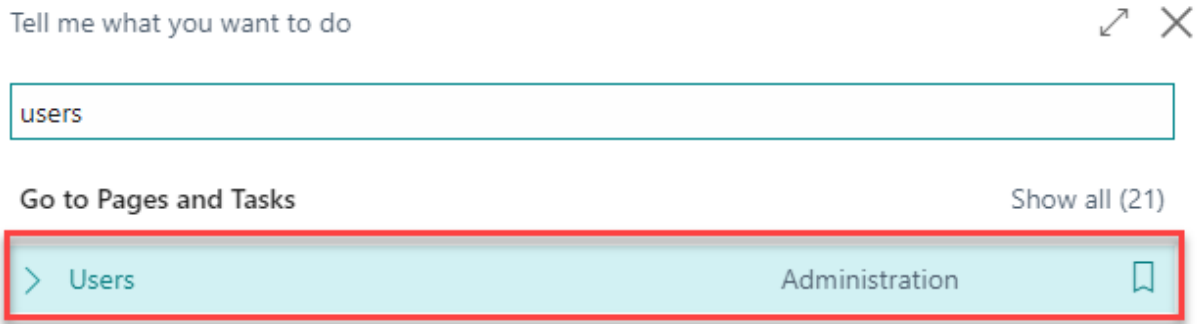
Type	No.	Action Message	Acce... Action Mes...	Description	Location Code	Original Quantity	Quantity	Unit of Measure Code
Item	:	1988-S	New	<input checked="" type="checkbox"/>	SEOUL Guest Chair, red	MAIN	26	PCS
Item		1996-S	New	<input checked="" type="checkbox"/>	ATLANTA Whiteboard, base	MAIN	16	PCS
Item		2000-S	New	<input checked="" type="checkbox"/>	SYDNEY Swivel Chair, green	MAIN	6	PCS

4. SECURITY

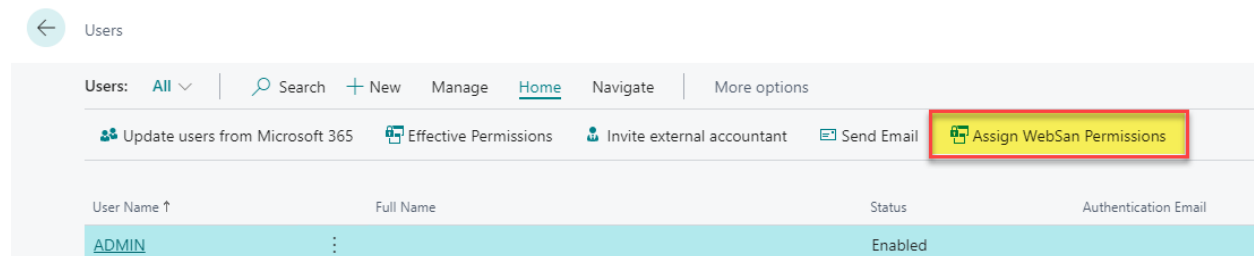
The Reservation Enhancer application, along with the rest of WebSan Inc.'s Dynamics 365 apps, have a built-in AutoPermission security functionality. When a user with the proper credentials installs an App, the AutoPermission function automatically triggers and assigns or updates the user's permissions. No other action is needed from the user.

When a user without the proper credentials installs an App, the AutoPermission function allows the installation, but user permissions are not changed. In this case, a user with the proper security credentials can change the user's permissions later.

To change user permissions, search and go to the User list.



In the Users window, select Assign WebSan Permissions to assign all users the WebSan Permission Set.



5. REGISTRATION

To register a WebSan Inc.'s application, search WebSan Client Information and select WebSan Client Information – Administration.

Tell me what you want to do ↗ ✕

websan client information

Go to Pages and Tasks

> WebSan Client Information Administration 🔖

In the WebSan Client Information window, enter your company's contact and billing information. After your information is complete, select Transmit Data.

📝 🔗 + 🗑️ ✓ Saved 🔖 🔗 ↗

WebSan Client Information

📡 Transmit Data

General

MS Client ID On Hold

Active

Contact Information

Company *	PostalCode / ZipCode *
Name *	Country *
Address *	Phone
Address2	Email
City *	Email CC
Province / State *	Billing is Same as Co... <input checked="" type="checkbox"/>