Configuring Inventory Planner

Minimum Eagle and Eagle for Windows PCO Levels

The minimum PCO for Inventory Planner is Eagle for Windows Level 20.1 General Release. Specifically, that is Eagle for Windows 20.1998.270/ Eagle 32.3294.272.

Inventory Planner requires minimal system and security setup. The following options should be enabled on your system to use Inventory Planner:

Eagle for Windows Licensing Options

The following MSY controlled options should be enabled to use Inventory Planner:

- 1034 Inventory Planner on System
- 1095 Enhanced Lead Times on System
- 1057 Multiple Order Points on System
- 9456 4 Years of Sales History Buckets

Eagle Options Required

The following Eagle options (non MSY controlled) should be enabled:

8839 Compass Spooler on System

Eagle for Windows Security Bits

The following security bits for Eagle ROP will also control security for Inventory Planner:

- 233 Allow access to ROP, all options excluding F
 - Set this option to Yes for any user that will be allowed to create or modify Inventory Plans, but not update them to the Eagle system.
- 246 Allow access to ROP, all options including F

Set this option to Yes for any user that will be allowed to update Inventory Plans. The user must have MSE233 to gain access to the Inventory Planner application.

Other Eagle for Windows Options to Review

The following options are used to set defaults in Inventory Planner or Enhanced Lead Times:

3055 – Consider Unusual Usage (Requires Options 43 and 3097 to be set to Yes)

- 3056 Consider Lost Sales (Requires Options 43 and 3094 to be set to Yes)
- 3058 -- % for Lost Sales (Requires Options 43 and 3094 to be set to Yes)
- 3057 Consider Transfers In (Multi-store users only)
- 3059 Consider Transfers Out (Multi-store users only)
- 9680 -- Set PO Due Dates for these PO Types using Average Lead Times
- 9681 -- Default 'Update Lead Times' to No for these PO Types

Getting Started with Inventory Planner

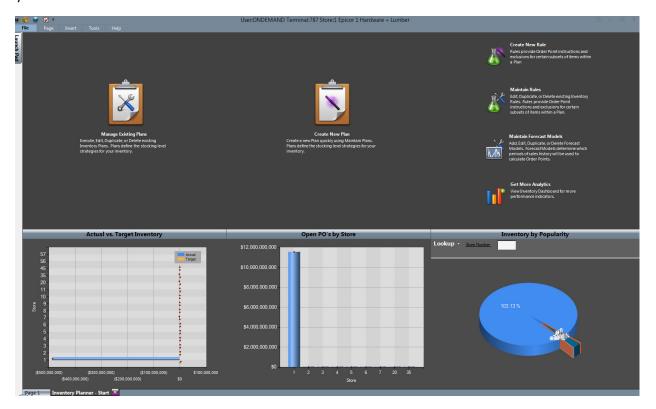
Navigation, Buttons, etc.

Throughout the Inventory Planner application, the following buttons will be visible and available based on user input.

Button	Typical Action
	Adds a new Model, Rule, or Plan. Found in Maintain Forecast Models, Maintain Rules,
	and Maintain Plans.
116	Copies the current record into a new record. For example, use this to copy a Rule into a
	new Rule. Found in Maintain Forecast Models, Maintain Rules, and Maintain Plans.
	Deletes the current record. There are safeguards in place to prevent deletion of
	Forecast Models or Inventory Rules in use. Found in Maintain Forecast Models,
	Maintain Rules, and Maintain Plans.
Close	Cancels any changes to a Model, Rule, or Plan and closes the application.
Save	Saves a Model, Rule, or Plan.

Inventory Planner - Start Page

The starting page for Inventory Planner is launched by clicking the Inventory Planner item on the Launch Pad. The starting page is divided into 2 areas, Navigation and Analytics.



Navigation

The Navigation area contains 6 buttons with descriptions. Each of these buttons will navigate the user to an Inventory Planner application area.

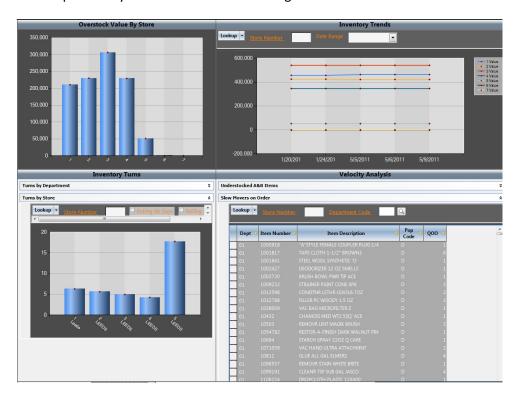
Button	Title	Action
	Manage Existing Plans	Launches Manage Plans application for editing, analyzing, and executing Plans.
	Create New Plan	Launches Maintain Plans in add mode to allow for creation of a new Plan.
	Create New Rule	Launches Maintain Rules in add mode to allow for creation of a new Rule.
&	Maintain Rules	Launches Maintain Rules to allow for editing existing Rules.
	Maintain Forecast Models	Launches Maintain Forecast Models to allow for adding or editing of Forecast Models.
	Get More Analytics	Launches the Inventory Dashboard.

Analytics

The Analytics area provides 3 standard charts for providing Inventory Performance information. Users with Compass Analytics can customize the design of these charts. After making customizations, choose Page, Save Current Page. Because this page is tied to a menu item, the user will be prompted to update the menu link to launch the saved page.

Inventory Dashboard

The Inventory Dashboard provides numerous charts and grids of data around Inventory Performance. Users with Compass Analytics can customize the design of these charts.



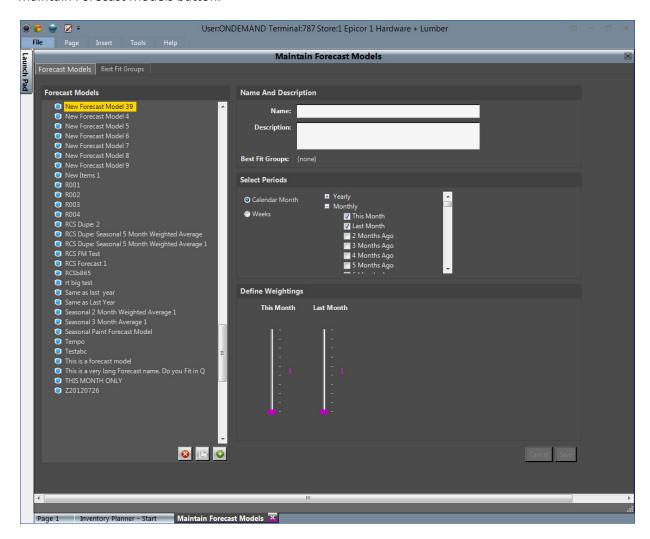
Applying Changes to the Dashboard and Start Page

Once changes are made to the Inventory Dashboard, choose Page, Save Current Page. This page should be saved at System Scope. Next you will also need to modify the button that launches the dashboard also. To do this, right click on the Get More Analytics button on the Inventory Start Page. Choose "Customize Get More Analytics". In the dialog, click the Page Button and choose the page just saved. Finally, click Save. Note: the customization of this button is saved at the User scope only, so the last step must be completed for each user.

Inventory Planner Setup

Working with Forecast Models

A Forecast Model is a pre-defined set of periods and weights to use for usage calculations. Inventory Planner comes with 18 pre-built Forecast Models. To view, add, change, copy, or delete Forecast Models, launch Maintain Forecast Models from the Inventory Planner – Start screen by clicking the Maintain Forecast Models button.



Field Information

Field	Use
News	A married for the Correspond Model
Name	A name for the Forecast Model
Description	A description for the Forecast Model
Select Periods	Choose the type of periods and the periods this Forecast Model should use
Define Weightings	Using the sliders, indicate the relative importance of each selected period.
	For example, a value of 2 indicates this period is twice as important as a

period with a value of 1.

Inventory Rules

An Inventory Rule describes how the Order Point for an item should be calculated. Inventory Rules can also have Item Filters, which indicate which items from within the Plan's item set should be processed by this Rule. A Rule's Item Filter will never *add* items to a Plan; Rules are limited to working within those items configured on the Plan. Epicor supplies 4 pre-built Inventory Rules based on best practices for your use.

Inventory Rules can be created independently of Inventory Plans, and a single Rule can be used by several different Plans.

There are four fundamental types of Inventory Rules:

- <u>Usage Rules</u>: Order Points are based on forecasted demand for an item, and the forecast itself is based on the item's historical usage.
- Specified Rules: The Order Point is set to a specific value or min/max values are entered for all items on the Rule
- <u>Protected Rules</u>: The Order Point remains unchanged for all items on the Rule
- <u>Adjusted Rules</u>: The current Order Point is adjusted up or down by a specified amount for all items on the Rule. Adjusted Rules also allow copying an Order Point to another Order Point. (ex: Copy OP A to OP B)

Working with Inventory Rules

Inventory Rules can be created or edited through the Maintain Rules application. To access Maintain Rules, click the Maintain Rules button on the Inventory Planner – Start screen. If you are creating a new Inventory Rule, you can click the Create New Rule button on the Inventory Planner – Start screen and Maintain Rules will be launched in add mode.

Maintain Rules

Inventory Rules are viewed, added, changed, and deleted in the Maintain Rules application.

Managing Tab

The Managing tab is where the user sets or changes the name and description of the Inventory Rule

Type Tab

The Type tab is where the user defines the type of the Inventory Rule. Valid choices are Usage, Specified, Protected and Adjusted

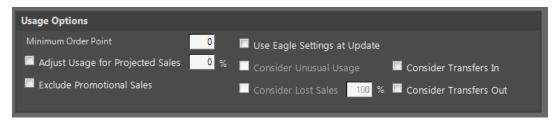
Usage Type Rules

Usage type Inventory Rules use historical sales data to forecast future sales units. Usage Rules have Usage Types, Usage Options, and New Item Handling options.

Usage Type

Туре	Description
Best Fit	An Inventory Rule that uses Best Fit will evaluate every Forecast Model defined for use in Best Fit and select the best Forecast Model for each item in the Plan. Choosing this option allows the user to make no decisions on what type of forecasting they should do as well as allowing each item to use a different Forecast Model.
Forecast Model	Selecting this Usage Type allows the user to select from a pre-defined Forecast Model to use for all items on the Inventory Rule.
Weighting	Selecting this Usage Type allows the user to select periods and weightings to use. {Matches current ROP behavior for Method 3}

Usage Options



Option	Description	Results
Use Eagle Settings at Update	Rule will use the settings from Options 3055-3059	Settings for Lost Sales, Transfers and Unusual Usage will be controlled by these options. {Matches current ROP behavior}
Adjust Usage for Projected Sales	Allows usage to be adjusted for anticipated sales	Forecasted usage will be adjusted by % entered. Selecting this option overrides any adjustment set on the Plan for all items on this Rule.
Consider Lost Sales	Allows usage to be	Forecasted usage will be

	adjusted by recorded	adjusted by the % of lost
	Lost Sales	sales entered.
Consider Transfers-In	Allows usage to be	Forecasted usage will be
	adjusted for inbound	reduced by the amount
	transfers	of inbound transfers.
Consider Transfers-Out	Allows usage to be	Forecasted usage will be
	adjusted for outbound	increased by the amount
	transfers	of outbound transfers.
Consider Unusual Usage	Allows usage to be	Forecasted usage will be
	adjusted for unusual	reduced by the amount
	usage	of unusual usage.
Exclude Promotional	Allows usage to be	Forecasted usage will be
Sales	adjusted for Promotional	reduced by the amount
	Sales	of promotional sales.
Minimum Order Point	Sets a Minimum Order	Sets a Minimum Order
	Point for all items on the	Point for all items on the
	Inventory Rule	Inventory Rule

New Item Handling

A user can define an item as a new item by identifying items added to the system within a specified number of days or since a specified date. Once an item is defined as "new", there are 3 ways to handle them:

Choice	Results for the New Item
Use Proxies	Allows for the user to specify a proxy item to use for forecasting usage. Since the new item likely has no usage, a proxy item can be defined and Inventory Planner will use the proxy item's usage instead of the new item's usage for as long as the new item continues to meet the definition of new.
Protect Order Point	Allows for the user to instruct Inventory Planner to not change the new item's Order Point. However, Inventory Planner does consider that this item was processed by the Rule; therefore neither the Plan Defaults nor any other Rule will address this item on the Plan. <i>{Matches current ROP behavior}</i>
Exclusion	Allows for the user to instruct Inventory Planner to skip this item on this Rule. This means that the item will then be processed by another Rule or the Plan Defaults. As a result, based on other Rules on the Plan or the defaults, this item COULD have an Order Point calculated.

Specified Rules

Specified Rules allow for the setting of a specific Order Point or Min/Max combination. Using Min/Max will populate the value from Min to the Order Point, and the value from Max to the Maximum Stock Level. The values set here apply to all items on the Inventory Rule.

Protected Rules

Protected Rules allow you to simply block an Order Point from change while indicating that the item has been addressed. Epicor recommends that an Item Filter be assigned to these types of Inventory Rules.

Adjusted Rules

Adjusted Rules allow you to adjust existing source Order Points by a %. *{This matches current ROP functionality for Method 2}* You can also use this type of Rule to copy an Order Point from one to another. For example, you can specify the Source OP to be OP A and then when applied to the Plan, you can choose to update primary Order Point. This will effectively copy the value of OP A to the primary Order Point field.

Settings Tab

The Settings tab allows you to specify additional settings on an Inventory Rule pertaining to dates for the Rule to be in effect, and specification of inventory levels for the Rule.

Effective Dates

To specify dates for an Inventory Rule to be in effect, check the checkbox and enter the starting and ending dates. If you'd like these effective dates to recur annually, check the Recur Annually checkbox. When the Rule is processed on a Plan, Inventory Planner will check the Effective Dates and only implement the Rule if the current date is within the defined Effective Dates.

Define Stocking Levels

By default, the Inventory Plan will define the stocking levels to implement. However, the user can override those settings for the items on an Inventory Rule. Choices are to define a Service Level or Days of Supply, or use the Plan Settings. This setting only applies to Usage Rules.

Filters Tab

The Filters tab is where you can optionally specify what items this Inventory Rule will apply to. Note that any filters set apply only to items that are also on any Plan this Rule is applied to.

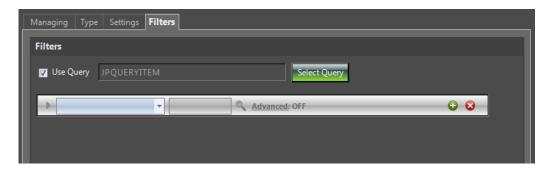
Use Query

To create a Filter, you can optionally use an existing Compass Analytics query. (Compass Analytics users only) To use a query, check the Use Query checkbox and then click the

Select Query button to choose the query to use. (Epicor recommends only using queries that are scoped at the System scope) Please note that Inventory Planner will not support grid filters or the use of any GP% measures in these queries. If you select a query that uses an unsupported GP% measure, you will receive an error message indicating which unsupported measure you attempted to use.

Adding Other Filters

You can specify additional "ad-hoc" filters by choosing the dimensions and values using the Dimension selector. Any filters added in addition to the query will be applied in conjunction with the query. For example, if the query you use specifies Department 01 only and the filter specifies Class 100, the resulting filter will be only items in both Department 01 and Class 100.



Inventory Plans

An Inventory Plan contains Inventory Rules, options and other settings required to compute order points for a specific group of items. It is expected that most Inventory Plans will be designed for periodic processing, and normally will be configured to automatically execute on a standard schedule.

Working with Plans

Inventory Plans can be created in the Maintain Plans application. To add a new plan, click the Create New Plan button on the Inventory Planner –Start page. This will launch Maintain Plans in add mode.

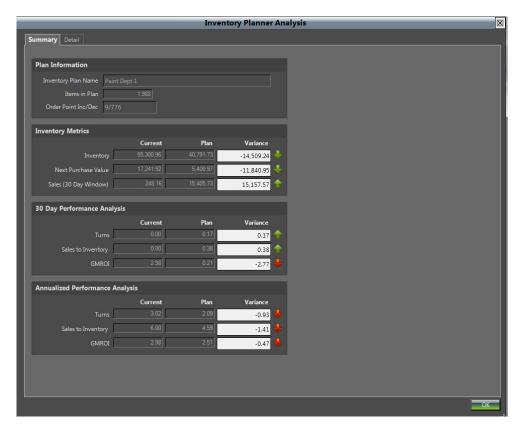
Manage Plans

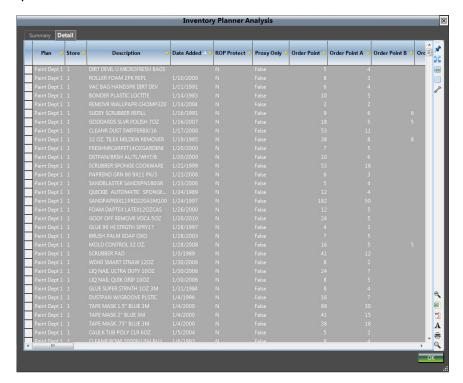
This application lists all currently saved Inventory Plans. From here you can duplicate, edit, delete, analyze, and execute a Plan.

Analyze

Selecting a single Plan and clicking the Analyze button will perform an on screen analysis of the impact of the selected Plan vs. current inventory information for the items on the Plan. The analysis will show you the number of items on the Plan, number of increases and decreases in Order Points, and projections of Inventory Value, Next Purchase Value, Sales to Inventory, Turns, and GMROI. These Plan values are compared to the current values, variances are shown, along

with color coded indicators of positive or negative impacts. A second tab, labeled Details will show you each item with an Order Point change on the Plan. *Warning:* depending on the size of the Plan, this process could take some time to complete. You may work on another Compass page or PC application while this processes.





Execute

Selecting a Plan and clicking the Execute button will execute the selected Plan immediately. Updates to the Eagle system will occur for any Plan with at least 1 Order Point selected for update. Plans executed from here and set to generate an output file have their output spreadsheets placed in the Compass Spooled Tasks Viewer. You can access the Spooled Tasks Viewer from the Tools Menu.

Maintaining Plans

Inventory Plans can be viewed, added, changed, and deleted in the Maintain Plans application. It is launched from the Create New Plan button on the Inventory Planner –Start page, or from the Manage Plans application.

Plan Tab

The Plan Tab is where the Name and Description are setup or changed and the Item Set is configured.

Use the top area to set the Name and Description of the Plan

Item Set

Use the Item Set area to select the items that this Plan applies to.

Use Query

To create an Item Set, you can optionally use an existing Compass Analytics query. (Compass Analytics users only) To use a query, check the Use Query checkbox and then click the Select Query button to choose the query to use. (Epicor recommends only using queries that are scoped at the System scope) Please note that Inventory Planner will not support grid filters or the use of any GP% measures in these queries. If you select a query that uses an unsupported GP% measure, you will receive an error message indicating which unsupported measure you attempted to use.

Adding Other Filters

You can specify additional "ad-hoc" filters to create your Item Set by choosing the dimensions and values using the Dimension selector. Any filters added in addition to the query will be applied in conjunction with the query. For example, if the query you use specifies Department 01 only and the filter specifies Class 100, the resulting filter will be only items in both Department 01 and Class 100.

There are additional options to select here as well:

Option	Description
Include Kits	Selecting this option will calculate Order Points for Kit Header Records
Include Discontinued	Selecting this option will calculate Order
Allow OP's of 0 or 1 to Change	Points for Discontinued items Selecting this option will calculate Order
	Points for items with current Order Points of 0 or 1.
Allow Protected Order Points to	Selecting this option will calculate Order
Change	Points for items with ROP Protect flag = Y

Global Levels

Global Levels are the Plan level instructions for how to calculate an Order Point. There are 2 areas to consider: Plan Adjustments (apply to all items) and Plan Defaults (apply only to items not addressed by an Inventory Rule).

Plan Adjustments

Plan Sales Forecast

Use the slider to adjust your forecasted usage on all items. The forecasted usage will be adjusted by the amount chosen here. For example, if you anticipate a sales increase of 4% this year, you would slide the slider to 4% and

the usage calculated for all items on the Plan would be increased by 4%. Note: if a Rule has a forecasted sales adjustment, then the Rule's setting will apply for all the items on that Rule.

Plan Defaults

Default Usage Type

Select the Usage Type to use for any item not addressed by a Rule

Default Stocking Level

Select the Stocking Level strategy to use for any item not addressed by a Rule or for any items on a Rule that specifies to use the Plan Settings. Valid choices are Days of Supply or Service Level.

Service Level

Service Level is defined as the probability of being in stock during your order cycle. Service Levels are represented as a percentage. For example, as Service Level of 95% instructs Inventory Planner to adjust the level of supply to achieve an in-stock probability of 95%. This means that 95 times out of 100, you will not run out of stock within an order cycle. The Service Level calculation requires a specified number of Order Cycle Days (see below) and a default number of days for Safety Stock.

Days of Supply

Using the Days of Supply setting allows you to simply specify the total days of supply to use in calculating the Order Point. When using this method, you don't need to choose an Order Cycle or Safety Stock default.

Other Plan Defaults

Choose addition plan default settings

Order Cycle Days (For Service Level Only)

For regularly ordered items, this represents the number of days between an order that you need to carry stock for. For example, if you normally consider items for order every 2 weeks, you would enter 14 here so that you always carried enough stock to cover 14 days of sales.

For items *not* ordered on a regular basis, you should enter the sum of the number of days of supply to stock and the average lead time for the products here. This would allow you to carry enough stock to cover for the anticipated lead time of the products when you decide to order them.

Default Safety Stock Days (For Service Level Only)

Inventory Planner attempts to use the lead time data tracked by the Eagle system for each item in order to calculate an anticipated safety stock. The calculation is based off of the variability in the average lead time. However, in some cases, an item may not have enough lead time records for this calculation to occur. If so, the system uses the amount entered here for safety stock and adds that to the Order Cycle Days to determine the number of Days of Supply to use.

Minimum Order Point

The user can set a minimum order point to be used for all items on the plan.

Calculate Using (For Service Level Only)

Choose the data that Inventory Planner will use to calculate the Safety Stock. Valid choices are:

Lead Time and Forecast Accuracy (Default)

Choosing this option allows for Safety Stock to be calculated to include variability in Lead Times as well as the variability in the Forecast Accuracy of the Forecast Model chosen.

Forecast Accuracy Only

Choosing this option allows for Safety Stock to be calculated to include the variability in the Forecast Accuracy of the Forecast Model chosen. Lead Time data is not used.

Lead Time Only

Choosing this option allows for Safety Stock to be calculated to include variability in Lead Times only.

Rules Tab

The Rules Tab is where you specify the Inventory Rules to apply to the Plan, and the order in which to apply the Rules. An Inventory Plan contains a list of Rules that have a well-defined order. When the Plan is executed, the list of items in the entire Plan is assembled along with any data required for that item. For each item in the Plan, each Rule is checked one after another to see if the item falls within the Rule's filters.

Lowest Position Number Sequencing

The default setting instructs the Plan to apply the Inventory Rules in order from first to last when determining how to address an item that can be handled by more than 1 Rule on the Plan. In other words, working from "top to bottom", the first Rule that applies to an individual item is the only Rule that will be used to compute the item's new Order Point. When using this method, your Rules should be ordered from narrow to broad.

Highest Position Number Sequencing

When a Plan's setting is set to use the Highest Position number, the Plan works from top to bottom, finding the last Rule that can apply to the item and using it. When using this method, your Rules should be ordered from broad to narrow.

Button / Field	Description	Results
Rules to Apply	This is a list of available Inventory Rules that could be applied to this Plan	
Rules Applied	A list of Inventory Rules applied to this Plan along with their sequence	
Add > < Remove	Add / Remove Buttons	Adds the selected Inventory Rule to the Plan in the next available sequence. Clicking Remove removes the selected Inventory Rule from the Plan
New Rule	New Rule Button	Launches the Maintain Rules application in add mode to add a new Inventory Rule to the system. The newly added Inventory Rule is then available for use immediately.
	Promote Button	Moves the selected Inventory Rule up 1 position in the sequence.
	Demote Button	Moves the selected Inventory Rule down 1 position in the sequence.
Details	Details Button	Displays details about the selected Inventory Rule.
Modify Items	Modify Items Button	Allows the modification of the filters for the selected Inventory Rule. Any modifications to the Item Filter apply on this Plan only

Execute Tab

The Execute Tab is used to configure how this Plan will be saved and any updates that should be posted to the Eagle system. Valid choices are Save Plan without Executing, Save Plan and Execute Now, and Save Plan as Future Update.

Execution Method

Save Plan without Executing

Choosing this option simply saves the Plan without any execution being run. Order Points to update may be selected using this option, but no changes will take effect until this Plan is executed. *{This option matches current ROP functionality when setup and saved as a report profile}*

Save Plan and Execute Now

Choosing this option allows the user to define which Order Points to update, and perform the updates immediately upon clicking the Save button. Updates to the Eagle system will occur immediately. *{This option matches current ROP functionality when run from the menu with Option F}*

Save Plan and Execute in the Future

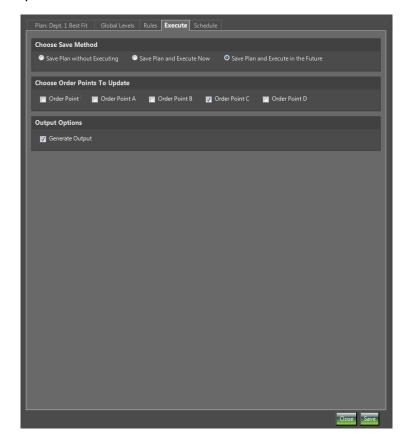
Choosing this option allows the user to define which Order Points to update, and provides a Schedule tab for creating a task to perform the updates. Updates to the Eagle system will occur when this Plan is run from the Scheduler. *{This option matches current ROP functionality when added to a queue and scheduled.}*

Choose Order Points to Update

This is where you can specify which Order Points should be updated when this Plan executes.

Output Options

To produce a spreadsheet report of items whose Order Points will change, check the "Generate Output" checkbox.



Schedule Tab

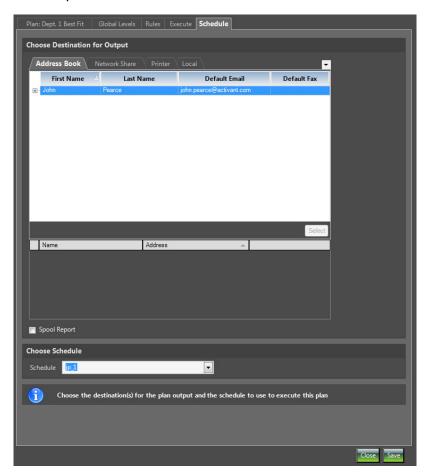
The Schedule Tab is only visible when the Execute method is set to "Save Plan and Execute in the Future", and is used to create a Scheduled Task to execute this Plan.

Choose Destination for Output

Use this section to determine how any output should be delivered (email, print, save on shared drive, etc.) You can also choose whether or not to save the output in the Spooled Tasks Viewer.

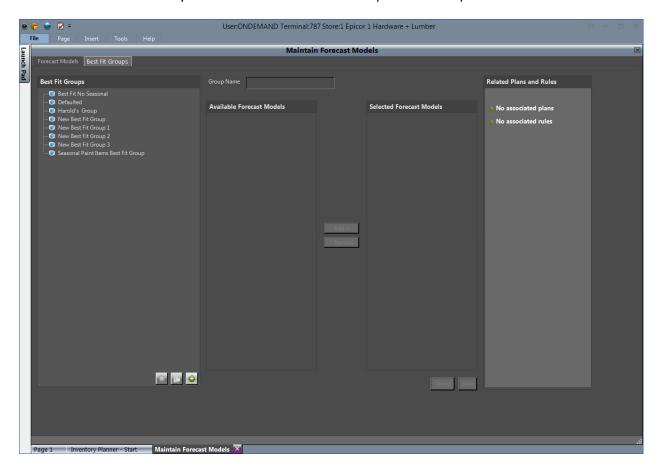
Choose Schedule

Use this section to choose the Schedule to use to execute this Plan



Best Fit Groups

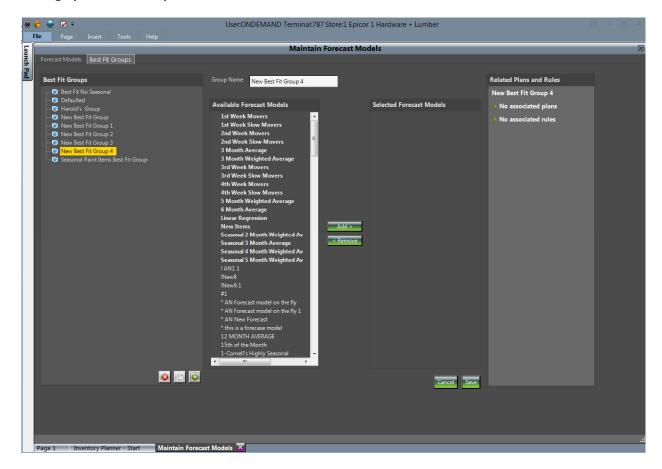
Inventory Planner allows users to create groups of Forecast Models to be used in Best Fit. The user can choose to have an Inventory Rule or Plan use a Best Fit Group to achieve optimal Results.



Benefits of Best Fit Groups

- Run Inventory Planner at any point in the month using different configurations
 - Use models that don't use Current Month
 - Use models with weeks only
- Achieve better results when running "on-demand"
 - o Create groups of models that correspond specifically to needs.
- Simulate "rolling" periods as needed
 - Use models with weeks only

Setting up Best Fit Groups



To set up Best Fit Groups, do the following:

- 1. Open Forecast Model Maintenance
- 2. Click the Best Fit Groups Tab
- 3. Click the green Plus icon to add a new group
- 4. Enter a name for the group
- 5. Select the Forecast Models to include in the group using the Add button
- 6. When all desired Forecast Models are added, click Save.

Using Best Fit Groups

To use a Best Fit Group, do the following:

- 1. Edit the Inventory Rule or Inventory Plan
- 2. Under Usage Options, select Best Fit
- 3. Using the dropdown menu, select the Best Fit Group you wish to use
- 4. Click Save

Using Best Fit Groups on Rules and Plans when upgrading from a previous Compass version

When upgrading from a previous version of Compass that did not have Best Fit Groups, the system will create a new Best Fit Group called "Default." All existing Forecast Models enabled for Best Fit on the system at the time of upgrade will be added to theis group. All existing Inventory Rules and Inventory Plans that are set to Use Best Fit will be modified to use the Default group. This means that all existing Rules and Plans will remain essentially unchanged when you upgrade