

## **Oracle® Retail Size Profile Optimization**

User Guide for the RPAS Fusion Client

Release 13.2.2.4

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Primary Author: Sneha Laxman

Contributor: Edwin Antonysamy

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# Preface

The Oracle Retail Size Profile Optimization User Guide for Fusion Client describes the application's user interface and how to navigate through it.

## Audience

This User Guide is for users and administrators of Oracle Retail Size Profile Optimization. This includes merchandisers, buyers, business analysts, and administrative personnel.

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For more information, see the following documents in the Oracle Retail Size Profile Optimization Release 13.2.2.4 documentation set:

- *Oracle Retail Size Profile Optimization Release Notes*
- *Oracle Retail Size Profile Optimization Installation Guide*
- *Oracle Retail Size Profile Optimization Implementation Guide*
- *Oracle Retail Size Profile Optimization User Guide for the RPAS Classic Client*

For more information on the Fashion Planning Bundle applications, see the following documents:

- Oracle Retail Merchandise Financial Planning documentation
- Oracle Retail Assortment Planning documentation
- Oracle Retail Item Planning documentation
- Oracle Retail Clearance Optimization Engine (COE) documentation
- Oracle Retail Item Planning Configured for COE documentation

For more information about RPAS and the RPAS Fusion Client, see the RPAS documentation set.

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- Oracle Retail ODI Enabled Integration documentation

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[http://www.oracle.com/technology/documentation/oracle\\_retail.html](http://www.oracle.com/technology/documentation/oracle_retail.html)

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<b>Convention</b>	<b>Meaning</b>
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<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.



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# Introduction

This chapter provides an overview of the Oracle Retail Size Profile Optimization (SPO) application, the products that are integrated with the application, and the features, and concepts of the application.

## Overview

Oracle Retail Size Profile Optimization (SPO) creates optimal profiles of size distribution, and prepacks by merchandise area for each store and at higher levels of aggregation on both the merchandise and store dimensions. SPO augments/enhances the analytical selection of merchandise at size-level by determining optimized size profile and creating prepacks to match them. This helps downstream applications such as Assortment Planning, Inventory Planning, and replenishment systems to translate style/color, or similar aggregate level plans or replenishment strategies, into optimal order or buy quantities by SKU at the store level.

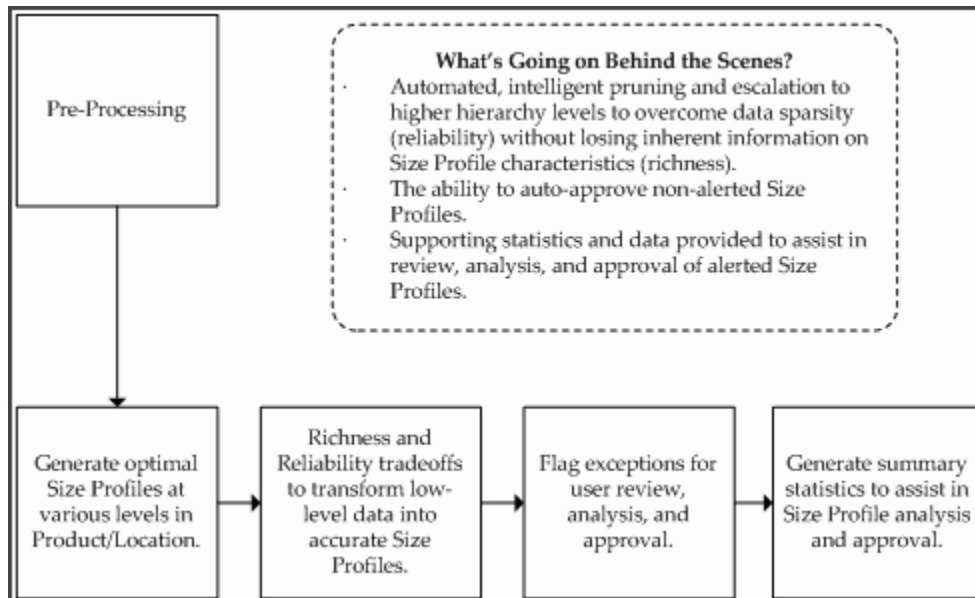
SPO reduces stock outs and end of season markdowns due to size limitations while maximizing assortment productivity, ensuring that the store's shelves are stocked with the right merchandise in the right sizes to meet customer demand. Additionally, SPO allows users to view and approve these optimal size profiles within the RPAS interface.

SPO is usually an independent activity performed to generate, review, and approve size profiles, and prepacks. The frequency of creating size profiles varies from retailer to retailer, and from product area to product area. Optimization runs for size and prepack are typically processed by season or quarter and may be run at shorter frequency or on ad-hoc basis. Frequency may vary depending on retailers, for different geographies and for different product areas.

## Size Profile Optimization Functions

The Size Profile Optimization solution includes:

- Data preprocessing to correct for stock outs and other data anomalies
- Size profile generation per store
- Richness versus reliability tradeoffs to determine optimal size profiles
- Automated sizeprofile escalation and exception-based approval of size profiles
- Manual review, analysis, and adjustments of size profiles
- Creation of location clusters based on size profiles
- Creation of prepacks aligned to cluster size profiles

**Figure 1–1 Generating Optimized Size Profiles**

## Size Profile Optimization Concepts

The sections below describe the various concepts behind SPO. The various concepts are:

- [Size Ranges](#)
- [Escalation](#)
- [Season Code Dependent Size Profiles](#)
- [Kinks and Kink Exceptions](#)

### Size Ranges

A size range is a collection of types of sizes and is an attribute of a particular collection of merchandise manufactured by a vendor (for example, S-M-L-XL). While at the lowest level in the product hierarchy, such as the Style-Color, size range is a unique attribute for each Style-Color, at higher levels in the product hierarchy a group of merchandise can have multiple valid size ranges. For example, a category may contain merchandise that includes multiple types of size ranges, such as both S-M-L-XL and 4-6-8-10. Thus, a given category/store can have multiple size profiles for each valid size range.

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**Note:** Users can view, analyze, and approve size profiles at different product/location levels as well as browse through profiles for different size ranges.

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## Escalation

SPO utilizes size profile escalation logic to determine the optimal size profile for a level in product and location hierarchies.

The escalation logic used is a predefined traversal path along hierarchies and can be defined through a combination of configuration time decisions and user inputs from within the Administration activity of SPO.

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**Note:** Refer to the "Escalation Path Management Task" section in Chapter 2, "Administration Activity" for details on how to specify the escalation path.

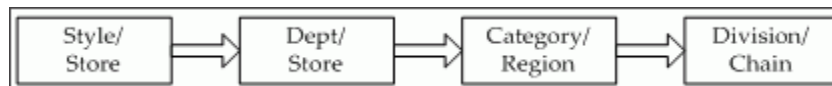
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After the escalation path has been specified, SPO uses this information to determine the optimal size profiles associated with any merchandise/location/size range combination.

The concept of escalation becomes relevant due to the automated pruning or rejection of invalid size profiles by SPO at various levels. When a size profile at a given level is pruned, SPO traverses the escalation path to determine the valid or optimal size profiles associated with that level. This does imply that higher level optimal size profiles are resolved (by approval) before lower level size profiles are resolved.

The following diagram represents an example escalation path:

**Figure 1–2 Escalation Path**



SPO traverses the predefined escalation path to resolve the size profile for each style/store. If the system does not find a profile associated with a given level in the escalation path, it traverses to the next level on the assumption that a valid profile exists in at least one level on the escalation path.

For example, for style/store, SPO attempts to look up the size profile distribution at style/store. If it does not find a valid profile at that level, it moves to department/store, then category/region, and so on.

## Season Code Dependent Size Profiles

For certain businesses, it may be necessary to further classify size profiles by season code in addition to product, location, and size range.

Season code is a merchandise attribute that classifies merchandise based on launch date or start date. Examples of season code are spring, summer, fall, and so on.

SPO can calculate and present size profiles by season code. SPO can thus determine optimal size profiles that also take season code into consideration while traversing an escalation path.

**Figure 1–3 Escalation Path Including Season Codes**



## Kinks and Kink Exceptions

Kinks are anomalies in a size range. When SPO checks generated size profiles for accuracy, it looks for anomalies in size profiles such as a size that sells for a considerably lower price than its neighbors. These are considered kinks in a size profile, and the system can prune or reject a size profile if it has kinks.

However, certain odd sizes also exhibit kinks. For example, it is acceptable or even expected that an odd size sells significantly lower than its neighboring sizes. Kink exceptions are mechanisms for users to indicate or tag these odd sizes to the system where the kinks are acceptable. By specifying these odd sizes as kink exceptions, users can indicate to the system the sizes that need to be exempted from checking for kinks when SPO conducts its checks for accuracy of calculated size profiles.

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**Note:** Kink exceptions or odd sizes within a size range can be specified from within the Size Range Management.

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## Size Profile Optimization Hierarchies

SPO utilizes the following hierarchies:

- Calendar (CLND)
- Product (PROD)
- Location (LOC)
- Size (SIZ)

The size dimension uniquely identifies a size within a corresponding size range; for example, a size of "S" comes from the "S, M, L, XL" size range. The size hierarchy displays the size in relation to the size, size range, and size length.

- Attribute (ATTR)
- Size Range (SIZR)

The size range hierarchy displays information based on the size hierarchy, including the size range and size range length.

- Escalation Levels (ELVH)

The escalation levels hierarchy groups escalation levels together along a single dimension.

- Generation ID (GIDH)

The generation ID hierarchy groups profile generations in a dimension.

- Cluster (CLSH)

The cluster hierarchy has the positions of all clusters that can be used in location clustering.

- Pack (PCC)

The pack hierarchy has the positions of prepacks.

## Size Profile Optimization Parameters

There are three types of parameters in SPO: Pre-Processing, Profile Generation, and Post-Processing. These parameters are used at various stages in the SPO batch in the calculation and pruning of size profiles.

Pre-Processing parameters can have both global and override versions. The global versions are scalar measures which can be set in the Administration, and the override versions are based on SKU/store and can be set in the Pre-Processing. The values in both versions are merged prior to running preprocessing, and are then saved in generation ID-specific measures. The SPO parameters can be specified from within the Administration activity, and the preprocessing overrides can be specified in the Pre-Processing Analysis.

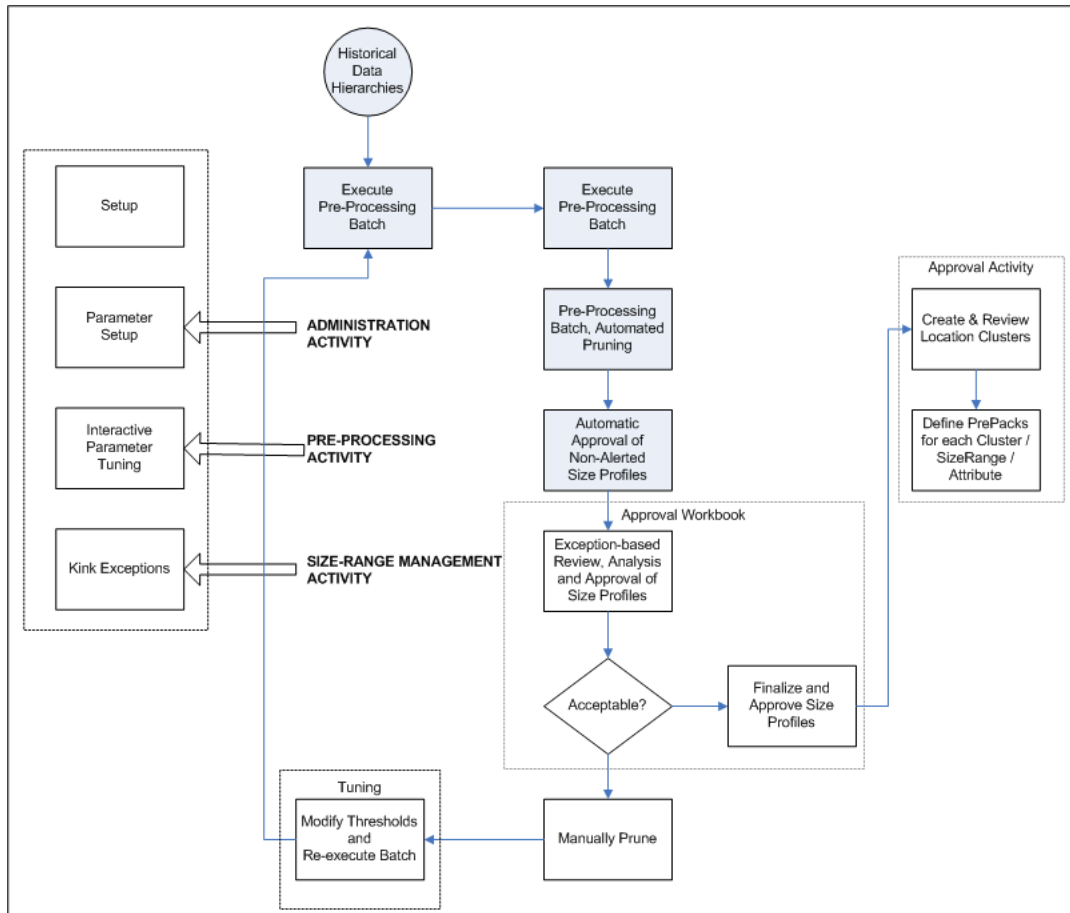
The Profile Generation and Post-Processing parameters are both escalation level-based or scalar measures, and neither has an override version. These parameters can be set in the Administration activity, and their values are stored in generation ID-specific measures prior to each batch run.

## Size Profile Optimization Process Flow and Activities

The SPO process flow consists of the initial setup, executing preprocessing, generating size profiles, the pruning of size profiles based on accuracy criteria, and finally the analysis and approval of size profiles. The manual analysis and approval of size profiles can be restricted to exception or alerted size profiles. Alerts can be configured into the SPO system.

The following diagram depicts which tasks are used for the steps in the SPO process flow:

**Figure 1-4 Size Profile Optimization Process Flow and Workflow Diagram**



### Size Profile Optimization Activities

SPO contains five templates that support the following processes:

- Administration Activity  
Used to set up the preprocessing, profile generation, and postprocessing parameters.
- Preprocessing Analysis Activity  
Used for what-if analysis of preprocessing. This is an analytical tool available for the user to adjust parameters and observe the results.

- **Size Range Management Activity**  
Used to manage size ranges (including sub-size ranges) and product-to-size-range relationships, to specify kink exceptions and kink exception ratios, and to request size profile runs for specific size ranges.
- **Size Profile Approval Activity**  
Used to adjust and approve the generated profiles. Only approved profiles can be used in the escalation and export.
- **Location Clustering and Pack Definition Activity**  
Used to create a specified number of location clusters based on similarity in their size profiles. In addition, there is a new functionality of prepack definition added in this, which allows users to define prepacks using cluster size profiles.

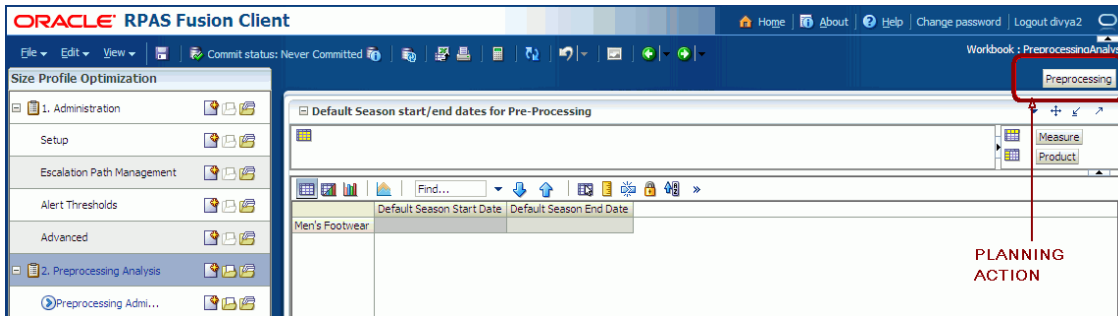
The SPO user workflow comprises the following steps:

1. Use the Administration activity to set up the parameters.
2. Use the Preprocessing Analysis activity to perform what-if analysis and tune the parameters.
3. Use the Size Range Management activity to specify the subset of size ranges for which the size profile batch needs to be executed.
4. Run a batch to generate size profiles.
5. Use the Approval activity to view the generated profiles and exceptions, adjust and approve the profiles, and review the resolved profile at the lowest level.
6. Use the Location Clustering activity to create clusters.
7. Create prepack containers using computed cluster profiles.

## SPO Planning Actions

Some steps of the Size Profile Optimization require certain Planning Actions to be executed. They are available on the menu bar as shown here. The Planning Action for SPO are available on the menu bar for some activities. The menu options varies depending on the currently open activity.

**Figure 1–5 Planning Action for the Preprocessing Analysis**



The Planning Actions available for each of the Size Profile Optimization steps are as follows:

- Preprocessing Analysis Activity
  - Preprocessing
- Size Profile Activity
  - Approve Level
- Location Clustering and Pack Definition Activity
  - Location Clustering

### Preprocessing

The Preprocessing planning option is used to initiate Preprocessing. The Preprocessing planning action is a batch process. This planning action cleanses historic data based on user set parameters, and thresholds.

### Approve Level

An Approve Level option is available for every size profile level displayed in the activity, based on the selections made in the Size Profile Approval process.

The number of Approve Levels displayed depends on the number of escalation levels chosen in the Size Profile Approval activity. The Approve Level that the user approves becomes the escalation level at which the hierarchy is maintained.

### Location Clustering

The Location Clustering option creates location clusters and assigns each of the selected locations to one of the clusters.

## Custom Settings

The standard release of SPO is optimized for typical workflow of the intended users. It can be customized further based on retailer policies or user preference using the following options:

- [Save Format](#)
- [User Administration](#)
- [Using the Alert Manager](#)

### Save Format

To save the format in which each is displayed, use the Save Format feature. This ensures that when this is retrieved or when similar s are created in the future, the user is presented with the same format. To ensure that the data entered is saved in template format, click the View menu and select Save Format.

### User Administration

For information about creating, modifying, and editing users in SPO, see the *RPAS Administration Guide for the Classic Client* or the *RPAS Administration Guide for the Fusion Client*.

### Using the Alert Manager

This is used to setup alerts for SPO. Alert Manager provides user-defined and user-maintained exception reporting. You can define a measure and have it evaluated to see if any of its values fall outside an acceptable range or do not match a given value. When this happens, an alert is generated to let you know that a value may need to be examined and possibly amended in a workbook. For more information about Alert Manager, see the *RPAS User Guide for the Fusion Client* or *RPAS User Guide for the Classic Client*.

**Figure 1–6 Alert Manager**

The screenshot shows the Oracle RPAS Fusion Client interface. The left navigation pane includes sections for Administration (Auto Workbook Maintenance, Password Policy Administration, Security Administration, Translation Administration, Alert Manager, Hierarchy Maintenance), Analysis, and User Administration. The main content area displays a welcome message and instructions for using the Activity Taskflow pane. Below this, the 'Manage Alerts' section is visible, showing a table of alerts.

Alert Name	Category	Count	As Of	Resolved
Approve Alert Esc Level L01 G1	APPROVAL	6	06/24/2010	<input type="checkbox"/>
Approve Alert Esc Level L02 G1	APPROVAL	1	06/24/2010	<input type="checkbox"/>
Approve Alert Esc Level L03 G1	APPROVAL	1	06/24/2010	<input type="checkbox"/>
Approve Alert Esc Level L04 G1	APPROVAL	4	06/24/2010	<input type="checkbox"/>
Approve Alert Esc Level L05 G1	APPROVAL	1	06/24/2010	<input type="checkbox"/>
Approve Alert Esc Level L06 G1	APPROVAL	2	06/24/2010	<input type="checkbox"/>



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## Administration Activity

This chapter contains the following topics:

- [Administration Activity Wizard](#)
- [Setup Task](#)
- [Escalation Path Management Task](#)
- [Alert Thresholds Task](#)
- [Advanced Task](#)

### Introduction

The Administration task is used to set parameter values, define alert thresholds, define the escalation path, and manage the Generation ID.

The Administration Activity contains the following tabs:

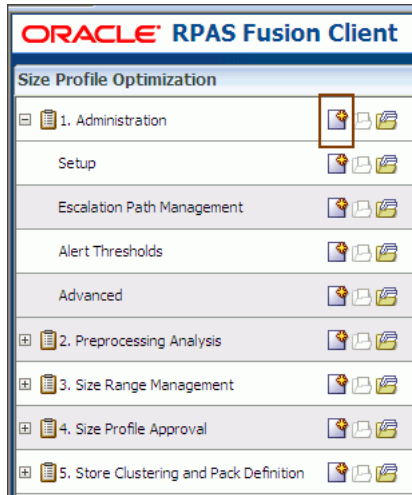
- [Setup Task](#)
- [Escalation Path Management Task](#)
- [Alert Thresholds Task](#)
- [Advanced Task](#)

## Administration Activity Wizard

To build the Administration activity, perform the following steps:

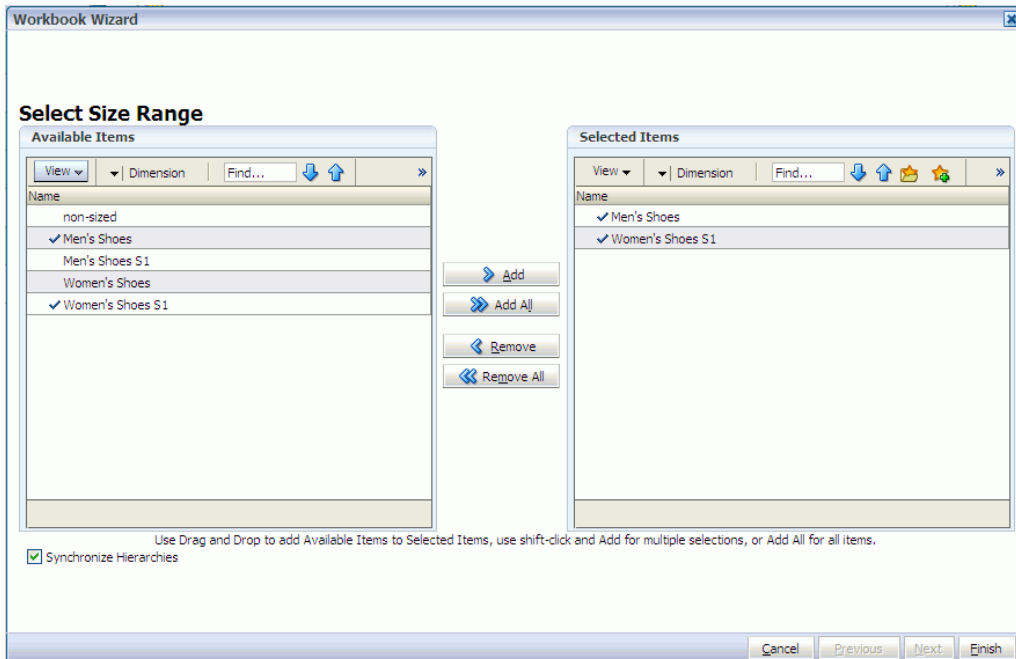
1. Click the **Create New Workbook** icon in the Administration activity.

**Figure 2–1 Create New Workbook Icon**



2. The workbook wizard opens at the Select Size Range screen. Select the desired size range and click **Finish**.

**Figure 2–2 Workbook Wizard: Select Size Range**



The Administration workbook is built.

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**Note:** The size range selections apply only to the specification of kink exception thresholds in the Alert Thresholds.

---

## Setup Task

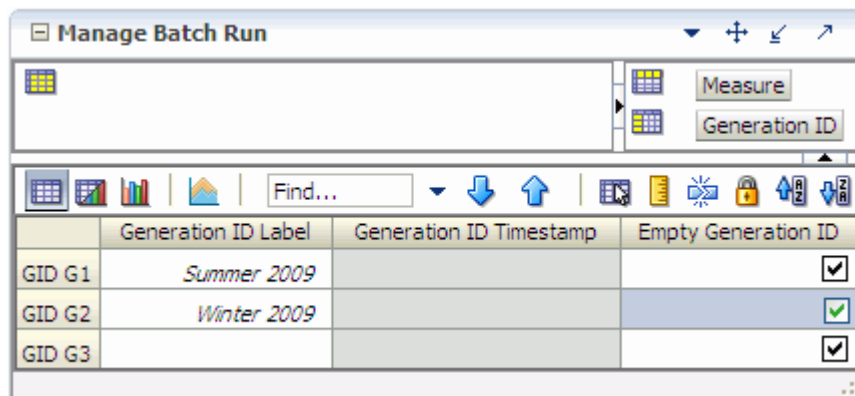
The following sections describe the steps available in the Setup task:

- [Manage Batch Run View](#)
- [Basic Setup View](#)
- [Set Default Season Start/End Date View](#)

## Manage Batch Run View

This view is used to trigger the generation (or re-generation) of sizeprofiles associated with each generation ID.

**Figure 2–3** *Manage Batch Run View*



The following table describes the measures available in the Manage Batch Run view:

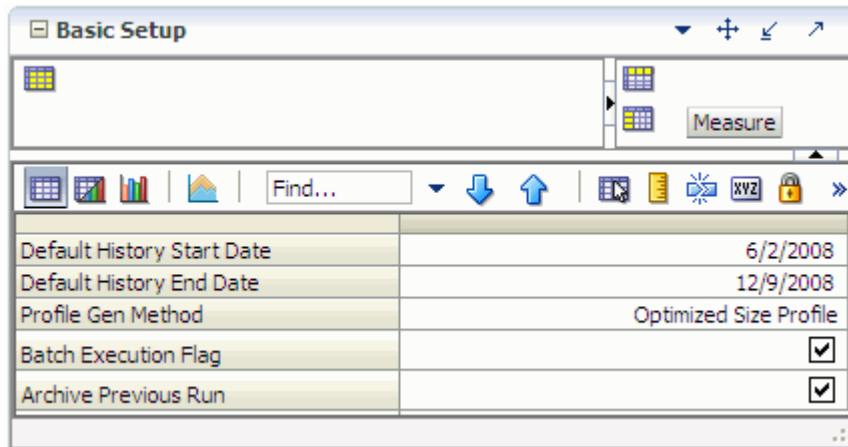
**Table 2–1** *Manage Batch Run View Measures*

Measure	Description
Generation ID Label	A user-specified descriptive label for the profile generation ID.
Generation ID Timestamp	This is updated upon successful completion of the SPO batch. It indicates the timestamp of the previous SPO run associated with the generation ID.
Empty Generation ID	This indicates to the SPO batch that it is empty, and reuse the generation ID.

## Basic Setup View

The Basic Setup view is used to specify the basic parameters for this size profile run.

**Figure 2–4 Basic Setup View**



The following table describes the measures available on the Basic Setup view.

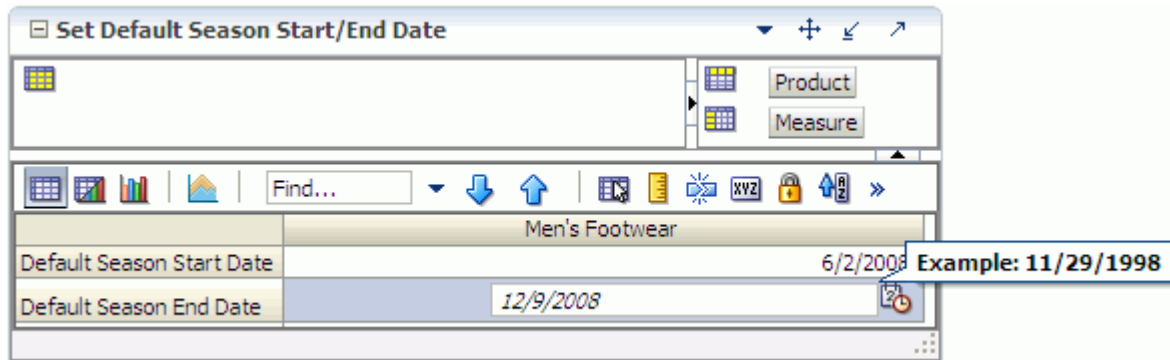
**Table 2–2 Basic Setup View Measures**

Measure	Description
Default History Start Date	Indicates the first date in history that is used for computing this size profile run.
Default History End Date	Indicates the last date in history that is used for computing this size profile run.
Profile Gen Method	Specifies the profile generation method to use for computing size profiles. Options are: Optimized Size Profiles and Normalized Size Profiles.  Normalized generation method considers the values within the valid threshold (treat the others as invalid) and create a profile based on these values. Normalized size profiles are basically the normalized ratio of pre-processes historic sales.  Optimized generation method tries to insert estimated values for the invalid values and uses that for generating the profile. Optimized size profile is the MLE approach in the SPO insight.
Batch Execution Flag	This indicates the SPO batch needs to be executed. The SPO batch, when invoked, checks if this flag is true and only then continues processing.
Archive Previous Run	When this is selected, it would archive the results from the previous Sizeprofile run.

## Set Default Season Start/End Date View

The set default season start/end date view is used to set different start, and end dates for the season for each of the size ranges that are being optimized.

**Figure 2–5 Set Default Season Start/End Date View**



The following table describes the measures available on the Set Default Season Start/End Date View:

**Table 2–3 Season Start/End Date View Measures**

Measures	Description
Default Season Start Date	Used for fashion items, this date indicates the season start date. It is used for preprocessing.
Default Season End Date	Used for fashion items, this date indicates the season end date. It is used for preprocessing.

## Escalation Path Management Task

Escalation levels are the intersections at which size profiles can be generated. An escalation path is an ordered subset of escalation levels.

The following section describes the views available in the Escalation Path Management task:

- [Escalation Path Management View](#)
- [Escalation Path Order Override View](#)

## Escalation Path Management View

The view displays the escalation level order, and allows you to enable/disable escalation levels for this run of the SPO batch.

IF SPO is unable to obtain a valid sizeprofile for a style-color/store, it tries to escalate to a higher level where a reliable profile may exist.

Escalation starts with level one, and goes through to all of the higher levels that are enabled.

The standard escalation levels are defined as an administration task and may be modified or extended.

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**Note:** For more information on administering the plug-in, refer to the *Oracle Retail Size Profile Optimization Implementation Guide*.

---

**Figure 2–6 Escalation Path Management View**

	Enable/Disable Escalation Levels	Escalation Level Order	Escalation Level Intersection Label
level 01	<input checked="" type="checkbox"/>	1	Class/Store/Size/Attribute Code
level 02	<input checked="" type="checkbox"/>	2	Class/Region/Size/Attribute Code
level 03	<input checked="" type="checkbox"/>	3	Class/Size/Season Code
level 04	<input checked="" type="checkbox"/>	4	Department/Store/Size/Sku Grouping
level 05	<input checked="" type="checkbox"/>	5	Department/Region/Size/Sku Grouping
level 06	<input checked="" type="checkbox"/>	6	Department/Size
level 07	<input checked="" type="checkbox"/>	7	Division/Store/Size
level 08	<input checked="" type="checkbox"/>	8	Division/Region/Size
level 09	<input checked="" type="checkbox"/>	9	Division/Size
level 10	<input checked="" type="checkbox"/>	10	Size

The following table describes the measures available here are:

**Table 2–4 Escalation Path Management View Measures**

Measure	Description
Enable/Disable Escalation Levels	When this check box is selected, it enables the escalation levels. When you de-select this check box, it disables escalation levels.
Escalation Level Intersection Label	The label associated with each escalation level. Note that this measure is also an attribute measure, which can be used throughout the SPO solution as a display attribute.
Escalation Level Order	Indicates the order of escalation path traversal. See the " <a href="#">Size Profile Optimization Concepts</a> " section for more details on escalation paths.

As per standard configuration, there are ten levels. Number of escalation levels may be increased using the plug-in provided with the SPO product. For more information on the new plug-in, refer to the *SPO Implementation Guide*.

## Escalation Path Order Override View

Use this view to override the default escalation path that was displayed in the Escalation Path Management view. In this view specify the escalation path overrides at the escalation path override level.

**Figure 2–7 Escalation Path Order Override View**

	level 01	level 02	level 03	level 04	level 05	level 06	level 07	level 08	level 09	level 10
Escalation Level Order Override	5	3	2	6	1	7	8	6	9	10

**Table 2–5 Escalation Path Order Override View Measures**

Measure	Description
Escalation Level Order Override	The escalation level orders that override the default orders.

## Alert Thresholds Task

The Alert Thresholds Task allows users to review and modify any thresholds for alerts in the SPO batch runs.

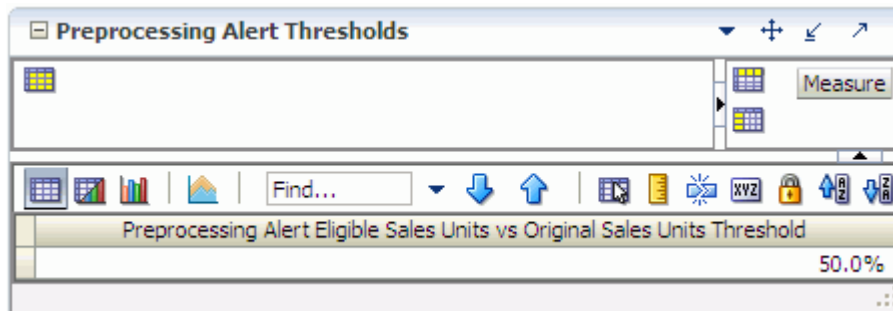
The following section describes the steps available in the Alert Thresholds Task:

- [Preprocessing Alert Threshold View](#)
- [Kink Exception Ratio View](#)

### Preprocessing Alert Threshold View

This view allows users to review and modify alert thresholds for preprocessing alerts.

**Figure 2–8 Preprocessing Alert Threshold View**



The following table describes the measures available here are:

**Table 2–6 Preprocessing Alert Threshold View Measures**

Measure	Description
Preprocessing Alert Eligible Sales Units vs Original Sales Units Threshold	The threshold used by the Preprocessing Alert. This alert compares the original unfiltered sales to the filtered sales. If the ratio of the total filtered sales for the SKU/store to the total original unfiltered sales exceeds this threshold, then this implies the system has preprocessed too many sales and the alert parameter is set to true.

## Kink Exception Ratio View

This view allows the user to override the thresholds for the inner and outer ratios for Kink. This may be defined separately for each of the size ranges in the view.

**Figure 2–9** Kink Exception Ratio View

	Kink Inner Ratio	Kink Outer Ratio
Men's Shoes	1.10	1.03
Women's Shoes S1	1.10	1.03

The following table describes the measures available here are:

**Table 2–7** Preprocessing Alert Threshold View Measures

Measure	Description
Kink Inner Ratio	The threshold for the inner ratio. If the inner and outer ratios of a size exceed the kink inner and kink outer ratios specified, the system will consider the size a kink. See the Kink Ratio View for a definition of the inner ratio and other information.
Kink Outer Ratio	The threshold for the outer ratio. If the inner and outer ratios of a size exceed the kink inner and kink outer ratios specified, the system will consider the size a kink. See the Kink Ratio View for a definition of the outer ratio and other information.

## Advanced Task

The following section describes the different steps available in the Advanced Task:

- [Preprocessing Parameters Default View](#)
- [Profile Generation Parameters View](#)
- [Postprocessing Parameters View](#)

### Preprocessing Parameters Default View

This view displays the default parameters defined for preprocessing. This applies across all items and may be edited here. Editing these parameters impacts the size profile runs requested in this view.

**Figure 2–10 Preprocessing Parameters Default View**

Parameter Name	Value
Inventory Unit Threshold (SKU/Store/Week Eligibility)	1
Max Inventory Percentage Threshold (SKU/Store/Week Eligibility)	1.0%
Sales Unit Threshold (Sku/Store/Week Eligibility)	0
Inventory Unit Threshold (Start/End Date)	1
Sales Unit Threshold (Start/End Date)	1
Maximum Inventory Percentage Threshold (Start/End Date)	5.0%
Total Sales Threshold (SKU /Store Eligibility)	1
Eligible Weeks Percentage Threshold (SKU/Store Eligibility)	10.0%
Season Length Threshold (SKU/Store Eligibility)	1
Eligible SKUs Percentage Threshold - Optimized (SKU Parent/Store/Week Eligibility)	41.0%
Eligible SKUs Threshold - Optimized (SKU Parent/Store/Week Eligibility)	2
SKU Parent/Store Eligible Week Threshold (SKU Parent/Store Eligibility)	2
Total Sales Threshold (SKU Parent/Store Eligibility)	1
Eligible SKU's Threshold (SKU Parent/Store Eligibility)	2

The following table describes the measures available on this view.

**Table 2–8 Preprocessing Parameters Default View Measures**

Measure	Description
Inventory Units Threshold (SKU/Store/Week Eligibility)	The minimum inventory level needed for the SKU/store/week to be considered eligible.
Max Inventory Percentage Threshold (SKU/Store/Week Eligibility)	The SKU/store/week is considered eligible only if its inventory expressed as a percentage of the maximum inventory for the SKU/store is greater than the max inventory percentage threshold specified.
Sales Unit Threshold (Sku/Store/Week Eligibility)	The first and last date of history where sales units exceed this measure are used in the season length calculation.

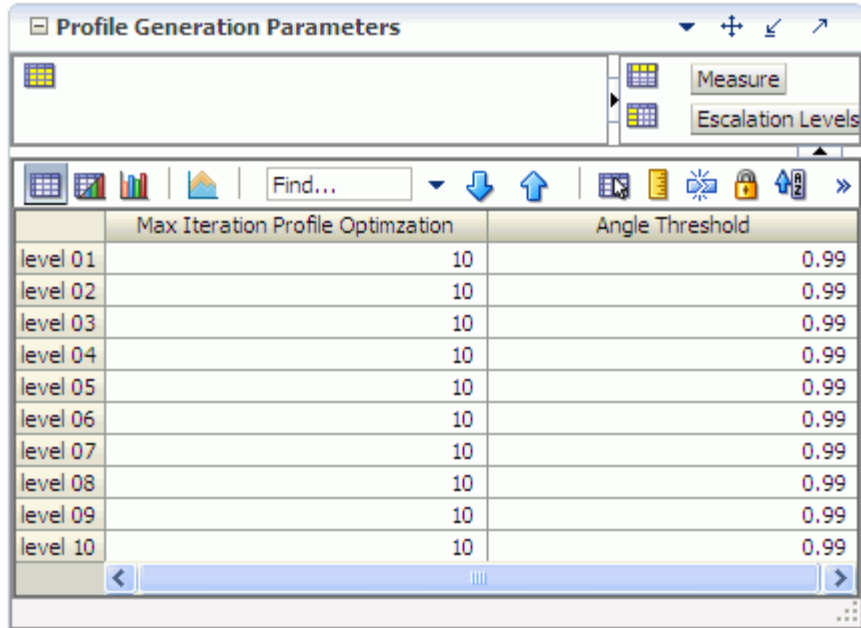
**Table 2–8 (Cont.) Preprocessing Parameters Default View Measures**

<b>Measure</b>	<b>Description</b>
Inventory Units Threshold (Start/End Date)	When calculating the season length of a SKU/store, inventory for a given week needs to exceed this inventory units value for that SKU/store/week to be considered eligible for the season length calculation.
Sales Unit Threshold (Start/End Date)	When calculating the season length of a SKU/store, sales units for a given week, for that SKU/store needs to exceed this sales unit threshold value for that SKU/store/week to be considered eligible for the season length calculation.
Maximum Inventory Percentage Threshold (Start/End Date)	When calculating the season length of a SKU/store, inventory for a given week, expressed as a percentage of max inventory for that SKU/store, needs to exceed this max inventory percentage threshold value for that SKU/store/week to be considered eligible for the season length calculation.
Total Sales Threshold (SKU/Store Eligibility)	Used in the SKU/store eligibility check, if the total sales for a SKU/store exceeds this threshold, then it is considered eligible.
Eligible Weeks Percentage Threshold (SKU/Store Eligibility)	A SKU/store is considered eligible if the ratio of its eligible weeks to its season length exceeds this threshold. Minimum ratio of eligible weeks to season length needed for SKU/Store eligibility.
Season Length Threshold (SKU/Store Eligibility)	A SKU/store is considered eligible if its season length calculated is above this threshold.
Eligible SKU Percentage Threshold Optimized (SKU Parent/Store/Week Eligibility)	If the total number of eligible SKUs for a given SKU parent/store/week expressed as a percentage of total SKUs exceeds the threshold, then the SKU parent/store/week is considered eligible.
Eligible SKUs Threshold Optimized (SKU Parent/Store Eligibility)	If the number of eligible SKUs for a given SKU parent/store exceeds this threshold, the SKU parent/store is considered eligible.  Note: SKU/Parent in the context of SPO refers to Style-Color.
SKU Parent/Store Eligible Week Threshold (SKU Parent/Store Eligibility)	SKU parent/store eligible weeks threshold is used in SKU parent/store eligible calculation. This is the minimum number of weeks required for the SKU Parent / Store to be considered eligible.
Total Sales Threshold (SKU Parent/Store Eligibility)	Used in the SKU parent/store eligibility check. If the total sales for a SKU parent/store exceeds this threshold, then it is considered eligible.
Eligible SKUs Threshold (SKU Parent/Store Eligibility)	If the number of eligible SKUs for a given SKU parent/store is above this threshold, it is considered eligible.

## Profile Generation Parameters View

The Profile Generation Parameters view allows users to review and modify parameters used to calculate profiles at various escalation levels based on the escalation level's intersection.

**Figure 2–11 Profile Generation Parameters View**



The following table describes the measures available on this view.

**Table 2–9 Profile Generation Parameters View Measures**

Measure	Description
Max Iteration Profile Optimization	This is used by the Optimized Size Profile method. This measure indicates the maximum number of iterations after which the algorithm will stop and return size profile from the last iteration.
Angle Threshold	This is used by the Optimized Size Profile method. The method calculates size profiles iteratively, and calculates the angle between the size profile from a given iteration to the size profile from the previous iteration. If the angle falls within the specified threshold, the system returns the latest value of the size profiles. No further iteration happens beyond this.

## Postprocessing Parameters View

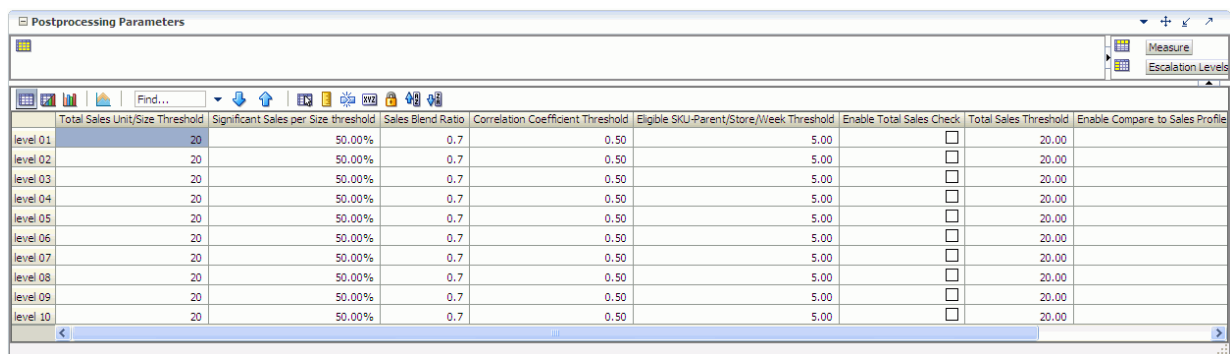
Post processing is performed to check size profiles for accuracy and reject or prune size profiles if they do not meet accuracy criteria. The Postprocessing Parameters view allows users to review and modify post processing parameters that drive the criteria for size profile accuracy.

SPO primarily performs the following types of postprocessing:

- Blending or comparison to sales size profiles
- Comparison to chain size profiles
- Significant sizes check
- Total sales check
- Contributing number of SKU parent/store/weeks check

In addition, the system also looks for kinks in size profiles. This functionality is described in the "[Kinks and Kink Exceptions](#)" and in the "[Size Range Management Activity](#)" chapters.

**Figure 2–12 Postprocessing Parameters View**



	Total Sales Unit/Size Threshold	Significant Sales per Size threshold	Sales Blend Ratio	Correlation Coefficient Threshold	Eligible SKU-Parent/Store/Week Threshold	Enable Total Sales Check	Total Sales Threshold	Enable Compare to Sales Profile
level 01	20	50.00%	0.7	0.50	5.00	<input type="checkbox"/>	20.00	
level 02	20	50.00%	0.7	0.50	5.00	<input type="checkbox"/>	20.00	
level 03	20	50.00%	0.7	0.50	5.00	<input type="checkbox"/>	20.00	
level 04	20	50.00%	0.7	0.50	5.00	<input type="checkbox"/>	20.00	
level 05	20	50.00%	0.7	0.50	5.00	<input type="checkbox"/>	20.00	
level 06	20	50.00%	0.7	0.50	5.00	<input type="checkbox"/>	20.00	
level 07	20	50.00%	0.7	0.50	5.00	<input type="checkbox"/>	20.00	
level 08	20	50.00%	0.7	0.50	5.00	<input type="checkbox"/>	20.00	
level 09	20	50.00%	0.7	0.50	5.00	<input type="checkbox"/>	20.00	
level 10	20	50.00%	0.7	0.50	5.00	<input type="checkbox"/>	20.00	

The following table describes the measures available on this view:

**Table 2–10 Postprocessing Parameters View Measures**

Measure	Description
Total Sales Unit/Size Threshold	Total sales units per size for the size to be considered significant. Significant sizes are used to determine if a size profile is reliable; for example, if a size profile does not have sufficiently significant sizes, it is rejected by the system.
Significant Sales per Size Threshold	This ratio serves as a threshold when determining if the filtered sales associated with the size are too large compared to total sales. If the ratio of total filtered sales associated with a size for a given partition position to the total sales for all sizes within the size range for that partition position exceeds this threshold, then the associated size profile is automatically pruned.
Sales Blend Ratio	Used only when Enable Normalized multiple is False, this indicates the ratio of unfiltered sales profile (based on actual unfiltered history) to use in the blending process to generate final size profiles.

**Table 2–10 (Cont.) Postprocessing Parameters View Measures**

Measure	Description
Correlation Coefficient Threshold	<p>Indicates the minimum correlation coefficient between raw profile and chain level profile. This is used in postprocessing to identify situations where the size profiles do not look in any way similar to the corresponding chain level aggregate size profiles. This check can effectively be disabled by specifying a very low threshold.</p> <p>Correlation coefficient is an indication of the degree to which two variables (in this case a calculated size profile for a given level and its corresponding chain level size profile) are linearly related.</p> <p>A correlation coefficient of 1 indicates there is a perfect relationship between the two variables, meaning that whenever one variable has a high (low) value, so does the other.</p> <p>A correlation coefficient of -1 indicates there is a negative relationship, meaning that whenever one variable has a high (low) value, the other has a low (high) value.</p> <p>A correlation coefficient of 0 means that there is no linear relationship between the variables.</p> <p>Correlation coefficient is calculated as:</p> $\frac{n \sum x_i y_i - \sum x_i \sum y_i}{\sqrt{n \sum x_i^2 - (\sum x_i)^2} \sqrt{n \sum y_i^2 - (\sum y_i)^2}}$ <p>Where:</p> <ul style="list-style-type: none"> <li>■ n = the size length</li> <li>■ x = the size profile for a given level</li> <li>■ y = the chain level size profile</li> <li>■ i = ranges from 1 to n, for each size in the size range</li> </ul>
Eligible SKU-Parent/Store/Week Threshold	<p>If the number of contributing SKU parent/store/week combinations used for calculating a size profile is below this threshold, the size profile is pruned or rejected.</p>
Enable Total Sales Check	<p>Enable this check to see if the total eligible sales that were used for calculating the size profile are below a certain threshold. If the total contributing sales is below this threshold, the size profile is pruned or rejected. The threshold is specified in the Total Sales Check Threshold measure.</p>
Total Sales Threshold	<p>This is used when the Enable Total Sales check flag is set to True. If the total contributing sales is below this threshold, the size profile is pruned or rejected.</p>
Enable Compare to Sales Profile Check	<p>This flag enables the Compare to Sales Profile check and automatically disables blending functionality. Note that the Compare to Sales Profile check and Blending are two mutually exclusive postprocessing concepts.</p> <p>Profiles against normalized actual unfiltered historic sales:</p> <p>If the ratio of the calculated size profile to corresponding normalized sales (for a given size) exceeds the normalized multiple threshold specified, the system will automatically prune the size profile.</p>

**Table 2–10 (Cont.) Postprocessing Parameters View Measures**

Measure	Description
Sales Profile Comparison Threshold	This is used when the Compare to Sales Profile check flag is set to True. If the ratio of the calculated size profile to corresponding normalized unfiltered sales (for a given size) exceeds the Sales Profile Comparison threshold specified, the system will automatically prune the size profile.



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## Preprocessing Analysis Activity

The preprocessing analysis activity includes an introduction to preprocessing analysis, and the procedure to use the preprocessing analysis.

### Introduction

Preprocessing is performed to account for stock out situations and short lifecycle items in regards to item start and exit periods. Since sales history during stock-out situations and the launch and exit of an item is not a true indicator of demand, SPO has sophisticated preprocessing techniques to identify and flag these situations so that such data points are not taken into account while computing size profiles.

The Preprocessing Analysis activity contains the following tasks:

- [Preprocessing Administration Task](#)
- [Preprocessing Results](#)
- [Preprocessing Summary Statistics Task](#)

The Preprocessing Analysis activity allows users to tune, override, and review the impact of updating preprocessing parameters before committing their updates to the preprocessing parameters. These updated parameters are then utilized by the next SPO batch run.

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**Note:** The results of preprocessing viewed within the Preprocessing are not committed back to database; only the parameters themselves can be committed back to database.

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Preprocessing is executed prior to actual size profile generation in the SPO batch. Preprocessed or filtered sales history is used to generate size profiles.

Preprocessing has a nested approach to evaluating eligibility (or valid data points for consideration for size profile generation). The system first tries to identify start and end dates for all SKU/stores, then it looks at historic sales and inventory data and eliminates data points with insufficient history and inventory at the start and end of an item lifecycle.

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**Note:** The start and end date of an item lifecycle are identified by season start and end dates for fashion SKUs and history start and end dates for basic SKUs.

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When the item start and end date of a SKU/store has been identified, its season length is calculated as

$$(\text{end\_dt} - \text{start\_dt}) / 7 + 1.$$

Next, the SKU/store/week, SKU/store, SKU parent/store, and SKU parent/store/week level data points are evaluated for eligibility.

Note that if a SKU/store or SKU parent/store is considered ineligible, all corresponding data points (down to the SKU/store/week level) are considered ineligible for size profile calculation.

The following points outline the preprocessing process:

1. SKU/store/week level eligibility is determined based on:
  - The SKU/store/week lying within the start and end dates determined as in the calculation given above.
  - No out of stock situation was observed for that SKU/store/week.
    - Criteria for stock out situation is again based on user specified thresholds for inventory levels (Inventory Units and Max Inventory Percentage threshold) and observed sales was above a certain user specified threshold (Sales Unit threshold - SKU/store/week eligibility).
  - If it belongs to an eligible SKU/store (criteria described below).
2. SKU/store level eligibility is determined based on:
  - Season length for the SKU/store is long enough (season length threshold).
  - Total sales for the SKU/store are not below a certain user-defined threshold (total sales threshold).
  - The SKU/store has significant eligible sales periods within its season length.
    - This is determined by taking the ratio of total eligible season weeks of the SKU/store to its season length and checking to see if it is above a user-defined threshold (eligible weeks percentage).
3. SKU parent/store/week eligibility is determined by:
  - For each given store, for the given week, if the SKU parent has significant enough SKUs (based on a user-defined threshold) that are eligible for that store/week, then the SKU parent is eligible for that store/week. Also, the number of SKUs should be greater or equal to certain percentage of the total number of sizes in the corresponding size range (the percentage is set by user).
  - If it belongs to an eligible SKU parent/store (criteria determined as below).
4. SKU parent/store eligibility:
  - Start and end dates calculated as median of the start and end dates of SKU/stores.
  - Number of eligible weeks for the SKU parent is greater than a user-defined threshold.
  - Number of eligible SKUs for the SKU parent is greater than a user-defined threshold.
  - The total sales units are greater or equal to certain threshold (set by user) for given SKU parent/store.

## Pre-Processing for Normalized Size and Optimized Size Profile

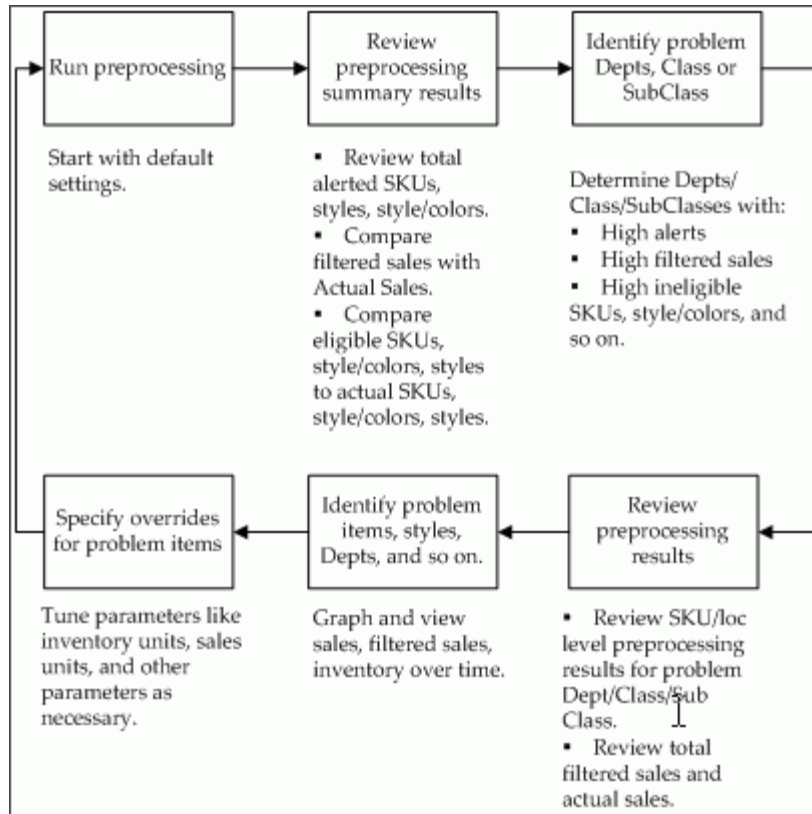
**Table 3–1 Comparison of preprocessing**

Concepts	Normalized Size Profile	Optimized Size Profile
Definition	Pre-processing for Normalized size profiles looks at the number of eligible SKU/store/weeks to determine if a styleColor/store/week is eligible.	Pre-processing for Optimized Size Profiles tries to utilize more data, by not rejecting non-stocked out SKU/store/weeks even if other sizes in the stylecolor had stocked out. This is because Optimized Size Profiles tries to estimate demand for the stylecolor/week/store first, and then calculates size profile distributions for the stylecolor.
Stocks Included for Size Profile	In the event of a stock out in certain sizes for a given week, if the number of stocked out SKUs for the week exceeds a certain fraction (user defined threshold) of the total number of sizes in the size range, then the entire stylecolor/store/week is considered ineligible (or discarded by preprocessing)	A sku/store/week is considered eligible if it belongs to an eligible sku-parent/store/week.
Mask Measures	Normalized Sales Profile Elig Flag	Eligible OptimizedSize Profile Mask

## Using the Preprocessing Analysis Activity

The following diagram outlines how to use the Preprocessing Analysis Activity:

**Figure 3–1 How to Use the Preprocessing Analysis**



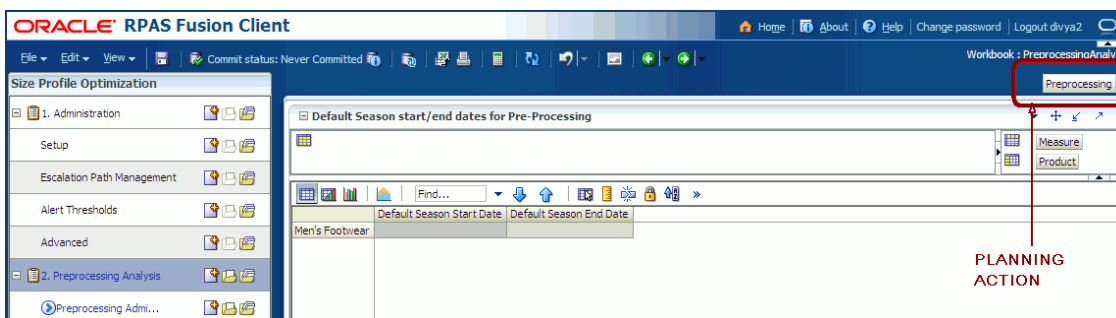
## Planning Action

The following planning action is available for the Preprocessing Analysis activity:

- Preprocessing

The Preprocessing planning action is used to initiate Preprocessing. The Preprocessing planning action is a batch process. This planning action cleanses historic data based on user set parameters, and thresholds.

**Figure 3–2 Planning Action for the Preprocessing Analysis Workbook**

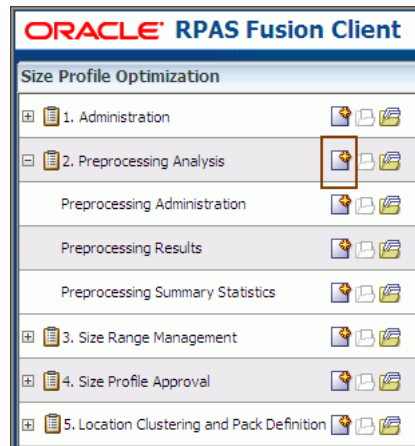


## Preprocessing Analysis Activity Wizard

To build the Preprocessing Analysis activity, perform the following steps:

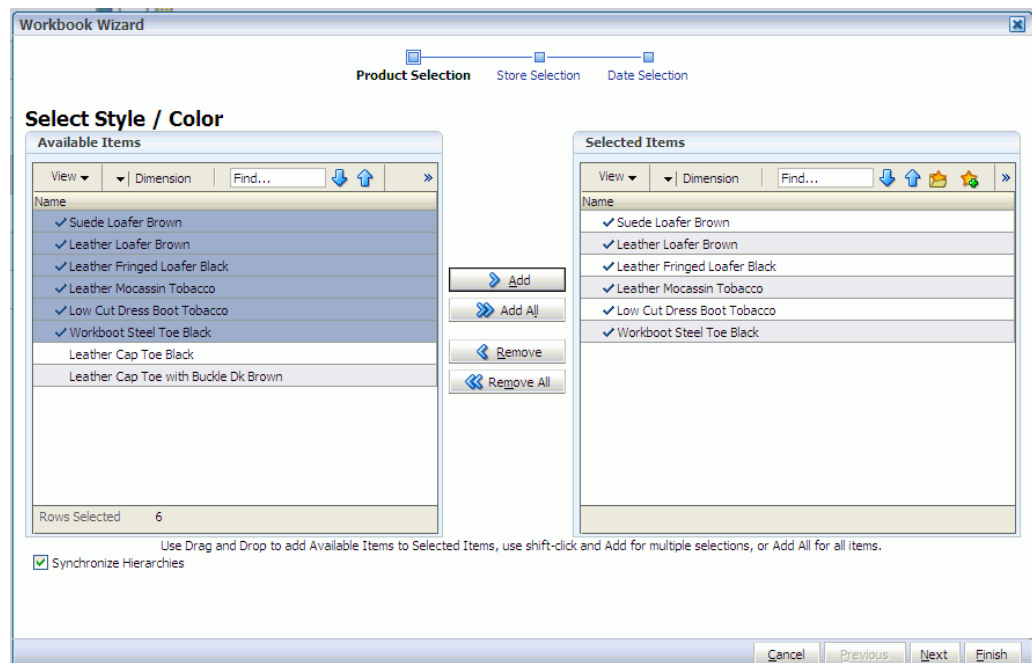
1. Click the **Create New Workbook** icon in the Preprocessing Analysis activity.

**Figure 3–3 Create New Workbook Icon**



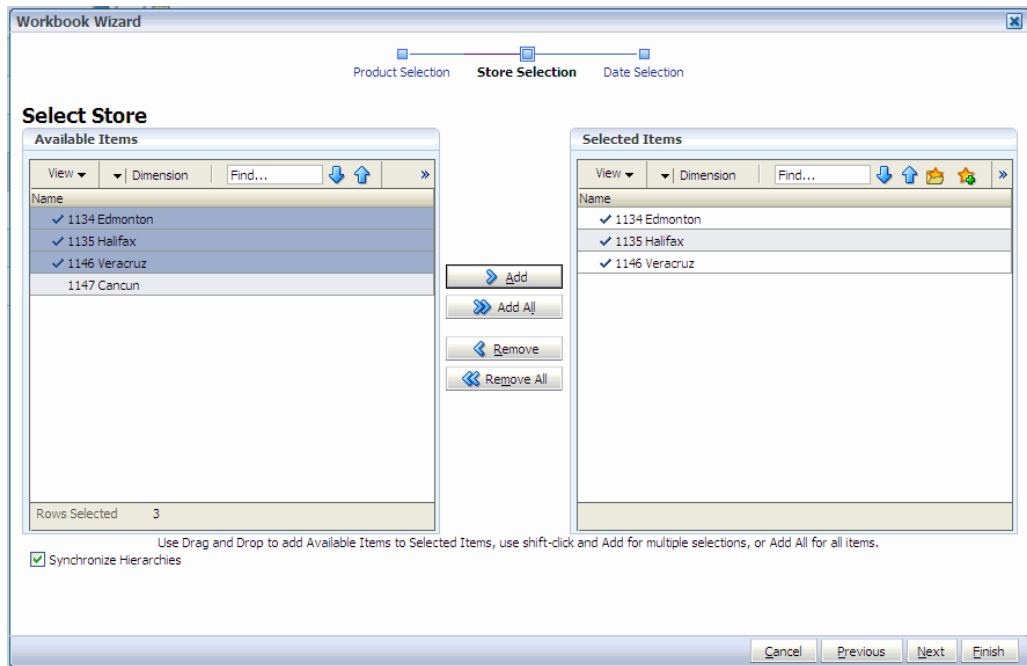
2. The Select Style/Color workbook wizard is displayed. Select the products you would like to analyze and for which you want to update parameters, and click **Next**.

**Figure 3–4 Workbook Wizard: Select Style/Color**



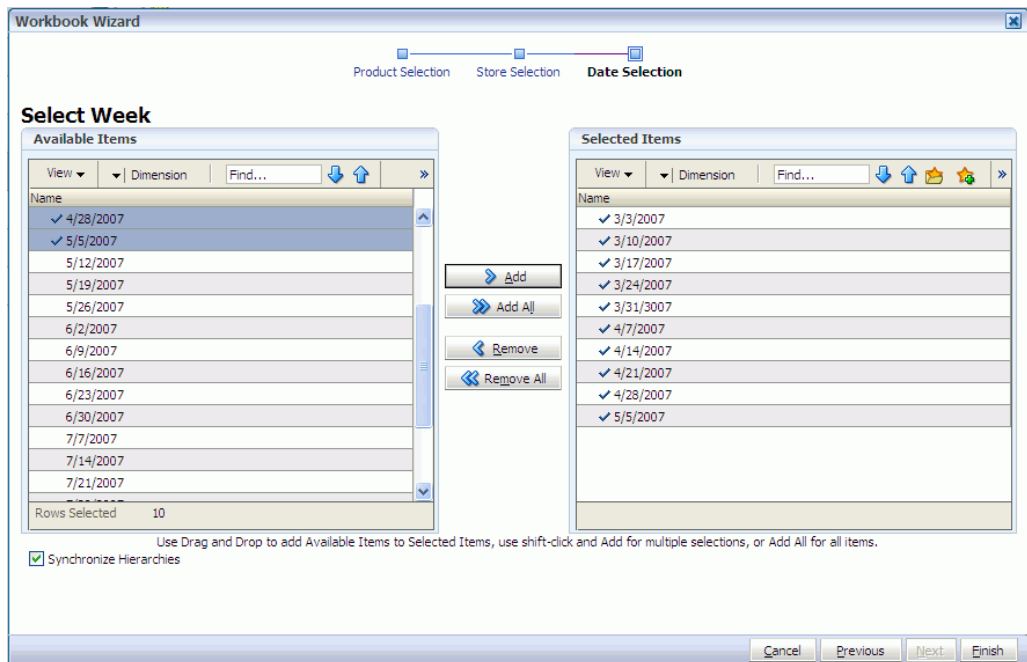
- The Select Store workbook wizard is displayed. Select the locations you want to examine, and click **Next**.

**Figure 3–5 Workbook Wizard: Select Store**



- The Select Week workbook wizard is displayed. Select the weeks of history you want to examine, and click **Finish**. Note that all weeks selected here are considered for preprocessing.

**Figure 3–6 Workbook Wizard: Select Week**



The Preprocessing Analysis task is built.

## Preprocessing Administration Task

On the Preprocessing Administration task, you can review default settings and specify item/location specific overrides if necessary. If certain special overrides need to be specified, SPO allows users to do so at the SKU/location or SKU parent/location level, depending on the override measure.

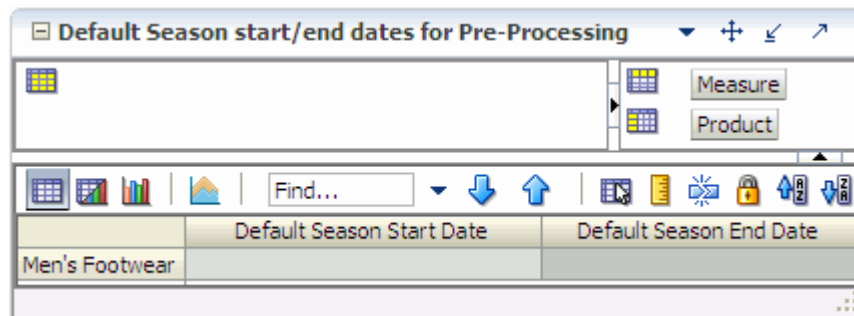
The following sections describe the steps available on the Preprocessing Administration task:

- [Default Season Start/End dates for Pre-Processing View](#)
- [Default Parameters for Preprocessing View](#)
- [Overrides View](#)

### Default Season Start/End dates for Pre-Processing View

The season start/end dates for preprocessing are displayed in this view. These represent the range of dates for which sizeprofiles are being determined.

**Figure 3–7** *Default Season Start/End dates for Pre-Processing View*



**Table 3–2** *Default Season start/end dates for Pre-Processing View Measure*

Measure	Description
Default Season Start Date	Used for fashion items, this is the date that indicates the season start date. Used for preprocessing.
Default Season End Date	Used for fashion items, this is the date that indicates the season end date. Used for preprocessing.

## Default Parameters for Preprocessing View

The default parameters for preprocessing can be specified in this view.

**Figure 3–8** *Default Parameters for Preprocessing View*

Parameter	Value
Default History Start Date	3/1/2007
Default History End Date	5/30/2007
Inventory Unit Threshold (SKU/Store/Week Eligibility)	1
Max Inventory Percentage Threshold (SKU/Store/Week Eligibility)	1.0%
Sales Unit Threshold (Sku/Store/Week Eligibility)	0
Inventory Unit Threshold(Start/End Date)	1
Sales Unit Threshold (Start/End Date)	1
Maximum Inventory Percentage Threshold (Start/End Date)	5.0%
Total Sales Threshold (SKU /Store Eligibility)	1
Eligible Weeks Percentage Threshold (SKU/Store Eligibility)	10.0%
Season Length Threshold (SKU/Store Eligibility)	1
Eligible SKUs Percentage Threshold - Optimized(SKU Parent/Store/Week Eligibility)	41.0%
Eligible SKUs Threshold - Optimized (SKU Parent/Store/Week Eligibility)	2
SKU Parent/Store Eligible Week Threshold (SKU Parent/Store Eligibility)	2
Total Sales Threshold (SKU Parent/Store Eligibility)	1
Eligible SKU's Threshold (SKU Parent/Store Eligibility)	2
Eligible SKUs Percentage Threshold - Normalized (SKU Parent/Store/Week Eligibility)	90.0%
Eligible SKUs Threshold - Normalized (SKU Parent/Store/Week Eligibility)	0

**Note:** The cells are hatched like scalar measures. To see the value, roll up the product hierarchy to All [Product].

The following table describes the measures available here:

**Table 3–3** *Default Parameters for Preprocessing View Measures*

Measure	Description
Default History Start Date	Used to determine the history start date for the preprocessing window.
Default History End Date	Used to determine the history end date for the preprocessing window.
Inventory Unit Threshold (SKU/Store/ Week Eligibility)	The minimum inventory level needed for the SKU/store/week to be considered eligible.
Max Inventory Percentage Threshold (SKU/Store/Week Eligibility)	The SKU/store/week is considered eligible only if its inventory expressed as a percentage of the maximum inventory for the SKU/store is greater than the max inventory percentage threshold specified.

**Table 3–3 (Cont.) Default Parameters for Preprocessing View Measures**

<b>Measure</b>	<b>Description</b>
Sales Unit Threshold (SKU/Store/Week Eligibility)	The first and last date of history where sales units exceed this measure are used in the season length calculation.
Inventory Unit Threshold (Start/End Date)	When calculating the season length of a SKU/store, the inventory for a given week needs to exceed this inventory units value for that SKU/store/week to be considered eligible for the season length calculation.
Sales Unit Threshold (Start/End Date)	When calculating the season length of a SKU/store, the sales units for a given week, for that SKU/store need to exceed this sales unit threshold value for that SKU/store/week to be considered eligible for the season length calculation.
Maximum Inventory Percentage Threshold (Start/End Date)	When calculating the season length of a SKU/store, the inventory for a given week, expressed as a percentage of max inventory for that SKU/Store, needs to exceed this Max inventory percentage threshold value for that SKU/store/week to be considered eligible for the season length calculation.
Total Sales Threshold (SKU/Store Eligibility)	Used in the SKU/store eligibility check. If the total sales for a SKU/store exceed this threshold, then it is considered eligible.
Season Length Threshold (SKU/Store Eligibility)	A SKU/store is considered eligible if its season length calculated is above this threshold. Minimum Season length needed for SKU/Store eligibility.
Eligible SKUs Percentage Threshold - Optimized (SKU Parent/Store/Week Eligibility)	If the total number of eligible SKUs for a given SKU parent/store/week expressed as a percentage of total SKUs exceeds the threshold, then the SKU parent/store/week is considered eligible.
Eligible SKUs Threshold - Optimized (SKU Parent/Store Eligibility)	If the number of eligible SKUs for a given SKU parent/store exceeds this threshold, the SKU parent/store is considered eligible.
SKU Parent/Store Eligible Week Threshold (SKU Parent/Store Eligibility)	SKU parent/store eligible weeks threshold, used in SKU parent/store eligible calculation. Minimum number of weeks required for the SKU Parent / Store to be considered eligible.
Total Sales Threshold (SKU Parent/Store Eligibility)	Used in the SKU parent/store eligibility check. If the total sales for a SKU parent/store exceed this threshold, then it is considered eligible.
Eligible Weeks Percentage Threshold (SKU/Store Eligibility)	This is the threshold contribution of any week's sales to be used in Pruning. If any weeks' sales is below this threshold, that week's sales will be ignored.
Total Sales Threshold (SKU Parent/Store Eligibility)	This is the threshold Sales units for any Style-Color at a given Store. If the Sales is below this threshold, then the Batch will skip trying to determine Size Profile for this Style-Color
Eligible SKU's Threshold (SKU Parent/Store/Week Eligibility)	If the number of eligible SKUs for a given SKU parent/store/week is above this threshold, it is considered eligible.
Eligible SKU's Percentage Threshold - Normalized (SKU Parent/Store/Week Eligibility)	If the total number of eligible SKUs for a given SKU parent/store/week expressed as a percentage of total SKUs exceeds the threshold, then the SKU parent/store/week is considered eligible.
Eligible SKU's Threshold - Normalized (SKU Parent/Store Eligibility)	If the number of eligible SKUs for a given SKU parent/store exceeds this threshold, the SKU parent/store is considered eligible.

## Overrides View

The Overrides view enables the user to override certain measures.

After all necessary overrides have been performed, you should execute preprocessing by selecting the **Preprocessing** option from the Planning Actions menu. When preprocessing is completed, a success dialog displays. You can then continue to the Preprocessing Results to view the preprocessing results.

---

**Note:** In order to specify an override for SKU parent eligibility criteria, aggregate the view to SKU parent (or style/color level).

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**Figure 3–9** Overrides View

Measure	Value
Default History Start Date Override	3/1/2007
Default History End Date Override	5/30/2007
Inventory Unit Threshold Override (SKU/Store/Week Eligibility)	6
Max Inventory Percentage Threshold Override (SKU/Store/Week Eligibility)	12.0%
Sales Unit Threshold Override (SKU/Store/Week Eligibility)	24.00
Inventory Unit Threshold Override (Start/End Date)	2
Sales Unit Threshold Override (Start/End Date)	4.00
Maximum Inventory Percentage Threshold Override (Start/End Date)	2.0%
Total Sales Threshold Override (SKU/Store Eligibility)	4.00
Eligible Weeks Percentage Threshold Override (SKU/Store Eligibility)	2.0%
Season Length Threshold Override (SKU/Store Eligibility)	12.00
Eligible SKUs Percentage Threshold Override - Optimized (SKU Parent/Store/Week Eligibility)	
Eligible SKUs Threshold Override - Optimized (SKU Parent/Store/Week Eligibility)	
SKU-Parent/Store Eligible Week Threshold Override (SKU Parent/Store Eligibility)	
Total Sales Threshold Override (SKU Parent/Store Eligibility)	
Eligible SKUs Threshold Override - Normalized (SKU Parent/Store/Week Eligibility)	
Eligible SKUs Percentage Threshold Override - Normalized (SKU Parent/Store/Week Eligibility)	
Eligible SKU's Threshold Override (SKU Parent/Store Eligibility)	

The following table describes the measures available here:

**Table 3–4** Overrides View Measures

Measure	Description
Default History Start Date Override	Used to determine the history start date for the preprocessing window
Default History End Date Override	Used to determine the history end date for the preprocessing window
Inventory Unit Threshold Override (SKU/Store/Week Eligibility)	The minimum inventory level needed for the SKU/store/week to be considered eligible.

**Table 3-4 (Cont.) Overrides View Measures**

<b>Measure</b>	<b>Description</b>
Max Inventory Percentage Threshold Override (SKU/Store/Week Eligibility)	The SKU/store/week is considered eligible only if its inventory expressed as a percentage of the maximum inventory for the SKU/store is greater than the max inventory percentage threshold specified
Sales Unit Threshold Override (Start/End Date)	When calculating the season length of a SKU/store, the sales units for a given week for that SKU/store need to exceed this sales unit threshold value for that SKU/store/week to be considered eligible for the season length calculation.
Inventory Unit Threshold Override (Start/End Date)	When calculating the season length of a SKU/store, the inventory for a given week needs to exceed this inventory units value for that SKU/store/week to be considered eligible for the season length calculation.
Sales Unit Threshold Override (SKU/Store/Week Eligibility)	The first and last date of history where sales units exceed this measure are used in the season length calculation
Maximum Inventory Percentage Threshold Override (Start/End Date)	When calculating the season length of a SKU/store, the inventory for a given week, expressed as a percentage of max inventory for that SKU/store, needs to exceed this Max inventory percentage threshold value for that SKU/store/week to be considered eligible for the season length calculation.
Total Sales Threshold Override (SKU/Store Eligibility)	Used in the SKU/store eligibility check, if the total sales for a SKU/store exceeds this threshold, then it is considered eligible.
Eligible Weeks Percentage Threshold Override (SKU/Store Eligibility)	A SKU/store is considered eligible if the ratio of its eligible weeks to its season length exceeds this threshold.
Season Length Threshold Override (SKU/Store Eligibility)	A SKU/store is considered eligible if its season length calculated is above this threshold.
Eligible SKU's Percentage Threshold Override - Optimized (SKU Parent/Store/Week Eligibility)	If the total number of eligible SKUs for a given SKU parent/store/week expressed as a percentage of total SKUs exceeds the threshold, then the SKU parent/store/week is considered eligible
Eligible SKU's Threshold Override - Optimized (SKU Parent/Store/Week Eligibility)	If the number of eligible SKUs for a given SKU parent/store/week is above this threshold, it is considered eligible.
SKU-Parent/Store Eligible Weeks Threshold Override (SKU Parent/Store Eligibility)	SKU parent/store eligible weeks threshold. Used in SKU parent/store eligible calculation.
Total Sales Threshold Override (SKU Parent/Store Eligibility)	Used in the SKU parent/store eligibility check. If the total sales for a SKU parent/store exceeds this threshold, then it is considered eligible.
Eligible SKU's Threshold Override - Normalized (SKU Parent/Store Eligibility)	If the number of eligible SKUs for a given SKU parent/store exceeds this threshold, the SKU parent/store is considered eligible for normalized generation method.

**Table 3-4 (Cont.) Overrides View Measures**

Measure	Description
Eligible SKU's Percentage Threshold Override - Normalized (SKU Parent/Store/Week Eligibility)	If the total number of eligible SKUs for a given SKU parent/store/week expressed as a percentage of total SKUs exceeds the threshold, then the SKU parent/store/week is considered eligible for normalized generation method.
Eligible SKU's Threshold Override (SKU Parent/Store Eligibility)	If the number of eligible SKUs for a given SKU parent/store/week is above this threshold, it is considered eligible.

## Preprocessing Results

The following sections describe the steps available under the Preprocessing Results:

- Preprocessing Results view

### Preprocessing Results View

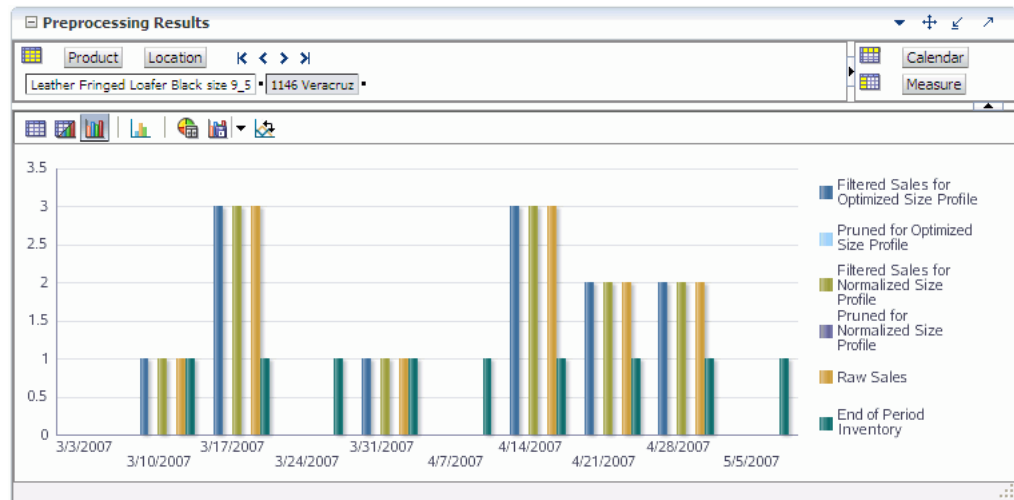
On the Preprocessing Results view, you can review the product/location level preprocessing results by aggregating data along the calendar hierarchy or other hierarchies as necessary.

**Figure 3-10 Preprocessing Results View**

	3/3/2007	3/10/2007	3/17/2007	3/24/2007	3/31/2007	4/7/2007	4/14/2007	4/21/2007	4/28/2007	5/5/2007
Filtered Sales for Optimized Size Profile	0.00	1.00	3.00	0.00	1.00	0.00	3.00	2.00	3.00	0.00
Pruned for Optimized Size Profile	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Filtered Sales for Normalized Size Profile	0.00	1.00	3.00	0.00	1.00	0.00	3.00	2.00	3.00	0.00
Pruned for Normalized Size Profile	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Raw Sales	0.00	1.00	3.00	0.00	1.00	0.00	3.00	2.00	3.00	0.00
End of Period Inventory	0.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00

In [Figure 3-10](#), you can see that there was no sales for week1, therefore that week was pruned for the purpose of sizeprofile generation- for both the optimized and normalized methods.

When reviewing the impact of preprocessing on weekly data, you can compare actual sales to filtered or preprocessed sales and actual inventory to validate the results of preprocessing. You may find it helpful to view these results in graph mode.

**Figure 3–11 Preprocessing Results View Viewed as a Graph**

The following table describes the measures available on this view.

**Table 3–5 Preprocessing Results View Measures**

Measure	Description
Filtered Sales for Optimized Size Profile	Filtered sales after applying preprocessing criteria for the optimized size profile generation method.
Pruned for Optimized Size Profile	Indicates if a the SKU/store/week data point was considered eligible from the preprocessing run after applying preprocessing criteria for optimized size profile generation.
Filtered Sales for Normalized Size Profile	Filtered sales after applying preprocessing criteria for the normalized size profile generation method.
Pruned for Normalized Size Profile	Indicates if a the SKU/store/week data point was considered eligible from the preprocessing run after applying preprocessing criteria for normalized size profile generation.
Raw Sales	Raw, unfiltered historic sales data.
End of Period Inventory	Raw, unfiltered historic inventory data.

## Preprocessing Summary Statistics Task

The following sections describe the steps available under the Preprocessing Summary Statistics task:

- [Pre-Processing Summary View](#)
- [Pre Processing Summary Statistics- Style view](#)

### Pre-Processing Summary View

The Pre-Processing Summary view displays the filtered, and alerted sales for both normalized, and optimized size profiles.

**Figure 3–12 Pre-Processing Summary View: Default Measure Profile**

	Leather Fringed Loafer Black size 7_5	Leather Fringed Loafer Black size 8	Leather Fringed Loafer Black size 8_5	Leather Fringed Loafer Black size 9	Leather Fringed Loafer Black size 9_5
Raw Sales	3.00	5.00	8.00	10.00	13.00
Filtered Sales for Optimized Size Profile	1.00	2.00	8.00	10.00	13.00
Total alerted SKUs for Optimized Size Profile	1.00	1.00	0.00	0.00	0.00
Total Altered SKUs/Store for Optimized Size Profile	1.00	1.00	0.00	0.00	0.00
Total Altered Styles for Optimized Size Profile					
Total Eligible SKU/Store for Optimized Size Profile	1.00	1.00	1.00	1.00	1.00
Total Eligible SKUs for Optimized Size Profile	1.00	1.00	1.00	1.00	1.00
Total Eligible Styles for Optimized Size Profile					
Total Unfiltered SKU/Store	1.00	1.00	1.00	1.00	1.00
Total Unfiltered SKUs	1.00	1.00	1.00	1.00	1.00
Total Unfiltered Styles					

The following table describes the measures available on this view.

**Table 3–6 Pre-Processing Summary View Measures**

Measure	Description
Raw Sales	Raw, unfiltered historic total sales.
Filtered Sales for Optimized Size Profile	Filtered sales after applying preprocessing criteria for size profile generation using the optimized method.
Total Altered SKUS for Optimized Size Profile SKUs	Total alerted SKUs after applying preprocessing criteria for size profile generation using the optimized method.
Total Altered SKUs/Store for Optimized Size Profile	Total alerted SKU/stores after applying preprocessing criteria for size profile generation using the optimized method.
Total Altered Styles for Optimized Size Profile	Total alerted styles after applying preprocessing criteria for size profile generation using the optimized method.
Total Eligible SKUs/Store for Optimized Size Profile	Total eligible SKU/stores after applying preprocessing criteria for size profile generation using the optimized method.
Total Eligible SKUs for Optimized Size Profile	Total eligible SKUs after applying preprocessing criteria for size profile generation using the optimized method.
Total Eligible Styles for Optimized Size Profile	Total eligible styles after applying preprocessing criteria for size profile generation using the optimized method.
Total Unfiltered SKU's	Total unfiltered SKU count.
Total Unfiltered SKU's/Store	Total unfiltered SKU/store count.
Total Unfiltered Styles	Total unfiltered style count.

## Measure Profiles

A measure profile allows you to view only certain measures within the view. The Pre-Processing Summary view has three measure profiles. The three measure profiles are as follows:

- Default: This profile displays default measures in the view.
- Normalized Size Profile: In this profile, the normalized values of the measures are displayed. The measures displayed are:
  - Raw Sales
  - Filtered Sales for Normalized Size Profile
  - Total Unfiltered SKU/Store
  - Total Eligible SKU/Store for Normalized Size Profile
  - Total Alerted Style/Store for Normalized Size Profile
  - Total Unfiltered SKUs
  - Total Eligible SKUs for Normalized Size Profile
  - Total Alerted SKUs for Normalized Size Profile
- Optimized Size Profile: In this profile, only the optimized values of the measures are displayed. The measures displayed are:
  - Raw Sales
  - Filtered Sales for Optimized Size Profile
  - Total Unfiltered SKU/Store
  - Total Eligible SKU/Store for Optimized Size Profile
  - Total Alerted Style/Store for Optimized Size Profile
  - Total Unfiltered SKUs
  - Total Eligible SKUs for Optimized Size Profile
  - Total Alerted SKUs for Optimized Size Profile

## Pre Processing Summary Statistics- Style view

The Pre Processing Summary Statistics- Style view displays the unfiltered, alerted, and eligible styles for both normalized, and optimized size profile.

**Figure 3–13 Pre Processing Summary Statistics- Style: Default measure profile**

Measure	Value
Total Alerted Styles for Optimized Size Profile	5.00
Total Eligible Styles for Optimized Size Profile	6.00
Total Alerted Styles for Normalized Size Profile	6.00
Total Eligible Styles for Normalized Size Profile	6.00
Total Unfiltered Styles	6.00

The following table describes the measures available on this view

**Table 3–7 Pre Processing Summary Statistics- Style View Measures**

Measure	Description
Total Eligible Styles for Normalized Size Profile	Displays the number of eligible styles for sizeprofile generation using the normalized method.
Total Alerted Styles for Normalized Size Profile	Displays the number of alerted styles for sizeprofile generation using the normalized method.
Total Alerted Styles for Optimized Size Profile	Displays the number of alerted styles for sizeprofile generation using the optimized method.
Total Eligible Styles for Optimized Size Profile	Displays the number of eligible styles for sizeprofile generation using the optimized method.
Total Unfiltered Styles	Total number of unfiltered style count.

The Pre Processing Summary Statistics- Style view has three measure profiles as given below:

- Default: The default profile displays all the measures in the view
- Normalized Size Profile: In this view, the following measures are displayed:
  - Total Unfiltered Styles
  - Total Alerted Styles for Normalized Size Profile
  - Total Eligible Styles for Normalized Size Profile
- Optimized Size Profile: In this profile, the following measures are displayed:
  - Total Unfiltered Styles
  - Total Alerted Styles for Optimized Size Profile
  - Total Eligible Styles for Optimized Size Profile

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## Size Range Management Activity

The Size Range Management activity is used to set the kink inner neighboring ratio, the kink outer neighboring ratio, and the expected kink sizes.

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**Note:** Refer to the [Kinks and Kink Exceptions](#) for details on kinks and how they are handled by SPO.

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The Size Range Management activity contains the following tasks:

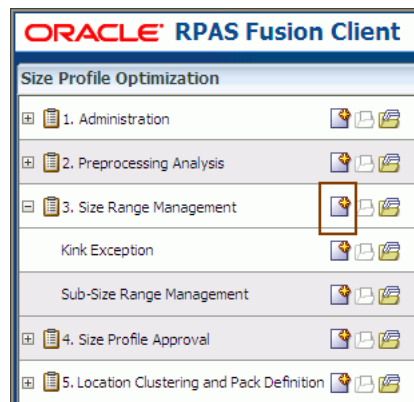
- [Kink Exception Task](#)
- [Sub-Size Range Management Task](#)

### Size Range Management Activity Wizard

To build the Size Range Management activity, perform the following:

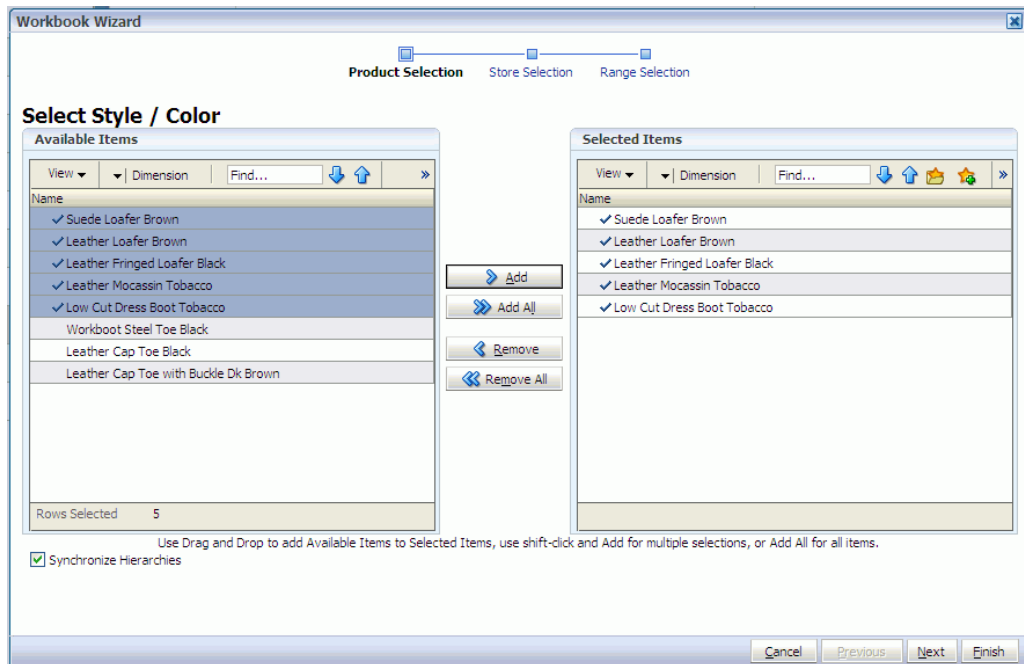
1. Click the **Create New Workbook** icon in the Size Range Management activity.

**Figure 4–1** Create New Workbook Icon



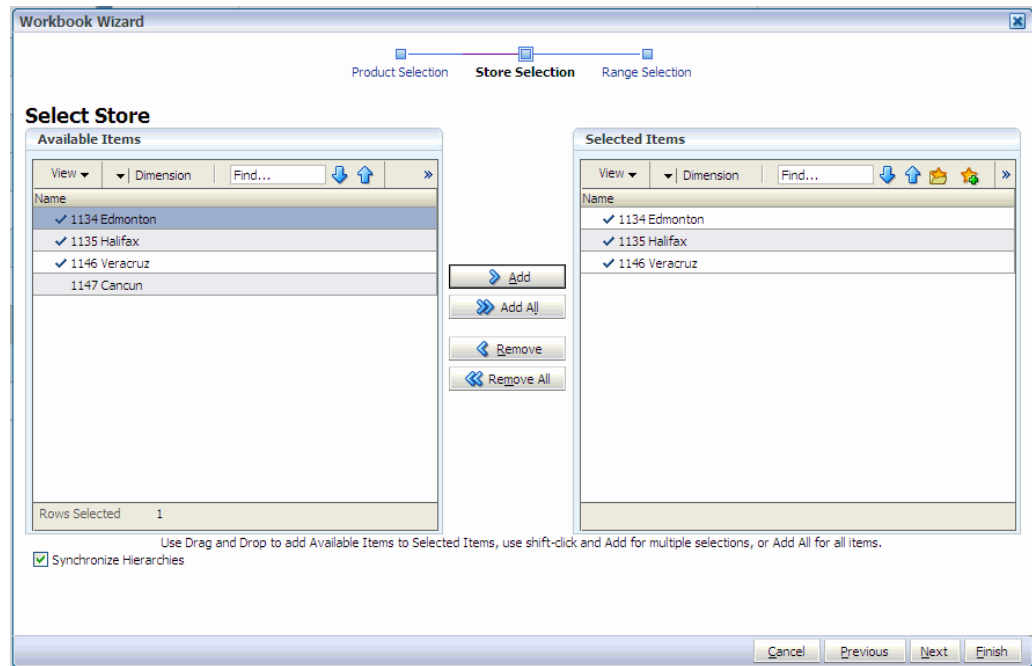
2. The workbook wizard opens at the Select Style/Color screen. Select the style/color you would like to examine, and click **Next**.

**Figure 4–2 Workbook Wizard: Select Style/Color**



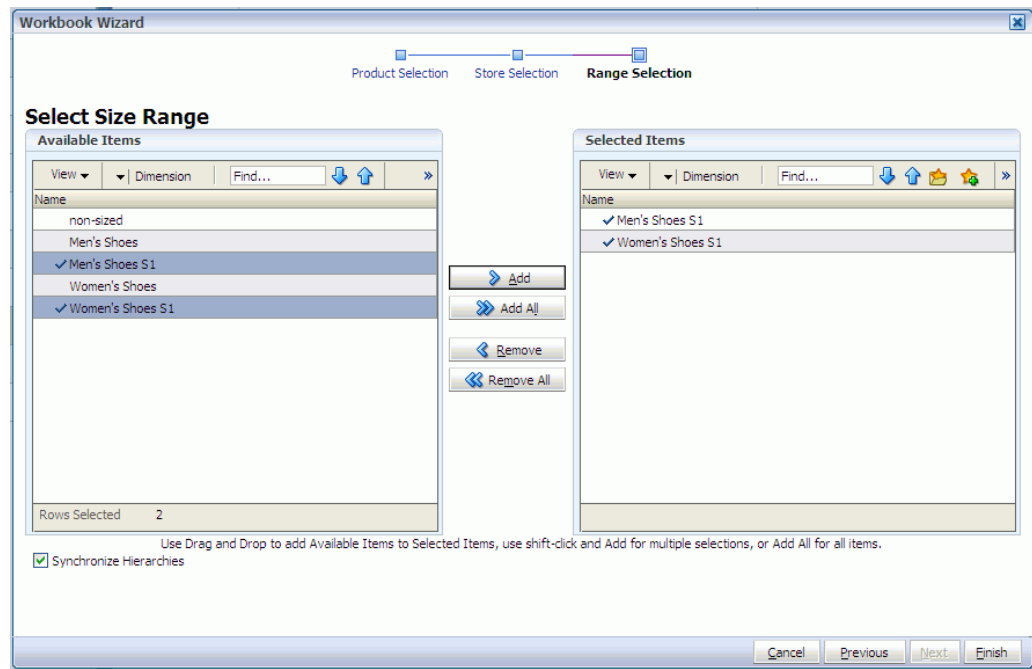
- The stores are displayed on the Select Store workbook wizard. Choose the locations, and click **Next**.

**Figure 4–3 Workbook Wizard: Select Store**



- The workbook wizard opens at the Select Size Range step. Select the size ranges you would like to examine, and click **Finish**.

**Figure 4–4 Workbook Wizard: Select Size Range**



The Size Range Management is built.

## Kink Exception Task

The Kink Exception task allows users to specify kink sizes as well as kink ratios for detecting kink exceptions.

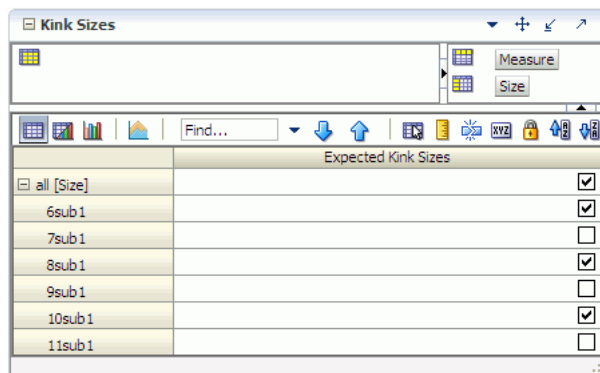
The following sections describe the steps available under the Kink Exception:

- [Kink Sizes View](#)
- [Kink Ratio View](#)

### Kink Sizes View

The Kink Sizes view contains a Boolean measure called Expected Kink Sizes, which indicates whether or not a size is odd. The intersection for this view is at the size level.

**Figure 4–5 Kink Sizes View**



The following table describes the measures available on this view.

**Table 4–1 Kink Sizes View Measures**

Measure	Description
Expected Kink Sizes	Indicates whether or not a size is odd.

## Kink Ratio View

The Kink Ratios view allows users to specify parameters that are used by the system for detecting kinks in size profiles. Note that if a size is identified by a user as an odd size, the system does not test that size for kinks.

The systems checks for or attempts to detect kinks by comparing sizes in a size range to their neighbors. The comparison is done by computing the ratio of the size to its inner and outer neighbors.

If a neighboring size is closer to the middle of the size range than the examined size, then the neighboring size is considered an inner neighbor. For example, in a size range with five sizes, size 3 is considered an inner neighbor of size 2. Size 1 is considered an outer neighbor of size 2.

The inner and outer ratios of a size are defined as a profile of its inner neighbor divided by the profile of the examined size, and the profile of its outer neighbor divided by the profile of the examined size respectively. Note that these ratios do not exist for border sizes.

The system computes the inner and outer ratios of a size and checks to see if both the ratios exceed the thresholds specified. Note that both the thresholds need to be exceeded for a size to be considered a kink.

The Kink Ratio view displays the inner kink ratio and the outer kink ratio. The intersection for this view is at the size range level.

**Figure 4–6** Kink Ratio View

	Kink Inner Ratio	Kink Outer Ratio
Men's Shoes S1	1.10	1.03
Women's Shoes S1	1.10	1.03

The following table describes the measures available on this view.

**Table 4–2** Kink Ratio View Measures

Measure	Description
Kink Inner Ratio	The threshold for the inner ratio (see above for definition of inner ratio). If the inner and outer ratios of a size exceed the kink inner and kink outer ratios specified, the system considers the size a kink.
Kink Outer Ratio	The threshold for the outer ratio (see above for definition of inner ratio). If the inner and outer ratios of a size exceed the kink inner and kink outer ratios specified, the system considers the size a kink.

## Sub-Size Range Management Task

The Sub-Size Range Management allows users to specify the size ranges for which the SPO batch should generate size profiles.

The following sections describe the steps available under the Size Range Management task:

- [Manage Sub-Size Range Assignment View](#)
- [Sub-Size Range Assignment Validation View](#)

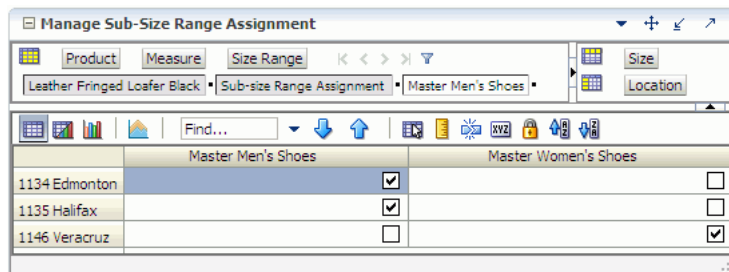
### Manage Sub-Size Range Assignment View

The Manage Sub-Size Range Assignment view contains the selected stores and size ranges available. Select the check box to specify that a new size profile run needs to be executed for the selected store.

This view shows which of the subsize ranges is assigned to each store for the selected merchandise.

In this example, the first two stores are assigned to one sub size range and the third store is assigned to a different sub size range

**Figure 4–7** *Manage Sub-Size Range Assignment View*



The following table describes the measures available on this view.

**Table 4–3** *Manage Sub-Size Range Assignment View Measures*

Measure	Description
Sub-size Range Assignment	Select the check box to assign a sub-size range to each SKU parent/store.

## Sub-Size Range Assignment Validation View

The Sub-Size Range Assignment Validation view is used to display the stores for which valid size ranges are available. This view is used to ensure that each of the Stores is mapped to one of the available sub-size ranges

**Figure 4–8 Sub-Size Range Assignment Validation**

	1134 Edmonton	1135 Halifax	1146 Veracruz
Leather Fringed Loafer Black	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Leather Loafer Brown	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Leather Mocassin Tobacco	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Suede Loafer Brown	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following table describes the measures available on this view:

**Table 4–4 Sub-Size Range Assignment Validation Measures**

Measure	Description
SKU Parent/Store to Sub-size Range Validation	This is a calculated measure. When true, one sub-size range is assigned to a SKU parent/store.



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## Size Profile Approval Activity

This chapter discusses the functions of the size profile approval activity, the concepts, and the different steps within this workbook.

### Introduction

The Size Profile Approval task allows users to review, update and approve size profiles. Users have the option of restricting their manual analysis and approval of size profiles to only alerted size profiles.

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**Note:** The number of tabs in the Size Profile Approval activity depends on the number of escalation levels chosen in the Size Profile Approval workbook wizard. Note that each contains the same three tasks.

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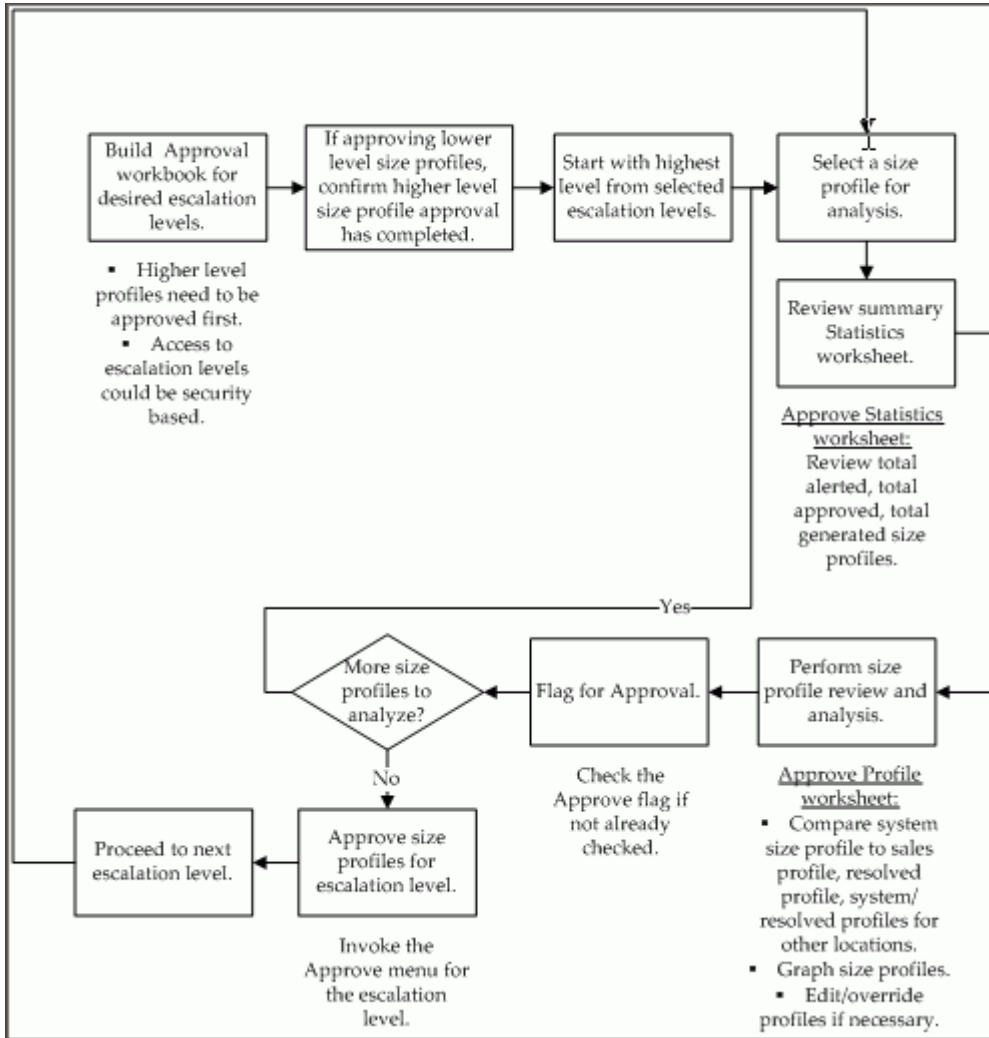
The Size Profile Approval activity contains the following tasks and steps:

- [Approve Task](#)
- [Kink Exception Task](#)

## Using the Size Profile Approval Activity

The following diagram outlines how to use the Size Profile Approval activity:

**Figure 5-1 How to Use Size Profile Approval Activity**



## Planning Action

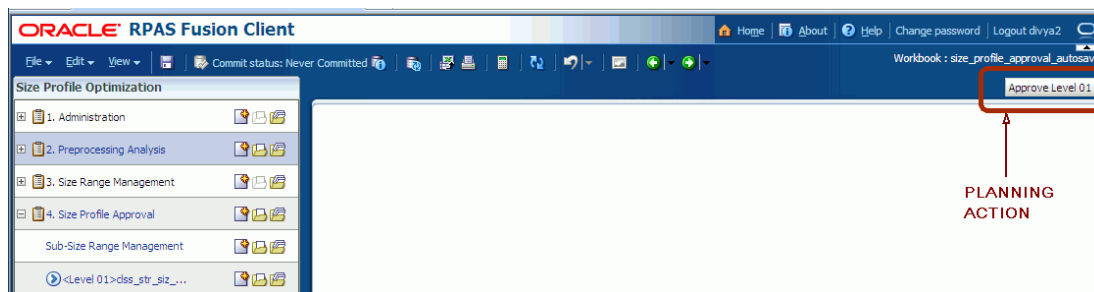
The planning action for Size Profile Approval activity is:

- Approve Level

An Approve Level option is available for every size profile level displayed in the activity, based on the selections made in the Size Profile Approval wizard process.

The number of Approve Levels displayed in the menu depends on the number of escalation levels chosen in the Size Profile Approval wizard. The Approve Level that the user approves becomes the escalation level at which the hierarchy is maintained.

**Figure 5–2 Planning Action for Size Profile Approval Workbook**

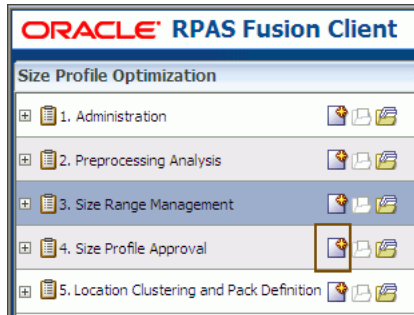


## Size Profile Approval Activity Wizard

To build a Size Profile Approval activity, perform the following steps:

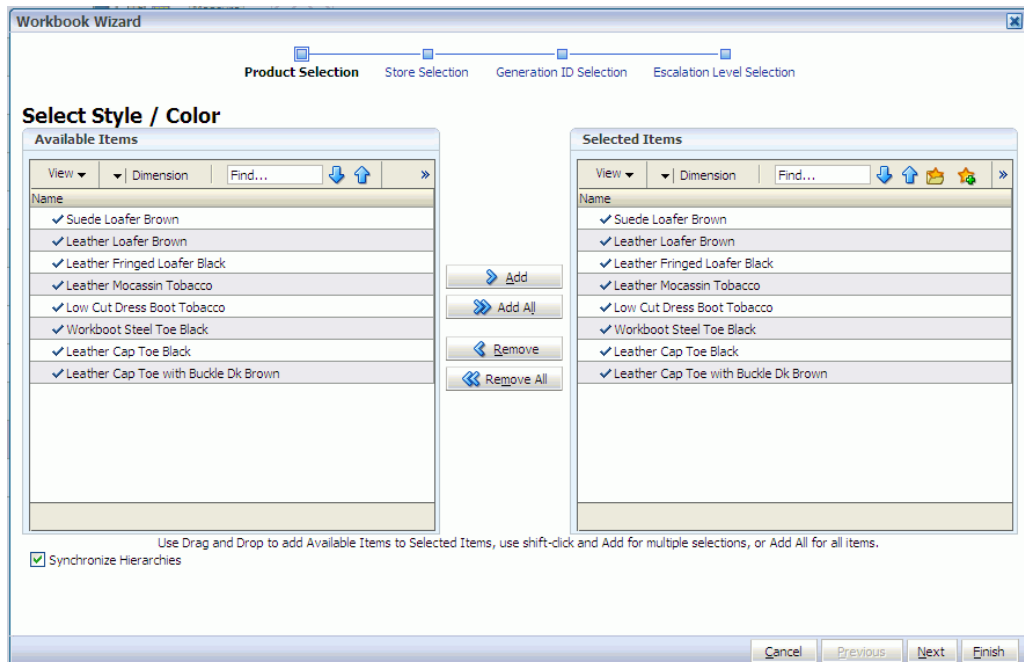
1. Click the **Create New Workbook** icon in the Size Profile Approval activity.

**Figure 5–3 Create New Workbook Icon**



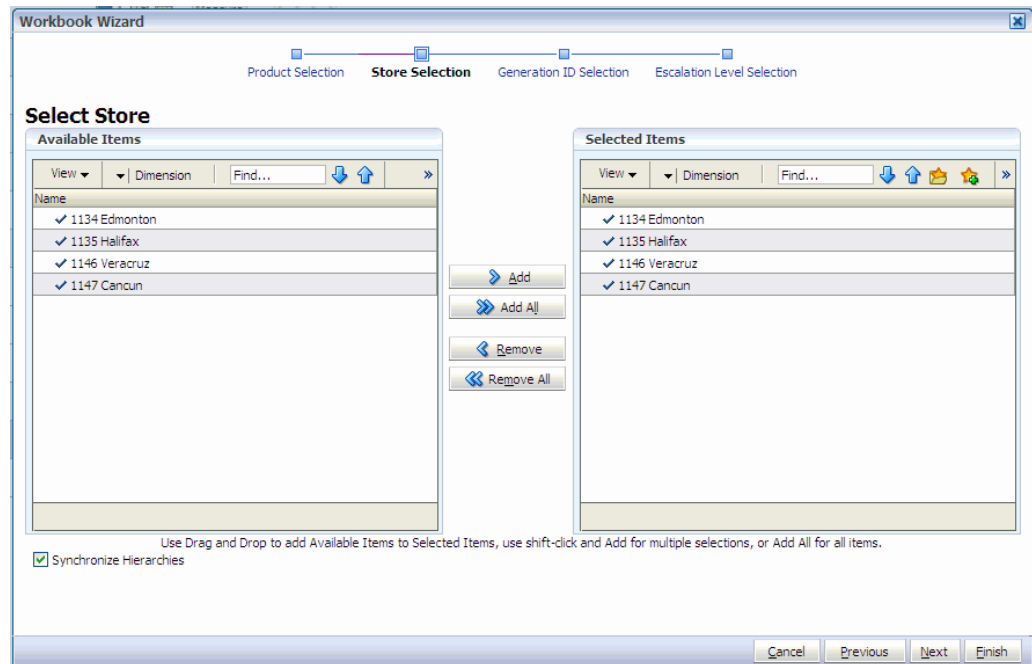
2. The workbook wizard opens at the Select Style/Color screen. Select the products you would like to examine, and click **Next**.

**Figure 5–4 Workbook Wizard: Select Style/Color**



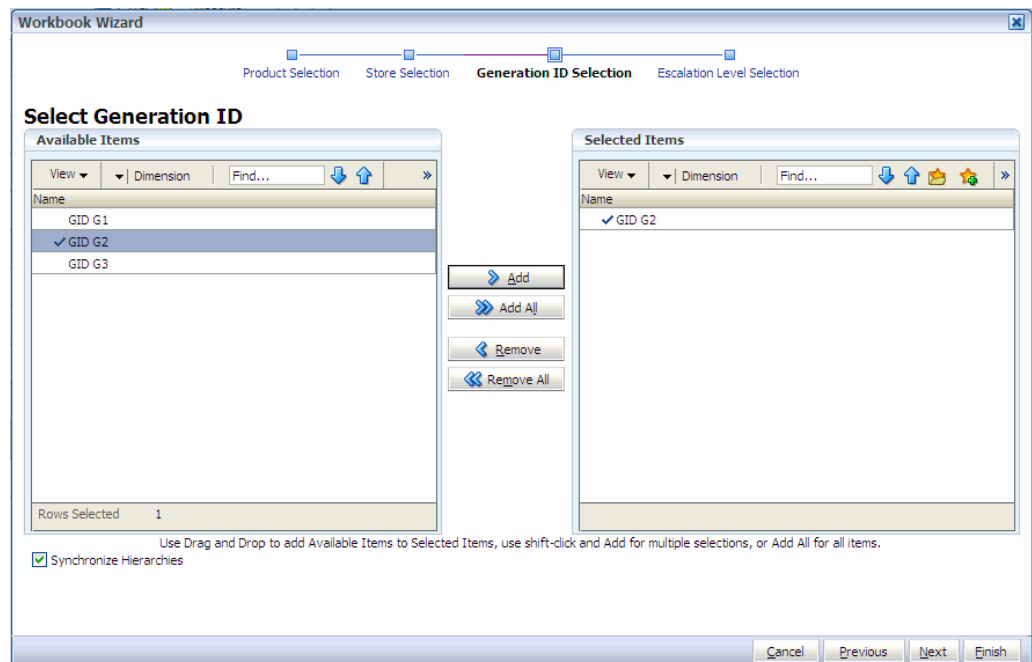
3. The Select Store workbook wizard is displayed. Select the store you would like to examine, and click **Next**.

**Figure 5–5 Workbook Wizard: Select Store**



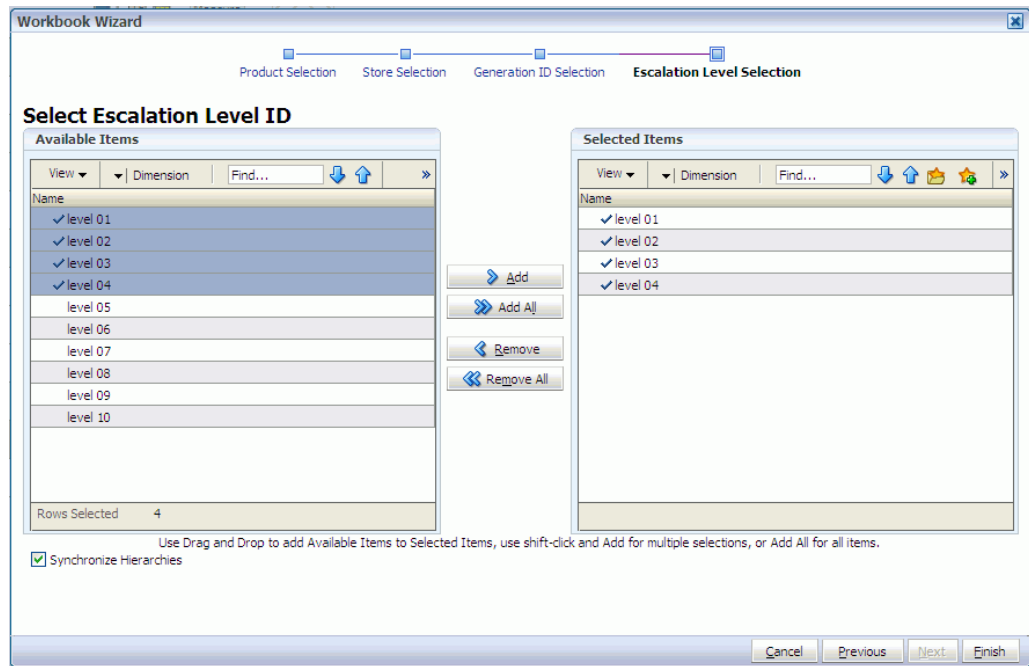
4. The Select Generation ID screen is displayed. Generation IDs are necessary for saving multiple runs of size profile batches. Select no more than one generation ID, and click **Next**.

**Figure 5–6 Workbook Wizard: Select Generation ID**



- The Select Escalation Level ID screen is displayed. Escalation levels are the intersections at which a size profile is generated.

**Figure 5–7 Workbook Wizard: Select Escalation Level ID**



Note that only the escalation levels that have been enabled for the selected generation ID are available for selection on this workbook wizard screen.

By default, the valid escalation levels are displayed by their label (for example, level 01 or level 02). Once finished, the escalation levels listed under the **Valid Escalation levels** pane is displayed according to their escalation level label (for example, class/store/attribute/size).

Select the escalation levels you would like to examine, and click **Finish**.

The Size Profile Approval workbook is built.

## Approve Task

**Note:** The application displays separate steps for each level of escalation that was enabled.

These are dynamic-built tasks that have different number of steps based on the data.

The following sections describe the steps available under the Approve 01:

- [Summary Statistics View](#)
- [Approve Size Profiles View](#)
- [Review and Edit Size Profiles View](#)

### Summary Statistics View

This view contains all the approval statistics information for its level.

**Figure 5–8 Summary Statistics View**

		Filtered Sales	Total Generated Size Profiles Esc Level L01	Total Alerted Profiles Esc Level L01	Total Approved Profiles Esc Level L01
1134 Edmonton	Men's Shoes	50	0	0	0
	Men's Shoes S1	58	0	0	0
	Women's Shoes	0	0	0	0
	Women's Shoes S1	0	0	0	0
1135 Halifax	Men's Shoes	48	0	0	0
	Men's Shoes S1	56	0	0	0
	Women's Shoes	0	0	0	0
	Women's Shoes S1	0	0	0	0
1146 Veracruz	Men's Shoes	52	1	0	1
	Men's Shoes S1	60	1	0	1
	Women's Shoes	0	0	0	0
	Women's Shoes S1	0	0	0	0
1147 Cancun	Men's Shoes	57	1	0	1
	Men's Shoes S1	66	1	0	1
	Women's Shoes	0	0	0	0
	Women's Shoes S1	0	0	0	0

The following table describes the measures available on this view.

**Table 5–1 Summary Statistics Measures**

Measure	Description
Filtered Sales	Filtered sales indicates total filtered sales after preprocessing.
Total Generated Size Profiles Esc Level L01	This indicates total profiles generated by the system. Note that the system does not generate size profiles in cases where the size profiles are pruned or rejected during postprocessing.
Total Alerted Profiles Esc Level L01	This indicates total number of alerts triggered.
Total Approved Profiles Esc Level L01	This indicates total approved size profiles.

## Approve Size Profiles View

This view contains details of whether any profiles were approved by the system. Besides if the user wishes to approve this level for a store that was not approved by the Store, it should be done in this view. This view also contains details of archived size profiles for this level - for profiles that were archived earlier.

**Figure 5–9 Approve Size Profiles View**

The following table describes the measures available on this view.

**Table 5–2 Approve Size Profiles View Measures**

Measure	Description
Approve Esc Level L01	This indicates that a size profile is ready for approval. The next time the Approve custom menu is invoked by the user, if this is check box is selected, the Approved Size Profile is populated by the adjusted size profile.
Approve Status Esc Level L01	This indicates whether a size profile has been approved. If the Approve check box is selected, this measure is populated when the user invokes the custom menu. The None approval status indicates that the size profile has not yet been approved.
Approved by User Esc Level L01	This indicates who has approved the size profile. If the Approve check box is selected, this measure is populated when the user invokes the custom menu. The System approval status indicates that the profile was auto-approved by the system.
Approve Date Esc Level L01	This indicates when a size profile has been approved. If the Approve check box is selected, this measure is populated when the user invokes the custom menu.
Approval Comment for Esc Level 01	In case you would prefer to approve any level of escalated size profile manually, you may add a comment here that is saved for review later
Edit Comment for Esc Level L01	Placeholder comments on Esc Level 01 that go with Approval.
Approval Comment Esc Level L01 Latest Archived	Comment attached to the approval for this level for the latest archived profile
Approved Date Esc Level L01 Latest Archived	Date on which the latest archived profile was approved for this level

## Review and Edit Size Profiles View

This view contains information on the system profiles, adjust profiles, and resolved profiles.

**Figure 5–10 Review and Edit Size Profiles**

	6.5	7.5	8.5	9.5	10.5	11.5
Approved Profile Esc Level L01 Latest Archived	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Final Approved Size Profile	0.0%	0.0%	0.0%	11.1%	0.0%	0.0%
Adjusted Profile Esc Level L01	5.0%	2.0%	2.5%	3.0%	0.0%	1.5%
Edit Profile Esc Level L01	5.0%	2.0%	2.5%	3.0%	4.0%	1.5%
Escalation Level Picked	clsrgn_sizeatcdszr_	clsrgn_sizeatcdszr_	clsrgn_sizeatcdszr_	clsrgn_sizeatcdszr_	clsrgn_sizeatcdszr_	clsrgn_sizeatcdszr_
System Profile Esc Level L01	0.0%	0.0%	0.0%	0.0%	-100.0%	0.0%
Sales Size Profile Esc Level L01	0.0%	3.4%	6.7%	10.9%	0.0%	10.9%

**Table 5–3 Review and Edit Size Profiles View Measures**

Measure	Description
Adjusted Profile Esc Level L01	This is populated by the normalized values of the Edit Profile. When the user specifies an edit profile, and approves the size profile, the system copies the Adjusted profile to the Approved Profile.
Approved Profile for Esc Level L01 XG	Approved size profile for Escalation Level.
Edit Profile Esc Level L01	This allows users to input override size profile values.
Sales Size Profile Esc Level L01	This indicates the size profile calculated by the system based on normalized sales from raw unfiltered actual sales.
Final Approved Size Profile	Current approved Size Profile.
System Profile Esc Level L01	This is the system generated size profile for the given escalation level. In case the system fails to generate a size profile because of data sparsity or other issues, zero is displayed.
Escalation Level Picked	This is the resulting size profile that would effectively apply for the given escalation level. For the lowest escalation level, this measure is effectively the size profile that gets exported by the system. If a given size profile has been reviewed and approved by user, the resolved size profile equals the approved size profile. If size profile has not been approved or generated by system, the resolved profile is calculated by traversing the escalation path in the escalation order specified and finding the nearest approved size profile.
Approved Profile Esc Level L01 Latest Archived	Most recently archived Approved Level 01 profile.

## Kink Exception Task

The Kink Exception task allows users to define or change kink exceptions within the approval workbook.

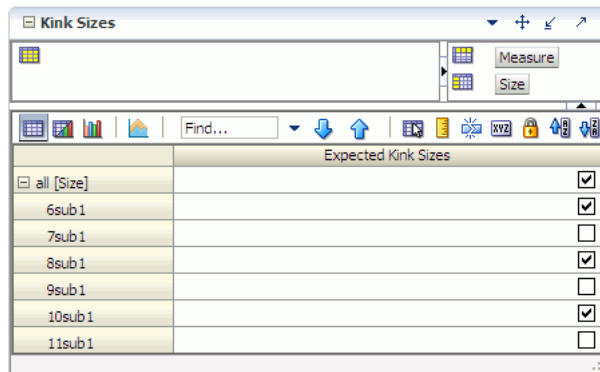
The following sections describe the steps available under the Kink Exception:

- Kink Sizes view

### Kink Sizes View

The Kink Sizes view contains a Boolean measure called Expected Kink Sizes, which indicates whether or not a size is odd. The intersection for this view is at the size level.

**Figure 5–11 Kink Sizes View**



The following table describes the measures available on this view.

**Table 5–4 Kink Sizes View Measures**

Measure	Description
Expected Kink Sizes	Indicates whether or not a size is odd.

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## Location Clustering Activity

The Location Clustering activity allows users to cluster locations based on similarity of their size profiles to create ideal prepacks for each of the clusters.

Size clusters in the context of SPO are useful for determining prepacks that are best suited to each cluster and may be used in downstream applications such as Assortment Planning and Allocation.

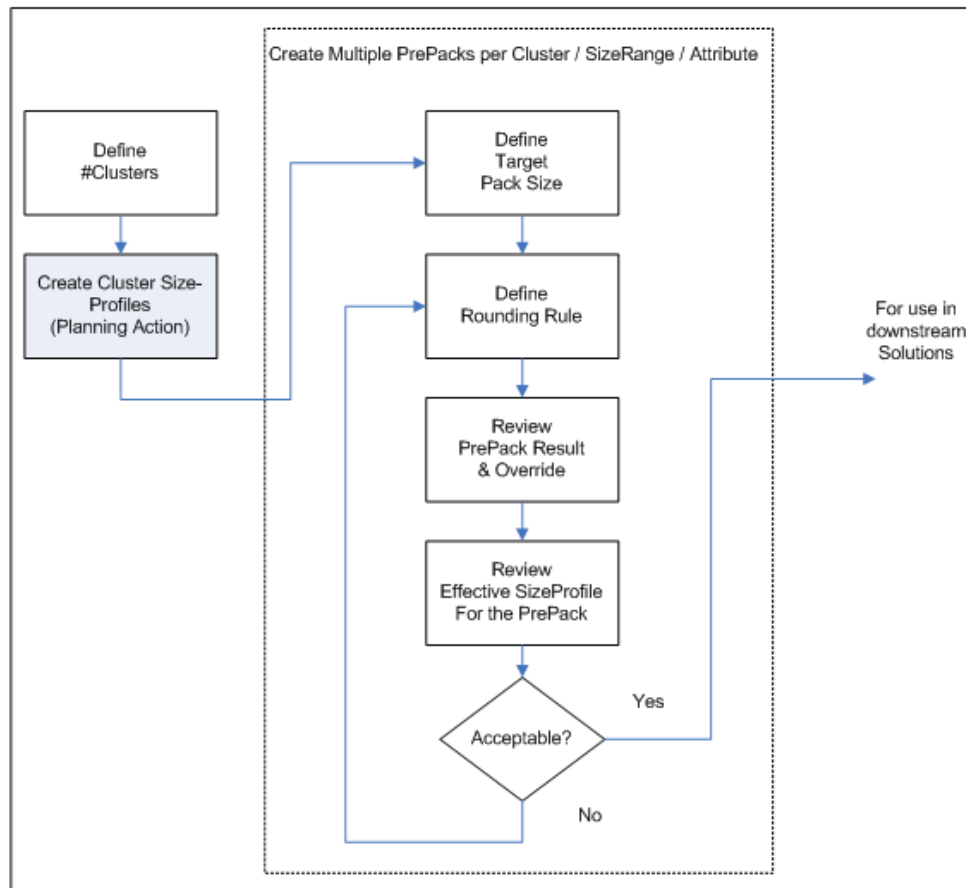
The Location Clustering activity contains the Location Clustering task.

The Location Clustering task has the following steps:

- [Number of Clusters View](#)
- [Final Approved Profile View](#)
- [Cluster Profiles Results View](#)
- [Location Clusters Membership View](#)
- [Location Count View](#)

## Using the Location Clustering Activity

**Figure 6–1 Process Flow for the Location Clustering**



This is used to define the prepack combinations that can be used by downstream solutions.

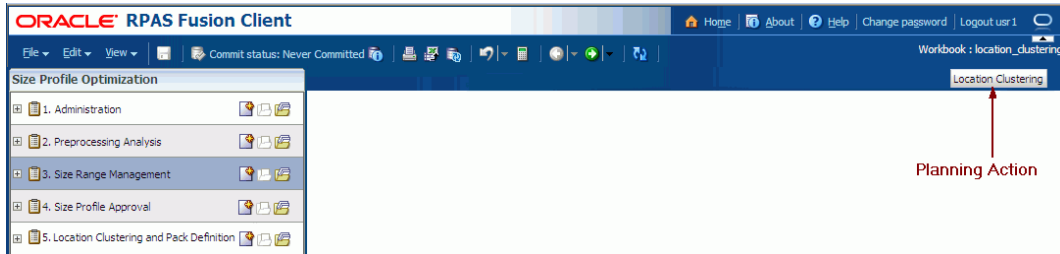
### Creating Location Clusters

1. Use the Location Clustering within SPO to create location clusters for each size range.
2. Create up to ten clusters based on location sizeprofiles for each size range and attribute.
3. The clusters for each size range and attribute combination are independent of one another.
4. Use the list in the Number of Clusters View to select the number of clusters required for the class.

## Planning Action

The Location Clustering option creates location clusters and assigns each of the selected locations to one of the clusters.

**Figure 6–2 Planning Action for Location Clustering Activity**

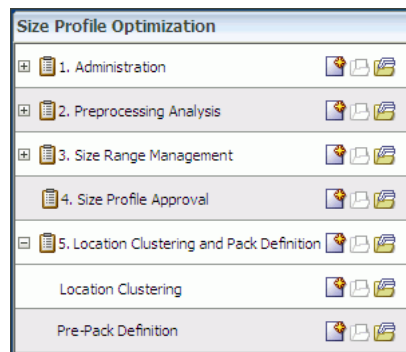


## Location Clustering Activity Wizard

To build a Location Clustering workbook, perform the following steps:

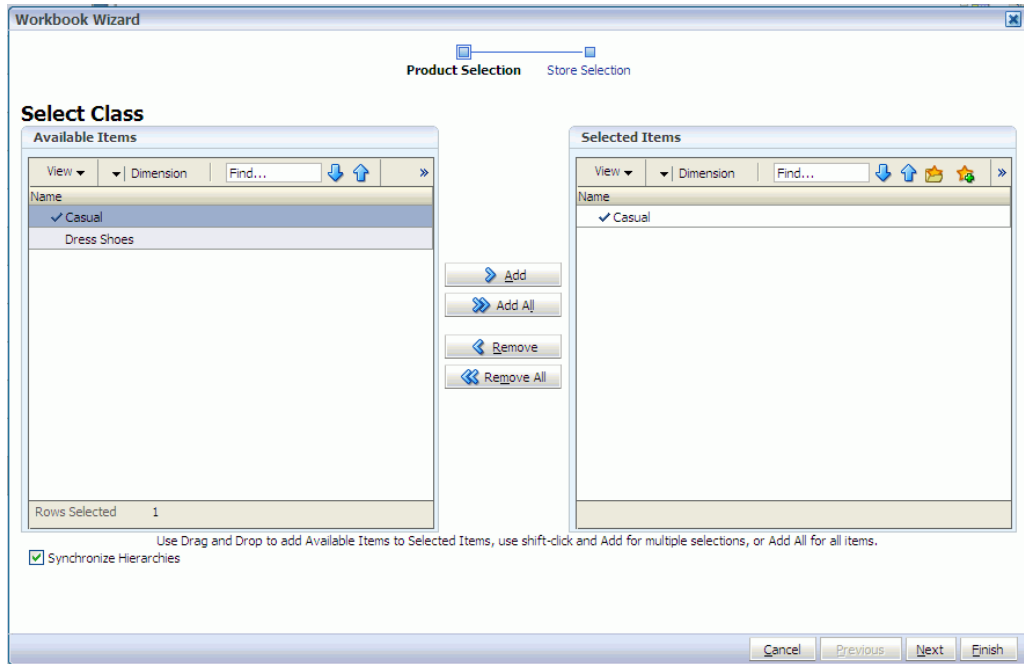
1. Click the **Create New Workbook** icon on the Location Clustering task.

**Figure 6–3 Create New Workbook Icon**



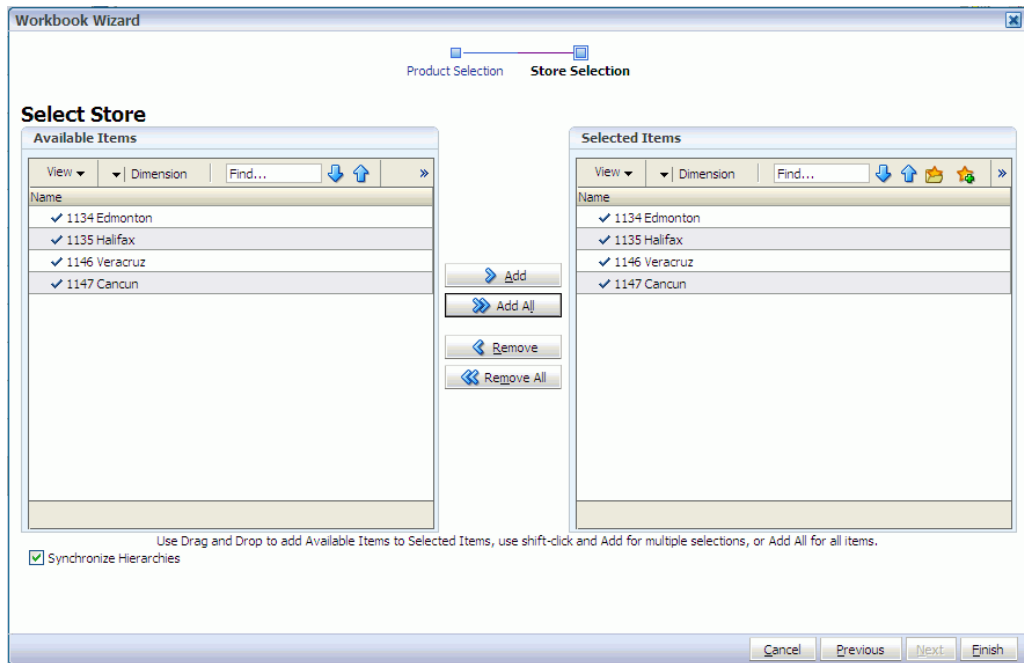
- The Select Class workbook wizard is displayed. Select the class for which the location clusters have to be created, and click **Next**.

**Figure 6–4 Workbook Wizard: Select Class**



- The workbook wizard opens at the Select Store screen. Select the locations and click **Next**.

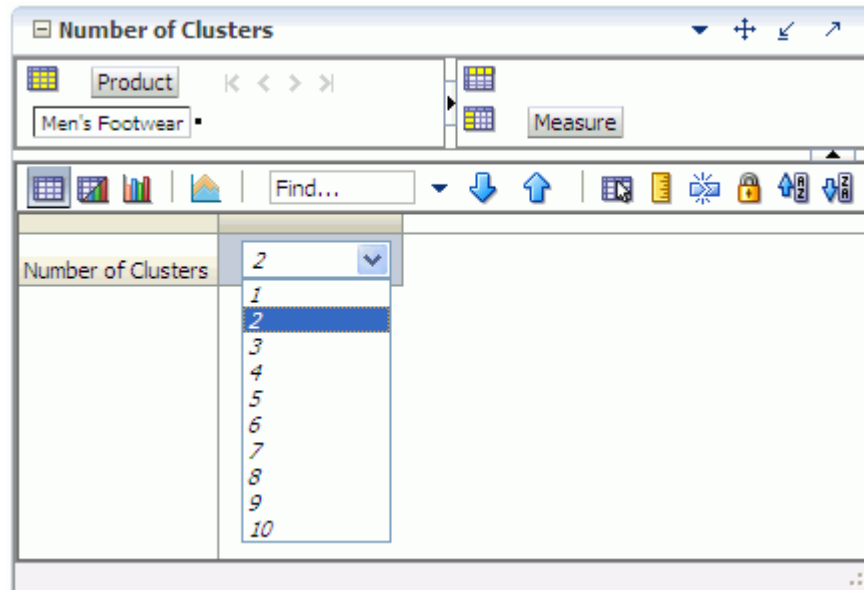
**Figure 6–5 Workbook Wizard: Select Store**



## Number of Clusters View

This view is used to define the number of clusters required for the selected class.

**Figure 6–6** Number of Clusters View



The following table describes the measures available on this view.

**Table 6–1** Numbers of Clusters View Measures

Measure	Description
Number of Clusters	Select the number of clusters required for the class.

After you have specified the number of clusters, use the **Location Clustering** option in the **Clustering** menu to perform the following:

1. Create as many location clusters as needed based on the centroids of the size profiles.
2. Assign each of the locations to one of the available clusters, based on the relationship of the location's size profile to that of the cluster.

## Final Approved Profile View

This view displays the escalated profile that was eventually approved. This is the size profiles that would be used in Location Clustering in the next view.

**Figure 6–7 Final Approved Profile View**

		7.5	8.5	9	9.5	10	10.5	11	11.5	12	13	14
Final Approved Size Profile	dark color basic	0.0%	0.0%	0.0%	11.1%	0.0%	0.0%	4.9%	13.6%	0.0%	0.0%	13.6%
	dark color fall 2008	3.0%	6.5%	4.9%	11.4%	8.7%	12.5%	11.4%	11.4%	8.7%	4.9%	3.0%
	dark color spring 2008											

The following table describes the measures available on this view.

**Table 6–2 Escalated Profile View Measures**

Measure	Description
Final Approved Size Profile	This measure displays the resulting size profile that applies to the given escalation level. It is the data source for clustering.

## Cluster Profiles Results View

This view displays the centroids of each of the clusters. A centroid is the average of the members in that cluster. This view is used to view the profiles of the clusters that would be created.

**Figure 6–8 Cluster Profile Results View**

		Cluster Profiles											
		6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5
Cluster 01		0.0%	0.0%	0.0%	3.0%	4.9%	6.6%	8.6%	11.5%	0.0%	0.0%	0.0%	0.0%
Cluster 02		0.0%	0.0%	0.0%	3.4%	4.8%	6.4%	8.7%	11.2%	0.0%	0.0%	0.0%	0.0%
Cluster 03		0.0%	0.0%	0.0%	3.0%	4.9%	6.6%	8.6%	11.5%	0.0%	0.0%	0.0%	0.0%

## Location Clusters Membership View

This view shows the assignment of each of the locations to one of the clusters for the selected class.

The example here shows that a given location can belong to different size clusters for the same class of merchandise-based on the size range and attribute.

**Figure 6–9 Location Clusters Membership View**

Location	Product	Measure	Size Range	Location	Attribute
1134 Edmonton	dark color basic			Men's Shoes	Cluster 02
	dark color fall 2008			Women's Shoes	Cluster 01
1135 Halifax	dark color basic			Men's Shoes	Cluster 03
	dark color fall 2008			Women's Shoes	Cluster 01
1146 Veracruz	dark color basic			Men's Shoes	Cluster 02
	dark color fall 2008			Women's Shoes	Cluster 01
1147 Cancun	dark color basic			Men's Shoes	Cluster 03
	dark color fall 2008			Women's Shoes	Cluster 01
	dark color fall 2008			Men's Shoes	Cluster 01
	dark color fall 2008			Women's Shoes	Cluster 02

The following table describes the measures available on this view.

**Table 6–3 Location Clusters Membership View Measures**

Measure	Description
Cluster Membership ID	Displays the assignment of each of the locations to one of the clusters for the selected class.

## Location Count View

This view displays the total number of locations in each of the clusters for every size range and attribute within the class.

**Figure 6–10 Location Count View**

Store Count	Product	Measure	Attribute	Size Range	Cluster 01	Cluster 02	Cluster 03	Cluster 04	Cluster 05
	dark color basic	Men's Shoes			1	2	1	0	0
		Women's Shoes			4	0	0	0	0
	dark color fall 2008	Men's Shoes			0	1	3	0	0
		Women's Shoes			2	1	1	0	0
	dark color spring 2008	Men's Shoes			0	0	0	0	0
		Women's Shoes			0	0	0	0	0

**Table 6–4 Location Count View Measures**

Measure	Description
Store Count	Displays the total number of locations in the cluster



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# Prepack Optimization Activity

This chapter contains the following sections:

- [Introduction](#)
- [Prepack Optimization Concepts](#)
- [Prepack Optimization Process Flow](#)
- [Prepack Optimization Users](#)
- [Workflow for Prepack Optimization at the Item Level L01](#)
- [Workflow for Prepack Optimization at the Complex Pack Level L02- Fashion Items](#)
- [Workflow for Prepack Optimization at the Subclass/Class Level \(L03 and L04\)](#)
- [Workflow for Prepack Optimization at the Complex Pack Level- Non-Fashion Items](#)

## Introduction

Prepack Optimization can be used by Prepack Analysts to determine the optimal combination of prepack configurations to meet individual store-level requirements. While optimizing returns for the retailer, Prepack Optimization takes into account competing constraints such as presentation minimums, vendor specifications, and storage limitations.

The principles driving Prepack Optimization are:

- Reducing supply chain handling costs
- Minimizing misallocation, resulting in lost sales at some stores ([Under-allocation Cost](#)) and markdowns at other stores ([Over-allocation Cost](#))
- Striking a balance with the complexity due to multiple prepack configurations

Oracle Retail Prepack Optimization provides a unified workflow to determine prepack configurations for varied types of retail merchandise such as:

- Sized merchandise (for example, Fashion)
  - Single style - single color - multiple units of the same size (also called "bundles")
  - Single style - multiple colors - multiple units of each style-color-size
  - Different styles - multiple units of different style-color-size
- Non-sized merchandise (for example, Hardlines)

## Prepack Optimization Concepts

This section details some of the basic concepts used in the Prepack Optimization module.

### Size Clusters

Clustering is widely used in retail to group large number of similar entities into a manageable number of clusters. Size profiles of each store tends to be unique, but grouping stores that have approximately the same profile helps reduce the complexity of the supply chain.

Stores/locations that have similar size profiles are grouped to form a size cluster. Size clusters in the context of SPO are useful for determining prepacks that are best suited to each cluster, and may be used in downstream applications such as Assortment Planning (AP) and Allocation. For more information on location clusters, see [Chapter 6, "Location Clustering Activity"](#).

### Prepacks

Prepacks are a predefined combination of multiple SKUs that facilitate efficient shipping, warehousing, handling, and distribution.

### Complex Pack

A complex pack is a prepack that contains more than one item. In the context of fashion merchandise, each style-color is referred to as an item; whereas, in the context of hardlines and grocery, each SKU is referred to as an item.

### Flat Pack

A pack that contains one unit of each available size in the specified size range is termed as a flat pack in prepack optimization. This classification is applicable only to fashion merchandise.

### Fixed Prepacks

Some prepack configurations may have to be forced into Purchase Orders because they are mandated by the vendor or the buyer. This could be based on the vendor or buyer's past experience or logistical constraints. Such prepacks are termed fixed prepacks.

### Prepack Optimization

Prepack Optimization determines the optimal number of prepack configurations required to minimize misallocation of sales (resulting in lost sales or markdowns), while keeping the number of prepacks to a minimum (to reduce operational costs).

### Core and Fringe Sizes

When the average size profile of a chain is analyzed, the sizes that contribute to the majority of sales across most stores are called the **core sizes**. The other sizes that contribute to lower sales or are sold at fewer stores are called the **fringe sizes**.

## Handling Cost

It represents costs such as those associated with picking, moving, and loading each unit of merchandise within a warehouse. Handling cost is represented as average cost per unit of merchandise and it usually varies by the class of merchandise, such as clothing, footwear, and home appliances.

## Under-allocation Cost

This is the notional value lost (sales or margin) as a result of supplying any store with merchandise less than its true sales potential.

## Over-allocation Cost

This is the loss incurred due to the supply of more merchandise to a store than it has potential to sell. This could result in clearance markdowns or expiration.

## Features of Prepack Optimization

Some of the features of the Prepack Optimization module of SPO are as follows:

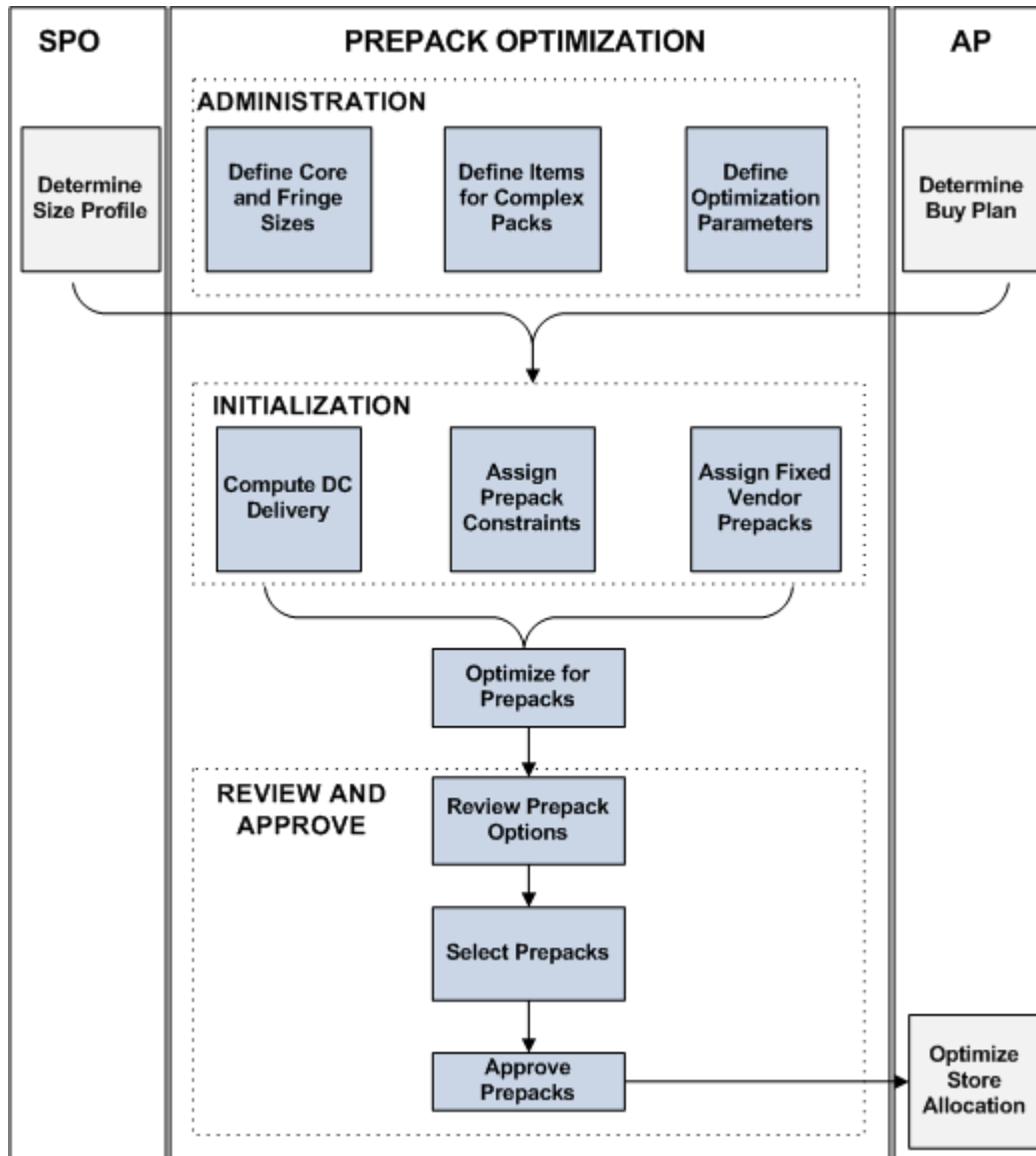
- Computes optimal prepack configurations, depending on the number of prepacks the retailer may be able to buy, optimized for each DC delivery or Purchase Order, while minimizing misallocation and handling cost
- Suggests prepack configurations based on planned store receipts, historical sales, or a Bulk Purchase Order
- Recommends the optimal number of prepack configurations to strike a balance with supply chain complexities
- Takes into account pack-level constraints to ensure conformity to logistical and storage constraints
- Accounts for size-level constraints to enable user-specified distribution of sizes
- Enables the specification of pre-defined prepacks to accommodate reuse of existing or vendor-specified prepack configurations
- Provides Prepack Analysts with the ability to alter parameters and perform what-if analysis
- Offers the option to manually override the optimal solution recommended by the tool if the Analyst prefers
- Specifies validity dates for the prepacks, based on the Purchase Orders with which they are associated
- Enables prepack optimization at various levels- specifically for selected Items or generically at higher levels of merchandise dimension, such as Class or Department

## Prepack Optimization Process Flow

Prepack optimization is implemented as a module within SPO. Retailers who have implemented AP and SPO can leverage this capability from within AP.

The Prepack Optimization module contains a set of workbook templates to support the initialization, review, and approval of optimized prepacks. The process of optimization can be done online or as a batch process. For more details on the batch processes, see the *Oracle Retail Size Profile Optimization Implementation Guide*.

Figure 7-1 Prepack Optimization Workflow



## Prepack Optimization Users

The typical users of Prepack Optimization are as follows:

- **Administrators:** An administrator performs tasks such as defining items for complex packs, setting optimization parameters, and defining the fringe sizes. These tasks are performed using the following workbooks in the Prepack Optimization Administration group:
  - [Optimization Parameter Administration Task](#)
  - [Complex Pack Maintenance Task](#)
  - [Fringe Size Management Task](#) (for fashion merchandise only)
- **Analysts:** A Prepack Optimization Analyst performs tasks such as initiation of optimization, review of the optimized configurations, and approval/overriding of the suggested configurations.

Initiation of optimization and approval of optimized prepacks can be executed in either of the following ways:

- If a detailed review of the optimization configurations and what-if analysis is required, manual override of values is preferred, and automation is not of primary importance, use the [Prepack Optimization and Analysis Task](#).
- If there are multiple Prepack Optimization Analysts processing voluminous data simultaneously, optimization can be automated, using a batch process. In this case, the approval of the optimized prepacks can be executed using the [Batch Result Approval Task](#). For more details on the batch processes, see *Oracle Retail Size Profile Optimization Implementation Guide*.

## Optimization Parameter Administration Task

Prepack Optimization depends on several parameters that are specific to each department. For example, DC Weeks of Supply, Handling Costs, Maximum Pack Size, and Over/Under-allocation Cost are likely to be uniform within a department. The Prepack Administrator can maintain these department-specific values using the [Set Default Optimization Parameters View](#). For more information on this view, see [Set Default Optimization Parameters View](#).

On the other hand, some parameters are uniform across all departments. Such global parameters can be maintained using the [Set Global Optimization Parameters View](#). For more information on this view, see [Set Global Optimization Parameters View](#).

If the department-level defaults are not specified for certain departments, the tool uses the global-level values by default.

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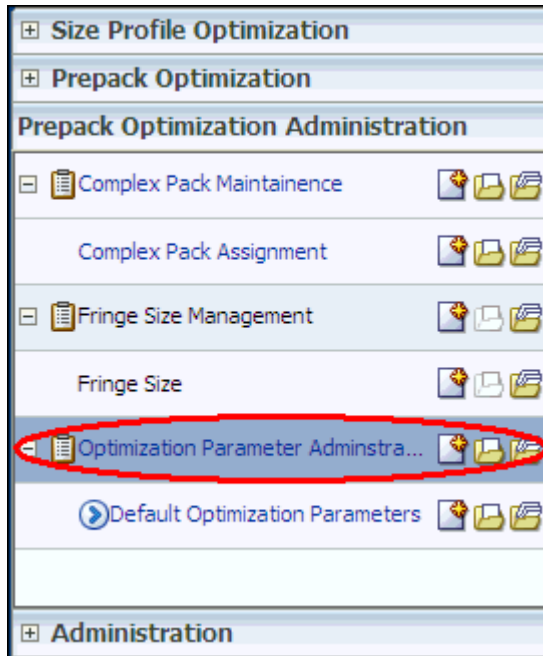
**Note:** Prepack Analysts can override some global and department-level parameters at the item-level in the later steps of the workflow.

---

To open the Optimization Parameter Administration workbook, perform the following:

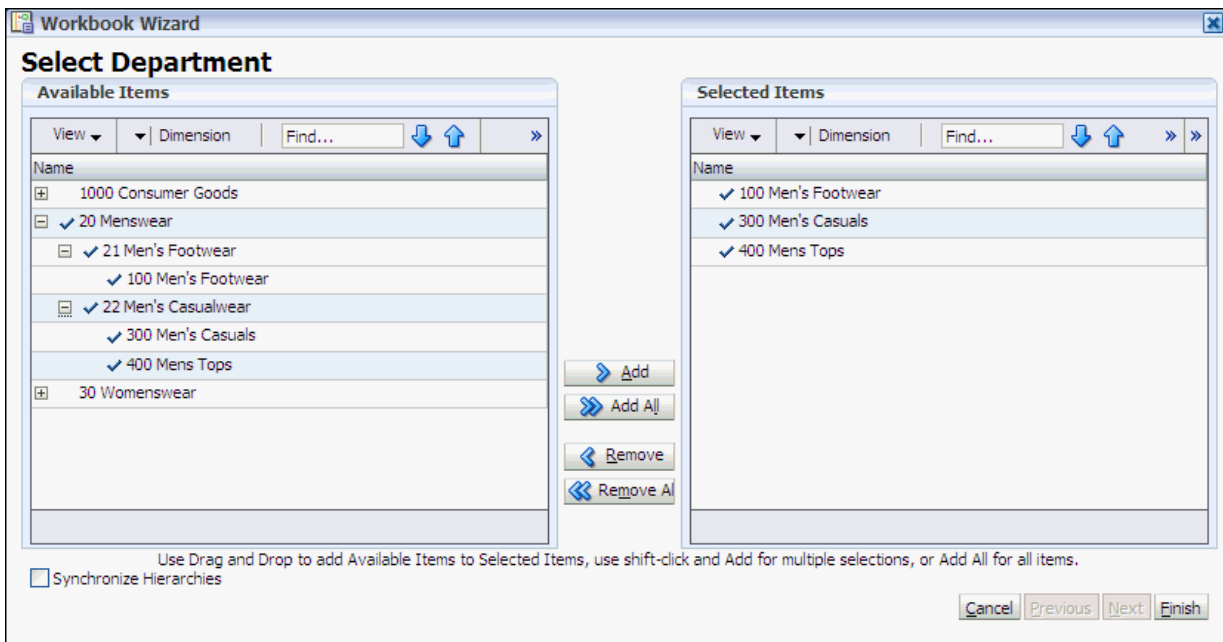
1. Click the **Create New Workbook** icon on the Optimization Parameter Administration task.

**Figure 7-2 Creating a New Optimization Parameter Administration Task**



2. The Select Product screen appears. Select the departments in which you wish to maintain default parameters and click **Finish**.

**Figure 7-3 Selecting Departments to Maintain Default Parameters**



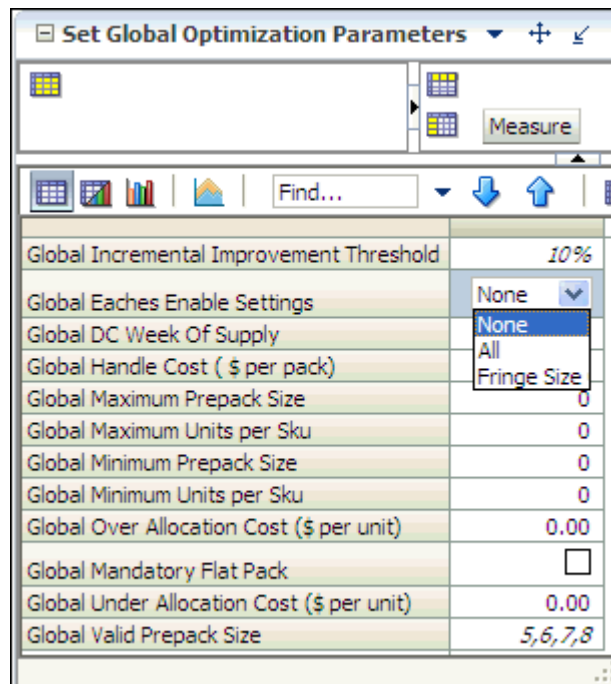
The Optimization Parameter Administration workbook is built and the following views are displayed:

- [Set Global Optimization Parameters View](#)
- [Set Default Optimization Parameters View](#)

## Set Global Optimization Parameters View

Use this view to define the global parameters for prepack optimization. These values will take effect for all products unless default values are assigned using the [Set Default Optimization Parameters View](#).

**Figure 7-4** Setting Global Optimization Parameters



**Table 7-1** Set Global Optimization Parameters Measures

Measure	Description
Global Incremental Improvement Threshold	Use this parameter to assign the minimal cost saving (%) required to justify the adding of another prepack. For example, in the above figure, the value is 10%. So, additional prepack configurations will be suggested only if the associated cost savings is more than 10%.
Global Eaches Enable Settings	Use this parameter to define whether or not eaches can be purchased for the specified DC Receipt. The possible values for this measure are: <ul style="list-style-type: none"> <li>■ <b>All</b>- Eaches are eligible for all sizes</li> <li>■ <b>Fringe-Only</b>- Eaches are eligible only for the fringe sizes; core sizes will be bought only in prepacks</li> <li>■ <b>None</b>- Eaches are not eligible</li> </ul>
Global DC Week Of Supply	Use this parameter to define the number of weeks of forward store receipts that needs to be covered by each DC Delivery.

**Table 7-1 (Cont.) Set Global Optimization Parameters Measures**

<b>Measure</b>	<b>Description</b>
Global Handling Cost	Use this parameter to specify the logistics and handling costs associated with the product.
Global Maximum Pack Size	Use this parameter to define the upper limit for the calculation of prepack size. The maximum pack size may be dictated by restrictions of storage and handling capacities.
Global Maximum Units per SKU	Use this parameter to define the highest number of units per pack that the solver uses for prepack optimization.
Global Minimum Pack Size	Use this parameter to define the lower limit for the calculation of prepack size.
Global Minimum Units per SKU	Use this parameter to define the least number of units per pack for prepack optimization.
Global Over Allocation Cost	Use this parameter to define the cost incurred due to the supply of more merchandise to a store than it has potential to sell. This could include the loss incurred due to clearance markdowns or expiration.
Global Mandatory Flat Pack	Use this drop-down to indicate whether or not flat packs should be compulsorily included in the optimization of prepacks.
Global Under Allocation Cost	Use this parameter to define the cost associated with the opportunity lost as a result of supplying any store with merchandise less than its true sales potential.
Global Valid Pack Size	Use this parameter to define the preferred pack sizes, other than the global minimum and maximum sizes defined above. Provide a list of comma-separated values. During pack size calculation, the tool will consider only the sizes mentioned here, and ignore the other values.  If left blank, all values between the defined minimum and maximum will be considered valid.

## Set Default Optimization Parameters View

While the Set Global Optimization Parameters view enables you to define the parameters for the entire chain, the Set Default Optimization Parameters view aids in assigning department-specific values for the same parameters. For example, the item sizes and associated costs of footwear may vary vastly from those of garments; similarly, there are differences between fashion merchandise and electronics or hardware. Therefore, the Set Default Optimization Parameters view facilitates the definition of parameters for the departments whose values differ from the global values set in the [Set Global Optimization Parameters View](#).

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**Note:** If you define parameters for your department here, then the parameters defined in the global workbook are effectively ignored.

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**Figure 7–5** Setting Default Optimization Parameters

Measure	Value
Default DC Week of Supply	9.00
Default Eaches Enable Settings	Fringe Size Only
Default Maximum Pack Size	60
Default Minimum Pack Size	1
Default Over Allocation Cost (\$ per unit)	2.00
Default Handle Cost (\$ per pack)	0.25
Default Incremental Improvement Threshold	0.10
Default Mandatory Flat Pack	<input type="checkbox"/>
Default Under Allocation Cost (\$ per unit)	60.00
Default Valid Pack Size	
Default Maximum Units per Sku	20
Default Minimum Units per Sku	0

**Table 7–2** Set Default Optimization Parameters Measures

Measure	Description
Default Incremental Improvement Threshold	Use this parameter to assign the minimal cost saving (%) required to justify the adding of another prepack. For example, in the above figure, the value is 10%. So, additional prepack configurations will be suggested only if the associated cost savings is more than 10%.
Default Eaches Enable Settings	Use this parameter to define whether or not eaches can be purchased for the specified DC Receipt. The possible values for this measure are: <ul style="list-style-type: none"> <li>■ <b>All-</b> Eaches are eligible for all sizes</li> <li>■ <b>Fringe-Only-</b> Eaches are eligible only for the fringe sizes; core sizes will be bought only in prepacks</li> <li>■ <b>None-</b> Eaches are not eligible</li> </ul>

**Table 7–2 (Cont.) Set Default Optimization Parameters Measures**

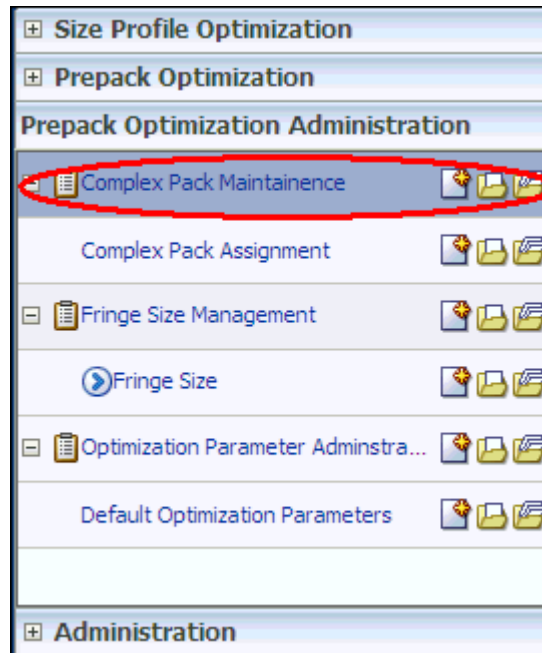
<b>Measure</b>	<b>Description</b>
Default DC Week Of Supply	Use this parameter to define the number of weeks of forward store receipts that needs to be covered by each DC Delivery.
Default Handling Cost	Use this parameter to specify the logistics and handling costs associated with the product.
Default Maximum Pack Size	Use this parameter to define the upper limit for the calculation of prepack size. The maximum pack size may be dictated by restrictions of storage and handling capacities.
Default Maximum Units per SKU	Use this parameter to define the highest number of units per pack that the solver uses for prepack optimization.  For larger packs, use this to restrict complexity. Set this value to 1 to define bundles.
Default Minimum Pack Size	Use this parameter to define the lower limit for the calculation of prepack size.
Default Minimum Units per SKU	Use this parameter to define the least number of units per pack for prepack optimization.
Default Over Allocation Cost	Use this parameter to define the cost incurred due to supply of more merchandise to a store than it has potential to sell. This could include the loss incurred due to clearance markdowns or expiration.
Default Mandatory Flat Pack	Use this drop-down to indicate whether or not flat packs should be compulsorily included in the optimization of prepacks.
Default Under Allocation Cost	Use this parameter to define the cost associated with the opportunity lost as a result of supplying any store with merchandise less than its true sales potential.
Default Valid Pack Size	Use this parameter to define the preferred pack sizes, other than the default minimum and maximum sizes defined above. Provide a list of comma-separated values. During pack size calculation, the tool will consider only the sizes mentioned here, and ignore the other values.  If left blank, all values between the defined minimum and maximum will be considered valid.

## Complex Pack Maintenance Task

To open the Complex Pack Maintenance workbook, perform the following:

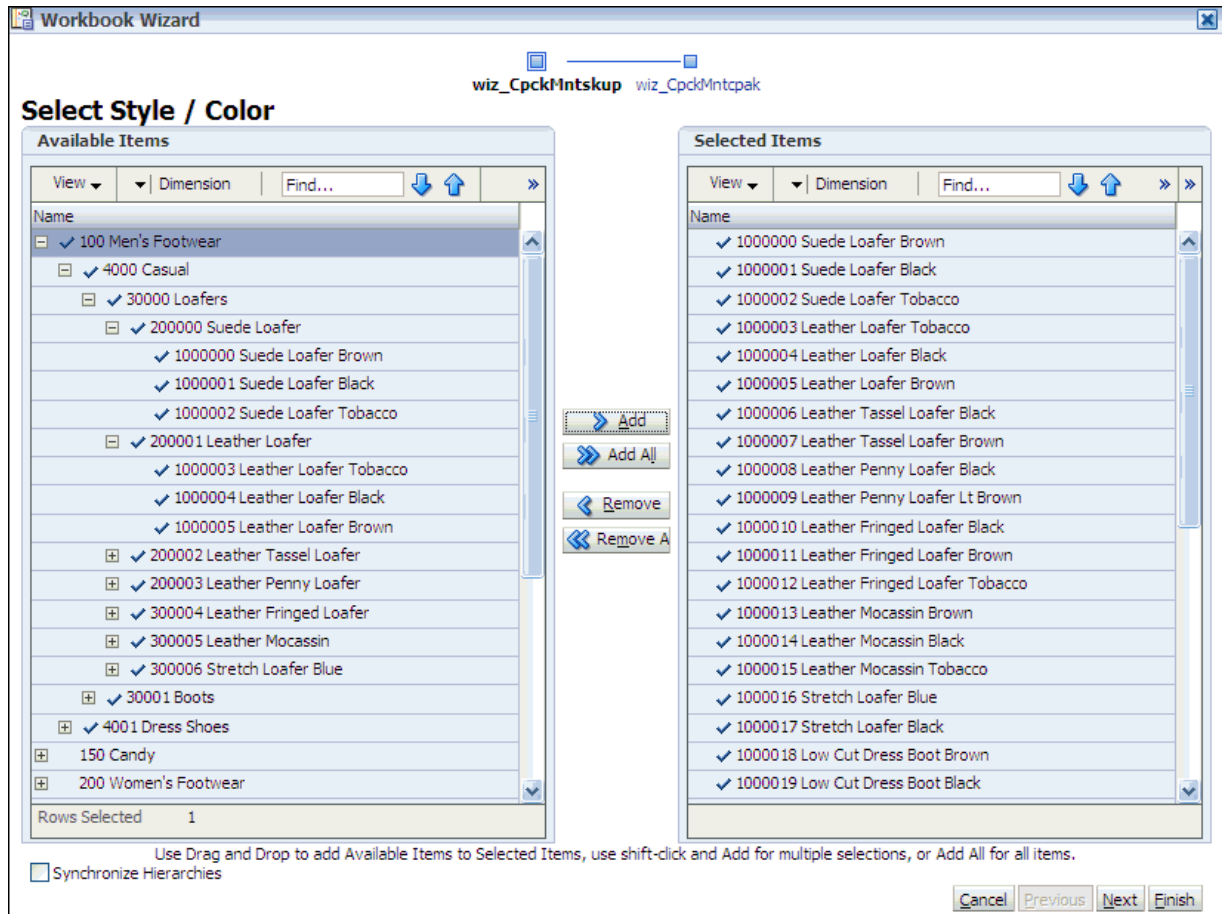
1. Click the **Create New Workbook** icon on the Complex Pack Maintenance task.

*Figure 7-6 Creating a New Complex Pack Maintenance Task*



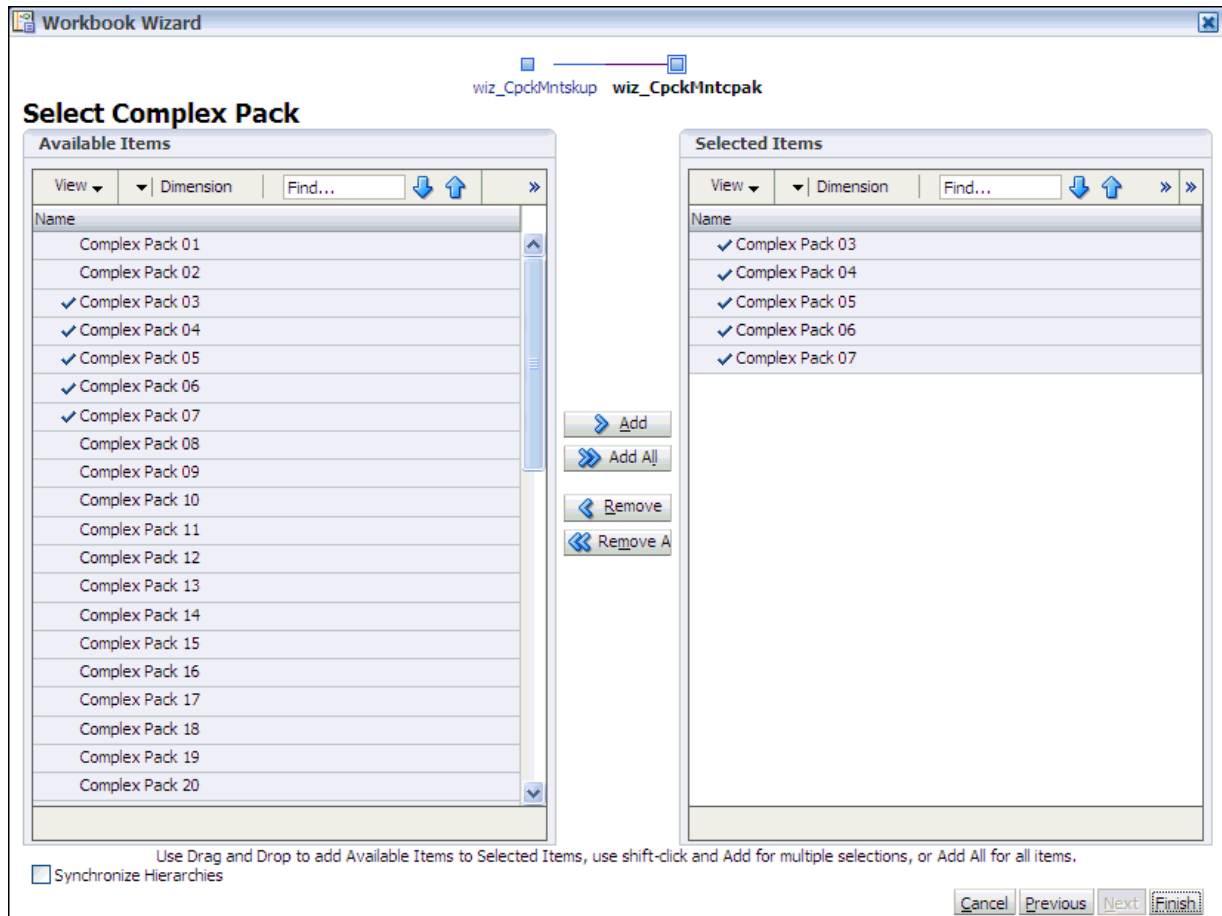
- The Select Product screen appears. Select the items to be included in the complex packs and click **Next**.

**Figure 7-7 Selecting Items for Complex Pack**



3. The Select Complex Pack screen appears. Select the IDs to be used for the complex packs and click **Finish**.

**Figure 7–8** Selecting IDs for Complex Packs



The Complex Pack Maintenance workbook is built and the [Assign Items to Complex Packs View](#) is displayed.

## Assign Items to Complex Packs View

Use this view to select items for each complex pack. These items can belong to different Classes or Departments.

**Figure 7–9 Assigning Items to Complex Packs**

Complex Pack	Item	Style-color to Complex	Complex Pack Description
Complex Pack 03	all [Product]	<input type="checkbox"/>	<i>Suede Loafers</i>
	1000000 Suede Loafer Brown	<input checked="" type="checkbox"/>	
	1000001 Suede Loafer Black	<input checked="" type="checkbox"/>	
	1000002 Suede Loafer Tobac	<input type="checkbox"/>	
	1000003 Leather Loafer Toba	<input type="checkbox"/>	
Complex Pack 04	all [Product]	<input type="checkbox"/>	<i>Tobacco Loafers</i>
	1000000 Suede Loafer Brown	<input type="checkbox"/>	
	1000001 Suede Loafer Black	<input type="checkbox"/>	
	1000002 Suede Loafer Tobac	<input checked="" type="checkbox"/>	
	1000003 Leather Loafer Toba	<input checked="" type="checkbox"/>	

Use the **Style-color to Complex Map** checkbox to include the items that can be packed together for the corresponding Complex Pack ID. The complex pack can be assigned a label using the **Complex Pack Description** measure so that the pack can be recognized in the downstream processes.

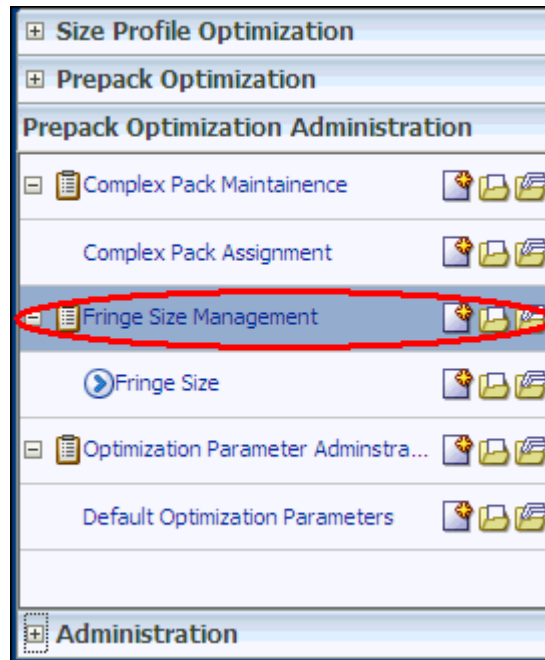
For example, in [Figure 7–9](#), the items added to Complex Pack 02 are 1000002 Suede Loafer Tobacco and 1000003 Leather Loafer Tobacco and the label assigned to this complex pack is Tobacco Loafers.

## Fringe Size Management Task

To open the Fringe Size Management workbook, perform the following:

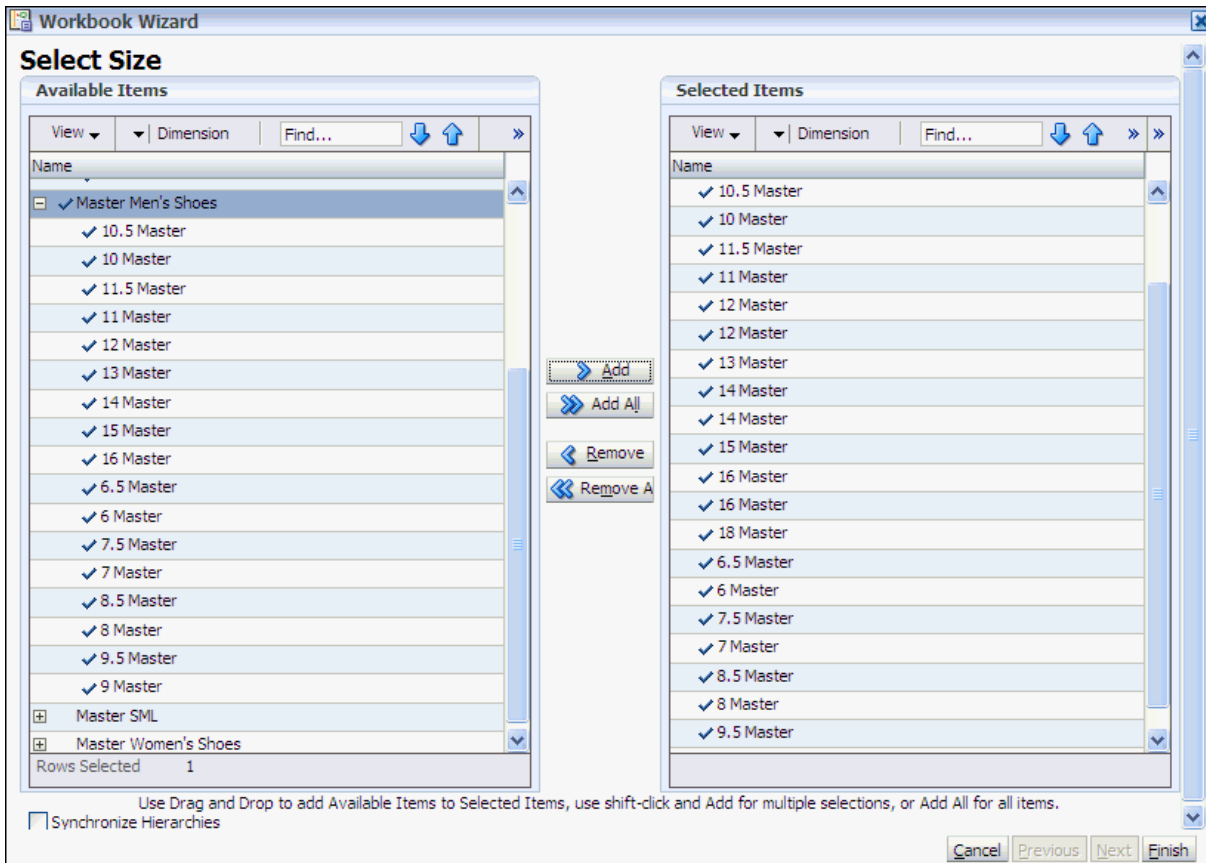
1. Click the **Create New Workbook** icon on the Fringe Size Management task.

*Figure 7-10 Creating a New Fringe Size Management Task*



- The Fringe Size Management wizard is displayed. Select the size ranges for which you wish to identify fringe sizes and click **Finish**.

**Figure 7–11 Selecting Size Ranges to Identify Fringe Sizes**



The Size Range Management workbook is built and the [Identify Fringe Size View](#) is displayed.

## Identify Fringe Size View

Use this view to define fringe sizes for each size range. If this data is not maintained for a size range, then all sizes for that size range will be considered to be core sizes.

**Figure 7-12** Identifying Fringe Sizes

	Fringe Size Flag
[-] Master Men's Shoes	<input checked="" type="checkbox"/>
6 Master	<input checked="" type="checkbox"/>
7 Master	<input checked="" type="checkbox"/>
8 Master	<input checked="" type="checkbox"/>
9 Master	<input type="checkbox"/>
10 Master	<input type="checkbox"/>
11 Master	<input type="checkbox"/>
12 Master	<input type="checkbox"/>
13 Master	<input checked="" type="checkbox"/>
14 Master	<input checked="" type="checkbox"/>
15 Master	<input checked="" type="checkbox"/>
16 Master	<input checked="" type="checkbox"/>

Use the **Fringe Size Flag** checkbox to define the fringe sizes. For example, in [Figure 7-12](#), for Master Men's Shoes, the sizes 6-8 and 13-16 have been identified as fringe sizes and sizes 9-12 have been identified as core sizes.

## Prepack Optimization and Analysis Task

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**Note:** The views explained in [Optimization Parameter Administration Task](#), [Fringe Size Management Task](#), and [Complex Pack Maintenance Task](#) are used primarily by the Prepack Optimization Administrators, whereas the views of [Prepack Optimization and Analysis Task](#) and [Batch Result Approval Task](#) are typically used by the Prepack Optimization Analysts.

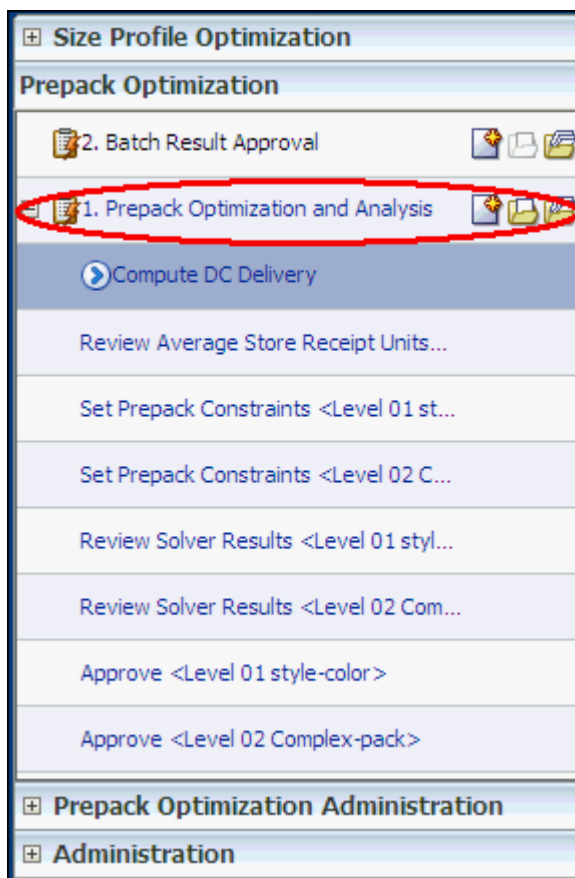
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To open the Prepack Optimization and Analysis workbook, perform the following:

1. Click the **Create New Workbook** icon on the Prepack Optimization and Analysis task.

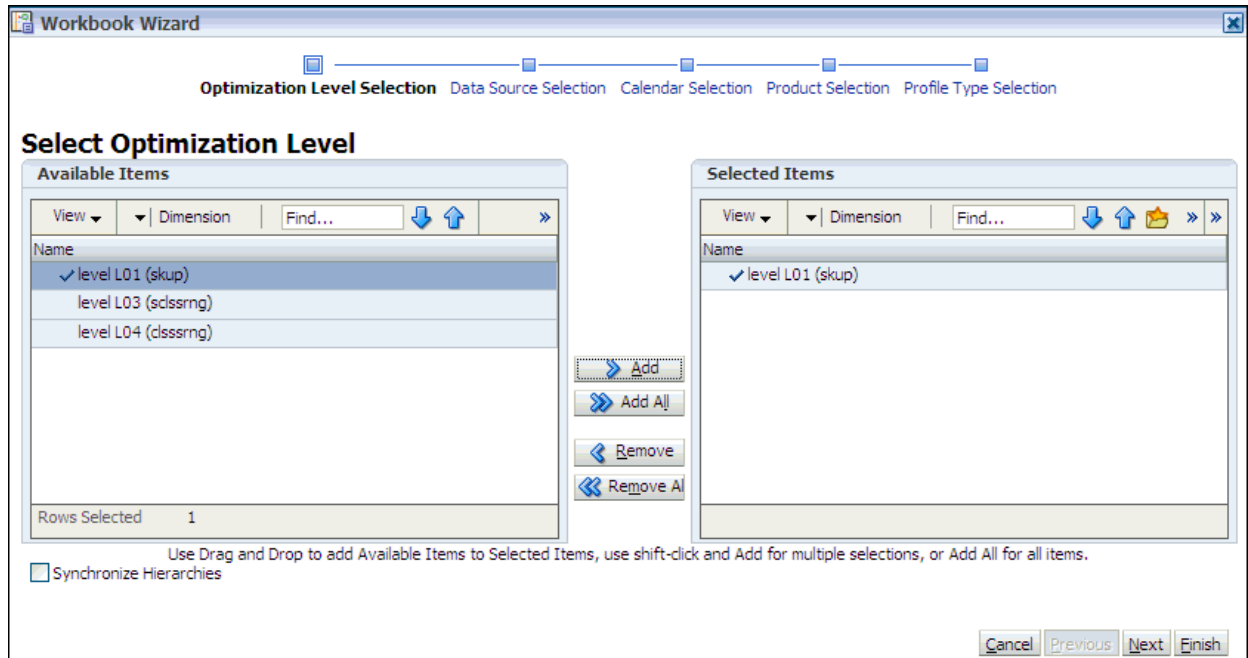
**Figure 7–13** *Creating a New Prepack Optimization and Analysis Task*



- The Select Optimization Level screen appears. Select the level at which you wish to perform optimization and click **Next**.

Based on the level selected, the dynamic workbook build capability is leveraged. This creates tasks and steps that are specific to the choice that is made in this step.

**Figure 7–14** Selecting the Level for Optimization



The parameters visible in the views of the Prepack Optimization and Analysis task are dependant on the optimization level selected for optimization.

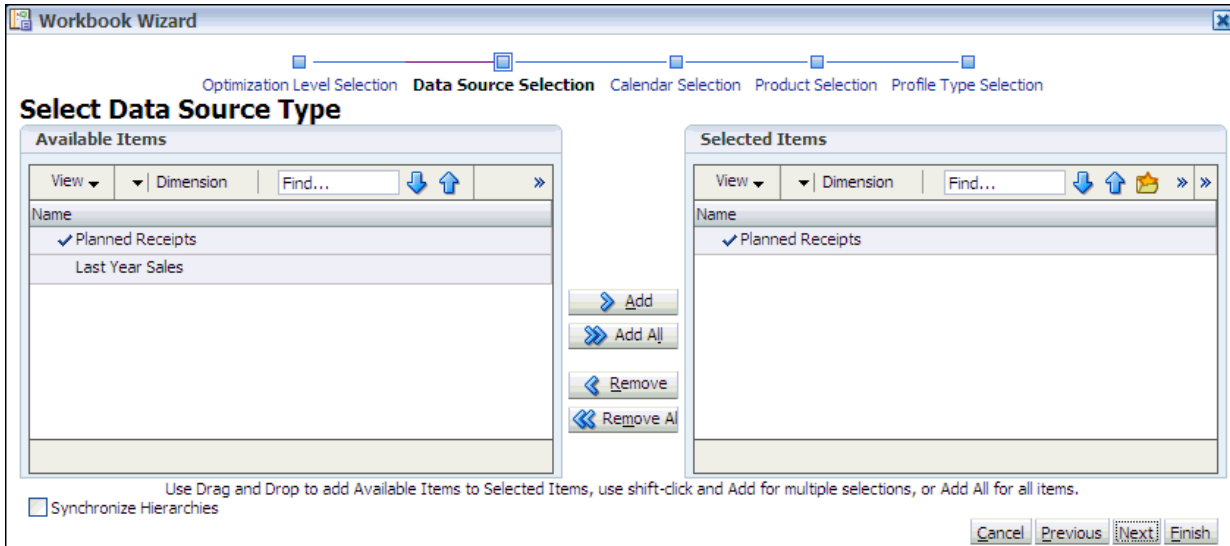
- Level1 (L01) corresponds to the item level and represents the lowest level at which prepack optimization can be performed. The workflow corresponding to this level is detailed in [Workflow for Prepack Optimization at the Item Level L01](#).
- Level2 (L02) corresponds to complex pack items. This level is selected by default if you select Level1.

The prepack optimization process for fashion items differs from that for non-fashion items. The workflow corresponding to the fashion items is detailed in [Workflow for Prepack Optimization at the Complex Pack Level L02- Fashion Items](#). The workflow corresponding to the non-fashion items is detailed in [Workflow for Prepack Optimization at the Complex Pack Level- Non-Fashion Items](#).

- Level3 (L03) corresponds to the subclass level and Level4 (L04) corresponds to the class level. The workflow corresponding to these levels is detailed in [Workflow for Prepack Optimization at the Subclass/Class Level \(L03 and L04\)](#).

3. The Select Data Source screen is displayed. Select the required source for the data and click **Next**.

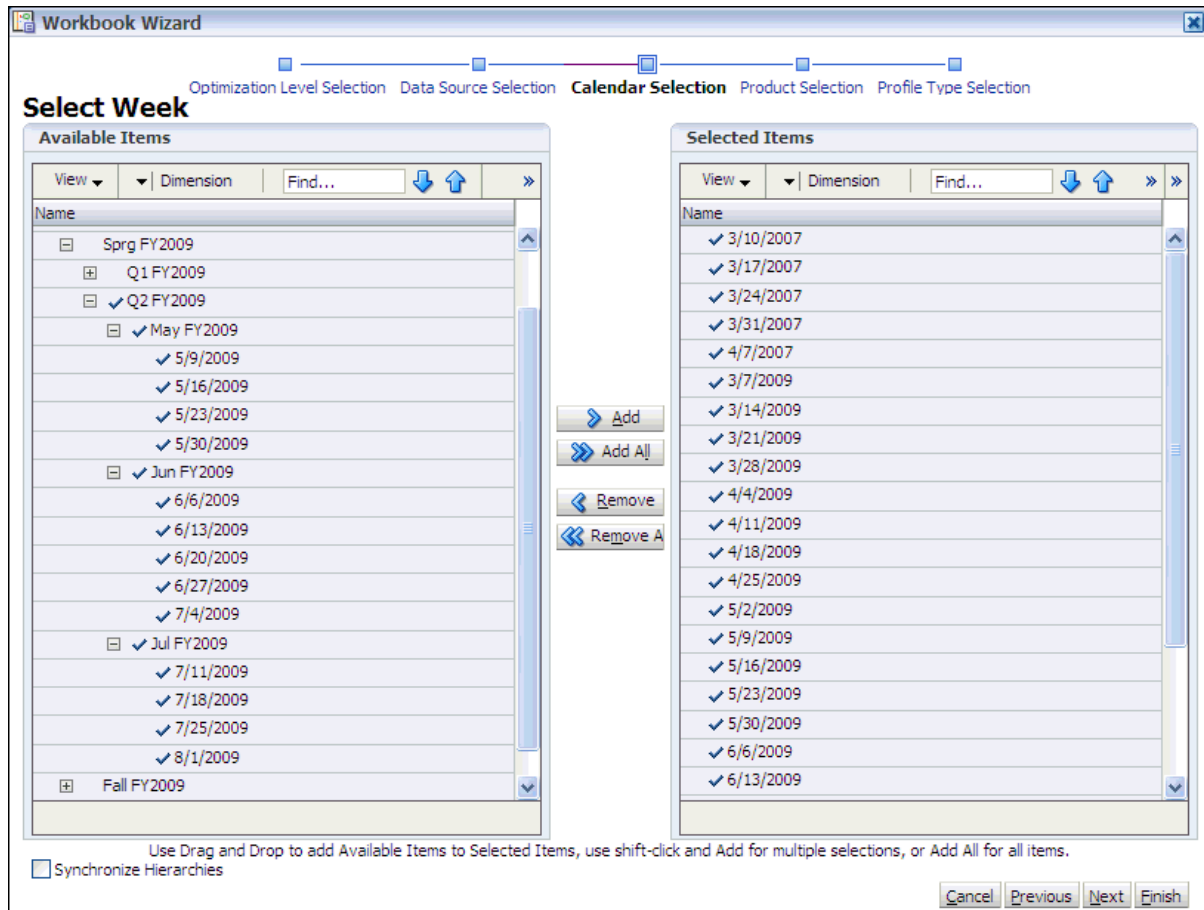
**Figure 7–15** *Selecting the Data Source for Prepack Optimization*



To seed the data for calculation of optimized prepicks, you can use data from either the assortment plan at the store level or the last year’s sales. You can also override these values to provide ad-hoc values for calculation.

- The Select Calendar screen is displayed. Select the period for prepack optimization and click **Next**.

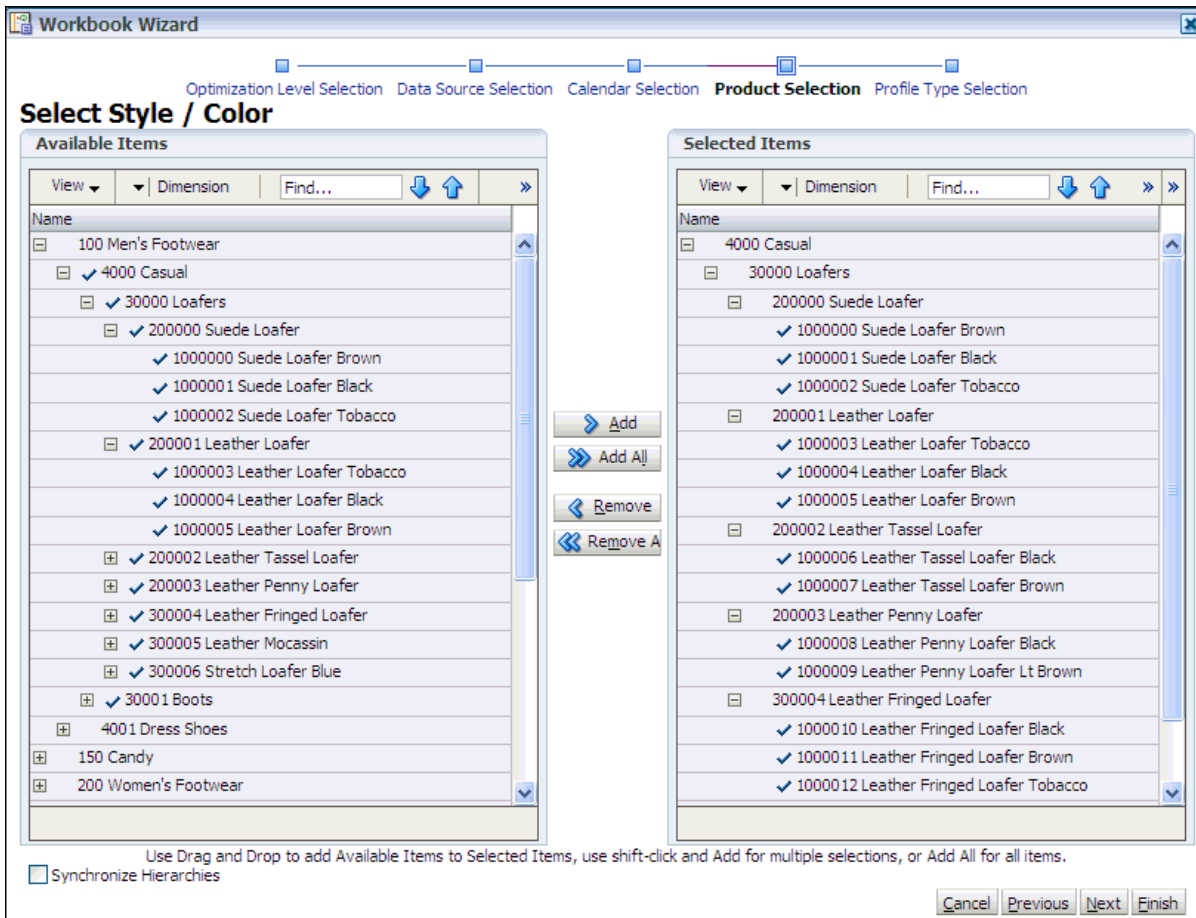
**Figure 7-16** Selecting the Period for Prepack Optimization



Planned receipts or last year sales data for the selected weeks will be brought into the workbook, after the items have been selected.

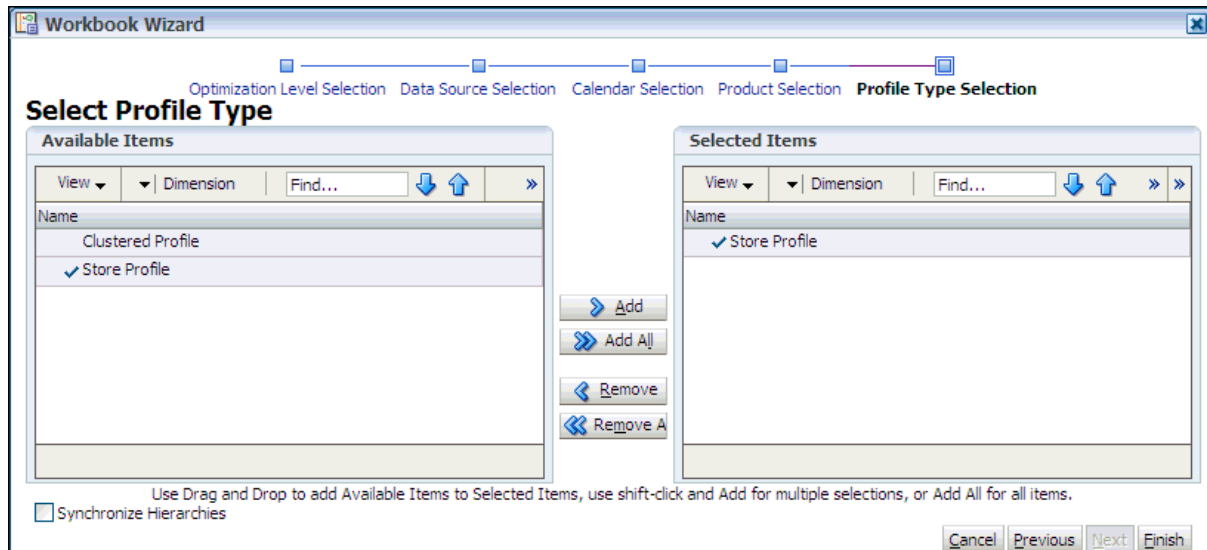
- The Select Product screen is displayed. Select the items for prepack optimization and click **Next**.

**Figure 7-17** *Selecting the Items for Prepack Optimization*



6. The Select Profile screen is displayed. Select the desired source for seeding data in the views.

**Figure 7–18** Selecting the Profile for Prepack Optimization



The Prepack Optimization and Analysis workbook is built and the following steps are displayed:

- [Compute DC Delivery Step](#)
- [Review Average Store Receipt Units Step \(Level L01\)](#)
- [Set Prepack Constraints Step \(Level L01\)](#)
- [Review Solver Results Step \(Level L01\)](#)
- [Approve Step \(Level L01\)](#)

## Compute DC Delivery Step

The views under this step are:

- [Define Delivery Parameters View](#)
- [Review DC Delivery Units View](#)

### Define Delivery Parameters View

Use this view to input the parameters required to compute the DC Receipts for which the prepack configurations must be calculated.

**Figure 7–19** *Defining the Parameters for DC Receipt Computation (Level L01)*

	DC Weeks of Supply	Compute DC Delivery
1000000 Suede Loafer Brown	6	<input checked="" type="checkbox"/>
1000001 Suede Loafer Black	6	<input checked="" type="checkbox"/>
1000002 Suede Loafer Tobacco	9	<input checked="" type="checkbox"/>
1000003 Leather Loafer Tobacco	9	<input checked="" type="checkbox"/>
1000004 Leather Loafer Black	6	<input checked="" type="checkbox"/>
1000005 Leather Loafer Brown	6	<input checked="" type="checkbox"/>
1000006 Leather Tassel Loafer Black	6	<input checked="" type="checkbox"/>
1000007 Leather Tassel Loafer Brown	6	<input checked="" type="checkbox"/>

The following step describes the measures available in this view.

**Table 7–3** *Measures in the Define Delivery Parameters View*

Measure	Description
DC Weeks of Supply	Use this measure to define the number of weeks of forward store receipts that needs to be covered by each DC delivery.  <b>Note:</b> For fashion items that have only one store receipt, set a high value larger than the number of weeks in this task.
Compute DC Delivery	Select this checkbox to compute DC deliveries based on the seeded receipts, which may be from Assortment Plan or from History.

## Review DC Delivery Units View

The DC Receipts computed in the Define Delivery Parameters view are visible in the Review DC Delivery Units view. This view displays the store flow and DC flow across all weeks in the workbook. The store override quantities are freely editable, and can be used to optimize to a Bulk PO.

**Note:** This view is organized by item and is similar, irrespective of the level of optimization. While optimizing for any level higher than style-color (Level 1), analyze all the component items individually.

**Figure 7–20** Reviewing the DC Delivery Units

		all [Calendar]	Mar FY2009	3/7/2	3/14/200	3/21/	3/28/200	4/4/200
1000000 Suede Loafer Brown	Store Receipt Units	52,436	5,465	0	0	0	2,712	2,753
	DC Receipt Units	52,436	10,960		10,960			
	Aggregated Store Receipt							
1000001 Suede Loafer Black	Store Receipt Units	51,916	5,495	0	0	0	2,749	2,746
	DC Receipt Units	51,916	10,969		10,969			
	Aggregated Store Receipt							
1000002 Suede Loafer Tobac	Store Receipt Units	53,799	5,691	0	0	0	2,848	2,843
	DC Receipt Units	53,799	10,969		10,969			

The following table describes the measures available in this view.

**Table 7–4** Measures in the Review DC Delivery Units View

Measure	Description
Store Receipt Units	This displays the store receipts in each week, as per seeding.
DC Receipt Units	This displays the DC deliveries computed in the Define Delivery Parameters view.
Aggregated Store Receipt	You may use this to input Store Receipts derived outside of the seeding mechanism. This will supersede the value in the Store Receipt Units measure and drive the prepack optimization. This quantity will be spread down to individual stores.

## Workflow for Prepack Optimization at the Item Level L01

This section describes the workflow and steps involved in prepack optimization at the item level for fashion items.

### Review Average Store Receipt Units Step (Level L01)

This step contains the Review Average Store Receipt Units view (Level L01).

#### Review Average Store Receipt Units View (Level L01)

This view displays the weekly planned store receipts and average receipt units (per delivery period) for each store. Data in this view is intended only for review and cannot be edited.

---

**Note:** This view is organized by item and is similar, irrespective of the level of optimization. While optimizing for any level higher than style-color (Level 1), analyze all the component items individually.

---

**Figure 7–21** Reviewing Average Store Receipt Units (Level L01)

	Mar FY2009	3/7/2009	3/14/2009	3/21/2009	3/28/2009	4/4/2009
Store Receipt Units	28	0	0	0	14	14
Average Store Receipt Units	14	14	0	0	0	0

The notation <Level L01> in the header indicates that this data is aggregated to the style-color level. When you optimize at the complex pack level, the header changes to <Level L02>. When you optimize at the subclass or class level, the header changes to <Level L03> and <LevelL04> respectively.

**Table 7–5** Measures in the Review Average Store Receipt Units View (Level L01)

Measure	Description
Store Receipt Units	This is the planned store receipts for this store per week.
Average Store Receipt Units	This measure represents the average units that a store must receive for each delivery within a certain DC delivery period. For each DC Delivery in a store, it is computed by dividing the Total Store Receipt Units until the next DC Delivery by the Store Receipt Units.

If store receipts had been seeded in this workbook, the ratio of the seeded data is retained when a chain-level override is spread down to the stores, during computation of Average Store Receipt Units. If you do not intend to seed planned receipts, you can choose to load a store-level profile to drive this calculation; else, the total quantity will be spread down equally to all stores.

## Set Prepack Constraints Step (Level L01)

Use this step to specify user-defined constraints at various levels, in order to control the prepack recommendations being generated.

These constraints are optional. If these values are not maintained explicitly, the tool will use the default values set up in the [Optimization Parameter Administration Task](#). If default values are not defined, the tool will optimize in an unconstrained scenario.

The views in this step are:

- [Define Prepack Constraints View \(Level L01\)](#), which you can use to define constraints for each DC delivery. These include constraints such as the number of prepacks, pack sizes, flat packs, and eaches.
- [Define Size Level Constraints View \(Level L01\)](#), which you can use to define the size-level minimum and maximum limits for each prepack.
- [Define Fixed Prepacks View \(Level L01\)](#), which you can use to assign certain prepacks as fixed, based on past experience or vendor suggestions.

### Define Prepack Constraints View (Level L01)

Use this view to define the constraints that are applicable for all prepacks attached to each DC delivery. You can define these constraints for each item and DC Delivery, or set them uniformly across all DC deliveries. They can also be defaulted from the global or default parameters for the department.

**Figure 7-22** Defining Prepack Constraints (Level L01)

	all [Delivery]	Delivery 1	Delivery 2
Eaches Enabled	Fringe Siz	Fringe Size Only	Fringe Size Only
Maximum Prepack Size	60	60	60
Minimum Prepack Size	1	1	1
Optimize	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Mandatory Flat Pack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Valid Prepack Size	1,4,8,12,20	1,4,8,12,20	1,4,8,12,20
Maximum Type of Prepacks	9	3	2

The following table describes the measures available on this view.

**Table 7–6 Measures in the Define Prepack Constraints View (Level L01)**

Measure	Description
Eaches Enabled	This measure can have the following values: <ul style="list-style-type: none"> <li>■ <b>None</b>- Eaches are not enabled for this DC delivery</li> <li>■ <b>All</b>- Eaches are eligible for all sizes</li> <li>■ <b>Fringe Size Only</b>- Eaches are eligible only for the fringe sizes; core sizes will be procured in prepacks</li> </ul>
Maximum Pack Size	Use this measure to define the upper limit that the tool must use for the calculation of prepack size.
Minimum Pack Size	Use this measure to define the lower limit that the tool must use for the calculation of prepack size. If left blank, the default value is 1.
Optimize	Use this checkbox to indicate that when prepack optimization is initiated, this item should be included.
Mandatory Flat Pack	Use this drop-down to indicate that at least one of the recommended prepacks must contain a flat pack.
Valid Pack Size	Use this measure to specify the valid pack sizes you are considering, as a list of comma-separated values. During pack size calculation, the tool will consider only the sizes mentioned here, and excludes other possible pack sizes. If left blank, all values between the defined minimum and maximum will be considered valid.
Maximum Type of Prepicks	Use this measure to specify the highest number of recommended prepicks that may be considered for optimization.

### Define Size Level Constraints View (Level L01)

Use this view to define size-level constraints for each prepack in each DC delivery. You can specify the minimum and the maximum units of SKU of specific sizes in a prepack.

Figure 7–23 Defining Size Level Constraints (Level L01)

		Mas	6 Ma	6.5 Ma	7 M	7.5 M	8 Ma	8.5 M	9 M	9.5 M	10 Ma	10.5 M	11 Ma	11.5 M	12 Ma	13 M	14 M	15 M	16 Ma
Delivery Pack ID01	Maximum Units of SKU		0	0	0	2	2	2	2	6	6	6	6	6	2	0	0	0	0
	Minimum Units of SKU		0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0
Delivery Pack ID02	Maximum Units of SKU		2	2	2	2	2	6	6	6	6	6	6	6	6	2	2	2	2
	Minimum Units of SKU		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Different limits can be set for different sizes for a particular Delivery Pack. Also, there can be different constraints per Delivery Pack.

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**Note:** This limit is defined during the configuration of the application. Contact your system administrator, who maintains the requirements of all users in your company. For more information on the configuration plug-in, see *Oracle Retail Size Profile Optimization Implementation Guide*.

---

### Define Fixed Prepacks View (Level L01)

Use this view to assign certain prepack configurations as fixed. This can be used to repeat known prepacks or if your vendor has stipulated certain prepacks.

Figure 7–24 Defining Fixed Prepacks (Level L01)

		Master	6 M	6.5 M	7 M	7.5 M	8 M	8.5 M	9 M	9.5 M	10 M	10.5 M	11 M	11.5 M	12 M	13 M	14 M	15 M	16
Delivery Pack ID01	Fixed Prepack		11	0	0	0	0	1	1	2	2	2	1	1	1	0	0	0	0
	Assign Fixed Prepack		<input checked="" type="checkbox"/>																
Delivery Pack ID02	Fixed Prepack		6	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0
	Assign Fixed Prepack		<input checked="" type="checkbox"/>																

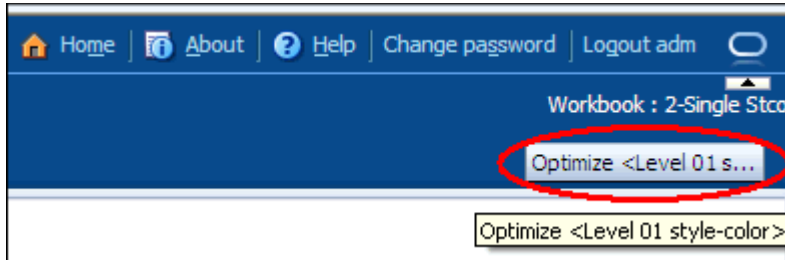
In the example shown in [Figure 7–24](#), select the DC delivery for which you wish to assign fixed prepacks. For the respective Delivery Packs, manually key in the configuration as shown above and use the Assign Fixed Prepack checkbox to indicate that this prepack should be considered fixed.

You can assign multiple fixed prepacks per DC delivery, and you can assign different fixed prepacks for different DC deliveries.

## Performing Prepack Optimization (Level L01)

The views in the [Compute DC Delivery Step](#) and the [Set Prepack Constraints Step \(Level L01\)](#) provide the pre-requisites for calculation of prepack optimization. The next step is to use the **Optimize <Level L01 >** planning action shown in [Figure 7–25](#).

**Figure 7–25** Performing Prepack Optimization (Level L01)

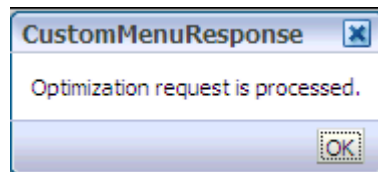


Following are the inputs that the prepack optimization solver uses to determine the recommended optimized prepack:

- Size-level store receipts, computed from store
- Size profile or cluster profile
- Department-level admin parameters
- User-defined constraints

On completion of prepack optimization, the following confirmation message is displayed.

**Figure 7–26** Confirmation of Prepack Optimization



The views of the [Review Solver Results Step \(Level L01\)](#) will now be populated with data.

## Review Solver Results Step (Level L01)

The Prepack Solver returns the optimization results for each of the specified DC deliveries. For each DC delivery, it evaluates the best possible combination, starting with a single prepack, moving on to two prepacks, and so on, till the maximum number specified.

**Note:** The maximum number permitted is driven by a parameter that is set in the configuration plug-in tool of the application. Contact your system administrator to change the value.

The views in this step are:

- [Review Optimized Prepacks View \(Level L01\)](#)
- [Recommended Prepack Configurations View \(Level L01\)](#)
- [Review Validity Dates View \(Level L01\)](#)

### Review Optimized Prepacks View (Level L01)

You can review the Prepack Optimization results beginning with the summary screen shown below.

**Figure 7–27** *Reviewing the Optimized Prepack Results (Level L01)*

Delivery 1					
all [Prepack Type]	Prepack NO= 01	Prepack NO= 02	Prepack NO= 03	Prepack NO= 04	
System Selected Prepack Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Error Message From Optimization					
Recommended Prepack Sizes	?	[28]	[28, 38]	[28, 38, 26]	[28, 38, 26, 3]
Total Prepack Receipt	35816	11340	8184	8222	8070
Total Each Receipt	0	0	0	0	0
Fit %	?	-0%	55%	54%	57%
Under Allocation Cost	2683	224	1035	808	617
Over Allocation Cost	26369	11349	5064	5133	4822
Mis-allocation Cost	29052	11573	6099	5940	5439
Handling Cost	282	101	57	59	64
Total Cost	29333	11674	6156	5999	5504
Select for Approval	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following table describes the measures available on this view.

**Table 7–7 Measures in the Review Optimized Prepacks View (Level L01)**

<b>Measure</b>	<b>Description</b>
System Selected Prepack Type	This checkbox indicates the best, optimal prepack combination recommended by the solver. This recommendation is based on the optimization parameters and constraints that you had defined.
Error Message From Optimization	If the request to the solver was unsuccessful, the message displayed here could aid the refinement of inputs and resolution of any conflicting parameters.
Recommended Prepack Sizes	This displays all the unique pack sizes that the solver recommends, as a list of comma-separated values.
Total Prepack Receipt	This measure represents the total quantity of prepacks required, if you had selected this option. This value is for the average store receipt for this DC delivery period.
Total Each Receipt	This measure represents the total quantity of eaches required, if you had selected this option. This value is for the average store receipt for this DC delivery period.
Fit%	This indicates the percentage of match to the Buy Quantity when the corresponding prepack is selected. This is computed as 100% - mis-allocation %.  Mis-allocation is computed at a store/SKU level for both over-allocation and under-allocation.
Under Allocation Cost	This is the aggregate of under-allocation costs from the SKU level to the store level in that DC delivery, for the corresponding set of prepack.
Over Allocation Cost	This is the aggregate of over-allocation costs at a store/SKU level for an average store receipt in that DC delivery, for the corresponding set of prepack.
Mis-allocation Cost	This is the sum of over-allocation cost and under-allocation cost.
Handling Cost	This represents the handling cost attached to the corresponding number of possible prepacks.
Total Cost	This is the sum of the mis-allocation cost and the handling cost for the corresponding set of prepack.
Select for Approval	Use this checkbox to mark the prepack for approval and to be flowed down to other processes downstream.

### Recommended Prepack Configurations View (Level L01)

This view displays the details of the optimization for each delivery and for the options evaluated by the solver.

The example in the figure below shows the best possible prepack combinations if you wish to approve three prepacks.

**Figure 7–28** Reviewing the Recommended Prepack Configurations (Level L01)

		Delivery Pack ID01																
		all [Size]																
		Master																
		6 M	6,5 M	7 M	7,5 M	8 M	8,5 M	9 M	9,5 M	10 M	10,5 M	11 M	11,5 M	12 M	13 M	14 M	15 M	16 M
Prepack Definition	all [Product]	19	19			1	1	3	3	4	3	3	1					
	1000000 Suede Loafer Brown	11	11					2	2	3	2	2						
	1000001 Suede Loafer Black	8	8			1	1	1	1	1	1	1						
Total Prepack Receipt	all [Product]	9064																
	1000000 Suede Loafer Brown																	
	1000001 Suede Loafer Black																	
Total Each Receipt	all [Product]																	
	1000000 Suede Loafer Brown																	
	1000001 Suede Loafer Black																	

The following table describes the measures available on this view.

**Table 7–8** Measures in the Recommended Prepack Configurations View (Level L01)

Measure	Description
Prepack Definition	This indicates the number of the corresponding SKUs in the specified prepack configuration.
Total Prepack Receipt	This indicates the total quantity of each prepack required per average store receipt, if this option is approved.
Total Each Receipt	This indicates the total quantity of eaches required if this option is approved.

### Review Validity Dates View (Level L01)

This view displays the prepack options and their validity dates for the corresponding prepack configuration. The details in this view enable the Analysts to determine prepack recommendations for different receipt drops.

**Figure 7–29 Reviewing Optimization Validity Dates (Level L01)**

		3/7/2009	3/14/2009	3/21/2009	3/28/2009	4/4/2009	4/11/2009	4/18/2009	4/25/2009
Prepack Validation Calendar	Delivery Pack ID01	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Delivery Pack ID02	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Delivery Pack ID03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Delivery Pack ID04	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The checkboxes in this screenshot indicate that the corresponding prepack is valid for the specified time period.

### Approve Step (Level L01)

The Approve step consists of the following views:

- [Approve Prepack Configuration View \(Level L01\)](#)
- [Recommended Prepack Configurations View \(Level L01\)](#)
- [Prepack Calendar View \(Level L01\)](#)

### Approve Prepack Configuration View (Level L01)

Use this view to select the items that are ready for approval. You can also use this to view the log of previous approvals, if any.

**Figure 7–30 Approving Prepack Configuration (Level L01)**

	Approve	Approve By	Approve Comment	Approve Date
1000000 Suede Loafer Brown	<input checked="" type="checkbox"/>	adm	User Comment	1/29/2009
1000001 Suede Loafer Black	<input checked="" type="checkbox"/>	adm	User Comment	1/29/2009
1000002 Suede Loafer Tobacco	<input type="checkbox"/>			
1000003 Leather Loafer Tobacco	<input type="checkbox"/>			
1000004 Leather Loafer Black	<input type="checkbox"/>			
1000005 Leather Loafer Brown	<input type="checkbox"/>			
1000006 Leather Tassel Loafer Bla	<input type="checkbox"/>			
1000007 Leather Tassel Loafer Br	<input type="checkbox"/>			
1000008 Leather Penny Loafer Bla	<input type="checkbox"/>			
1000009 Leather Penny Loafer Lt	<input type="checkbox"/>			
1000010 Leather Fringed Loafer B	<input type="checkbox"/>			
1000011 Leather Fringed Loafer B	<input type="checkbox"/>			
1000012 Leather Fringed Loafer T	<input type="checkbox"/>			

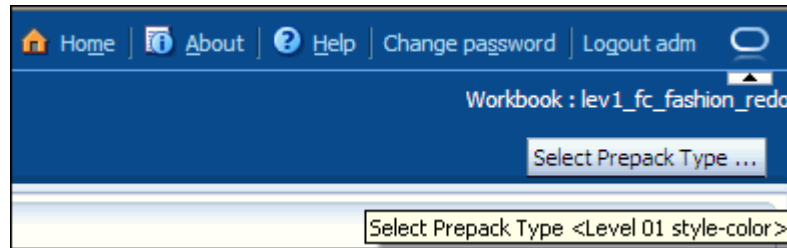
The following table describes the measures available on this view.

**Table 7–9 Measures in the Approve Prepack Configuration View (Level L01)**

Measure	Description
Approve	Use this checkbox to indicate that you wish to approve this item.
Approve By	This indicates the User ID of the Approver. This measure is populated when the approval process is successful.
Approve Comment	Use this measure to add comments, if required, for the approved prepack configuration.
Approve Date	This measure displays the system-generated time stamp of the approval.

After selecting the Approve checkbox and adding comments as desired, click the **Select Prepack** planning action as shown in the figure below.

**Figure 7-31 Initiating the Select Prepack Planning Action (Level L01)**



When the prepack has been approved, the [Recommended Prepack Configurations View \(Level L01\)](#) and [Prepack Calendar View \(Level L01\)](#) are populated.

### Recommended Prepack Configuration View (Level L01)

This view displays the approved prepack configurations for each Item. Note that this view consolidates all the DC deliveries in this task and presents a unified view of the approved prepacks for each item. Each of the approved prepacks are now assigned to a generic pack ID.

**Figure 7-32 Viewing the Approved Prepack Configurations**

The screenshot displays the 'Recommended Prepack Configuration' view for the product '1000000 Suede Loafer Brown'. The view shows a table of approved prepack definitions. The table has columns for size ranges (6.5 M to 16 M) and rows for Generic Pack IDs (0001, 0002, 0003). The table is titled 'Approved Prepack Definition'.

		Approved Prepack Definition																
all [Size]																		
Master		6.5 M	6 M	7.5 M	7 M	8.5 M	8 M	9.5 M	9 M	10.5 M	10 M	11.5 M	11 M	12 M	13 M	14 M	15 M	16 M
Generic Pack ID 0001	7	7								1	1		1	1		1		
Generic Pack ID 0002	7	7					1	1	1	1	1				1			
Generic Pack ID 0003	4	4						1	1				1	1				

### Prepack Calendar View (Level L01)

The Approved Prepack Calendar measure shows the validity period of each Generic Pack IDs, based on the DC deliveries they are attached to. Optionally, these validity dates may be enforced for purchase validations in downstream processes like AP and allocation.

**Figure 7-33 Viewing the Validity Periods for Prepack IDs (Level L01)**

	3/10/2007	3/17/2007	3/24/2007	3/31/2007	4/7/2007	3/7/2009	3/14/2009	3/21/2009	3/28/2009	4/4
Generic Pack ID 0001	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Generic Pack ID 0002	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Generic Pack ID 0003	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Generic Pack ID 0004	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

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**Note:** In the current release of the Fashion Planning Bundle, the validity dates for optimized prepacks are exported to downstream applications such as Assortment Planning. However, Assortment Planning does not force these validity dates on allocations.

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## Workflow for Prepack Optimization at the Complex Pack Level L02- Fashion Items

This section describes the workflow and the views involved in prepack optimization for fashion items at the complex pack level.

### Review Average Store Receipt Units Step (Level L02)

This step contains the Review Average Store Receipt Units view (Level L02).

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**Note:** This view is organized by item and is similar, irrespective of the level of optimization. While optimizing for any level higher than style-color (Level 1), analyze all the component items individually.

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For details on the Review Average Store Receipt Units view (Level L02), see [Review Average Store Receipt Units Step \(Level L01\)](#).

### Set Prepack Constraints Step (Level L02)

This step is used to specify user-defined constraints at various levels to control the prepack recommendations being generated. Use this step to determine prepacks for a complex items of multiple style-colors, belonging to a single style or different styles. This step is similar to the corresponding step for style-color, which is at Level 01. However, the views are organized at the level of complex packs, instead of items.

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**Note:** These constraints apply to the individual component items in each complex prepack.

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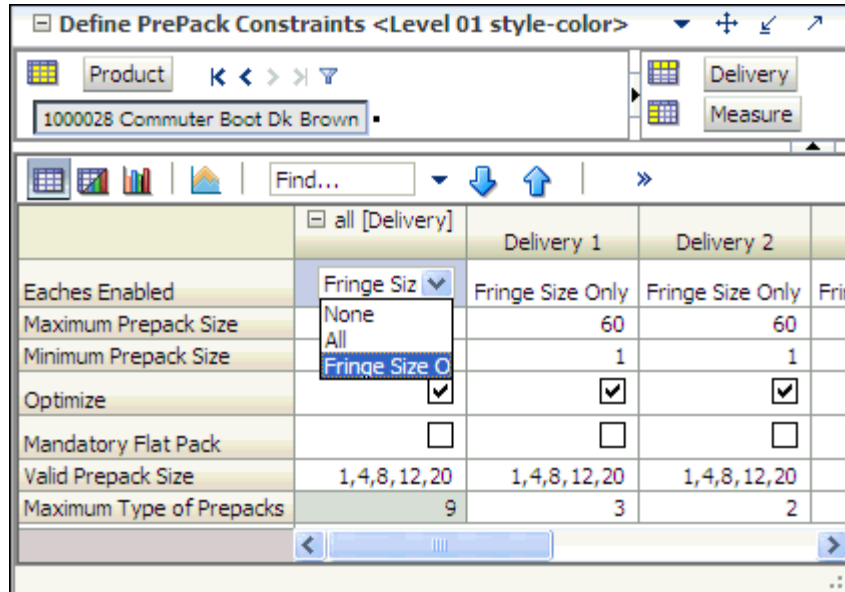
The views in this step are:

- [Define Prepack Constraints View \(Level L02\)](#), which you can use to define constraints for each DC Delivery. These include constraints such as the number of prepacks, pack sizes, flat packs, and eaches.
- [Define Size Level Constraints View \(Level L02\)](#), which you can use to define the size-level minimum and maximum limits for each prepack.
- [Define Fixed Prepacks View \(Level L02\)](#), which you can use to assign certain prepacks as fixed, based on past experience or vendor suggestions.

### Define Prepack Constraints View (Level L02)

Use this view to define the constraints that are applicable for all prepacks attached to each DC delivery. You can define these constraints for each complex item and DC Delivery, or set them uniformly across all DC deliveries. They can also be defaulted from the global or default parameters for the department. These constraints apply for the entire prepack and not components within the prepack.

**Figure 7–34 Defining Prepack Constraints (Level L02)**



The following table describes the measures available on this view.

**Table 7–10 Measures in the Define Prepack Constraints View (Level L02)**

Measure	Description
Eaches Enabled	<p>This measure can have the following values:</p> <ul style="list-style-type: none"> <li>▪ <b>None</b>- Eaches are not enabled for this DC delivery</li> <li>▪ <b>All</b>- Eaches are eligible for all sizes</li> <li>▪ <b>Fringe Size Only</b>- Eaches are eligible only for the fringe sizes; core sizes will be procured in prepacks</li> </ul>
Maximum Pack Size	Use this measure to define the upper limit that the tool must use for the calculation of prepack size.
Minimum Pack Size	<p>Use this measure to define the lower limit that the tool must use for the calculation of prepack size.</p> <p>If left blank, the default value is 1.</p>
Optimize	Use this checkbox to indicate that when prepack optimization is initiated, this item should be included.
Mandatory Flat Pack	Use this checkbox to indicate that at least one of the recommended prepacks must contain a flat pack.
Valid Pack Size	<p>Use this measure to specify the valid pack sizes you are considering, as a list of comma-separated values. During pack size calculation, the tool will consider only the sizes mentioned here, and excludes other possible packsizes.</p> <p>If left blank, all values between the defined minimum and maximum will be considered valid.</p>

**Table 7-10 (Cont.) Measures in the Define Prepack Constraints View (Level L02)**

Measure	Description
Maximum Type of Prepacks	Use this measure to specify the highest number of recommended prepacks that must be considered for optimization.

**Define Size Level Constraints View (Level L02)**

Use this view to define size-level constraints for each prepack in each DC delivery. You can specify the minimum and the maximum units of SKU of specific sizes in a prepack.

**Note:** Size-level constraints may be defined for each of the component items in each complex prepack.

**Figure 7-35 Defining Size Level Constraints (Level L02)**

		Master	6 M	6.5 M	7 M	7.5 M	8 M	8.5 M	9 M	9.5 M	10 M	10.5 M	11 M	11.5 M	12 M	13 M	14 M	15 M	16 M
1000000	Suede Loafer Brown	Maximum Units of SKU	?	0	0	0	0	2	2	2	3	3	3	2	2	2	0	0	0
		Minimum Units of SKU	?	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0
1000001	Suede Loafer Black	Maximum Units of SKU	?	0	0	0	0	2	2	2	2	2	2	2	2	2	0	0	0
		Minimum Units of SKU	?	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0

### Define Fixed Prepacks View (Level L02)

Use this view to assign certain prepack configurations as fixed. This can be used to repeat known prepacks or if your vendor has stipulated certain prepacks.

**Note:** Specify the exact quantities of each size of each component item of the complex prepack.

Figure 7-36 Defining Fixed Prepacks (Level L02)

		all [Size]	6 M	6.5 M	7 M	7.5 M	8 M	8.5 M	9 M	9.5 M	10 M	10.5 M	11 M	11.5 M	12 M	13 M	14 M	15 M	16 M
all [Product]	Fixed Prepack	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0
	Assign Fixed Prepack	<input checked="" type="checkbox"/>																	
1000000 Suede Loafer Brown	Fixed Prepack	14	14	0	0	0	1	1	2	2	3	2	2	1	0	0	0	0	0
	Assign Fixed Prepack	<input type="checkbox"/>																	
1000001 Suede Loafer Black	Fixed Prepack	8	8	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0
	Assign Fixed Prepack	<input type="checkbox"/>																	

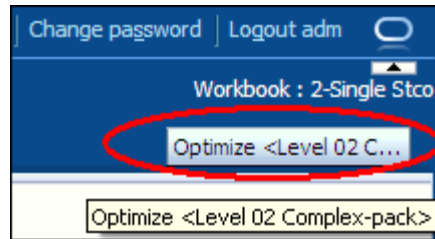
In the example shown in Figure 7-36, select the DC delivery for which you wish to assign fixed prepacks. For the respective Delivery Packs, manually key in the configuration as shown above and use the Assign Fixed Prepack checkbox to indicate that this prepack should be considered fixed.

You can assign multiple fixed prepacks per DC delivery, and you can assign different fixed prepacks for different DC deliveries.

## Performing Prepack Optimization (Level L02)

The views in the Compute DC Delivery Step and the Set Prepack Constraints Step provide the pre-requisites for calculation of prepack optimization. The next step is to use the **Optimize <Level L02 >** planning action shown in [Figure 7–37](#).

**Figure 7–37 Performing Prepack Optimization (Level L02)**



Following are the inputs that the prepack optimization solver uses to determine the recommended optimized prepack:

- Size-level store receipts, computed from store
- Size profile or cluster profile
- Department-level admin parameters
- User-defined constraints

On completion of prepack optimization, the following confirmation message is displayed.

**Figure 7–38 Confirmation of Prepack Optimization (Level L02)**



The views of the [Review Solver Results Step \(Level L02\)](#) will now be populated with data.

## Review Solver Results Step (Level L02)

The solver returns the optimization results for each of the specified DC deliveries. For each DC Delivery, it evaluates the best possible combination, starting with a single prepack, moving on to two prepacks, and so on, till the maximum number specified.

The views in this step are:

- [Review Optimized Prepacks View \(Level L02\)](#)
- [Recommended Prepack Configurations View \(Level L02\)](#)
- [Review Validity Dates View \(Level L02\)](#)

### Review Optimized Prepacks View (Level L02)

You can review the Prepack Optimization results beginning with the summary screen shown below.

Based on the defined threshold, it looks for the option that is the least expensive and exceeds the threshold% in cost savings compared to the previous option. The tool does not necessarily recommend the lowest cost option for prepacks. In the example illustrated in [Figure 7-39](#), as the three-prepacks option is only marginally cheaper than the two-prepacks option, the solver recommends the two-prepack option.

However, you can override the tool recommendation and select any of the other options.

**Figure 7-39 Reviewing the Optimized Prepack Results (Level L02)**

	all [Prepack Type]	Prepack NO= 01	Prepack NO= 02	Prepack NO= 03	Prepack NO= 04
System Selected Prepack Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Error Message From Optimization					
Recommended Prepack Sizes	?	[28]	[28, 38]	[28, 38, 26]	[28, 38, 26, 3]
Total Prepack Receipt	35816	11340	8184	8222	8070
Total Each Receipt	0	0	0	0	0
Fit %	?	-0%	55%	54%	57%
Under Allocation Cost	2683	224	1035	808	617
Over Allocation Cost	26369	11349	5064	5133	4822
Mis-allocation Cost	29052	11573	6099	5940	5439
Handling Cost	282	101	57	59	64
Total Cost	29333	11674	6156	5999	5504
Select for Approval	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following table describes the measures available on this view.

**Table 7–11 Measures in the Review Optimized Prepacks View (Level L02)**

<b>Measure</b>	<b>Description</b>
System Selected Prepack Type	This checkbox indicates the best, optimal prepack combination recommended by the solver. This recommendation is based on the optimization parameters and constraints that you had defined.
Error Message From Optimization	If the request to the solver was unsuccessful, the message displayed here could aid the refinement of inputs and resolution of any conflicting parameters.
Recommended Prepack Sizes	This displays all the unique pack sizes that the solver recommends, as a list of comma-separated values.
Total Prepack Receipt	This measure represents the total quantity of prepacks required, if you had selected this option. This value is for the average store receipt for this DC delivery period.
Total Each Receipt	This measure represents the total quantity of eaches required, if you had selected this option. This value is for the average store receipt for this DC delivery period.
Fit%	This indicates the percentage of match to the Buy Quantity when the corresponding prepack is selected. This is computed as 100% - mis-allocation %.  Mis-allocation is computed at a store/SKU level for both over-allocation and under-allocation.
Under Allocation Cost	This is the aggregate of under-allocation costs from the SKU level to the store level in that DC delivery, for the corresponding set of prepack.
Over Allocation Cost	This is the aggregate of over-allocation costs at a store/SKU level for an average store receipt in that DC delivery, for the corresponding set of prepack.s
Mis-allocation Cost	This is the sum of over-allocation cost and under-allocation cost.
Handling Cost	This represents the handling cost attached to the corresponding number of possible prepacks.
Total Cost	This is the sum of the mis-allocation cost and the handling cost for the corresponding set of prepack.
Select for Approval	This checkbox indicates the system-recommended option by default. Use this measure to override the system recommendation. It marks the selected prepack for approval so that data can flow down to other processes downstream.

### Recommended Prepack Configurations View (Level L02)

This view displays the details of the optimization for each delivery and for the options evaluated by the solver.

The example in the figure below shows the recommended combination of the two colors in the complex prepack. Each pack of the optimized prepack will contain 12 units each of Black and Brown. The tentative total quantity of this prepack configuration is also available.

**Figure 7-40** Reviewing the Recommended Prepack Configurations (Level L02)

The following table describes the measures available on this view.

**Table 7-12** Measures in the Recommended Prepack Configurations View (Level L02)

Measure	Description
Prepack Definition	This indicates the number of the corresponding SKUs in the specified prepack configuration.
Total Prepack Receipt	This indicates the total quantity of each prepack required per average store receipt, if this option is approved.

**Table 7–12 (Cont.) Measures in the Recommended Prepack Configurations View (Level L02)**

Measure	Description
Total Each Receipt	This indicates the total quantity of eaches required if this option is approved.

**Review Validity Dates View (Level L02)**

This view displays the prepack options and their validity dates for the corresponding prepack configuration. The details in this view enable the Analysts to determine prepack recommendations for different receipt drops.

**Figure 7–41 Reviewing Optimization Validity Dates (Level L02)**

Prepack Validation Calendar		3/7/2009	3/14/2009	3/21/2009	3/28/2009	4/4/2009	4/11/2009	4/18/2009	4/25/2009
Delivery Pack ID01		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Delivery Pack ID02		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Delivery Pack ID03		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Delivery Pack ID04		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Approve Step (Level L02)**

The views of the Approve step are similar for optimization of both single style-color (Level L01) and complex packs (Level L02). However, when you optimize for complex packs, perform a consolidated review for all the items that are packed together in each complex pack. For details on the views of this step, see [Approve Step \(Level L01\)](#).

## Workflow for Prepack Optimization at the Subclass/Class Level (L03 and L04)

This section describes the workflow and the views involved in prepack optimization at the subclass and class levels.

### Review Average Store Receipt Units Step (Level L03)

The Review Average Store Receipt Units step (Level L03) consists of the Review Average Store Receipt Units view.

#### Review Average Store Receipt Units View (Level L03)

This view displays the weekly planned Store Receipts and Average Receipt Units (per delivery period) for each location. Data in this view is intended only for review and cannot be edited.

**Figure 7–42** Reviewing the Average Store Receipt Units (Level L03)

	3/10/2007	3/24/2007	4/7/2007	3/7/2009	3/14/2009	3/21/2009	3/28/2009	4/4/2009	4/11/2009	4/18/2009	4/25/2009
Store Receipt Units	0	0	0	0	463	0	0	372	0	0	480
Store Receipt Units Override	0	0	0	0	0	0	0	0	0	0	0
Average Store Receipt Units	42	0	0	0	0	0	0	41	0	0	0

In [Figure 7–42](#), note that the Store Receipt Units are displayed as the total units for the stores in Charlotte. However, Average Store Receipt Units represents the average receipt units per style-color for the entire sub-class for this store.

**Table 7–13** Measures in the Review Average Store Receipt Units View (Level L03)

Measure	Description
Store Receipt Units	This is the planned store receipts for this store per week.
Average Store Receipt Units	This measure represents the average units that a store must receive for each delivery within a certain DC delivery period. For each DC delivery in a store, it is computed by dividing the Total Store Receipt Units until the next DC Delivery by the Store Receipt Units.

## Set Prepack Constraints Step (Level L03)

This step is used to specify user-defined constraints at various levels to control the prepack recommendations being generated. These constraints are optional. If these values are not maintained explicitly, the tool will use the default values set up in the [Optimization Parameter Administration Task](#). If default values are not defined, the tool will optimize in an unconstrained scenario.

The views in this step are:

- [Define Prepack Constraints View \(Level L03\)](#), which you can use to define constraints for each DC Delivery. These include constraints such as the number of prepacks, pack sizes, flat packs, and eaches.
- [Define Size Level Constraints View \(Level L03\)](#), which you can use to define the size-level minimum and maximum limits for each prepack.
- [Define Fixed Prepacks View \(Level L03\)](#), which you can use to assign certain prepacks as fixed, based on past experience or vendor suggestions.

### Define Prepack Constraints View (Level L03)

Use this view to define the constraints that are applicable for all prepacks attached to each DC delivery. You can define these constraints for each item and DC delivery, or set them uniformly across all DC deliveries. They can also be defaulted from the global or default parameters for the department.

Figure 7-43 Defining Prepack Constraints (Level L03)

	Delivery 1	Delivery 2	Delivery 3	Delivery 4	Delivery 5	Delivery 6
Eaches Enabled	Fringe Size Only	Fringe Size Only	Fringe Size Only	Fringe Size Only	Fringe Size Only	Fringe Size Only
Maximum Prepack Size	60	60	60	60	60	60
Minimum Prepack Size	1	1	1	1	1	1
Optimize	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mandatory Flat Pack	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Valid Prepack Size	12,24,36	12,24,36	12,24,36	12,24,36	12,24,36	12,24,36
Maximum Type of Prepacks	4	4	4	4	4	4

The following table describes the measures available on this view.

Table 7-14 Measures in the Define Prepack Constraints View (Level L02)

Measure	Description
Eaches Enabled	This measure can have the following values: <ul style="list-style-type: none"> <li>■ <b>None</b>- Eaches are not enabled for this DC delivery</li> <li>■ <b>All</b>- Eaches are eligible for all sizes</li> <li>■ <b>Fringe Size Only</b>- Eaches are eligible only for the fringe sizes; core sizes will be procured in prepacks</li> </ul>

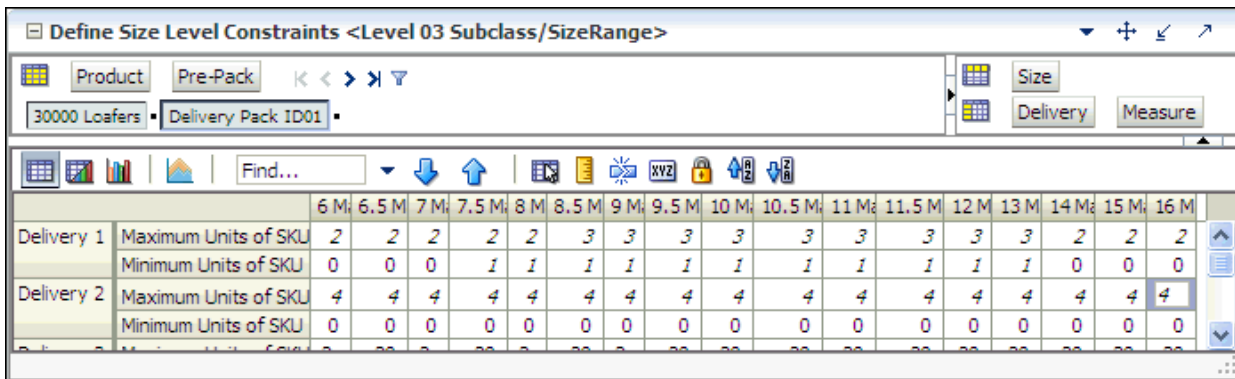
**Table 7–14 (Cont.) Measures in the Define Prepack Constraints View (Level L02)**

Measure	Description
Maximum Pack Size	Use this measure to define the upper limit that the tool must use for the calculation of prepack size.
Minimum Pack Size	Use this measure to define the lower limit that the tool must use for the calculation of prepack size. If left blank, the default value is 1.
Optimize	Use this checkbox to indicate that when prepack optimization is initiated, this item should be included.
Mandatory Flat Pack	Use this checkbox to indicate that at least one of the recommended prepacks must contain a flat pack.
Valid Pack Size	Use this measure to specify the valid pack sizes you are considering, as a list of comma-separated values. During pack size calculation, the tool will consider only the sizes mentioned here, and excludes other possible pack sizes. If left blank, all values between the defined minimum and maximum will be considered valid.
Maximum Type of Prepacks	Use this measure to specify the highest number of recommended prepacks that must be considered for optimization.

**Define Size Level Constraints View (Level L03)**

Use this view to define size-level constraints for each prepack in each DC delivery. You can specify the minimum and the maximum units of each size in a prepack for this subclass or class. Note that the constraints are only for each of size and not for individual SKUs of the selected items.

**Figure 7–44 Defining Size Level Constraints (Level L03)**



**Note:** The maximum limit is defined during the configuration of the application. Contact your system administrator, who maintains the requirements of all users in your company. For more information on the configuration plug-in, see *Oracle Retail Size Profile Optimization Implementation Guide*.

### Define Fixed Prepacks View (Level L03)

Use this view to assign certain prepack configurations as fixed. This can be used to repeat known prepacks or if your vendor has stipulated certain prepacks for a certain subclass/class of products.

Figure 7–45 Defining Fixed Prepacks (Level L03)

		Master	6 M	6.5 M	7 M	7.5 M	8 M	8.5 M	9 M	9.5 M	10 M	10.5 M	11 M	11.5 M	12 M	13 M	14 M	15 M	16 M
Delivery 1	Fixed Prepack	21	0	0	0	1	2	2	2	3	3	3	2	2	1	0	0	0	0
	Assign Fixed Prepack	<input checked="" type="checkbox"/>																	
Delivery 2	Fixed Prepack	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Assign Fixed Prepack	<input type="checkbox"/>																	

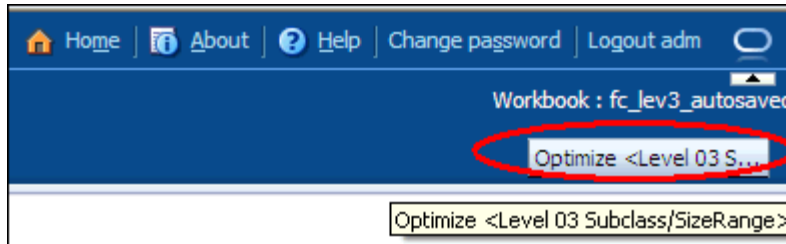
In the example shown in [Figure 7–45](#), select the DC delivery for which you wish to assign fixed prepacks. For the respective Delivery Packs, manually key in the configuration as shown above and use the Assign Fixed Prepack checkbox to indicate that this prepack should be considered fixed.

You can assign multiple fixed prepacks per DC delivery, and you can assign different fixed prepacks for different DC deliveries.

## Performing Prepack Optimization (Level L03)

The views in the [Review Average Store Receipt Units Step \(Level L03\)](#) and the [Set Prepack Constraints Step \(Level L03\)](#) provide the pre-requisites for calculation of prepack optimization. The next step is to use the **Optimize <Level L03 >** planning action shown in [Figure 7-46](#).

**Figure 7-46 Performing Prepack Optimization (Level L03)**

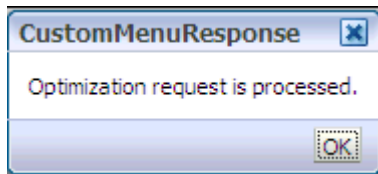


Following are the inputs that the prepack optimization solver uses to determine the recommended optimized prepack:

- Size-level store receipts, computed from store
- Size profile or cluster profile
- Department-level admin parameters
- User-defined constraints

On completion of prepack optimization, the following confirmation message is displayed.

**Figure 7-47 Confirmation of Prepack Optimization (Level L03)**



The views of the [Review Solver Results Step \(Level L03\)](#) will now be populated with data.

## Review Solver Results Step (Level L03)

The Prepack Solver returns the optimization results for each of the specified DC Deliveries. For each DC Delivery, it evaluates the best possible combination, starting with a single prepack, moving on to two prepacks, and so on, till the maximum number specified.

The views in this step are:

- [Review Optimized Prepacks View \(Level L03\)](#)
- [Recommended Prepack Configurations View \(Level L03\)](#)
- [Review Validity Dates View \(Level L03\)](#)

### Review Optimized Prepacks View (Level L03)

You can review the Prepack Optimization results beginning with the summary screen shown below.

Based on the defined threshold, it looks for the option that is the least expensive and exceeds the threshold% in cost savings compared to the previous option. The tool does not necessarily recommend the lowest cost option for prepacks. In the example illustrated in Figure 7-48, the two-packs option is recommended.

However, you can override the tool recommendation and select any of the other options.

**Figure 7-48 Reviewing the Optimized Prepack Results (Level L03)**

	Delivery 1			
	Prepack NO= 01	Prepack NO= 02	Prepack NO= 03	Prepack NO= 04
System Selected Prepack Type	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Error Message From Optimization				
Recommended Prepack Sizes	[28]	[28, 38]	[28, 38, 26]	[28, 38, 26, 3]
Total Prepack Receipt	11340	8184	8222	8070
Total Each Receipt	0	0	0	0
Fit %	-0%	55%	54%	57%
Under Allocation Cost	224	1035	808	617
Over Allocation Cost	11349	5064	5133	4822
Mis-allocation Cost	11573	6099	5940	5439
Handling Cost	101	57	59	64
Total Cost	11674	6156	5999	5504
Select for Approval	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following table describes the measures available on this view.

**Table 7-15 Measures in the Review Optimized Prepacks View (Level L03)**

Measure	Description
System Selected Prepack Type	This checkbox indicates the best, optimal prepack combination recommended by the solver. This recommendation is based on the optimization parameters and constraints that you had defined.
Error Message From Optimization	If the request to the solver was unsuccessful, the message displayed here could aid the refinement of inputs and resolution of any conflicting parameters.
Recommended Prepack Sizes	This displays all the unique pack sizes that the solver recommends, as a list of comma-separated values.
Total Prepack Receipt	This measure represents the total quantity of prepacks required, if you had selected this option. This value is for the average store receipt for this DC delivery period.

**Table 7–15 (Cont.) Measures in the Review Optimized Prepacks View (Level L03)**

<b>Measure</b>	<b>Description</b>
Total Each Receipt	This measure represents the total quantity of eaches required, if you had selected this option. This value is for the average store receipt for this DC delivery period.
Fit%	This indicates the percentage of match to the Buy Quantity when the corresponding prepack is selected. This is computed as 100% - mis-allocation %.  Mis-allocation is computed at a store/SKU level for both over-allocation and under-allocation.
Under Allocation Cost	This is the aggregate of under-allocation costs from the SKU level to the store level in that DC delivery, for the corresponding set of prepack.
Over Allocation Cost	This is the aggregate of over-allocation costs at a store/SKU level for an average store receipt in that DC delivery, for the corresponding set of prepack.
Mis-allocation Cost	This is the sum of over-allocation cost and under-allocation cost.
Handling Cost	This represents the handling cost attached to the corresponding number of possible prepacks.
Total Cost	This is the sum of the mis-allocation cost and the handling cost for the corresponding set of prepack.
Select for Approval	Use this checkbox to mark the prepack for approval and to be flowed down to other processes downstream.

### Recommended Prepack Configurations View (Level L03)

This view displays the details of the optimization for each delivery and for the options evaluated by the solver.

The figure below shows the recommended combination of two prepacks- one optimized prepack containing 10 units and another containing 12 units. The tentative total quantity of this prepack configuration is also available .

Figure 7-49 Reviewing the Recommended Prepack Configurations (Level L03)

		Master	6 M	6.5 M	7 M	7.5 M	8 M	8.5 M	9 M	9.5 M	10 M	10.5 M	11 M	11.5 M	12 M	13 M	14 M	15 M	16 M
Prepack Definition	Delivery Pack ID01	17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Delivery Pack ID02	21	0	0	0	1	2	2	2	3	3	3	2	2	1	0	0	0	0
	Delivery Pack ID03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Delivery Pack ID04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Prepack Receipt	Delivery Pack ID01	7667																	
	Delivery Pack ID02	7539																	
	Delivery Pack ID03	0																	
	Delivery Pack ID04	0																	
Total Each Receipt	Delivery Pack ID01																		
	Delivery Pack ID02																		
	Delivery Pack ID03																		
	Delivery Pack ID04																		

The following table describes the measures available on this view.

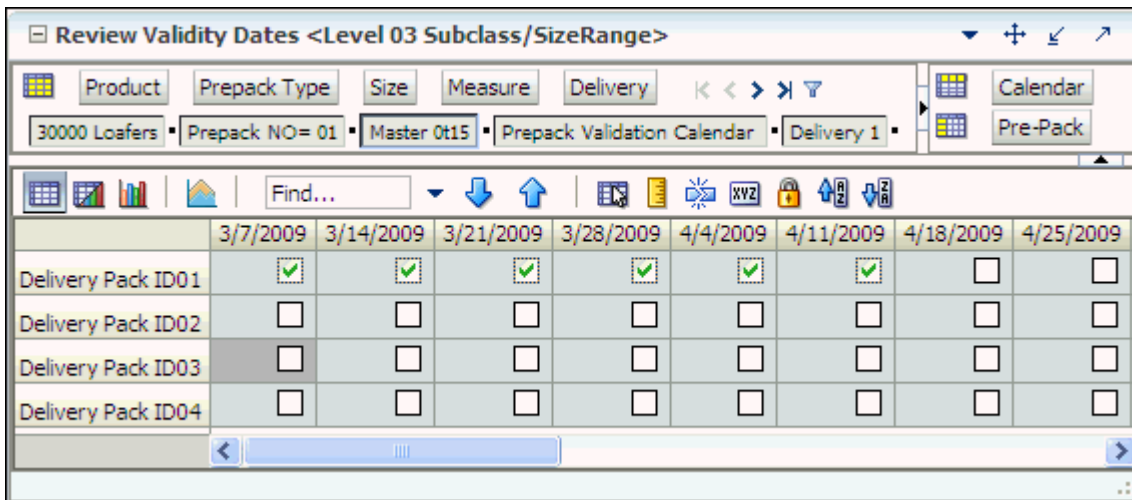
**Table 7-16 Measures in the Recommended Prepack Configurations View (Level L03)**

Measure	Description
Prepack Definition	This indicates the number of SKUs in the specified prepack configuration.
Total Prepack Receipt	This indicates the total quantity of each prepack required per average store receipt, if this option is approved.
Total Each Receipt	This indicates the total quantity of eaches required if this option is approved.

**Review Validity Dates View (Level L03)**

This view displays the prepack options and their validity dates for the corresponding prepack configuration. The details in this view enable the Analysts to determine prepack recommendations for different receipt drops.

**Figure 7-50 Reviewing Optimization Validity Dates (Level L03)**



If the Prepack Validation Calendar measure is set to true, then the corresponding prepack is valid for the specified time period.

**Approve Step (Level L03)**

The views of the Approve step are similar for optimization of both single style-color (Level L01) and complex packs (Level L02). However, when you optimize for Level 03, perform a consolidated review for all the items of the subclass or class. For details on the views of this step, see [Approve Step \(Level L01\)](#).

---

**Note:** When prepacks are approved at the the subclass or class level, they are exported to downstream systems at the style-color level. All the approved prepacks are treated as templates for which each style-color is considered eligible. Prepack configurations are replicated to each style-color before being exported to downstream applications.

---

## Workflow for Prepack Optimization at the Complex Pack Level- Non-Fashion Items

This section describes the workflow and the views involved in the prepack optimization of non-fashion items at the complex pack level.

---

**Note:** The Fringe Size Management task does not apply for the non-fashion items, as most non-fashion items are non-size.

---

To instantiate this workflow, the complex packs created in [Figure 7-51](#) have been used as an example.

**Figure 7-51** Assigning Items to Complex Packs- Non-Fashion

		all [Product]	1000625 Hershey Mocha Almond	1000627 Hershey Special Dark	1000628 Hershey Milk	1000629 Hershey Almond
Complex Pack 03	Style-color to Complex Pack Map	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Complex Pack Description	Hershey Milk				
Complex Pack 04	Style-color to Complex Pack Map	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Complex Pack Description	Hershey Asstd				
Complex Pack 05	Style-color to Complex Pack Map	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Complex Pack Description	Hershey Almond				

### Review Average Store Receipt Units Step (Level L02)- Non-Fashion

This step contains the Review Average Store Receipt Units view (Level L02).

---

**Note:** This view is organized by item and is similar, irrespective of the level of optimization. While optimizing for any level higher than style-color (Level 1), analyze all the component items individually.

---

For details on the Review Average Store Receipt Units view (Level L02), see [Review Average Store Receipt Units Step \(Level L01\)](#).

## Set Prepack Constraints Step (Level L02)- Non-Fashion

This step is used to specify user-defined constraints at various levels to control the prepack recommendations being generated. This tool allows you to combine items across different product classifications.

These constraints are optional. If these values are not maintained explicitly, the tool will use the default values set up in the [Optimization Parameter Administration Task](#). If default values are not defined, the tool will optimize in an unconstrained scenario.

The views in this step are:

- [Define Prepack Constraints View \(Level L02\)](#), which you can use to define constraints for each DC delivery. These include constraints such as the number of prepacks, pack sizes, flat packs, and eaches.
- [Define Size Level Constraints View \(Level L02\)](#), which you can use to define the size-level minimum and maximum limits for each prepack.
- [Define Fixed Prepacks View \(Level L02\)](#), which you can use to assign certain prepacks as fixed, based on past experience or vendor suggestions.

### Define Prepack Constraints View (Level L02)- Non-Fashion

Use this view to define the constraints that are applicable for all prepacks attached to each DC delivery. You can define these constraints for each complex item and DC Delivery, or set them uniformly across all DC deliveries. They can also be defaulted from the global or default parameters for the department.

**Figure 7–52 Defining Prepack Constraints (Level L02)- Non-Fashion**

	all [Delivery]	Delivery 1	Delivery 2	Delivery 3	Delivery 4
Eaches Enabled	None	None	None	None	None
Maximum Prepack Size	48	48	48	48	48
Minimum Prepack Size	1	1	1	1	1
Optimize	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Mandatory Flat Pack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Valid Prepack Size	6, 12, 24, 48	6, 12, 24, 48	6, 12, 24, 48	6, 12, 24, 48	6, 12, 24, 48
Maximum Type of Prepacks	24	4	4	4	4

The following table describes the measures available on this view.

**Table 7–17 Measures in the Define Prepack Constraints View (Level L02)- Non-Fashion**

<b>Measure</b>	<b>Description</b>
Eaches Enabled	This measure is not applicable for non-fashion merchandise.
Maximum Pack Size	Use this measure to define the upper limit that the tool must use for the calculation of prepac size.
Minimum Pack Size	Use this measure to define the lower limit that the tool must use for the calculation of prepac size. If left blank, the default value is 1.
Optimize	Use this checkbox to indicate that when prepac optimization is initiated, this item should be included.
Mandatory Flat Pack	This measure is not applicable for non-fashion merchandise.
Valid Pack Size	Use this measure to specify the valid pack sizes you are considering, as a list of comma-separated values. During pack size calculation, the tool will consider only the sizes mentioned here, and excludes other possible packsizes. If left blank, all values between the defined minimum and maximum will be considered valid.
Maximum Type of Prepacks	Use this measure to specify the highest number of recommended prepacs that must be considered for optimization.

### Define Size Level Constraints View (Level L02)- Non-Fashion

Use this view to define size-level constraints for each prepack in each DC delivery. Although most non-fashion items are non-size, you can specify the minimum and the maximum units of SKU in a prepack using this view.

**Note:** For non-fashion merchandise, size-level constraints must be defined for each of the component items in each complex prepack.

**Figure 7-53** Defining Size Level Constraints (Level L02)- Non-Fashion

Delivery Pack ID	SKU	Constraint Type	Value
Delivery Pack ID01	1000628 Hershey Milk	Maximum Units of SKU	4
		Minimum Units of SKU	0
	1000629 Hershey Almond	Maximum Units of SKU	40
		Minimum Units of SKU	4
Delivery Pack ID02	1000628 Hershey Milk	Maximum Units of SKU	12
		Minimum Units of SKU	8
	1000629 Hershey Almond	Maximum Units of SKU	48
		Minimum Units of SKU	12

**Note:** This maximum limit is defined during the configuration of the application. Contact your system administrator, who maintains the requirements of all users in your company. For more information on the configuration plug-in, see *Oracle Retail Size Profile Optimization Implementation Guide*.

### Define Fixed Prepacks View (Level L02)- Non-Fashion

Use this view to assign certain prepack configurations as fixed. This can be used to repeat known prepacks or if your vendor has stipulated certain prepacks.

**Note:** Specify the exact quantity of each item of the complex prepack.

**Figure 7-54** Defining Fixed Prepacks (Level L02)- Non-Fashion

all [Size]		non-sized	non-sized		
Delivery Pack ID01	all [Product]	Fixed Prepack	6	6	6
		Assign Fixed Prepack	<input checked="" type="checkbox"/>		
	1000628 Hershey Milk	Fixed Prepack	6	6	6
		Assign Fixed Prepack			
	1000629 Hershey Almond	Fixed Prepack	0	0	0
		Assign Fixed Prepack			
Delivery Pack ID02	all [Product]	Fixed Prepack	0	0	0
		Assign Fixed Prepack	<input type="checkbox"/>		

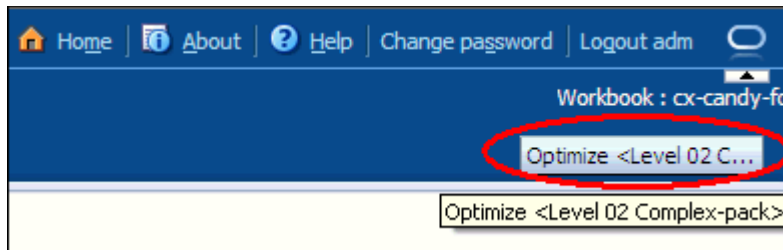
In the example shown in [Figure 7-54](#), select the DC delivery for which you wish to assign fixed prepacks. For the respective Delivery Packs, manually key in the configuration as shown above and use the Assign Fixed Prepack checkbox to indicate that this prepack should be considered fixed.

You can assign multiple fixed prepacks per DC delivery, and you can assign different fixed prepacks for different DC deliveries.

## Performing Prepack Optimization (Level L02)- Non-Fashion

The views in the Compute DC Delivery step and the [Set Prepack Constraints Step \(Level L02\)- Non-Fashion](#) provide the pre-requisites for calculation of prepack optimization. The next step is to use the **Optimize <Level L02 >** planning action shown in [Figure 7-55](#).

**Figure 7-55 Performing Prepack Optimization (Level L02)- Non-Fashion**

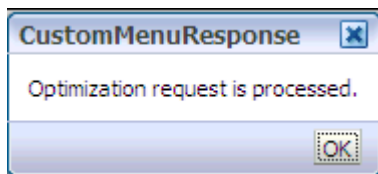


Following are the inputs that the prepack optimization solver uses to determine the recommended optimized prepack:

- Size-level store receipts, computed from store
- Cluster profile
- Department-level admin parameters
- User-defined constraints

On completion of prepack optimization, the following confirmation message is displayed.

**Figure 7-56 Confirmation of Prepack Optimization (Level L02)- Non-Fashion**



The views of the [Review Solver Results Step \(Level L02\)- Non-Fashion](#) will now be populated with data.

## Review Solver Results Step (Level L02)- Non-Fashion

The prepack solver returns the optimization results for each of the specified DC deliveries. For each DC delivery, it evaluates the best possible combination, starting with a single prepack, moving on to two prepacks, and so on, till the maximum number specified.

The views in this step are:

- [Review Optimized Prepacks View \(Level L02\)- Non-Fashion](#)
- [Recommended Prepack Configurations View \(Level L02\)- Non-Fashion](#)
- [Review Validity Dates View \(Level L02\)- Non-Fashion](#)

### Review Optimized Prepacks View (Level L02)- Non-Fashion

You can review the Prepack Optimization results beginning with the summary screen shown below.

Based on the defined threshold, it looks for the option that is the least expensive and exceeds the threshold% in cost savings compared to the previous option. The tool does not necessarily recommend the lowest cost option for prepacks. In the example illustrated in [Figure 7-39](#), as the three-packs option is only marginally cheaper than the two-packs option, the solver recommends the two-prepack option.

However, you can override the tool recommendation and select any of the other options.

**Figure 7-57** Reviewing the Optimized Prepack Results (Level L02)- Non-Fashion

	all [Prepack Type]	Prepack NO= 01	Prepack NO= 02	Prepack NO= 03	Prepack NO= 04
System Selected Prepack Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Error Message From Optimization					
Recommended Prepack Sizes	?	[28]	[28, 38]	[28, 38, 26]	[28, 38, 26, 3]
Total Prepack Receipt	35816	11340	8184	8222	8070
Total Each Receipt	0	0	0	0	0
Fit %	?	-0%	55%	54%	57%
Under Allocation Cost	2683	224	1035	808	617
Over Allocation Cost	26369	11349	5064	5133	4822
Mis-allocation Cost	29052	11573	6099	5940	5439
Handling Cost	282	101	57	59	64
Total Cost	29333	11674	6156	5999	5504
Select for Approval	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following table describes the measures available on this view.

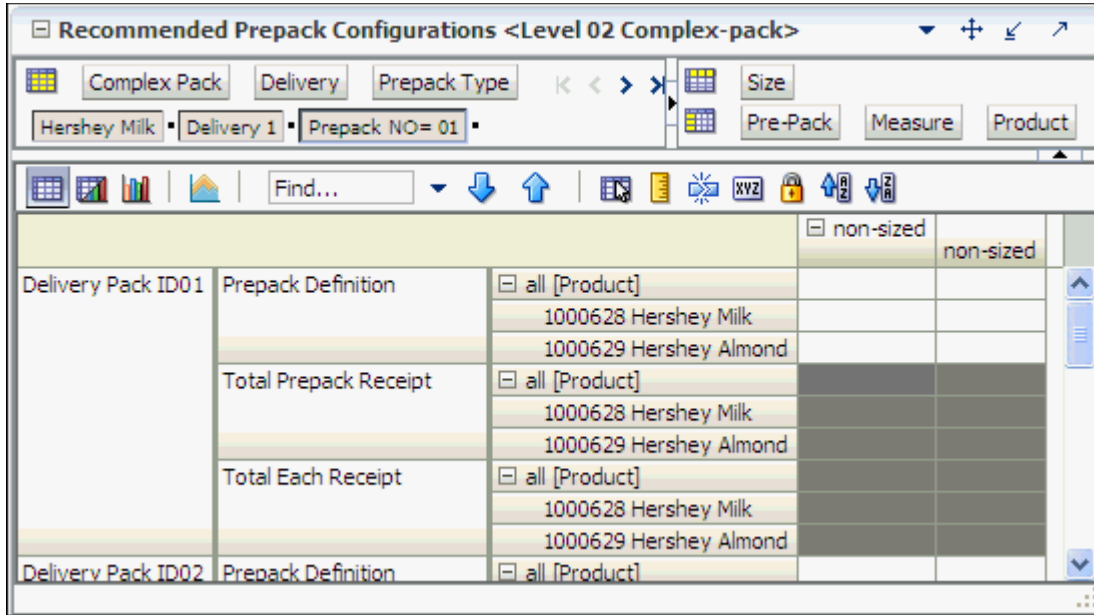
**Table 7–18 Measures in the Review Optimized Prepacks View (Level L02)- Non-Fashion**

<b>Measure</b>	<b>Description</b>
System Selected Prepack Type	This checkbox indicates the best, optimal prepack combination recommended by the solver. This recommendation is based on the optimization parameters and constraints that you had defined.
Error Message From Optimization	If the request to the solver was unsuccessful, the message displayed here could aid the refinement of inputs and resolution of any conflicting parameters.
Recommended Prepack Sizes	This displays all the unique pack sizes that the solver recommends, as a list of comma-separated values.
Total Prepack Receipt	This measure represents the total quantity of prepacks required, if you had selected this option. This value is for the average store receipt for this DC delivery period.
Total Each Receipt	This measure represents the total quantity of eaches required, if you had selected this option. This value is for the average store receipt for this DC delivery period.
Fit%	This indicates the percentage of match to the Buy Quantity when the corresponding prepack is selected. This is computed as $100\% - \text{mis-allocation } \%$ .  Mis-allocation is computed at a store/SKU level for both over-allocation and under-allocation.
Under Allocation Cost	This is the aggregate of under-allocation costs from the SKU level to the Store level in that DC delivery, for the corresponding set of prepack.
Over Allocation Cost	This is the aggregate of over-allocation costs at a Store/SKU level for an average store receipt in that DC delivery, for the corresponding set of prepack.
Mis-allocation Cost	This is the sum of over-allocation cost and under allocation cost.
Handling Cost	This represents the handling cost attached to the corresponding number of possible prepacks.
Total Cost	This is the sum of the mis-allocation cost and the handling cost for the corresponding set of prepack
Select for Approval	Use this checkbox to mark the prepack for approval and to be flowed down to other processes downstream.

### Recommended Prepack Configurations View (Level L02)- Non-Fashion

This view displays the details of the optimization for each delivery and for the options evaluated by the solver.

**Figure 7–58** *Reviewing the Recommended Prepack Configurations (Level L02)- Non-Fashion*



The following table describes the measures available on this view.

**Table 7–19** *Measures in the Recommended Prepack Configurations View (Level L02)- Non-Fashion*

Measure	Description
Prepack Definition	This indicates the number of the corresponding SKUs in the specified prepack configuration.
Total Prepack Receipt	This indicates the total quantity of each prepack required per average store receipt, if this option is approved.

### Review Validity Dates View (Level L02)- Non-Fashion

This view displays the prepack options and their validity dates for the corresponding prepack configuration. The details in this view enable the Analysts to determine prepack recommendations for different receipt drops.

**Figure 7–59 Reviewing Optimization Validity Dates (Level L02)- Non-Fashion**

	3/10/2007	3/17/2007	3/24/2007	3/31/2007	4/7/2007	3/7/2009	3/14/2009
Delivery Pack ID01	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Delivery Pack ID02	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Delivery Pack ID03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Delivery Pack ID04	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If the Prepack Validation Calendar measure is set to true, then the corresponding prepack is valid for the specified time period.

### Approve Step (Level L02)- Non-Fashion

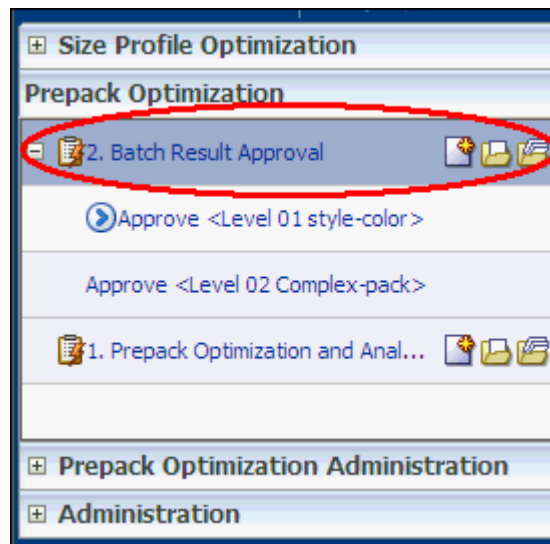
The views of the Approve step are similar for optimization of both single style-color (Level L01) and complex packs (Level L02). However, when you optimize for complex packs, perform a consolidated review for all the items that are packed together in each complex pack. For details on the views of this step, see [Approve Step \(Level L01\)](#).

## Batch Result Approval Task

To open the Batch Result Approval workbook, perform the following:

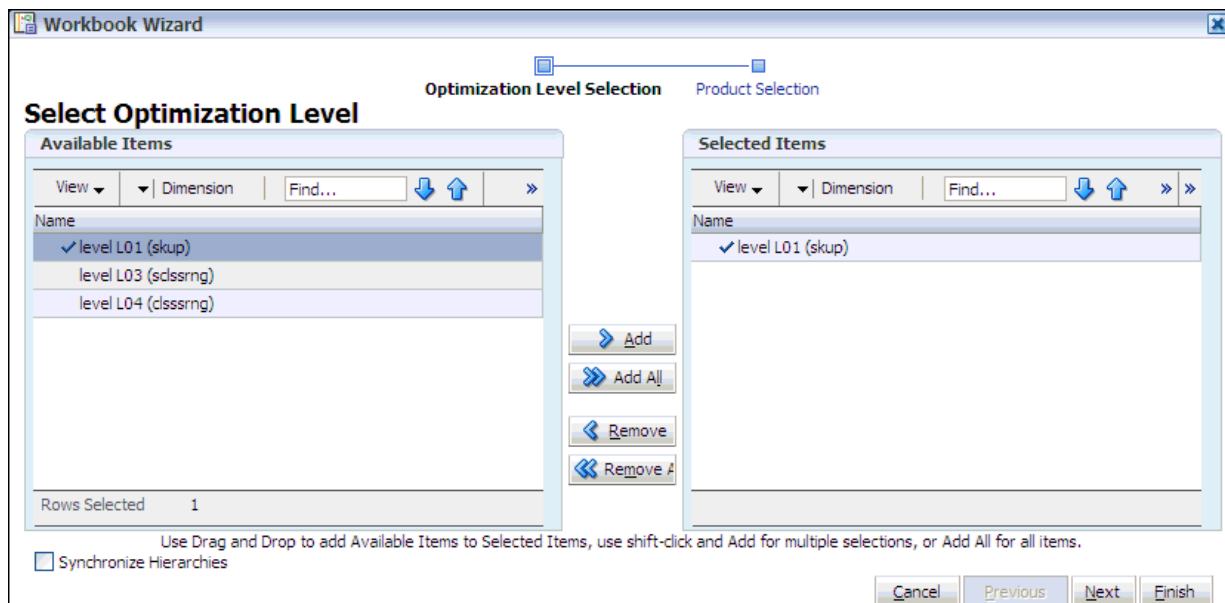
1. Click the **Create New Workbook** icon on the Batch Result Approval task.

**Figure 7-60** *Creating a New Batch Result Approval Task*



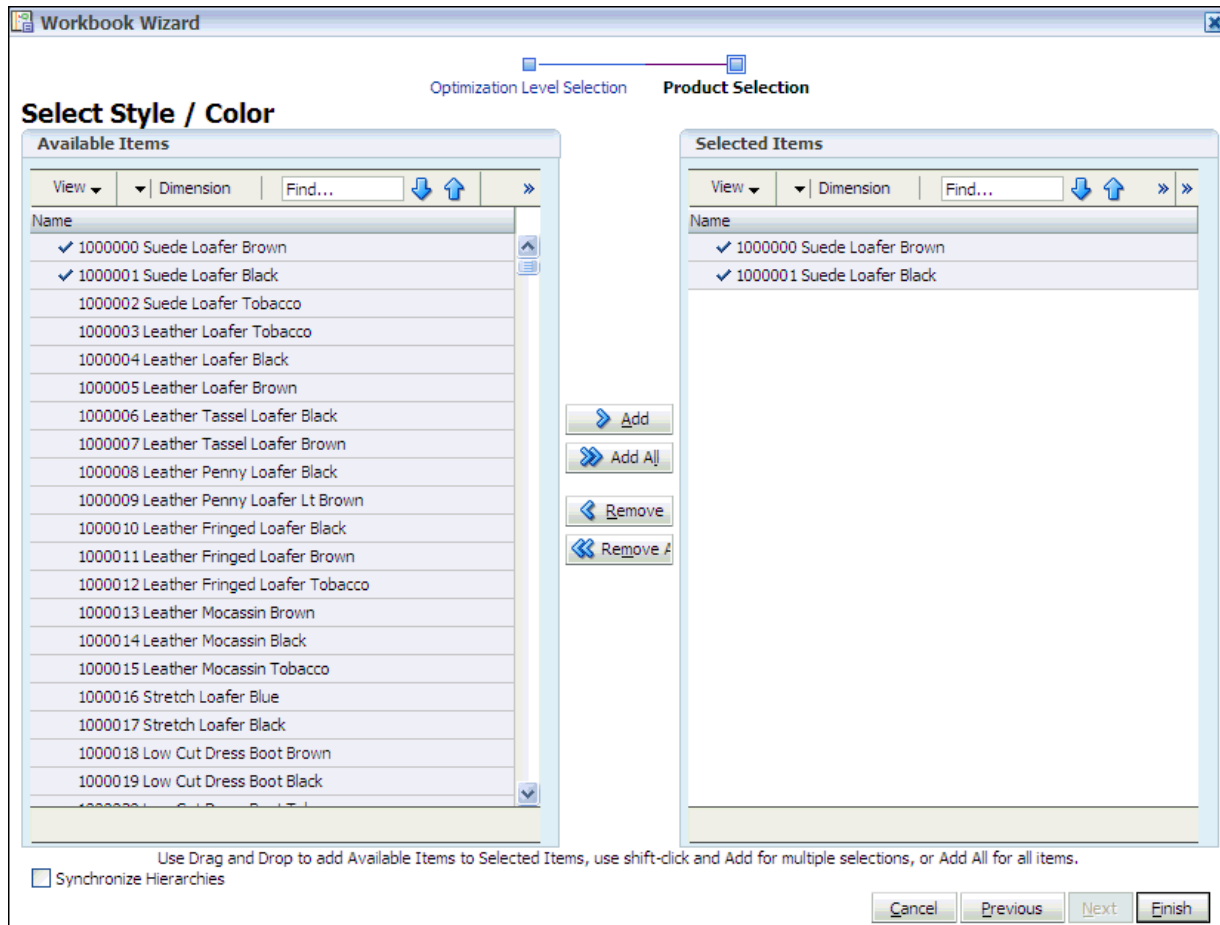
2. The Select Optimization Level screen appears. Select the level at which you wish to perform prepack optimization and click **Next**.

**Figure 7-61** *Selecting the Level for Prepack Optimization*



3. The Select Product screen appears. Select the items for which the results of prepack optimization in batch need to be analyzed and click **Finish**.

**Figure 7–62** *Selecting the Items for Prepack Optimization*



The Batch Result Approval workbook is built and the following views are displayed:

- Approve Prepack Configuration View (Level L01)
- Recommended Prepack Configurations View (Level L01)
- Prepack Calendar View (Level L01)

These views are similar in function and measures as the views of the Approve step of the Prepack Optimization and Analysis Task. See [Approve Step \(Level L01\)](#) for more details.