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Primary Author: Judith Meskill

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Oracle Retail Predictive Application Server User Guide for the Fusion Client, Release 16.0

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Preface

This document describes the Oracle Retail Predictive Application Server user interface. It provides step-by-step instructions to complete most tasks that can be performed through the user interface.

Audience

This document is for users and administrators of Oracle Retail Predictive Application Server. This includes merchandisers, buyers, business analysts, and administrative personnel.

Documentation Accessibility

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Related Documents

For more information, see the following documents in the Oracle Retail Predictive Application Server Release 16.0 documentation set:

- *Oracle Retail Predictive Application Server Administration Guide for the Classic Client*
- *Oracle Retail Predictive Application Server Administration Guide for the Fusion Client*
- *Oracle Retail Predictive Application Server Batch Script Architecture Implementation Guide*
- *Oracle Retail Predictive Application Server Configuration Tools User Guide*
- *Oracle Retail Predictive Application Server Installation Guide*
- *Oracle Retail Predictive Application Server Release Notes*
- *Oracle Retail Predictive Application Server Security Guide*

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- Product version and program/module name
- Functional and technical description of the problem (include business impact)
- Detailed step-by-step instructions to re-create
- Exact error message received
- Screen shots of each step you take

Review Patch Documentation

When you install the application for the first time, you install either a base release (for example, 16.0) or a later patch release (for example, 16.0.1). If you are installing the base release or additional patch releases, read the documentation for all releases that have occurred since the base release before you begin installation. Documentation for patch releases can contain critical information related to the base release, as well as information about code changes since the base release.

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This process will prevent delays in making critical corrections available to customers. For the customer, it means that before you begin installation, you must verify that you have the most recent version of the Oracle Retail documentation set. Oracle Retail documentation is available on the Oracle Technology Network at the following URL:

http://www.oracle.com/technetwork/documentation/oracle-retail-100266.html

An updated version of the applicable Oracle Retail document is indicated by Oracle part number, as well as print date (month and year). An updated version uses the same part number, with a higher-numbered suffix. For example, part number E123456-02 is an updated version of an document with part number E123456-01.

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http://www.oracle.com/technetwork/documentation/oracle-retail-100266.html

(Data Model documents are not available through Oracle Technology Network. You can obtain them through My Oracle Support.)

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	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.

1

Getting Started

Welcome to Oracle Retail RPAS Fusion Client. This chapter provides an overview that includes information to help you get started with the application. It includes the following sections:

- Overview
- Basic Concepts of RPAS
- Terminology Differences Between Clients
- Setting Up Your Browser
- Logging into the Fusion Client
- Understanding the Taskflow
- Opening a Workbook
- Creating a New Workbook
- Deleting a Workbook
- Renaming a Workbook
- Understanding the Workbook Wizard Window
- Extra Measures
- Plug-Ins from External Applications
- Reports
- Locating the Commit Status
- Viewing an Announcement
- Locating the Version Number
- Accessing Online Help
- Logging Out of the Application

Overview

The RPAS Fusion Client is a web-based rich client for the Retail Predictive Application Server (RPAS) platform developed using the latest Oracle Application Development Framework (ADF).

Planning is one of the most important and complex processes in a retail business. It typically involves a detailed set of activities that need to be followed as part of a workflow. Unlike the RPAS Windows-based Classic Client, the Fusion Client includes

a taskflow feature that provides a robust workflow capability to make each planning activity easier to track and maintain.

The Fusion Client uses the same RPAS server as the RPAS Windows-based Classic Client. In addition to the enhanced user experience, the Fusion Client provides access to a larger number of users and a greater degree of platform independence.

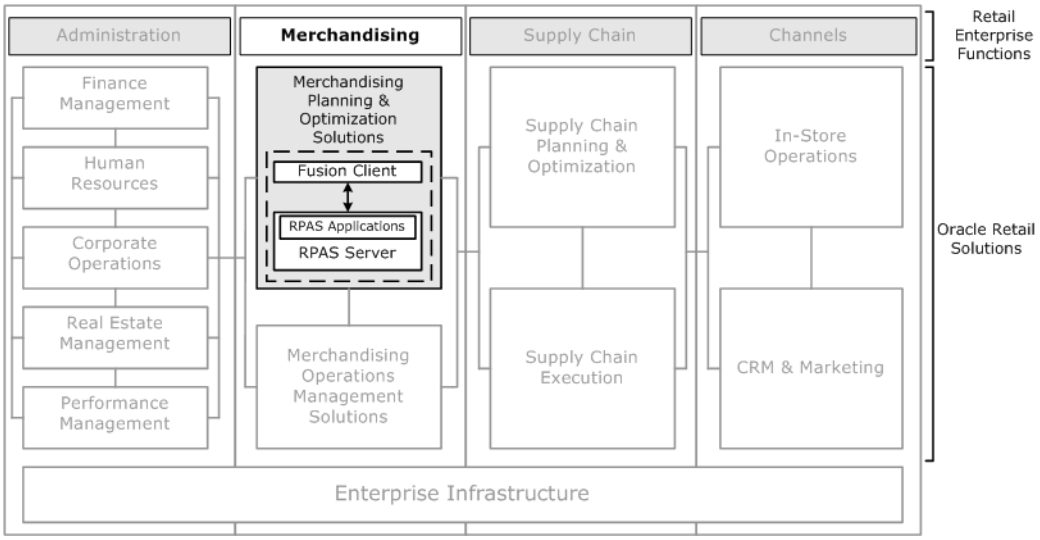
The taskflow also allows you to switch between solutions and domains without logging out and back in.

The Fusion Client supports dynamic hierarchies. For details, see *Oracle Retail Predictive Application Server Configuration Tools.*

Where Does the RPAS Fusion Client Fit in a Retail Enterprise

The RPAS platform and Fusion Client form part of the Merchandising Planning and Optimization solutions. Figure 1–1 shows an example of a retail enterprise with the Fusion Client application implemented with the RPAS server hosting an RPAS application. It provides a high-level overview of where the Fusion Client application fits in a typical retail enterprise.

Figure 1–1 RPAS Fusion Client in a Retail Enterprise



Basic Concepts of RPAS

RPAS is a configurable platform with a proven scalability for developing multidimensional forecasting and planning based solutions. This platform provides capabilities such as a multidimensional database structure, batch and online processing, a configurable slice-and-dice user interface, a sophisticated configurable calculation engine, user security and utility functions such as importing and exporting, all on a highly scalable technical environment that can be deployed on a variety of hardware.

This section introduces you to the following RPAS concepts:

- Multidimensionality
- Dimensions
- Measures

- Domains and Workbooks

Multidimensionality

In RPAS, information is stored and represented based on the multidimensional framework. In a multidimensional database system, data is presented as a multidimensional array, where each individual data value is contained within a cell accessible by multiple indexes.

Multidimensional database systems are a complementary technology to entity relational systems and achieve performance levels above the relational database systems. Applications that run on RPAS identify data through dimensional relationships. Dimensions are qualities of an item (such as a product, location, or time) or components of a dimension that define the structure and roll up within the dimension.

Dimensions

Dimensions describe the top-to-bottom relationship between the levels or positions of the dimensions in RPAS. They reflect the dimensions set up at your business and used by the merchandising solutions.

RPAS supports many alternative dimensions that provide different roll ups and can help you analyze the data from a different perspective.

Measures

Measures represent the events or measurements that are recorded, while the positions in the dimensions provide a context for the measurement. Measures are defined based on the business rules set in the application. The dimensionality of a measure is configured through the definition of its base intersection, which is the collection of levels (one per appropriate dimension) defining the lowest level at which the information is stored for the measure.

Measure names are completely configurable and typically named using a convention that identifies each component and the meaning of the measure.

Domains and Workbooks

RPAS stores information in a persistent multidimensional data cache that is optimized for large volumes and dimensional or time series data access requirements, typically required by multidimensional solutions. This central repository is called a domain. The domain also includes central definitions of metadata for the solution and provides a single update point.

When you use an RPAS solution, you interact with the solution through a personal data repository called a workbook. A workbook contains the subset of the data (and metadata) from the domain, and its scope is constrained by the access rights available to a user. Workbooks are stored on the RPAS server and can be built using an online wizard process or scheduled to be built in a batch process automatically.

Although the data and metadata in the workbook are copied from the domain, the data remains independent of the domain.

With a multi-solution taskflow, you do not log into a domain. You are logged into a solution. When you pick a particular task, you will be directed to a specific domain, based on a few settings. First, there is a task setting that indicates whether it is accessible via the master domain only, local domain only, or both. If the setting is local

domain only or both, the specific domain you are launched into will be based on the position level security on the partition dimension. If you have access to only a single local domain, you will be logged into that specific local domain. If you have access to more than one local domain, you will be prompted to select the positions you want to work with, and based on that, you will be logged into a specific local domain or the master domain.

Terminology Differences Between Clients

There are some key terminology differences between the Fusion Client and Classic Client. Understanding these differences is useful if you are moving from the Classic Client or if you have used the Classic Client before using the Fusion Client. The following table describes the differences.

Table 1–1 Terminology in the Fusion Client and Classic Client

Fusion Client Term	Term Description	Classic Client Term
Dimension	Grouping of a particular type of information. Typical dimensions are for products, locations, time, and measures. For instance, a Product dimension can contain information about items, item groups, departments, and divisions.	Hierarchy
Level	A subdivision of a dimension. Levels group information of the same type. For instance, a level within the Product dimension can be Department. The Department level contains all the departments (men's shoes, women's shoes, children's shoes) that exist.	Dimension
View	Multidimensional spreadsheets that are used to display information from the workbook. Workbooks can include one view or multiple views, which can present data in the form of numbers in a grid. These numeric data values can easily be converted to a graphical chart. Data can be viewed at a very high level of detail, or data values can be quickly aggregated and viewed at summary levels. You can display the information in a view in a variety of formats, generally by rotating, changing the data rollup, showing and hiding measures, and drilling up or down.	Worksheet

Setting Up Your Browser

The Fusion Client can be accessed using Apple Safari, Microsoft Internet Explorer, Google Chrome, or Mozilla Firefox. A list of the supported versions of browsers is included in the *Oracle Retail Predictive Application Server Installation Guide*. Before you access the application for the first time, you should set the following browser settings to allow seamless and error-free access:

- Cache Settings
- Security Settings for Internet Explorer

Based on the zone where the application is installed, you may configure your browser settings for **Local intranet** or as a **Trusted sites** zone.

Important: Do not select **Internet** unless you have been instructed to do so by an administrator. In most cases, the application is available on your company's intranet (**Local intranet**) or an Oracle trusted site (**Trusted sites**).

Cache Settings

Before starting the Fusion Client, set up the browser's cache so that temporary internet files are deleted every time you visit a web page. The cache settings are typically found in the browser's tool menu.

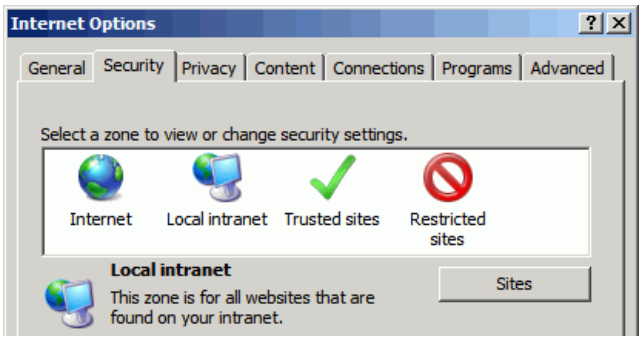
Security Settings for Internet Explorer

If using Internet Explorer, you should configure the browser security settings to improve the user experience.

To set the security settings, complete the following steps:

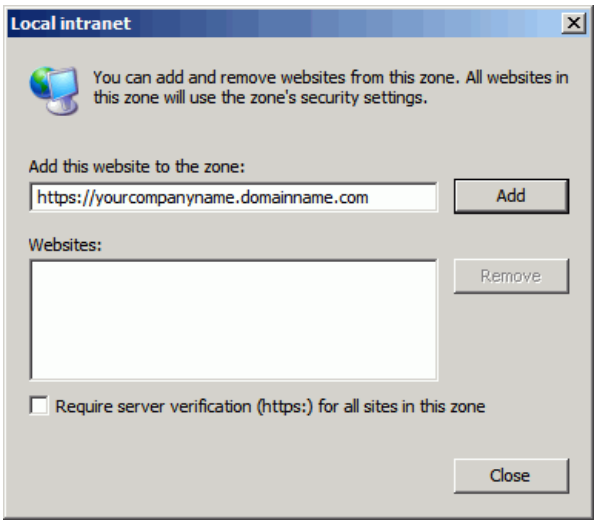
1. Start Internet Explorer.
2. From the Tools menu, click **Internet Options**.
3. On the Security tab, click **Local intranet**, and then click **Sites**.

Figure 1–2 Internet Options - Security Tab



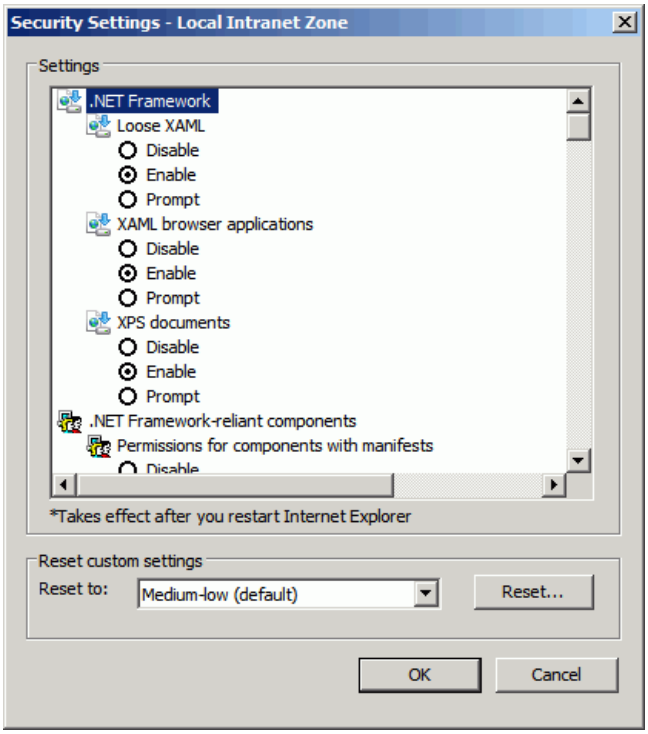
4. On the Local intranet window, click **Advanced**.
5. In the **Add this website to the zone** field, enter the application URL, click **Add**, and then click **Close**.

Figure 1–3 Local Intranet Window - Add Website to the Zone



6. On the Local intranet window, click **OK**.
7. In the Security level for this zone area, click **Custom level...**.

Figure 1–4 Security Settings - Local Intranet Zone Window



8. In the **Security Settings - Local Intranet Zone** window, select the **Prompt** or **Enable** option for the following parameters:

Table 1–2 Parameters in the Security Settings Window

Category	Parameter Name
ActiveX controls and plug-ins	

Table 1–2 (Cont.) Parameters in the Security Settings Window

Category	Parameter Name
	Download signed ActiveX controls
	Initialize and script ActiveX controls not marked as safe for scripting
	Run ActiveX controls and plug-ins
Downloads	
	File download
	For additional security settings for exporting views, see Export
Miscellaneous	
	Allow websites to open without address or status bars
Scripting	
	Active scripting

Note: For more information on the **Prompt** and **Enable** options, see About Prompt and Enable Options.

9. After you set up these parameters, click **OK**. A message appears that prompts you for a confirmation of the changes to the settings for the zone.
10. Click **Yes** to accept the changes. Based on the settings you changed, you may need to restart Internet Explorer for the changes to take effect.

About Prompt and Enable Options

The **Prompt** option provides a confirmation message box each time a specific action occurs on the web browser (for example, Download signed ActiveX controls). The browser grants access to the actions, based on your response.

The **Enable** setting provides direct access to the specified action without any notification.

You may select the **Prompt** option for the download options because the downloads typically occur one time. For the running and scripting actions, since they occur frequently, you may select the **Enable** option. If you select the **Prompt** option, you may have to respond to a message box several times in an application session.

Logging into the Fusion Client

Note: The only way to log into the Fusion Client is with external authentication.

Before you log into the Fusion Client, ensure that your system meets the recommended configuration requirements. For more information, see the *Oracle Retail Predictive Application Server Installation Guide*.

After you check the configuration, obtain the following information:

- Uniform Resource Locator, URL – Enter the URL or the web address of the application in the web browser to access the application. For example:

```
http://<fullyqualifieddomainname>:<port>/rpas
```

- User name and Password – Based on the tasks you want to perform, obtain a user account (that includes user name and password) to log onto the application.

What you see when logging in depends on the type of external authentication used. The Fusion Client login page appears only when you use LDAP for authentication. In the case of Single Sign-On, the Single Sign-On login page will appear. If you are using Single Sign-on (SSO), you may select a link in a portal and then see the home page.

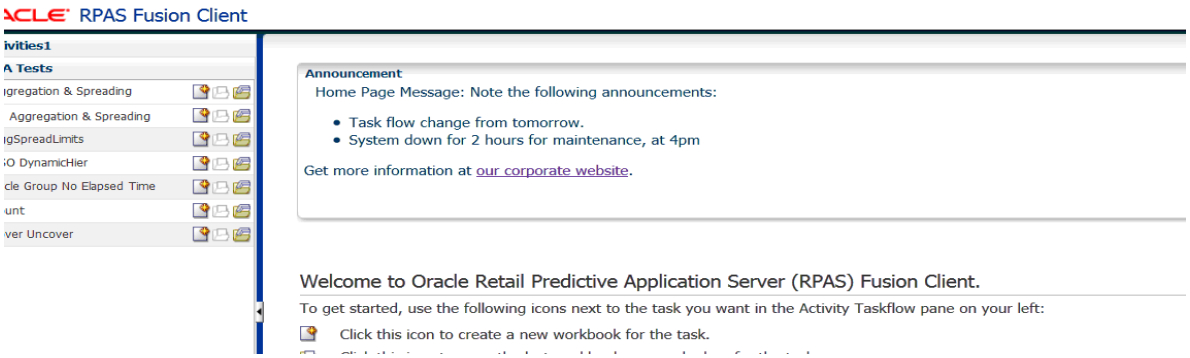
To log into the Fusion Client:

1. Open a supported internet browser.
2. In the **Address** bar, enter the Fusion Client URL and press **Enter**. The Fusion Client Login page appears.

Figure 1–5 Fusion Client Login Page

3. On the **Login** page, enter the username and password.
4. Click **Login**. The window refreshes, and the home page of the RPAS Fusion Client is shown.

Figure 1–6 RPAS Fusion Client Home Page



All the activities, tasks, and steps across all the configured solutions to which you have access are displayed. See "Understanding the Taskflow".

If a dialog appears telling you that no RPAS solutions are available or you are missing tasks, the RPAS server could be down or there could be some other connection issue. In this case, log out and log on later when the issue is fixed.

Logging in with Single Sign-On

If you have accessed the RPAS Fusion Client through a single sign-on environment such as the Oracle Retail Workspace portal, you see the home page of the RPAS Fusion Client (Figure 1–6).

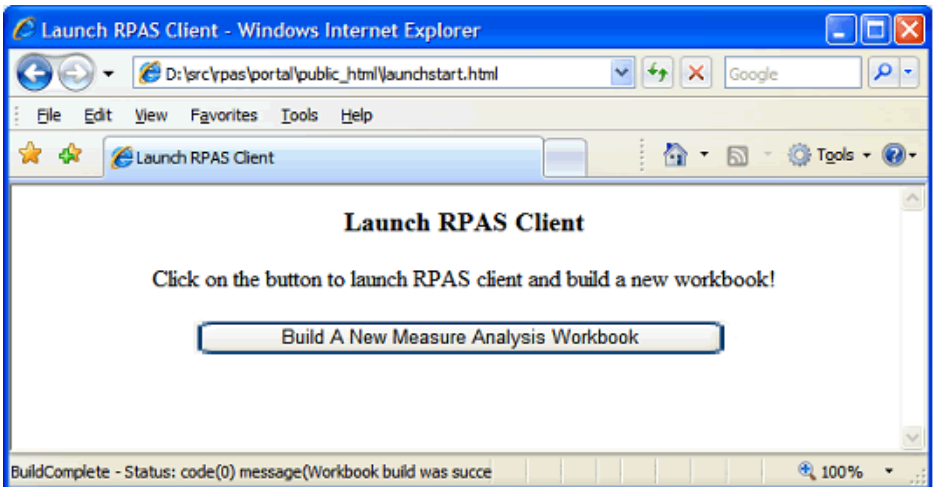
Note: For more information about single sign-on (SSO), see the *Oracle Retail Predictive Application Server Administration Guide for the Fusion Client*.

Accessing through Guided Launch

You can also access a workbook in the RPAS Fusion Client through the standalone guided launch. Guided launch allows users to click a link to automatically log into the Fusion Client and open or build a particular workbook.

If the workspace is configured to have guided launch, then a link or button is displayed, like the one shown in Figure 1–7.

Figure 1–7 Guided Launch

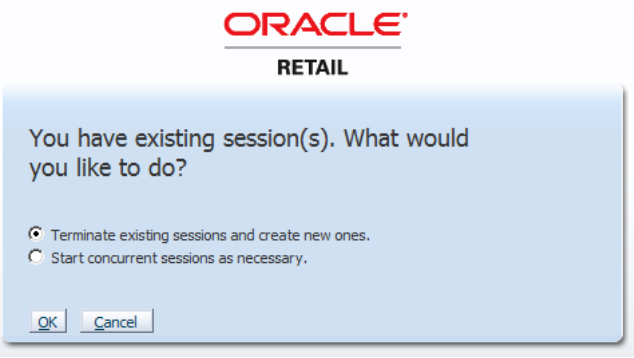


Depending upon how the guided launch is configured, the RPAS Fusion Client appears in a new browser window or within a pane within the same browser window with the configured workbook already open.

Concurrent Sessions

If you already have a user session of the Fusion Client running in a domain, you can start a second or concurrent session at the same time. When logging into the Fusion Client, if you have a concurrent session running, you see the following message:

Figure 1–8 Concurrent Session Message



Select one of the following options:

- **Terminate existing sessions and create new ones**: This option closes any existing connections for the user in that domain.
- **Start concurrent sessions as necessary**: This option allows the user to have multiple connections within the domain. This does not affect any prior user connections to the domain.

> **Note:** For information about the number of allowed concurrent sessions, see the "System Administration" chapter of the *Oracle Retail Predictive Application Server Administration Guide for the Fusion Client*.

Multiple Sessions

To have multiple sessions means that you have more than one Fusion Client session connected to an RPAS domain, whether the connection is to the same domain or the same username.

> **Note:** You must not open the same workbook in more than one tab.

The supported browsers handle multiple sessions differently. Table 1–3 describes the multiple session handling of each browser.

Table 1–3 Browser Multiple Session Handling

Browser	Multiple Session Handling

Internet Explorer	Use separate windows, rather than separate tabs.
	Note: For Internet Explorer 8, a special setup is required for multiple sessions to function properly:
	Option 1: From the Internet Explorer File menu, select the **New Session** option.
	Option 2: Update the Internet Explorer shortcut to include the following command line switch:
	`"C:\Program Files\Internet Explorer\iexplore.exe" -noframemerging`
	Use this shortcut every time.
	Option 3: Create a registry string called FrameMerging:
	1. From the Start menu, click **Run**.
	2. In the Run dialog box, type **regedit** in the Open field and click **OK**.
	3. Navigate to
	`HKEY_CURRENT_USER\Software\Microsoft\Internet Explorer\Main\`
	4. Right-click the Main key and select **New > String Value**.
	5. A new string value appears. Name it **FrameMerging**.
	6. Right-click the FrameMerging registry string and select **Modify** from the right-click menu.
	7. Enter **0** in the Value data field and click **OK**.

Firefox	Create a program shortcut with the following target: `"C:\Program Files\Mozilla Firefox\firefox.exe" -no-remote -p` Use this shortcut every time. The shortcut launches Firefox with a random profile. Since this profile does not exist, the profile manager dialog appears. When invoking this shortcut for the first time, create a profile for each concurrent session you need. After the first use, you can select the desired profile and create the Fusion Client session. Each profile has a different session. Ensure that you do not create a profile called *random*.
Chrome	Create a Fusion Client session from one Chrome window. To create another session, click the wrench icon and then select the **New incognito window** menu option. This launches a new Chrome window. In this new window, create a new Fusion Client session. This method has a limitation: you can create only one incognito window session. Multiple incognito windows merely share the same session.

Understanding the Taskflow

The taskflow is displayed on the left of your screen and helps you easily navigate through the activities in the application. It provides a pre-configured business workflow organized into expandable and collapsible activity groups, activities, tasks, and steps.

Note: The taskflow also appears when you log onto the application.

Each activity consists of more than one task and each task may consist of one or more steps. In the Fusion Client, each solution (spanning across multiple workbooks) is represented as a set of activities, tasks, and steps. The activities can also be grouped into an activity group.

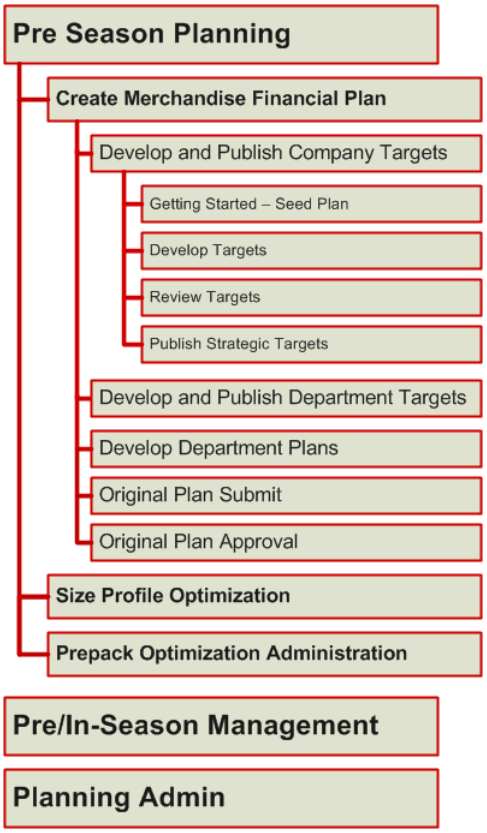
A multi-solution taskflow allows for a single point-of-access to multiple RPAS solutions. A taskflow can contain activities from a single RPAS solution or from multiple solutions. For multiple solutions, activity groups can be used to integrate activities from the solutions into a unified taskflow configuration that spans those solutions. The activity group provides an integrated workflow that represents the business process across multiple solutions, that is, it organizes activities from multiple solutions so the activities can be presented together under a single organizing entity.

With the multi-solution taskflow, you can log into the Fusion Client and have access to multiple solutions and domains.

> **Note:** The taskflow is configured for the required domains during implementation. For more information on this configuration, see the *Oracle Retail Predictive Application Server Configuration Tools User Guide*.

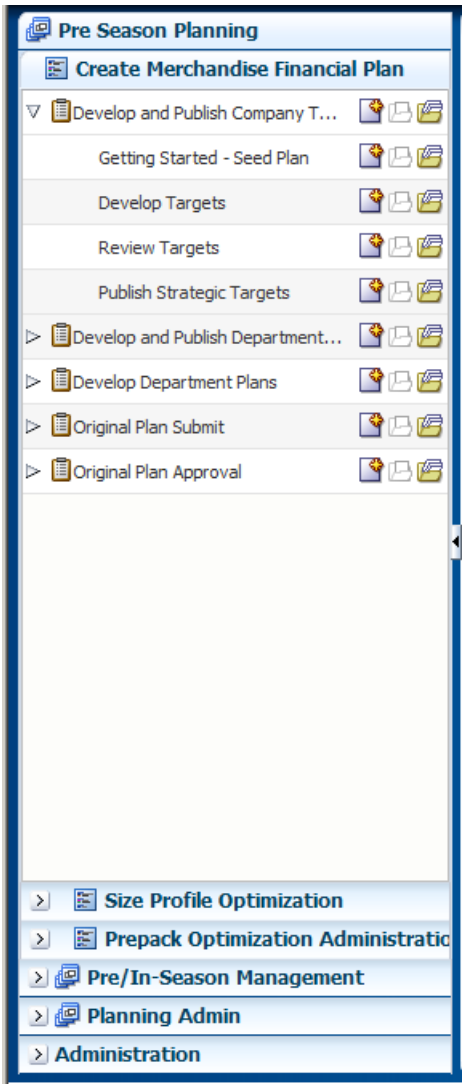
Figure 1–9 shows an example of a multi-solution taskflow configured with activity groups, activities, tasks, and steps.

Figure 1–9 Illustration of Activity Group, Activity, Task, and Step



In the Fusion Client, the workflow illustrated in Figure 1–9 appears in the following manner:

Figure 1–10 Taskflow



In the taskflow, you can click the Expand icon next to any task to view the associated steps. When you are working with a specific step, an arrow icon appears in the taskflow indicating the current step and your position in the workflow.

The Create New Workbook, Open Latest Workbook, and Show List of Workbooks icons that appear next to each task or step enable you to create new workbooks or open existing workbooks. You can find more information on creating new workbooks and opening existing workbooks in Chapter 1, "Getting Started".

Figure 1–11 illustrates the icons that appear in the taskflow.

Figure 1–11 Icons in the Taskflow

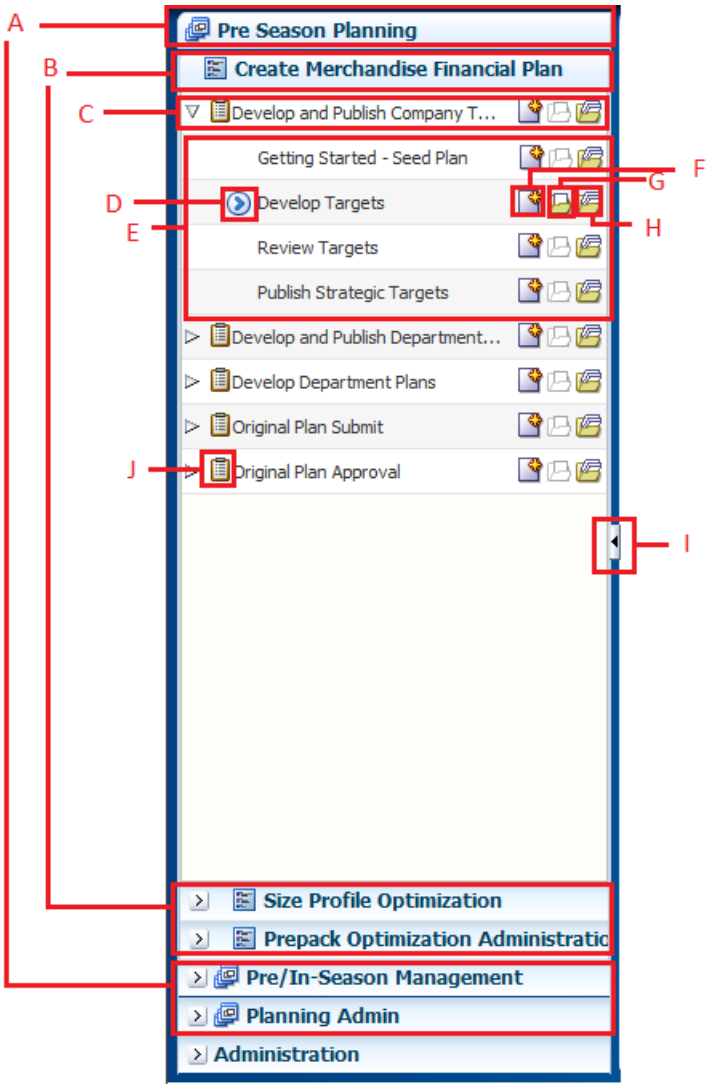


Table 1–4 describes the icons that appear with all the entries in the taskflow.

Table 1–4 Description of Icons in the Taskflow

Legend	Icon Name	Description
A	Activity Groups	These tabs represent the grouping of activities.
B	Activities	These tabs represent the predefined activities of the application.
C	Tasks	These are individual tasks within an activity. Tasks that have a workbook associated with it display a clipboard icon.
D	Current Position Icon	Indicates the current step and your position in the workflow.
E	Steps	One or more steps make up each task.
F	Create a New Workbook	Click this icon to create a new workbook. The new workbook wizard associated with the relevant task appears.

Table 1–4 (Cont.) Description of Icons in the Taskflow

Legend	Icon Name	Description
G	Open the Latest Workbook	Click this icon to view the latest workbook (associated with the relevant task/step) you worked on. Note that this latest workbook is with respect to the user's session and not the username in general. Clicking this icon will open the latest saved workbook that was accessed within the user session.
H	Show List of Workbooks	Click this icon to view a list of all workbooks (associated with the relevant task/step) accessible to you. The Open Workbook window appears with a list of accessible workbooks. If you do not own any workbooks that you own, a message appears allowing you to view all workbooks. If no workbooks are associated with the task/step, created by you or by someone else, a message appears that allows you to create a new workbook.
I	Collapse/Restore Icon	Click this icon to collapse or restore the taskflow. Collapsing the taskflow allows you to view more content in the Contents area. After you open a workbook, the state of the taskflow is maintained when navigating between workbooks and the home page. For instance, if you are in a workbook and the taskflow is collapsed, when you navigate to the home page and then return to a workbook, the taskflow remains collapsed because that was its last state. The state of the taskflow after the first workbook is built or opened in a user session is controlled by the rpasConfig.properties file. For information on changing this setting, see the rpasConfig.properties section of the *Oracle Retail Predictive Application Server Administration Guide for the Fusion Client*.
J	Dynamic Task	A dynamic task is one that has steps that are dynamic, based on the selection you makes when building the associated workbook. The steps are not shown unless you are within a workbook. Dynamic tasks display a clipboard with a lightning bolt icon.

Access-Based Visibility

The activity and tasks that appear in the taskflow are access-based. Depending upon the security settings, you may not have access to some tasks or activities. Access to a task is defined by whether you have access to the workbook template that the task is assigned to.

The access to the workbook template is maintained in the Security Administration step. See the *Oracle Retail Predictive Application Server Administration Guide for the Fusion Client* for more information about the Administration activity. If you do not have access to a workbook template, then you cannot build the workbooks for the associated tasks and steps.

Hiding specific tasks or activities based on user access is configurable. In the configuration, a task can be set to either hidden or disabled. If it is hidden and the user does not have access to it, then the task is not displayed. If it is disabled and the user does not have access, then the task is displayed but the links to access the workbooks are disabled. For more information, refer to the *Oracle Retail Predictive Application Server Configuration Tools User Guide*.

Switching Between Multiple Tasks

When working within multiple steps or tasks, all changes you make in a specific step are maintained when you move to a step in the same task or a different task associated

with the same workbook template. In this case, you do not need to save your work when you switch between tasks within the same workbook template.

If you switch to a task that is associated with a different workbook template, you are prompted to save or discard the changes before opening or building a new workbook. To save your changes, use the Save As dialog box. For more information on the Save As dialog box, see Save As Option.

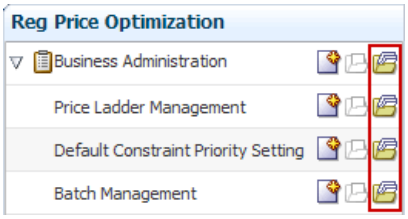
Opening a Workbook

After you log onto the application, a taskflow appears that you can use to navigate through the activities and tasks associated with your user account.

To open a workbook:

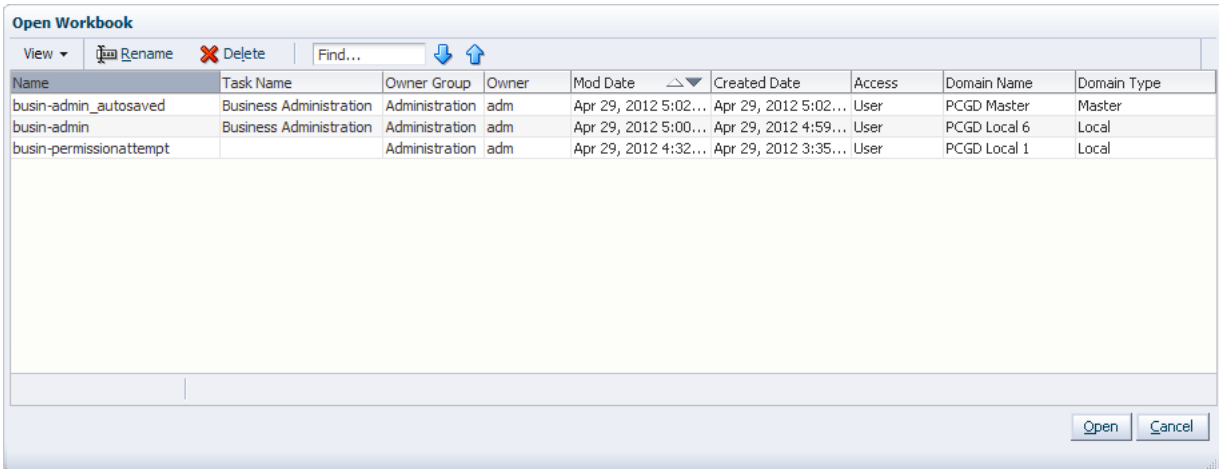
1. In the taskflow, click the **Show List of Workbooks** icon next to the task/step you want. For more information on the taskflow, see the Understanding the Taskflow section.

Figure 1–12 Show List of Workbooks Icon



The **Open Workbook** window appears. When using a combined taskflow, you see all the workbooks across all domains that you have access to.

Figure 1–13 Open Workbook Window



2. Select the workbook you want, and click **Open Workbook**.

Note: If the workbook DimRegistry version is different from the domain DimRegistry version, a warning message appears:

"Workbook and Domain DimRegistry versions are not matching. May cause performance delay while opening and processing workbooks."

For more information about DimRegistry, see the "Reindexing Domains" section of the *Oracle Retail Predictive Application Server Administration Guide for the Fusion Client*.

Understanding the Open Workbook Window

Figure 1–14 highlights the various components of the Open Workbook dialog.

Figure 1–14 Open Workbook Window User Interface Components

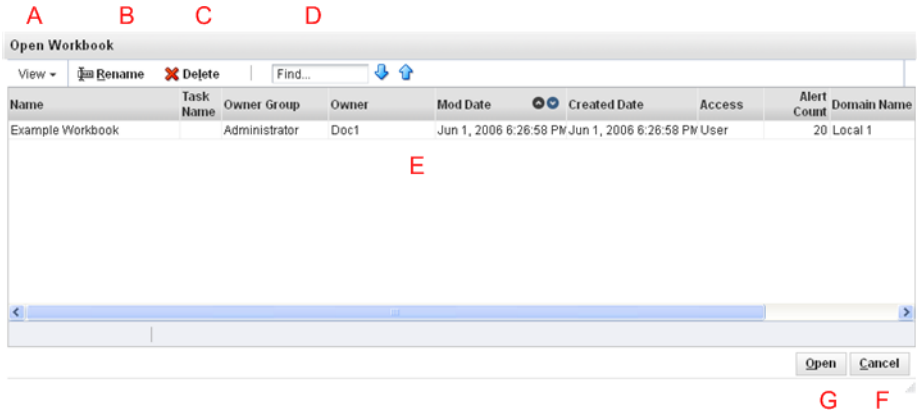


Table 1–5 describes the screen components of the Open Workbook window:

Table 1–5 Open Workbook Window User Interface Components

Legend	Screen Area Name	Position	Description
A	**View** menu	Top Left	The View menu enables you to view all the workbooks that you own. It also provides you the option to show or hide any column in the workbooks grid. It also lets you see workbooks in domains that you do not have position level security access to, for example, to open a workbook saved by another user.
B	**Rename** icon	Top Left	Use to rename a workbook.
C	**Delete** icon	Top Left	Use to delete a workbook. For more information, see Deleting a Workbook.
D	**Find** field, **Previous** and **Next** arrows	Top Center	Use to identify the workbooks with the keywords you entered in the Find field. Use the Previous and Next arrows to navigate between the workbooks matching the search pattern. The search is not case-sensitive.

Table 1–5 (Cont.) Open Workbook Window User Interface Components

Legend	Screen Area Name	Position	Description
E	**Workbooks** grid	Center	Displays the list of workbooks in the current profile. By default, only the workbooks that you own appear. To view all the workbooks, under the **View** menu, click **All**. The grid also holds the total number of real time alerts. Move derail can be obtained by mousing over a specific cell.
F	**Cancel** icon	Bottom Right	Use to cancel an action and exit the Open Workbook window.
G	**Open Workbook** icon	Bottom Right	After you select the workbook you want, click this icon to open the workbook. **Note**: You can open only one workbook at a time.

Creating a New Workbook

The new workbook wizard enables you to create workbooks based on the templates set up during the implementation as well as RPAS administration templates. These templates typically represent a high-level business activity in your organization.

Based on the configuration, each template in the RPAS domain may include many measures at different intersections. Each workbook template is associated with one of the following wizards that help you filter and include the relevant information for the workbook:

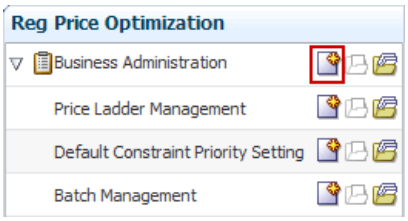
- Standard Two Tree Wizard is a set of similar looking two tree pages that help select positions in different dimensions.
- Custom Wizard offers flexibility when configuring custom pages for choosing positions.

The wizards are set up and associated with the workbook template using the RPAS Configuration tool.

To create a new workbook:

1. In the taskflow, click the **Create New Workbook** icon next to the task/step you want. For more information on the taskflow, see the Understanding the Taskflow section.

Figure 1–15 Create New Workbook Icon



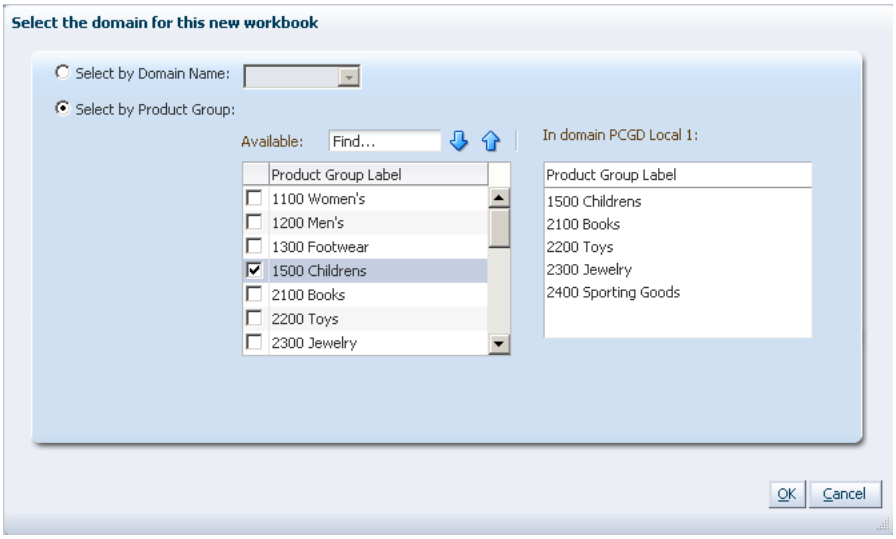
2. Select the domain for the workbook. If you only have position level security for positions within a single local domain or the task type is set to master only, this dialog box is not displayed. There are two options within this domain selection dialog:
   - Select by Position: You are presented with positions for the partitioned hierarchy, and you can select the positions that work within for the selected task. See Figure 1–16.

When you select a position, all the other positions in the same domain are shown on the right. Since choosing the domain is the goal, that may be enough. If you select a position that crosses domains, it will select the master domain if that is permitted by the task and template.

Note: This selection of positions is different than the selections made in the wizard. You must select positions in the wizard to indicate the specific positions that need to be included in the workbook.

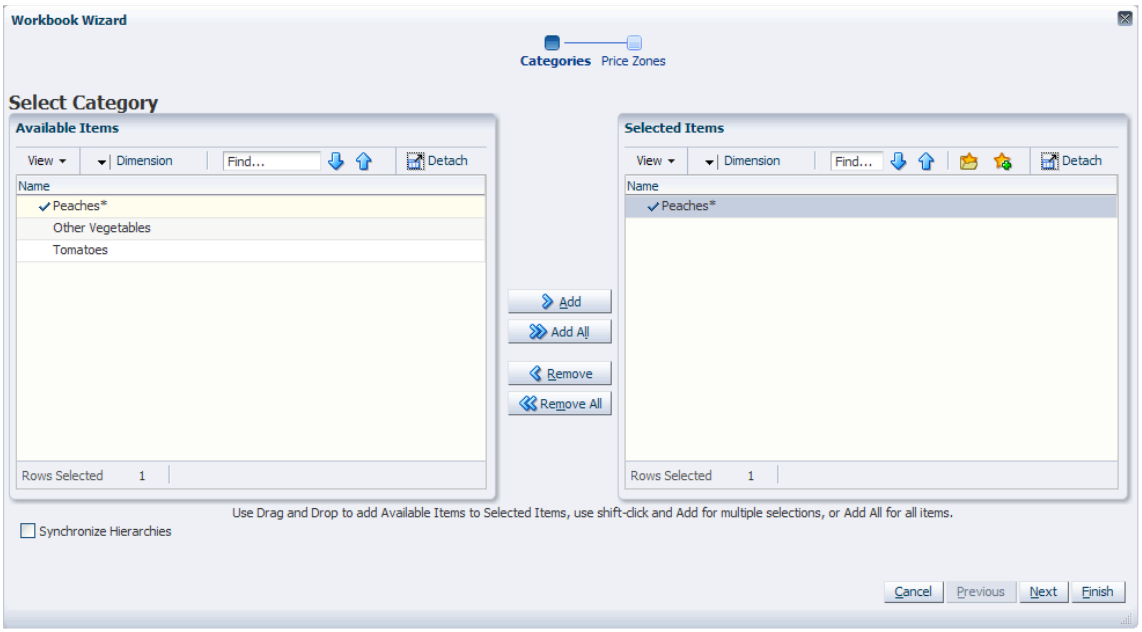
- Select by domain name: To select the master domain or a specific domain, select **Select by Domain Name**. See Figure 1–16. Select the master domain or a local domain from the menu.

Figure 1–16 Domain Selection Dialog



3. Based on the configuration of the workbook template, an associated wizard appears. The wizard provides you with positions that help you filter and include the relevant information in the workbook.

Figure 1–17 Workbook Wizard



4. In the Available Items area, select the positions you want by holding down the **Ctrl** or **Shift** keys and click **Add**. You can click **Add All** to select all the positions.

   Or, drag and drop the positions to the **Selected Items** area.

   Note: In order to drag and drop multiple positions at the same time, you must do the following:

   Hold down the **Shift** key or the **Ctrl** key and, using the mouse, move the cursor to highlight each position you want to move, keeping the cursor in the non-text area. You must keep the mouse button depressed after you finish highlighting and then drag your selection to the **Selected Items** area.

   ---

5. Follow the instructions in the wizard, and after you have selected the positions you want, click **Finish**.

Deleting a Workbook

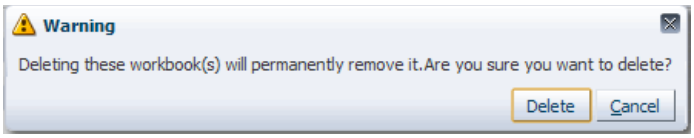
From the list of workbooks, you can delete any workbook you have write access to. To delete a workbook:

1. On the Open Workbook window, select the workbook you want.

   To delete more than one workbook, hold the **Ctrl** key and select the workbooks you want to delete. Or, you can hold **Shift** and select a group of workbooks.

2. Click **Delete**. A warning message appears.

Figure 1–18 Delete Warning Message



3. Review the warning message and then click **Delete** to delete the workbooks or click **Cancel** to cancel this operation.

Renaming a Workbook

The open workbook dialog box enables you to rename existing workbooks without affecting the data within the workbook or the other workbook information, such as the created date, modified date, and formatting information.

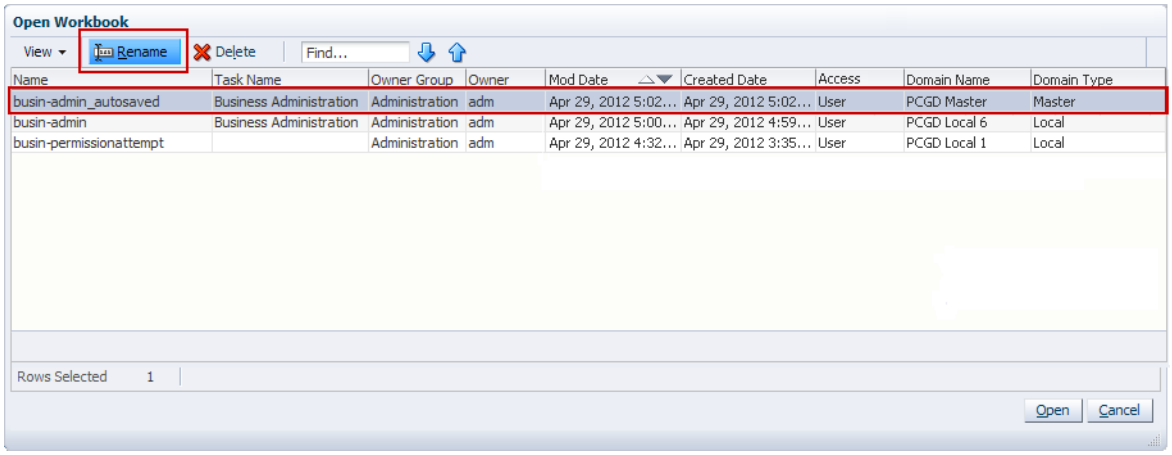
Keep in mind these key points when renaming workbooks:

- You can only rename workbooks that you have write access to.
- Workbook names can be no more than 32 characters.
- Workbook names cannot contain double or single quotation marks.
- Workbooks cannot be named "Untitled." This name is reserved.

To rename a workbook in the open workbook dialog box, complete the following steps.

1. Select the workbook you want to rename from the list. When selected, it becomes shaded, as shown in Renaming a Workbook.
2. Click **Rename**.

Figure 1–19 Renaming a Workbook

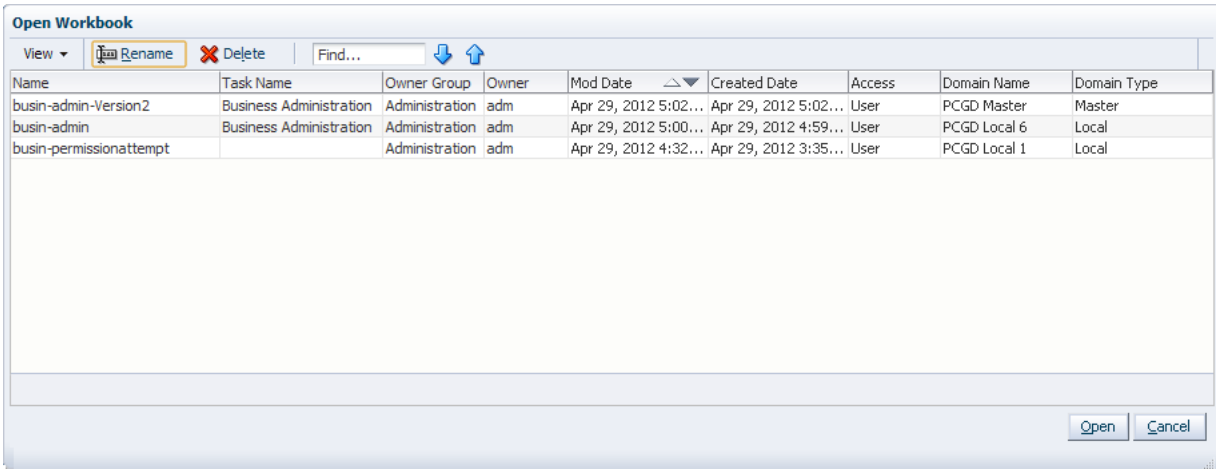


3. The Rename Workbook dialog box appears. Enter the new name of the workbook and click **OK**.

Figure 1–20 Rename Workbook Dialog Box

4. The renamed workbook appears in the workbook list.

Figure 1–21 Renamed Workbook



You can also rename a workbook from the File menu. For more information about this option, see Renaming Workbooks.

Understanding the Workbook Wizard Window

Figure 1–22 highlights the various components of the workbook wizard.

Figure 1–22 Workbook Wizard

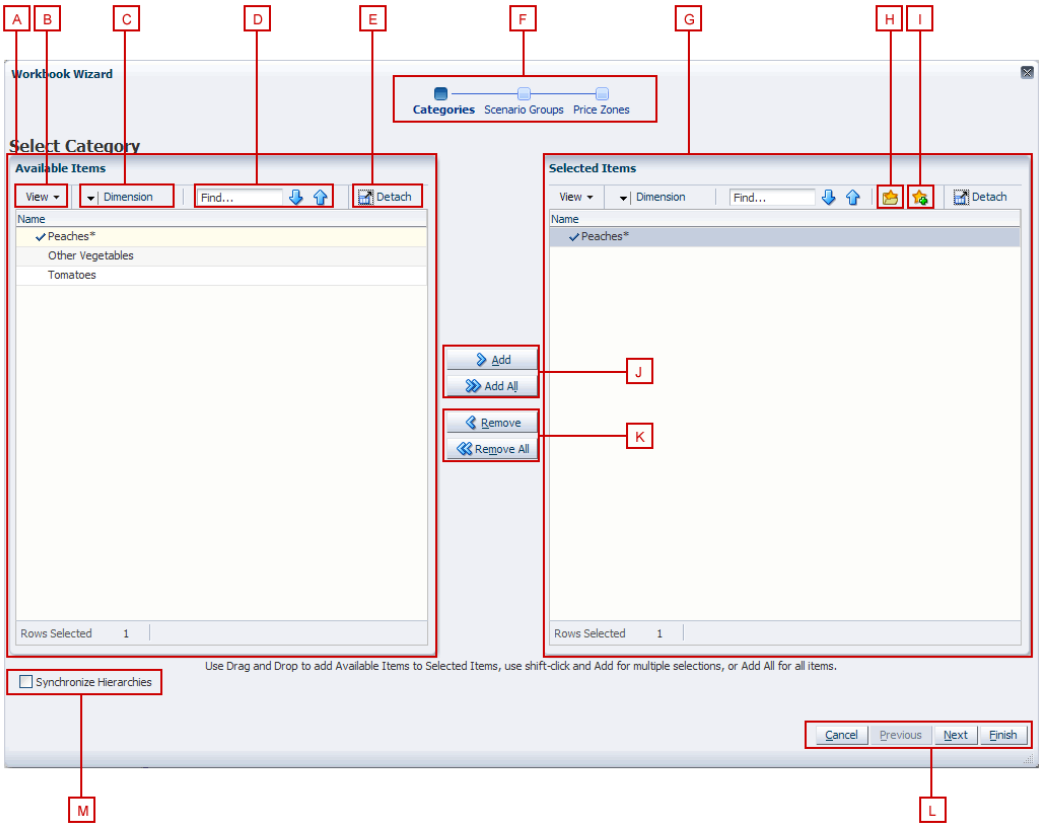


Table 1–6 describes the screen components of the workbook wizard window.

Table 1–6 Workbook Wizard Window User Interface Components

Legend	Screen Area Name	Position	Description
A	**Available Items** area	Center Left	Displays the positions that are available for you to select.
B	**View** menu	Center Left, within the Available Items area	Provides options for viewing the available positions. You can adjust the column setting, detach the list to view it in a larger window, expand or collapse the positions, or scroll to the beginning or end of the list.
C	**Dimension** menu	Center Left, within the Available Items area	Opens the Dimension options window where you can select the levels of the dimension you want to view in the Available Items list. You can also select the attributes that you would like to see and sort by in the list.
D	**Find** field, **Previous** and **Next** arrows	Center Left, within the Available Items area	Used to identify the positions with the keywords you entered in the Find field. Use the Previous and Next arrows to navigate between the workbooks matching the search pattern. The search is not case-sensitive.
E	**Detach**	Left corner of the Available Items and Selected Items areas	Used to view the list of positions in a larger window.

Table 1–6 (Cont.) Workbook Wizard Window User Interface Components

Legend	Screen Area Name	Position	Description
F	**Wizard Taskflow**	Top Center	Displays the steps in the wizard process and shows you where you are within that process. The wizard taskflow is configured in the RPAS Configuration Tools. For more information, see the *Oracle Retail Predictive Application Server Configuration Tools User Guide*.
G	**Selected Items** area	Center Right	Displays the positions you selected. It also includes a toolbar that enables you to perform various functions.
H	**Load Favorite** icon	Center Right, within the Selected Items area	Used to select a previously saved group of positions to load into the workbook. For more information, see Saving and Loading Favorites.
I	**Save Favorite** icon	Center Right, within the Selected Items area	Used to save the positions you have selected as group. The next time you build a new workbook, you can select and load that group rather than choosing the same positions individually again. For more information, see Saving and Loading Favorites.
J	**Add** and **Add All** icons	Center	Used to add positions that are selected in the Available Items area. To add all positions in the Available Items area, click the **Add All** icon.
K	**Remove** and **Remove All** icons	Center	Used to remove positions in the Selected Items area. To remove all positions in the Selected Items area, click the **Remove All** icon.
L	**Wizard Navigation** icon	Bottom Right	Used to navigate from one wizard page to another. After you have made the selections for the workbook and clicked **Finish**, the workbook builds with the selected positions.
M	**Synchronize Hierarchies** check box	Bottom Left	When selected, the displayed levels within the Selected Items area match the ones in the Available Items area. This is selected by default.

Saving and Loading Favorites

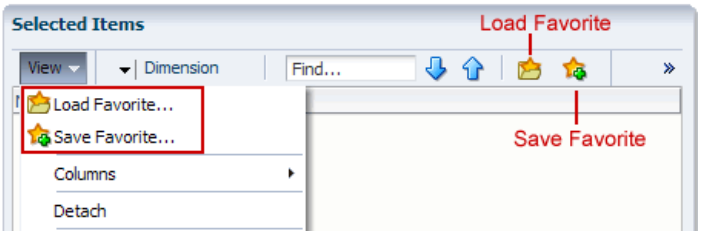
After you have selected the positions that you want to appear in the workbook you are building, you can save that collection of positions for future use by using the Save Favorite and Load Favorite features. You can save the collection of positions for each dimension presented in the workbook wizard.

Saving Favorites

To save the selected positions as a favorite, complete the following:

1. After you have moved the positions to the Selected Items area, click the **Save Favorite** icon or select **Save Favorites** from the View menu. See Figure 1–23.

Figure 1–23 Save and Load Favorites Icons

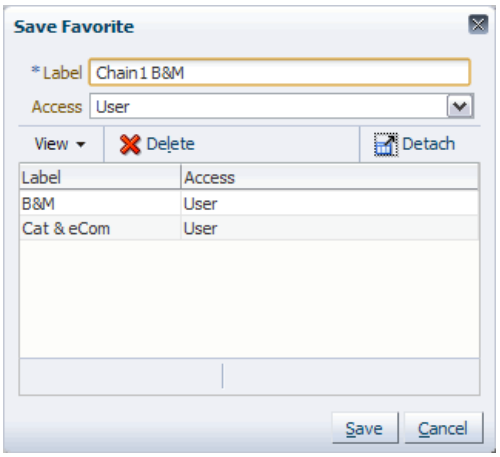


2. The Save Favorites window appears. Enter the name of the favorite in the **Label** field. In the **Access** field, choose one of the following:

   - **User**: This option makes the favorite available to only the user who created it.
   - **World**: This option makes the favorite available to all users.

   Note that previously saved favorites are listed in the table.

Figure 1–24 Save Favorites Window

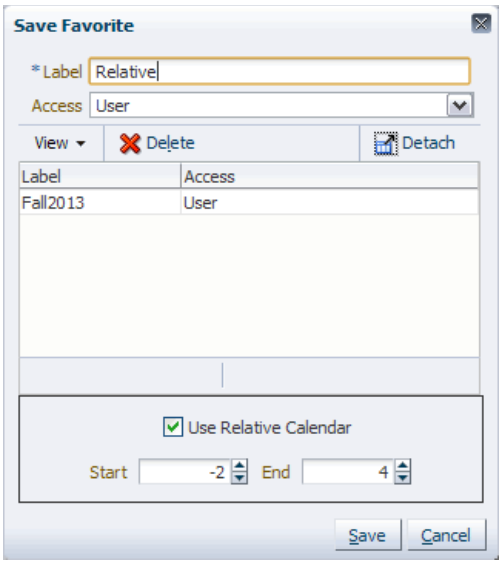


3. When finished, click **Save**. If you would like to abandon the changes, click **Cancel**.

Saving Calendar Positions as Favorites

When saving positions in the Calendar dimension, you have the option to use a relative calendar rather than the predefined time periods that are shown in the wizard. This enables you to use a range of time periods that are relative to the current date. As time passes, the calendar favorite updates the range of time to be in relation to the new date.

Figure 1–25 Save Favorites – Calendar Dimension



The length of the time periods is determined by the lowest level of the Calendar dimension presented in the wizard. For instance, if the lowest level in the wizard is Week, then when you select the time range in the relative calendar option, you choose the number of weeks to include.

To use the relative calendar feature, complete the following:

1. In the calendar step of the workbook wizard, click the **Save Favorite** icon. You do not need to move a position to the Selected Items list.
2. In the Save Favorites window, enter the name in the **Label** field and select the access level in the **Access** field.
3. At the bottom of the window, select the **Use Relative Calendar** option.
4. In the **Start** field, enter the number or use the arrows to choose the number of time periods in relation to today's date for the start period. For instance, if the workbook's lowest calendar level is week and you want the time period to begin 2 weeks in the past from today's date, you would enter **-2**. If you wanted it to begin 2 weeks in the future, you would enter **2**.
5. In the **End** field, enter the number of weeks in relation to today's date that you want the time period to end.
6. When finished, click **Save**.

Editing Favorites

To change or update a favorite, complete the following:

1. Move the updated set of positions to the Selected Items area.
2. Click the **Save Favorite** icon or select **Save Favorites** from the View menu.
3. In the Save Favorites window, select the favorite that you want to edit from the list.
4. Update the Access level if necessary.
5. Click **Save**. The favorite now includes the new set of positions.

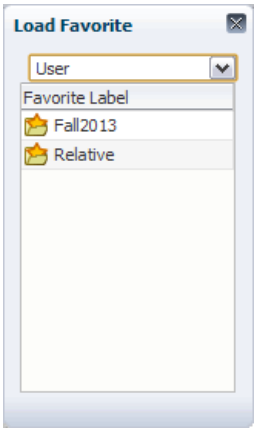
Loading Favorites

After you have saved a favorite, you can load it into to the workbook wizard. Loading favorites into the wizard rather than selecting individual positions from the wizard every time you create a workbook will save you time.

To load a favorite, complete the following:

1. In the workbook wizard, click the **Load Favorite** icon.
2. The Load Favorites window appears. Click the favorite you want to load. The Load Favorites window automatically closes.

Figure 1–26 Load Favorites Window



3. In the workbook wizard, the positions from the favorite now appear in the Selected Items area.

Deleting Favorites

To delete a favorite, complete the following steps:

1. Click the **Save Favorite** icon or select **Save Favorites** from the View menu.
2. Select the favorite you want to delete from the list.
3. Click **Delete**. The favorite is deleted and no longer appears in the list.

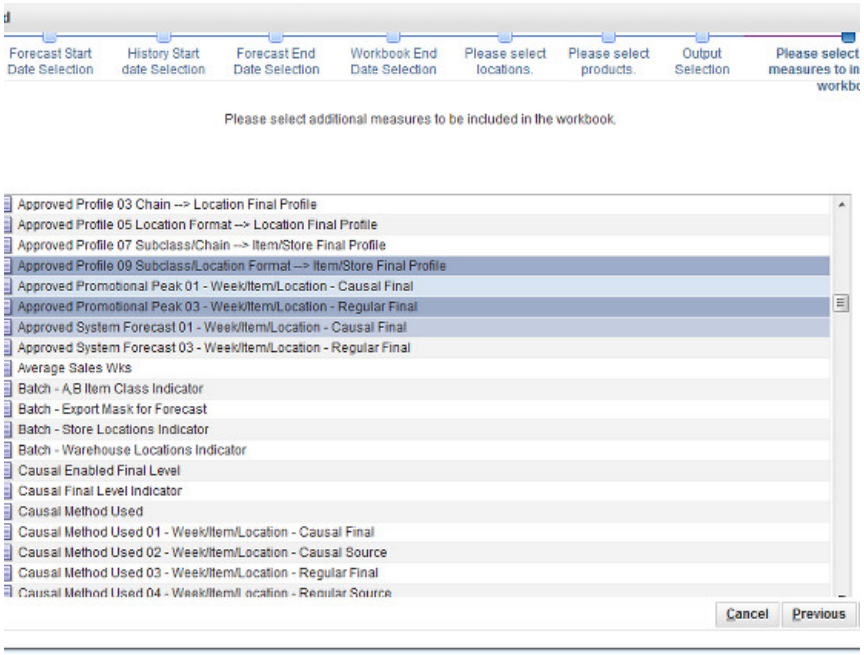
Extra Measures

There are certain circumstances where the create workbook custom wizard results in some extra worksheets that are not part of the Fusion Client taskflow. This can occur when the number of worksheets being created is dependent on the number of extra intersections that are selected by the user during the workbook creation process.

Tasks with Extra Measures

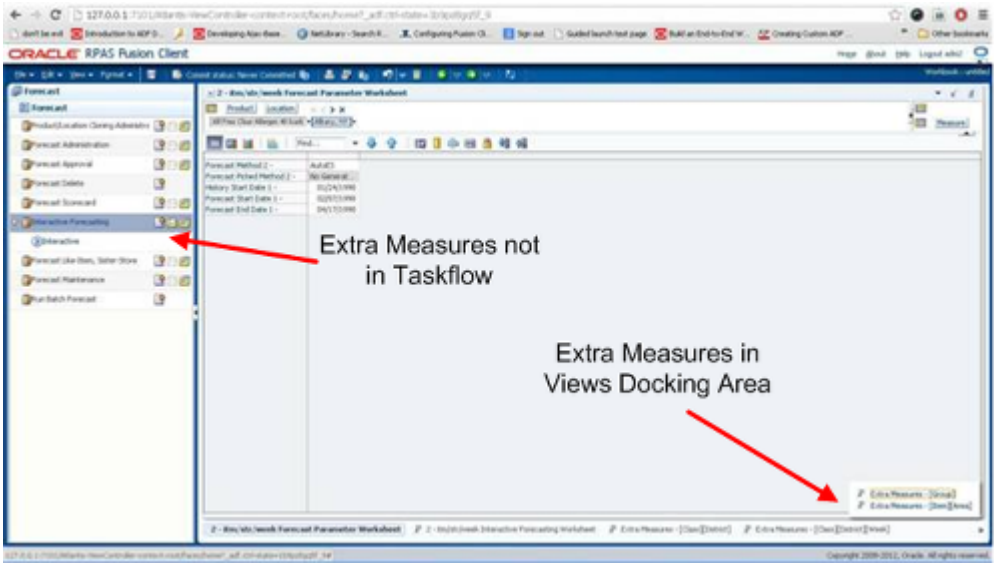
There is no way of determining from icons in the taskflow which tasks have extra measures associated with them. This can only be determined when the workbook wizard is in use. Both the Standard and Custom workbook wizards can have an additional stage added to select extra measures.

Figure 1–27 Workbook Wizard - Extra Measures Stage



As there may be dozens of extra measures that could potentially be added to the workbook, it is not possible to configure the task flow to accommodate all the permutations. Accordingly, the views for extra measures are accessible in the views docking area, but not in the Taskflow Area.

Figure 1–28 Extra Measures - Taskflow and Views Docking Area



Using Extra Measures

Working with extra measures in the activity flow is similar to working with steps that can be selected from the task flow. The sole difference being that steps associated with extra measures can only be selected from the Views Docking Area. The following conditions apply:

- If the task has a single step assigned to it in the taskflow, any additional worksheets will be assigned to that step.
- If the worksheet has a single task and multiple steps, the additional worksheets will be accessible from each step.
- If one or more steps of a task have been configured with tabs, then all the configured tabs will display the additional worksheets.

Plug-Ins from External Applications

RPAS has the ability to display plug-ins from other applications.

Overview of Plug-Ins From Other Applications

As well as displaying information from other RPAS domains in the Fusion Client via the standard client/server relationship, the capability exists to integrate plug-ins from external applications into RPAS. This allows data to be used from other sources.

For example, a plug-in can be configured to read data out of a relational database and present it in read-only form to a user in RPAS. That user could then use the information to update data within RPAS.

Configuring the Plug-In to Display in the Fusion Client

In order for these plug-ins to be visible in the Fusion client, a series of preparatory actions must be carried out. A brief overview is as follows:

- **Develop Package**

  The initial stage is to create a UI that is RPAS compliant. This UI must meet a set of stringent technical requirements.

- **Configure the Application Within RPAS**

  This requires a series of updates or edits to the files used to configure the application. These specify the data source, selection context, and metrics to be displayed.

Note: See the *RPAS Configuration Tools User Guide* for more information.

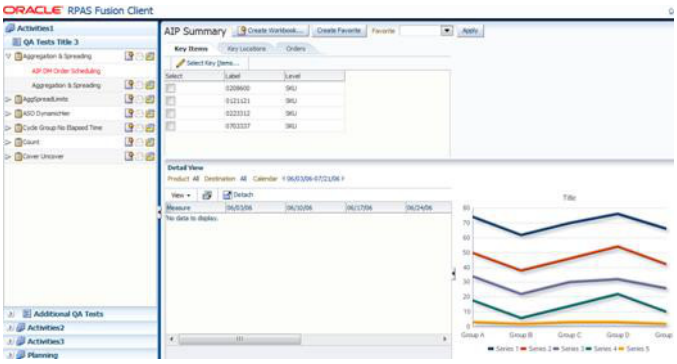
Adding Plug-Ins to RPAS

This section specifies three ways in which plug-ins can be made available to users within RPAS.

Launching from the RPAS Fusion Client Home Page

The first option is to make the plug-ins available to the user from the RPAS home page. It should occupy the content area, leaving room for the alert area.

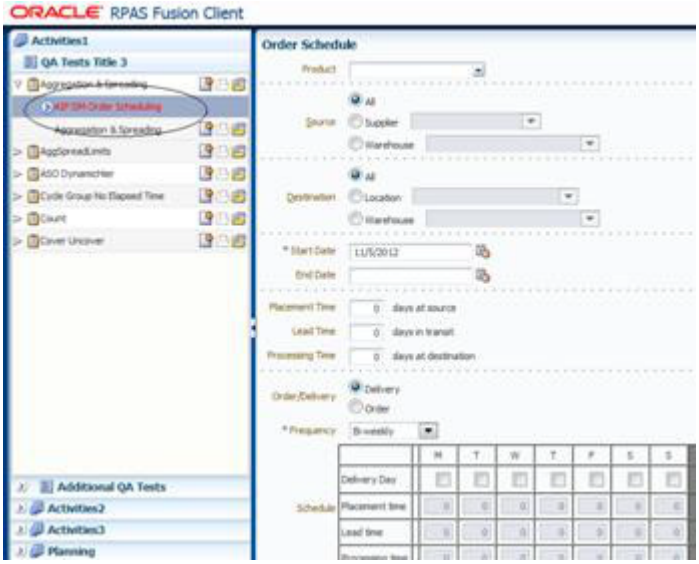
Figure 1–29 Adding Plug-In to Home Page



Adding to the Task Flow

The second option is to add the plug-in to the task flow. The plug-in must be regarded as a task or step in the task flow. The pertinent changes must be made in the Configuration Module before it is available to standard users. The user can then select the plug-in at the appropriate period in the business process.

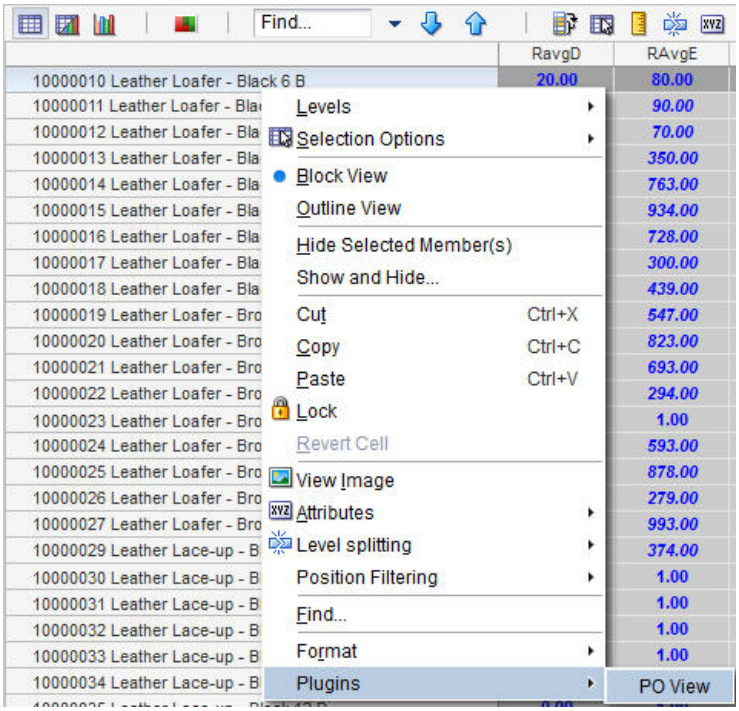
Figure 1–30 Adding Non-RPAS Plug-In to Taskflow



Launching from Within a RPAS Worksheet

The final option is to launch the plug-in from within a worksheet. This is done using the Plug-Ins option from the right click menu. In this example, two plug-ins can be selected.

Figure 1–31 Plug-In Menu Option

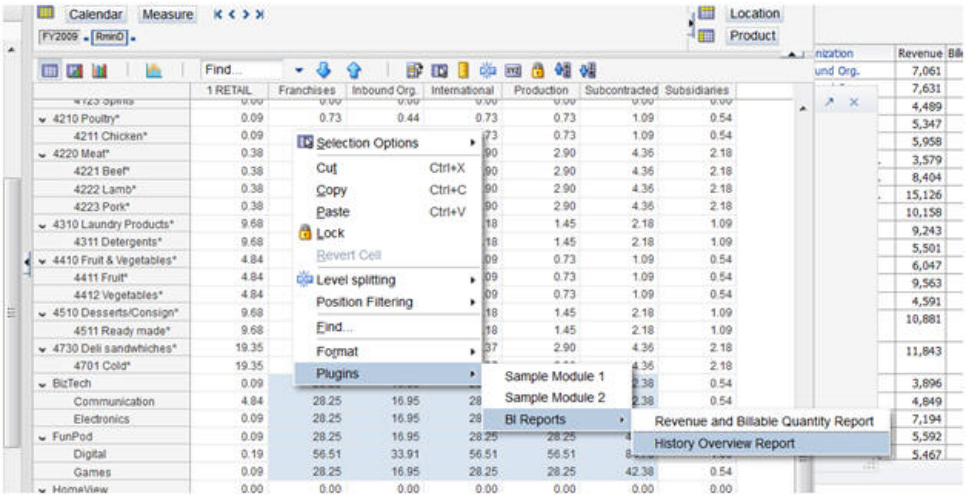


Reports

OBIEE reports are configured using a combination of configuration files, including Taskflow_MultiSolution.xml, MultiSolutionBundle.properties, and reportConfig.xml. See RPAS Configuration Tools User Guide and Oracle Retail Predictive Application Server Administration Guide for the Fusion Client for details.

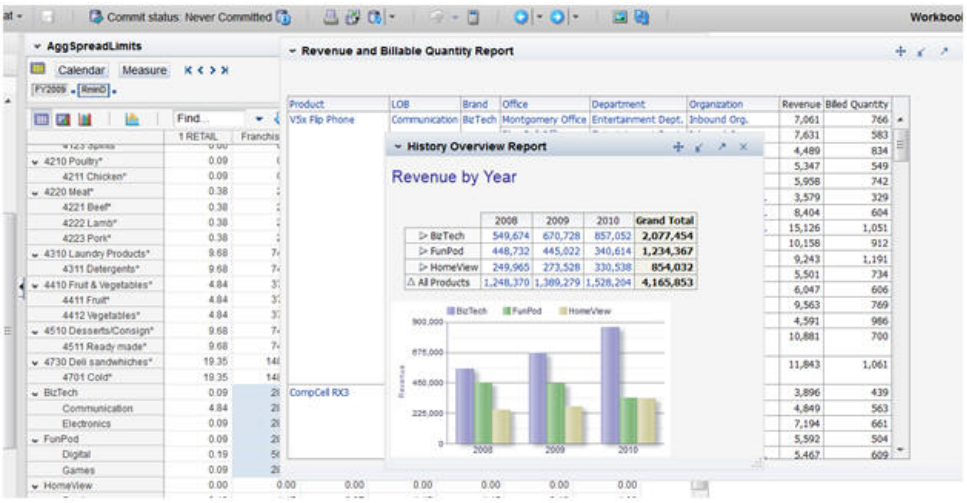
If a report or reports have been configured for a specific worksheet, you will see those reports listed in the context menu under Plugins when you make a worksheet selection, as shown in List of Reports. Depending on the report configuration, selected cells are typically used to filter the report.

Figure 1–32 List of Reports



When you select a report from the list of available reports to view, you see the report displayed in a new window. Each report you select from the list is generated in a separate window. The contents of the report depend on the selection you initially make in the worksheet. If you change the selection and launch the report again, the report is refreshed.

Figure 1–33 Example Report



As with other plug-ins launched from the context of a worksheet, report windows can be resized, repositioned, and deleted, In addition, the launch is remembered upon workbook save. This means that when you reopen the workbook, you see the report again without the need to relaunch it.

Locating the Commit Status

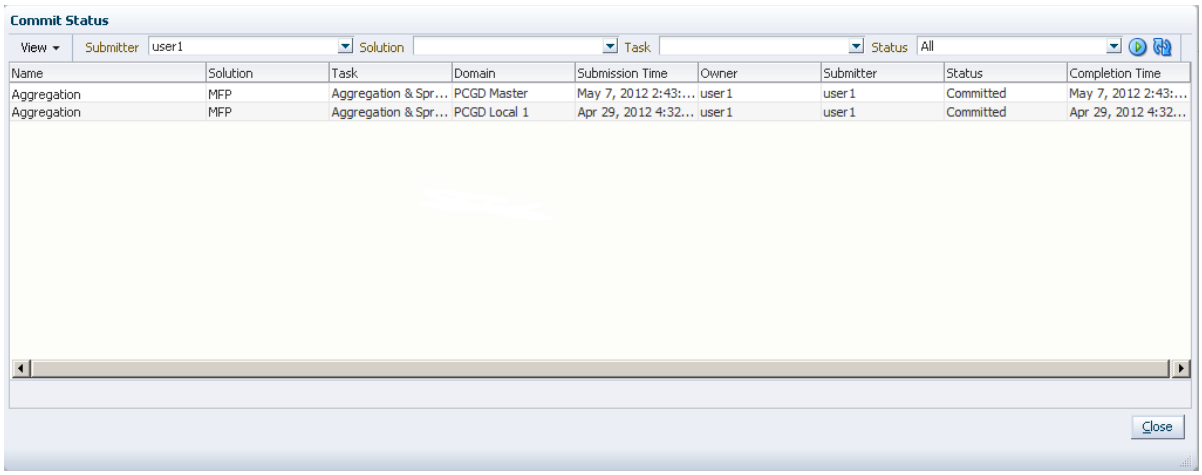
To see the commit status of a workbook without opening it, click **Commit Status** in the global toolbar.

Figure 1–34 Commit Status Link

The Commit Status dialog box appears. It lists all workbooks that have been created in the domain. In a combined taskflow, all the workbooks across the domains to which you have access are displayed. The workbook's solution, task type, domain, submission time, owner, submitter, commit status, and completion time are displayed. To see how the commit status appears when a workbook is open, see the Viewing Commit Statuses section. This section also describes how to use this dialog box.

Note: Commit status has meaning only for a commit asap, not commit now. The Fusion Client does only commit asap. To use commit status, you use commit asap.

Figure 1–35 Commit Status Dialog Box

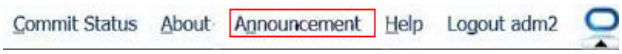


Viewing an Announcement

Site administrators can broadcast announcements to logged-in RPAS Fusion Client users about imminent events. Up to three messages can be displayed on the user's login, home, or workbook screens.

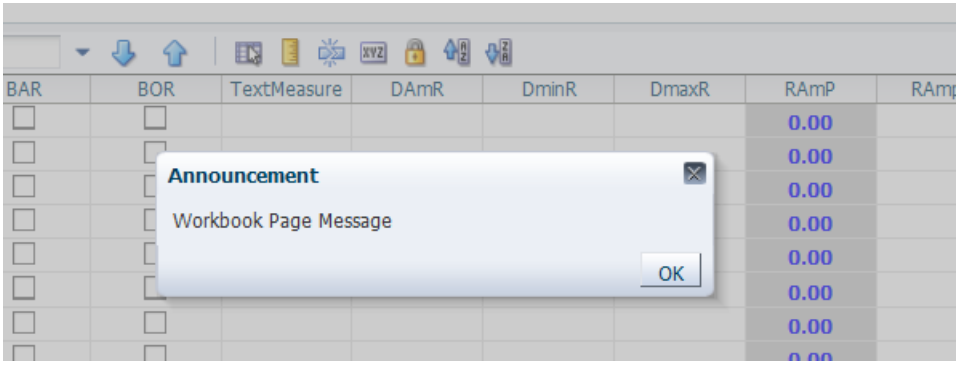
To see the announcement of a workbook without opening it, click **Announcement** in the global toolbar.

Figure 1–36 Announcement Link



The Announcement dialog box appears.

Figure 1–37 Announcement Dialog Box



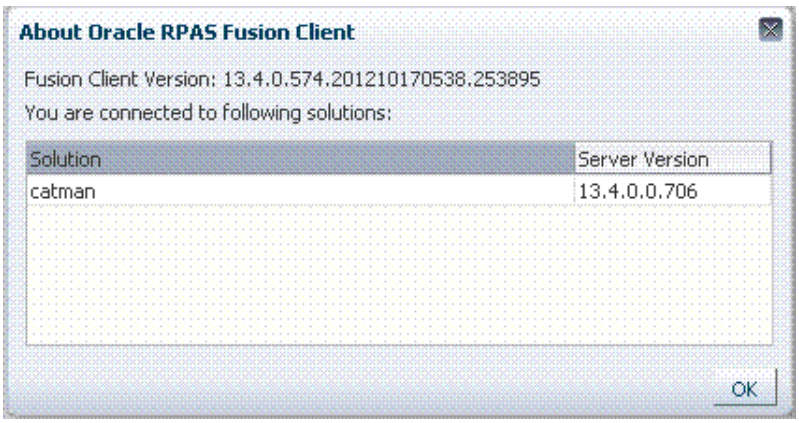
Locating the Version Number

To determine the version of RPAS Fusion Client and server, click the **About** link in the global header.

Figure 1–38 About Link

The About Oracle RPAS Fusion Client dialog box appears, displaying client and server versions. It also lists the solutions to which you are connected. In this example, you can see that you have access to one solution in the taskflow configuration.

Figure 1–39 About Oracle RPAS Fusion Client Dialog Box



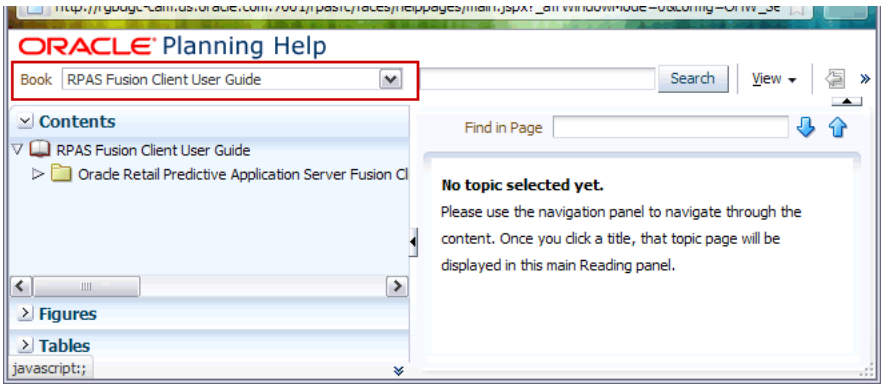
Accessing Online Help

To access online help, click **Help** in the global header.

Figure 1–40 Online Help Link

The online help appears in a new browser window. If more than one help set is available, you can choose which one to view by selecting it from the Book drop-down field. If there is only one help set, the field is shaded.

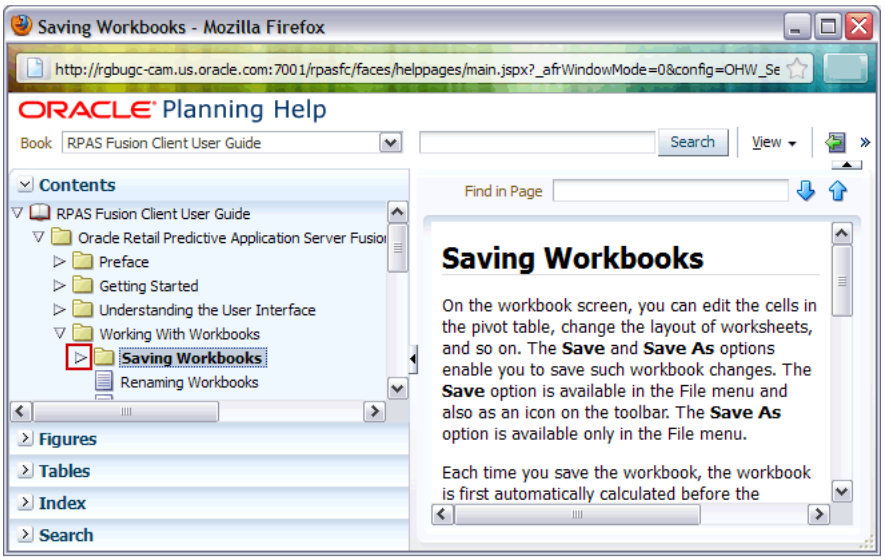
Figure 1–41 Online Help Window, Book Field



Contents

The contents of the online help set are shown in the Contents section of the navigation bar on the left. Click the **Expand** icon next to the folders to drill down to the help topics. Click the page you want to view. It appears in the content area.

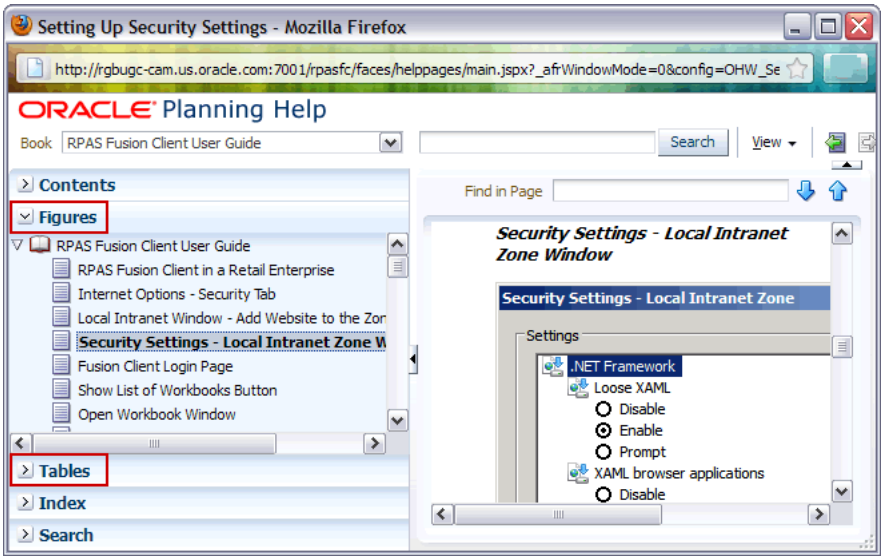
Figure 1–42 Help Topic within Online Help



Figures and Tables

To view a list of figures or tables, click the **Figures** or **Tables** bar.

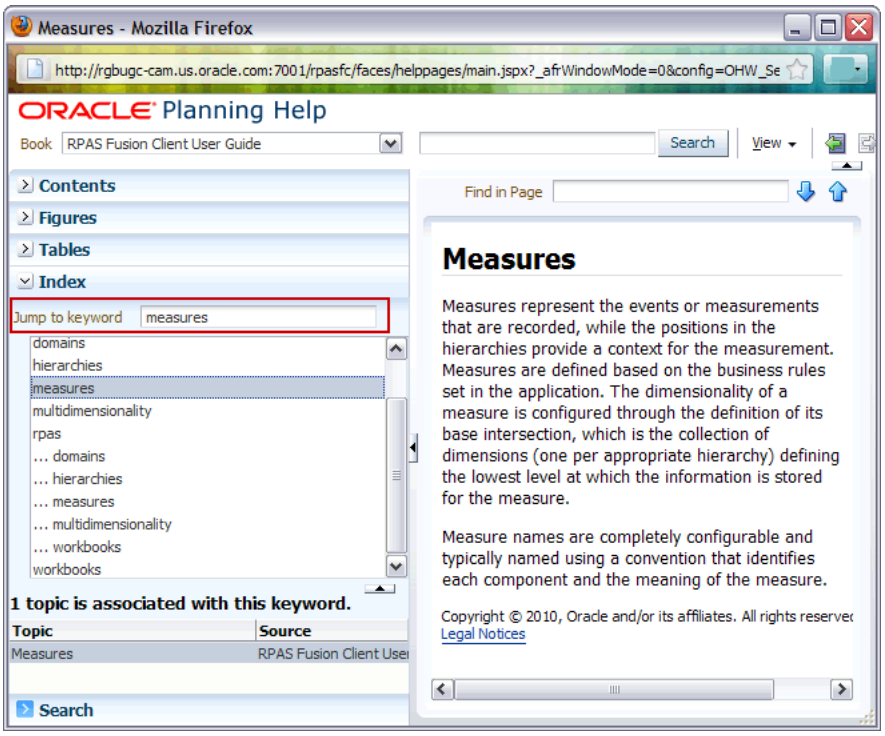
Figure 1–43 Online Help: Figure List



Index

In the Index, you can enter keywords to find topics that contain this keyword. Click the topic name to see the page.

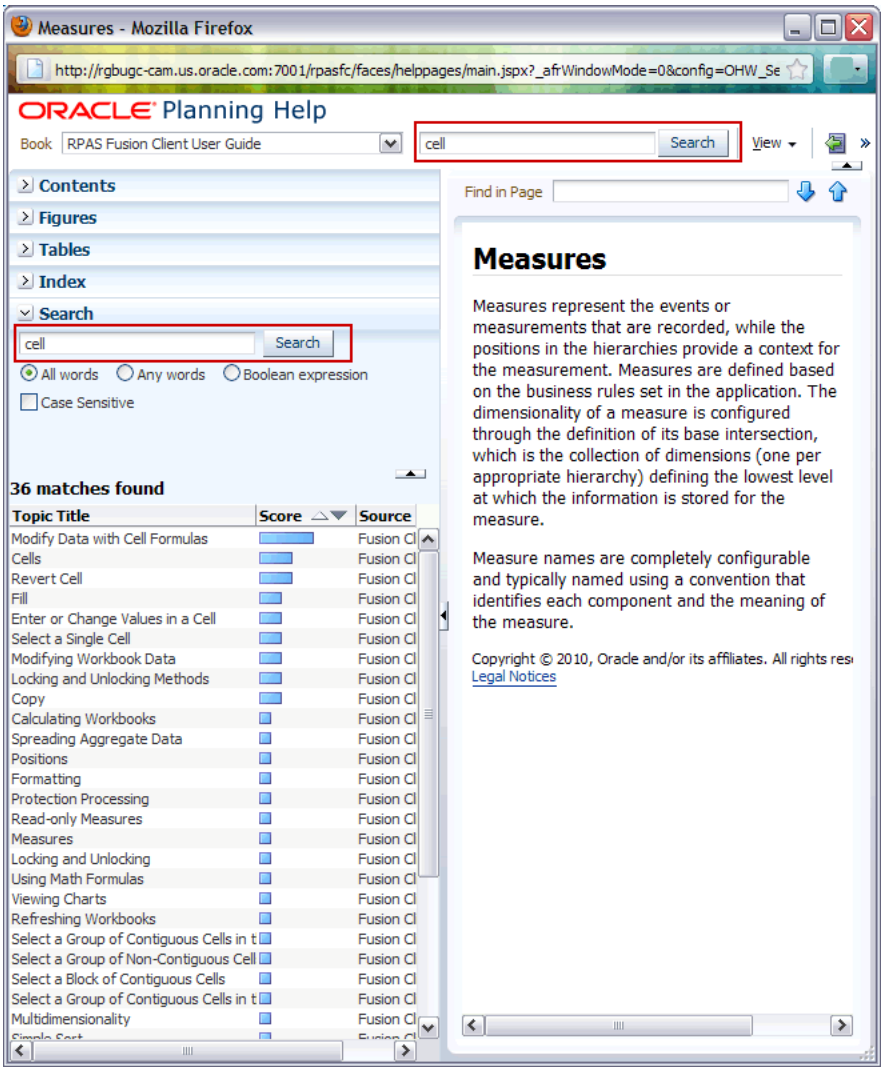
Figure 1–44 Online Help: Index



Search

Use the Search field at the top of the online help window or the Search section within the navigation bar to search for words or phrases.

Figure 1–45 Online Help: Search



Logging Out of the Application

To log out of the application, click **Logout** in the global toolbar.

Figure 1–46 Logout Link

For some SSO configurations, you may see "End Session <username>" instead. This will log you out of your RPAS session only, but not SSO. If you see Logout, it is configured to log you out of SSO as well.

Note: You may be prompted to save and commit the workbook data before logging out of the application.

2

Understanding the User Interface

This chapter introduces you to the user interface for the workbook and describes the following screen components:

- Quick Access Toolbar
- Contents Area

Figure 2–1 highlights the various components of the workbook user interface:

Note: RPAS Fusion Client 15.0 has a new look and feel. Though functionally the user interface is the same, users will find new styles and skin.

Figure 2–1 Workbook User Interface

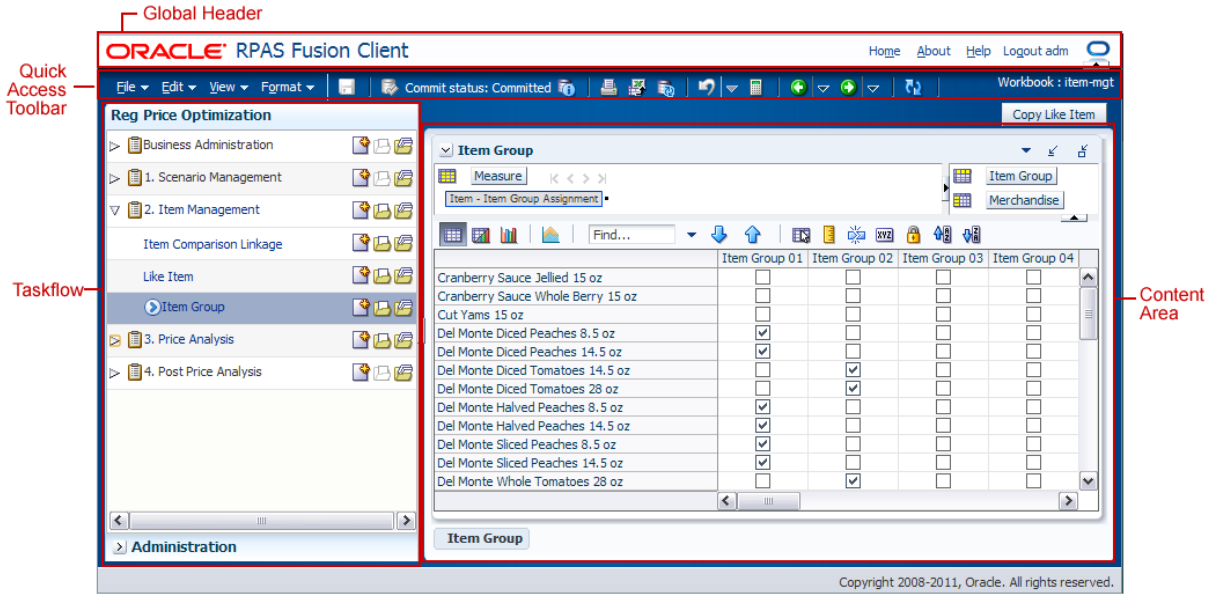


Table 2–1 describes the user interface components in the workbook user interface:

Table 2–1 Workbook User Interface Screen Components

Screen Component	Description
Global Header	Displayed at the top of the screen, this area appears across all the business applications and custom pages. It includes the application branding and links for the home page, About window, Online Help, and logging out of the application.
Quick Access Toolbar	Displayed below the global header, the quick access toolbar includes the menus and icons that you use to perform various actions in the workbook. For more information, see Quick Access Toolbar.
Taskflow	Displayed on the left of the screen, the taskflow provides a workflow that helps you navigate through the application. It lists each activity, associated tasks, and steps involved to complete an activity. For more information, see Understanding the Taskflow.
Content Area	Displayed on the right of the screen, the content area includes views and tabs associated and configured for each task and step in the application workflow.

Quick Access Toolbar

The following figure highlights the various components on the Quick Access toolbar:

Figure 2–2 Quick Access Toolbar Components

Table 2–2 describes the quick access toolbar components highlighted in Figure 2–2:

Table 2–2 Quick Access Toolbar Components

Legend	Toolbar Component	Description
A	File menu	The File menu provides access to the general options for the workbook, such as Save, Commit, and so on. For more information on each option available in the File menu, see File Menu Options.
B	Edit menu	The Edit menu provides access to the options associated with cell edits, such as Cut, Undo, and so on. For more information, see Edit Menu Options.
C	View menu	The View menu provides options that enable you to quickly access one of the workbooks from the taskflow using the Go To submenu. It also contains the synchronize page edge option and tiling options. For more information, see View Menu Options.
D	Format menu	The Format menu provides options that enable you to change and save the format of the workbook. For more information on formatting, see Format Menu Options.
E	Save Icon	The Save icon enables you to save the changes you make in the workbook. You can also access this option from the File menu. For more information on saving the workbooks, see Saving Workbooks.
F	Commit and Commit Status Icons	The Commit icon enables you to commit the changes to the domain. You can also access this option from the File menu. The Commit Status icon enables you to view the current statuses of the current commit requests in the Commit Status dialog box. For more information on committing the workbooks, see Committing Workbooks.

Table 2–2 (Cont.) Quick Access Toolbar Components

Legend	Toolbar Component	Description
G	Print Icon	The Print icon enables you to print the view by exporting it to an external program. For more information, see Print.
H	Export Icon	The Export icon enables you to export the view to an external program. For more information, see Export.
I	Refresh Workbook	The Refresh Workbook icon allows you to update a workbook with the data that is currently stored in the domain. This allows you to work with the most current data without having to rebuild the workbook. Workbooks can be refreshed with a single refresh rule group or multiple ones. For more information, see Refreshing Workbooks.
J	Undo Icon and Drop-down List	The Undo icon enables you to undo actions you performed within the entire workbook (not just the current view). You can also access this option from the Edit menu. When more than one action has been performed, a drop-down list of the last performed actions is available. From that list you can select the actions to undo.
K	Calculate Icon	After you edit the cells within the workbook, use the Calculate icon to calculate and update the associated cells within the workbook. You can also access this option from the Edit menu. For more information, see Calculating Workbooks.
L	Previous and Next Icons	The Previous and Next icons enable you to navigate to the previous or next task/step in the taskflow. You can also click the down arrow (next to both the icons) to quickly jump to a specific task or step within the workflow.
M	View/Manage Images	The View/Manage Images icon enables you to associate images with specific dimension positions. Most positions have images associated with them as part of the configuration process. You can use this feature for positions that for some reason may be missing an image. This feature is especially useful for the product and location dimensions. For instance, you can associate an item with a image of what it should look like displayed on the shelf. You can associate stores with images of the store front or interior. For more information, see Chapter 13, "Images".
N	Update Attribute Values and Level Splits Icon	After you edit user-defined attributes, you can update the attributes and level splits with this icon. Clicking this icon recalculates all sort attributes and dimension splits displayed in the workbook since the attribute or dimension split was last applied to the data. This icon is enabled only when there are attributes displayed that need to be recomputed based on user edits. For more information, see Updating Attribute Values.
O	Alerts	This section of the toolbar gives information on Batch Alerts and Real Time Alerts. These enable users to focus on information that needs their attention. These icons will only be visible if the workbook has been configured to have Batch Alerts and Real Time Alerts. For more information, see Overview of Alerts.
P	Workbook Name	This area displays the name of the currently open workbook.

File Menu Options

The file menu includes the following options:

- **Save** – Allows you to save all information in the workbook. This includes information on the current layout of views and charts. You can also click the Save icon on the toolbar. For more information, see Saving Workbooks.

> **Note:** The Save option does not commit the changes to the master domain.

- **Save As** – Use to save the workbook with a name and the access you want. For more information, see Save As Option.
- **Rename** – Use to rename the workbook. For more information, see Renaming Workbooks.
- **Commit** – Use to commit the changes to the master domain. After the changes are committed, all other users with access to the workbook will notice the changes as well. For more information, see Committing Workbooks.
- **Commit Status** – Use to view the status of committed workbooks. For more information, see Committing Workbooks.
- **Page Setup** – Use to change the orientation, scaling, margins, header, footer, and page breaks for the page when printing.
- **Print** – Use to print the view by exporting it to Microsoft Excel. For more information, see Print.
- **Export** – Use to export to Microsoft Excel. For more information, see Export.
- **Refresh** – Use to update a workbook with the data that is currently stored in the domain. This allows you to work with the most current data without having to rebuild the workbook. Workbooks can be refreshed with a single refresh rule group or a multiple ones.
- **Revert** – Use to close an open workbook without saving it and reopen it. This removes any changes made to the workbook and resets it to the last saved value.

Edit Menu Options

The Edit menu includes the following options:

- **Undo** – Use to undo the last action you performed within the workbook (not just the current view).
- **Calculate** – Use to submit the edited data to the server for processing.
- **Cut** – Use to copy and remove data from the cells of a view in order to move the data to cells in the same view, cells in another view, or other applications. For more information, see Cut.
- **Copy** – Copies selected data to the application clipboard. It keeps data in a clipboard that you can use to transfer data within RPAS as well as to an outside application such as Excel. For more information, see Copy.
- **Paste** – Pastes the data that was last placed on the clipboard into the selected cells within the RPAS Fusion Client. For more information, see Paste.
- **Cut Special** – Cuts data at the base level or higher level intersection across page slices. If multiple levels (product group or style) are represented in the pivot table selections, the cut option is performed at the lowest level actually selected. For more information, see Cut Special.
- **Copy Special** – Copies data at the base level or higher level intersection across page slices. You can view data at an aggregate level while copying data at a dimensional level not currently displayed or while selecting data from the current slice while copying data from all slices. For more information, see Copy Special.
- **Paste Special** – Use to view data at an aggregate level while pasting it at the base level that is not displayed in the current slices. It provides a dialog where you can specify options for specialized paste functions. For more information, see Paste Special.

- **Copy to External** – Copies data in the Fusion Client to be pasted in external applications. This feature is useful when the browser's security restriction prevents the Fusion Client from copying to and pasting from the clipboard. For more information, see Copy to External.
- **Paste from External** – Pastes data into the Fusion Client from external applications. This feature is useful when the browser's security restriction prevents the Fusion Client from copying to and pasting from the clipboard. For more information, see Paste from External.
- **Fill** – Use to quickly populate many cells of a writable measure at a time.
- **Clear** – Use to quickly clear the contents of cells in a view and set them to their NA value. You can clear one or more cells, a dimension level, or an entire slice.
- **Lock** – Protects cells, measures, and positions from being edited. For more information, see Locking and Unlocking.
- **Unlock** – Use to remove the protection of cells, measures, and positions so that they can be edited. For more information, see Locking and Unlocking.
- **Unlock All** – Use to remove the protection from all cells, measures, or positions so that they can be edited. For more information, see Locking and Unlocking.
- **Insert Measures** – Use to add measures to an existing workbook that were not initially included in the configuration. A measure can be inserted to a single view and is available to all the windows for that view. For more information, see Insert Measures.
- **Position Maintenance** – Use to dynamically add, edit, or remove positions to a non-calendar position while working in a workbook. These user-defined or informal positions are updated in both the domain and workbook dimensions. For more information, see Dynamic Position Maintenance.
- **Find** – Use to search for phrases within the rows, column, and page axis of an active view. The search does not include the data within the view. For more information, see Find.
- **Tile Accessibility Mode** – Checking this option enables check boxes on every tile, which allows multi-selection of tiles by the users. Unchecking this option causes the check boxes to be removed.
- **Copy/Cut Tile** – This option can be invoked using the keyboard shortcut Ctrl+G. This copies (tile dragging functionality) the selected tiles (via check boxes) tiles in the model, with no user-facing messages. If no tiles have been selected and this option is selected, then a warning message will be displayed to the user.
- **Paste Tile** – This option can be invoked using the keyboard shortcut Ctrl+P. This places (tile dropping functionality) the previously copied tiles into the selected row. The user must navigate to the destination window and select the row using 'Select Row <row name>' beforehand. If no tiles have been selected and this option is selected, then a warning message will be displayed to the user.

View Menu Options

The View menu includes the following options:

- **Go To** submenu – In addition to the **Previous** and **Next** icons on the Quick Access toolbar, the Go To submenu enables you to navigate through the workflow or to a specific step.

- **Synchronize Page Edge** – Use to simultaneously scroll through the page edge of multiple views. It is useful when you want to compare multiple views containing the same page or slice dimension. For more information, see Synchronized Page Edge Scrolling.
- **Automatically Evaluate Position Queries** – Allows position queries to automatically reevaluate data after a calculate, refresh, or slice move. When enabled, the query is updated and the view refreshes with only the positions that meet the requirements of the position query. For more information, see Using Position Queries with Auto Evaluate.
- **Resort Positions on Pagination** – Reapplies the sort order when paging through positions along the page-axis. For more information, see Sorting Across Page Edge.
- **Manage Images** – Use to associate images with specific dimension positions. Most positions have images associated with them as part of the configuration process. You can use this feature for positions that for some reason may be missing an image. This feature is especially useful for the product and location dimensions. For instance, you can associate an item with a image of what it should look like displayed on the shelf. You can associate stores with images of the store front or interior. For more information, see Chapter 13, "Images".
- **Attributes** submenu – Use to create and manage attributes and level splits after you have edited user-defined attributes. The Update Attribute Values option recalculates all sort attributes and dimension splits displayed in the workbook since the attribute or dimension split was applied to the data. For more information, see Updating Attribute Values.
- **Manage Alerts** – Use to navigate to and address both batch and real time alerts. Both forms of alert are ways of identifying circumstances where data in a workbook or view infringes predetermined rules. For more information, see Overview of Alerts.

  In addition to the Manage Alerts option, a series of navigation controls are available:

  - **Find Next Alert** – Moves forward to the next alert of that type.
  - **Find Previous Alert** – Moves back to the previous alert of that type.
  - **Select Active Alert** – Both Batch and Real Time Alerts come in different sub-types. This option lets you focus on a specific sub-type.
  - **Allow Find Alerts to Cross Views** – If multiple views are open and this option is selected, you can use the Find Next Alert or Find Previous Alert to move to the next or previous view, as appropriate. If this option is not active, the Next and Previous options will be confined to the current view.
  - **Apply Filter by Alert** – Use to show only the rows, columns or pages with active alerts.
  - **Remove Filter By Alert** – Removes any filtering that confines the displayed information to rows, columns od pages containing active alerts.
- **Tile Vertically** – Arranges all non-minimized views from left to right as columns. This layout is useful for comparing two or more views side by side.
- **Tile Horizontally** – Arranges all non-minimized views from top to bottom as rows.
- **Tile** – Arranges all non-minimized views on multiple rows or columns as a grid.

Note that for all the tile options above, the views are arranged in order such that the last selected view is placed first. If multiple views are selected prior to the tile action, the views will be arranged in reverse order of selections, starting with last selected view first.

Format Menu Options

The Format menu includes the following options:

- **Measure Styles** – Opens the Format dialog box. In the Format dialog box, you can set and clear formats that apply to measures or dimensions. You can make changes to single or multiple measures and dimensions and apply those changes across one, many, or all views in the workbook. For more information, see Formatting.
- **Number** – Modifies the number formatting for measures. For more information, see Modifying Number Formatting.
- **Date/Time** – Configures the date and time display for measures. For more information, see Modifying Date/Time.
- **Exceptions** – Exception formatting is used for numeric measure types. Exception formatting defines the styles to be applied to a cell's value when it falls outside a defined range. For more information, see Modifying Exceptions.
- **Alert Styles** – Configures the appearance of alerts. For more information see Customizing Alert Appearance.
- **Dimension Styles** – Specifies header styles for dimensions. For more information, see Modifying Dimension Styles.
- **Save Format** – Saves the workbook format to be used in the future. Formats can be saved at one of the following levels: **For Just Me**, **For [My Group]**, or **For Everyone**. For more information, see Saving Formats.
- **Delete Format** – Deletes a workbook format. It can be deleted at one of the following levels: **For Just Me**, **For [My Group]**, or **For Everyone**. For more information, see Deleting Formats.

Contents Area

The contents area appears on the center of your screen and includes the views associated with each step within the business workflow. It provides spreadsheet-like views that display multidimensional data. Each view includes a set of measures relevant to the step that help you view, analyze information, and make decisions.

Figure 2–3 shows the various components in the contents area.

Figure 2–3 Content Area Components

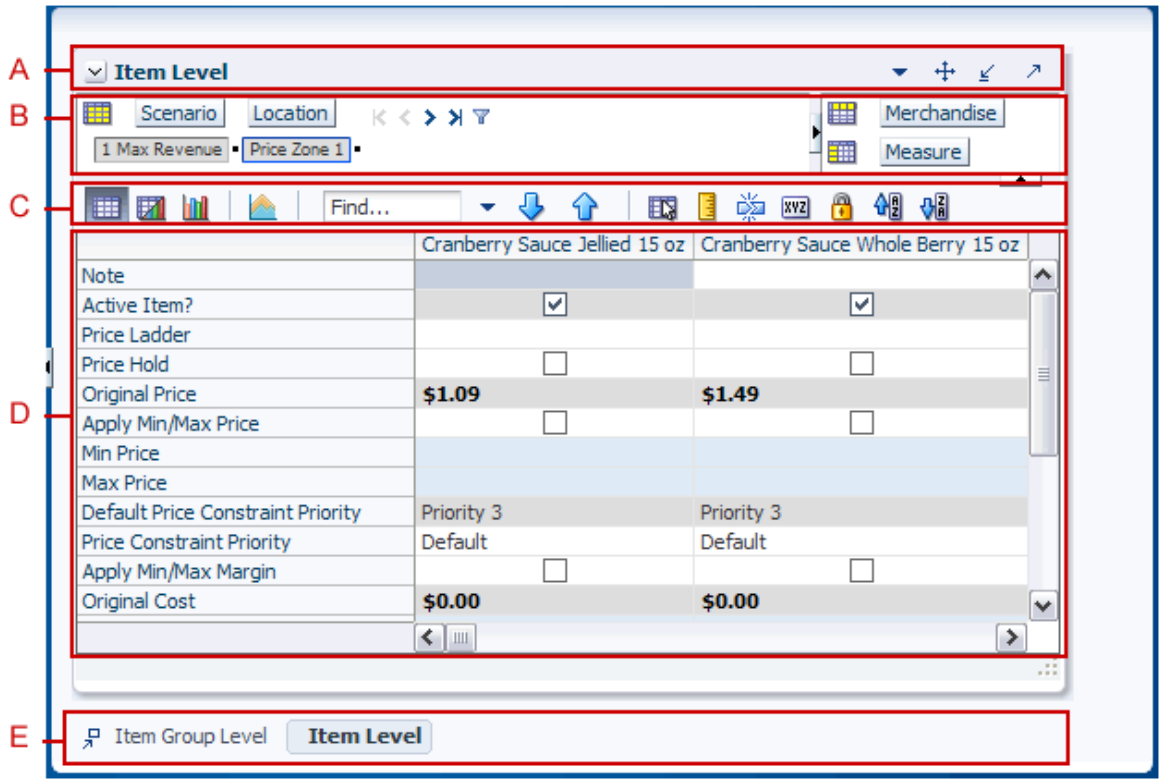


Table 2–3 describes the components highlighted in Figure 2–3.

Table 2–3 Components in the Contents Area

Legend	Area Name	Description
A	View Title Bar	Displays the name of the view and also includes view-level features such as Minimize, Maximize, Restore, and other View Options. See View Title Bar for more information.
B	Page Edge and Dimension Tiles Area	Enables you to move or swap individual dimensions to view the information in a more effective manner. See Page Edge and Dimension Tiles Area for more information.
C	View Toolbar	Provides quick access to view-level formatting, exporting, and charting options. See View Toolbar for more information.
D	View Area	Displays a Pivot Table/Grid with the multidimensional data organized based on the dimension position set up in the Page Edge and Dimension Tiles area. See View Area for more information.
E	Views Docking Area	Displays the views available in the current step and helps you manage any additional copies of the existing views that you may create. See Views Docking Area for more information.

View Title Bar

The View Title bar appears on the top of each view and displays the view name. It enables you to perform the following view-level actions:

- Maximizing or Restoring a View
- Minimizing a View

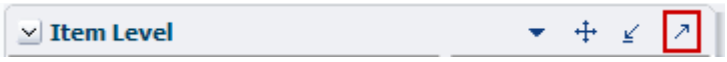
- Moving a View
- Renaming a View
- Making a Copy of a View
- Deleting a View

Maximizing or Restoring a View

To maximize a view:

- On the View Title bar, click the **Maximize** icon. This icon is the arrow that points towards the top-right. See Figure 2–4.

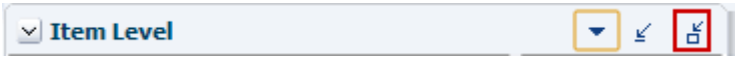
Figure 2–4 Maximize Icon on the View Title Bar



To restore a maximized view to its original size:

- On the View Title bar, click the **Restore** icon. This icon is the arrow with a box that points towards the bottom-left. See Figure 2–5.

Figure 2–5 Restore Icon on the View Title Bar

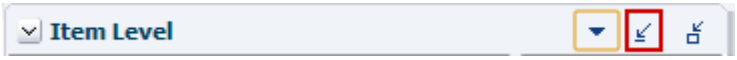


Minimizing a View

To minimize a view:

- On the View Title bar, click the **Minimize** icon. This icon is the arrow with an underline that point towards the bottom-left. See Figure 2–6.

Figure 2–6 Minimize Icon on the View Title Bar



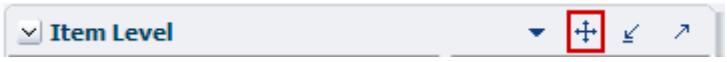
A minimized view is shown with a restore icon to the left of the view name. To restore the view, you must click the view in the Views Docking Area.

Moving a View

To move a view:

1. On the View Title bar, click the **Move** icon on the view you want to move. This icon is the cross hair that appears to the left of the Minimize icon. See Figure 2–7.

Figure 2–7 Move Icon on the View Title Bar



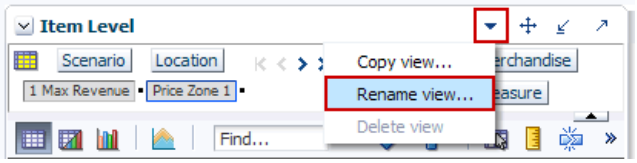
2. Drag and drop the view to the location you want. You can move this view only within the Contents area. When you try to move a view to a location out of the Contents area, the view auto fits to the nearest valid space.

Renaming a View

To rename a view:

1. On the View Title bar, click the **View Options** icon. The View Options menu appears.
2. In the View Options menu, click **Rename view**.

Figure 2–8 Rename View Option in the View Options Menu



A **Rename View** dialog box appears.

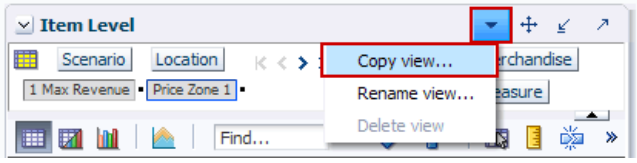
3. In the Rename View dialog box, enter the new view name and click **OK**.

Making a Copy of a View

To make a copy of a view:

1. On the View Title bar, click the **View Options** icon. The View Options menu appears.
2. In the View Options menu, click **Copy view**.

Figure 2–9 Copy View Option in the View Options Menu



A Copy View dialog box appears.

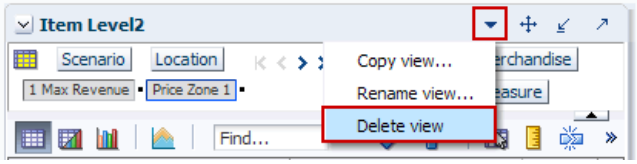
3. In the Copy View dialog box, enter or accept the new view name and click **OK**.

Deleting a View

To delete a view:

1. On the View Title bar, click the **View Options** icon. The View Option menu appears.
2. In the View Options menu, click **Delete view**.

Figure 2–10 Delete View Option in the View Options Menu



A warning message appears.

3. Review the warning message and click **Delete** to remove the view.

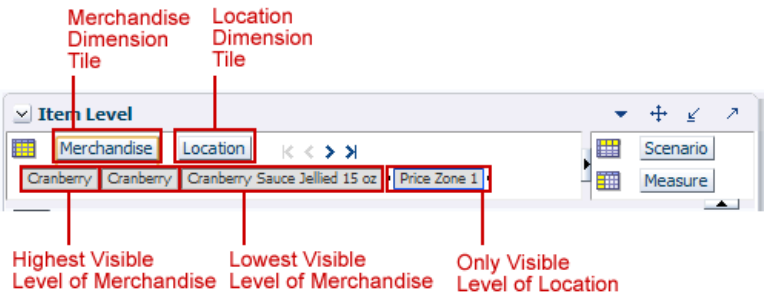
> **Note:** Deleting a view removes the view from the user interface permanently.

Page Edge and Dimension Tiles Area

The Page Edge area appears on top of the View area and displays the dimensions on the page edge axis according to its current position in the dimension. The Dimension Tiles area displays the dimensions as tiles that appear in the row and column axes.

On the Page Edge, the current position appears below the dimension name, horizontally with the highest visible level on the left and the lowest visible level on the right. You can mouse over the position to view the name of the level (displayed as a tool tip).

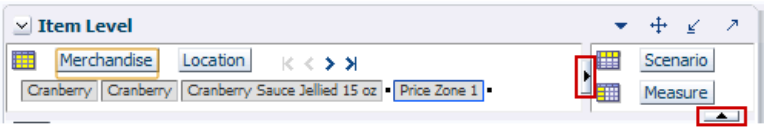
Figure 2–11 Page Edge Displaying the Current Position



When you open the workbook for the first time, the first position in each visible level is visible. In an existing workbook, the positions retain the last saved values.

You can collapse or restore the Page Edge and Dimension Tiles area to fit more view content. You can also drag these icons to resize this area. Figure 2–12 shows the Collapse Pane icon that you use to resize or collapse the Page Edge and Dimension Tiles area.

Figure 2–12 Collapse and Restore Icons in the Page Edge and Dimension Tiles Area

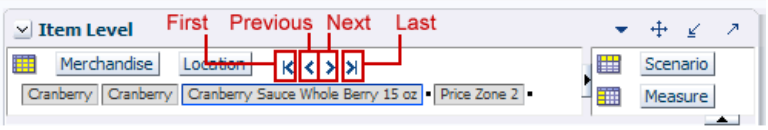


When a workbook is saved or a newly built workbook is formatted, the collapse/expand state of the dimension tile area is saved. This includes information for collapsing just the row and column as well as the entire dimension tile area. This information is saved on a view-by-view basis.

Understanding Paging/Position Navigation

On the Page Edge area, you can select any position displayed and page through or navigate to the positions using the navigation icons (**First**, **Previous**, **Next**, **Last**) available next to the dimension tiles. In the view, data relevant to each position is displayed when you navigate to a new position in a level.

Figure 2–13 Paging Navigation Icons



The **First** icon enables you to navigate to the first visible position within the level that is selected. When you are at the first position, the First and Previous icons are disabled and appear greyed out.

The **Last** icon enables you to navigate to the last visible position within the level that is selected. When you are at the last position, the Next and Last icons are disabled and appear greyed out.

The **Previous** and **Next** icons enable you to navigate to the previous and next position in the level that is selected. The position to which you navigate depends on the current position. When you navigate to a new position, all associated positions at the higher and lower visible levels of the same dimension are updated recursively.

Note: You can also pivot or rotate the dimensions between the Page Edge, Tiles, and View areas to rearrange the orientation. For more information, see Rotating or Pivoting Dimensions.

View Toolbar

The View Toolbar appears within the View area, above the grid. It displays several tools that you can use to manipulate the view.

Figure 2–14 View Toolbar

Table 2–4 describes the components highlighted in Figure 2–14.

Table 2–4 Components in the View Toolbar

Legend	Area Name	Description
A	**Switch to Pivot Table View** icon	When in the chart view, use this icon to switch to the pivot table view. For more information, see Viewing Charts.
B	**Switch to Split View** icon	Use to see the pivot table and chart in two vertical panels simultaneously in the same view. For more information, see Viewing Charts.
C	**Switch to Chart View** icon	When in the pivot table view, use this icon to switch to the chart view. For more information, see Viewing Charts.
D	**Select Chart Type** icon	Use to select which type of chart you want to view the data in. For more information, see Viewing Charts.
E	**Find** field, **Find Options**, **Previous** and **Next** Arrows	Use to search for words, partial words, or phrases within the rows, column, and page axis of an active view. The search does not include the data within the view. For more information, see Find Using the View Toolbar.

Table 2–4 (Cont.) Components in the View Toolbar

Legend	Area Name	Description
F	**Selection Options** icon	Use to select the data that is shown in the chart. You can choose **Select All** or any other option it presents. **Select All** finds the full extent of the pivot table edges (in slices) and sets a new selection range to encompass the entire pivot table. This action triggers a refresh of the pivot table.
G	**Measure Profile** icon	Use to select, save, or delete measure profiles. See Measure Profiles for more information.
H	**Level Splitting** icon	Use to group dimension data based on position characteristics defined by attribute values. For more information, see Level Splitting.
I	**Attributes** icon	Use to create dynamic attributes that describe a particular dimension and level, based on a measure's value at specified levels of other dimensions. For more information, see Dynamic Attributes.
J	**Lock** icon	Protects cells, measures, and positions from being edited. For more information, see Locking and Unlocking.
K	**Sort Ascending** and **Sort Descending** icons	Use to sort positions in a dimension based on the values of a measure's slice for that dimension. For more information, see Simple Sort.

View Area

The view area includes the multidimensional pivot table that displays information for the relevant task. Each task may include more than one view, and each view can appear in the contents area. The information in the view is organized based on the dimension positions set up at the Page Edge, row, and column axes.

The Fusion Client is designed to help you to work with the data within the view. You can manage the way the information is presented in a view. You can arrange and present the information in a layout you want by rotating or pivoting dimensions across the axes, changing the data roll ups, or showing or hiding measures. You can view the information at a low level of detail or aggregate to view the information at summary levels. You can also choose to present the information in many types of charts using the charting functionality.

Block View vs. Outline View

You can view the data within the view in one of two ways:

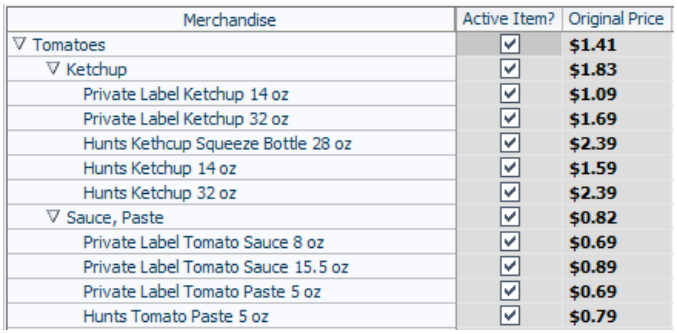
- Block View enables you to display the data one dimensional level at a time (with the lowest level expanded in the grid). Figure 2–15 illustrates the block view.

Figure 2–15 Illustration of the Block View

			Active Item?	Original Price
▽ Tomatoes	▽ Ketchup	Private Label Ketchup 14 oz	☑	$1.09
		Private Label Ketchup 32 oz	☑	$1.69
		Hunts Kethcup Squeeze Bottle 28 oz	☑	$2.39
		Hunts Ketchup 14 oz	☑	$1.59
		Hunts Ketchup 32 oz	☑	$2.39
	▽ Sauce, Paste	Private Label Tomato Sauce 8 oz	☑	$0.69
		Private Label Tomato Sauce 15.5 oz	☑	$0.89
		Private Label Tomato Paste 5 oz	☑	$0.69
		Hunts Tomato Paste 5 oz	☑	$0.79

- Use the Outline View to view the data at multiple dimensional levels at the same time, so that you do not need to collapse lower-level dimensions in order to see aggregate totals for higher levels. Figure 2–16 illustrates the outline view.

Figure 2–16 Illustration of the Outline View



Merchandise	Active Item?	Original Price
▽ Tomatoes	☑	$1.41
▽ Ketchup	☑	$1.83
Private Label Ketchup 14 oz	☑	$1.09
Private Label Ketchup 32 oz	☑	$1.69
Hunts Kethcup Squeeze Bottle 28 oz	☑	$2.39
Hunts Ketchup 14 oz	☑	$1.59
Hunts Ketchup 32 oz	☑	$2.39
▽ Sauce, Paste	☑	$0.82
Private Label Tomato Sauce 8 oz	☑	$0.69
Private Label Tomato Sauce 15.5 oz	☑	$0.89
Private Label Tomato Paste 5 oz	☑	$0.69
Hunts Tomato Paste 5 oz	☑	$0.79

To switch between the outline and block views, right click the header of the axis whose view you want to change and select the relevant view option.

Images

If image-enabled attributes or measures have been configured via Config Tools, you can see the images displayed in the UI. See Chapter 13 for more information about images in the UI. Images may be displayed as follows:

- Pivot table header. A thumbnail image as an attribute value is displayed for a specific position in a pivot table. The label can be displayed in addition to the image or instead of the image. You can hover over the image to see the label details. See Chapter 11 for details about showing and hiding attributes.
- Pivot table cells. A thumbnail image is displayed as a pivot table cell for measure cell values. The cell display rules apply to the displayed images. These cells cannot be edited.

In addition, additional images, displayed in a larger size, can be viewed via a detail pop-up that has been configured to display a series of images and associated information. See Chapter 14 for a description of this functionality.

Rotating or Pivoting Dimensions

In the View area, you can rotate or pivot the dimensions across the axes to display data in different orientations. In the Fusion Client, you can pivot the dimensions (in both outline and block views) between the view, tiles, and page edge in the two ways:

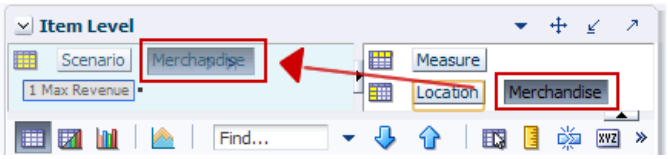
- Pivot Move – Moves a dimensional layer to another position on an axis.
- Pivot Swap – Swaps a dimension with another dimension on the axis.

> **Note:** When a dimension is swapped or moved to the page edge for the first time, the first position within the dimension is displayed in the page edge and the data for that position is shown in the view. When a dimension that has already been on the page edge during the current session is returned to the page edge, the position that was last displayed in the page edge during previous time is shown.

To perform a pivot move in the page edge:

1. In the page edge, click and hold the dimension tile you want to move.
2. Drag the tile next to the area you want and release the mouse.

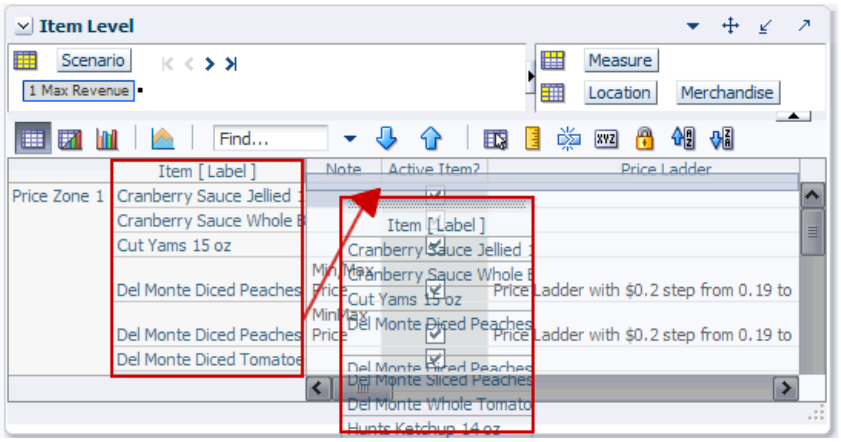
Figure 2–17 Pivot Move in the Page Edge



To perform a pivot move in the pivot table:

1. From the row or column edge, click and hold the dimension you want to move.
2. Drag the dimension to the location you want and release the mouse.

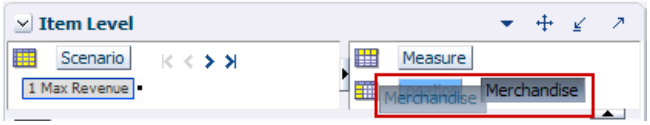
Figure 2–18 Pivot Move in the Pivot Table



To perform a pivot swap in the page edge:

1. In the page edge, click and hold the dimension tile you want to move.
2. Drag the dimension tile over the one you want to swap it with. Release the mouse.

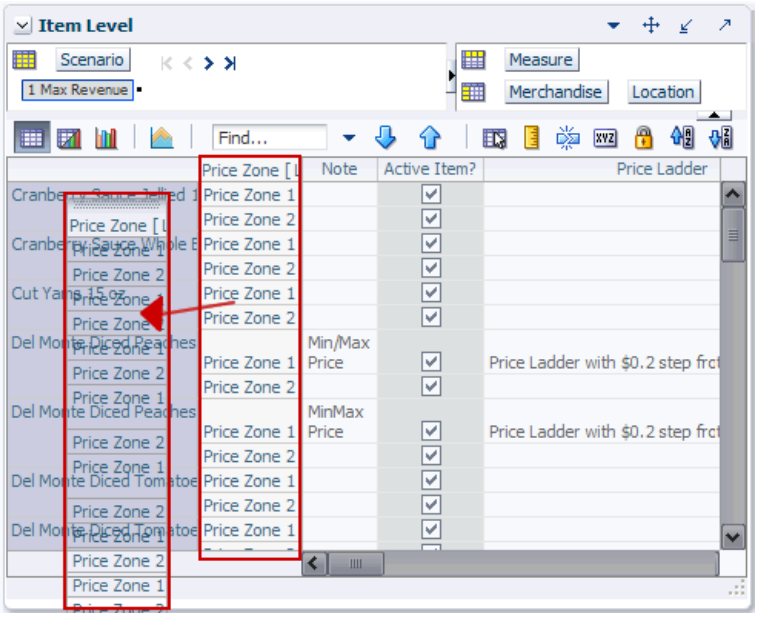
Figure 2–19 Pivot Swap in the Page Edge



To perform a pivot swap in the pivot table:

1. From the row or column edge, click and hold down the dimension you want to swap.
2. Drag the dimension over the other dimension and release the mouse.

Figure 2–20 Example of a Pivot Swap Action



Note: You can also perform similar actions to switch dimensions between the Views, Page Edge, and Dimension Tiles areas.

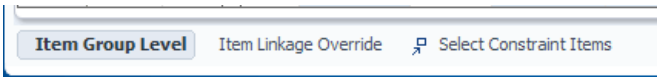
Views Docking Area

The Views Docking Area displays all the views configured within the tab. It enables you to easily navigate to a view that is not currently visible. When a view is behind other views, you can click the specific view name in the Views Docking Area to bring that view back to the front.

When you minimize a view, the view is minimized to the Views Docking Area. A minimized view can be displayed using the Restore icon to the left of the view name. To restore a minimized view, you must click the view in the Views Docking Area.

The following figure shows a Views Docking Area of a tab with three views:

Figure 2–21 Example of a Views Docking Area with Three Views



In Figure 2–21, the Item Group Level is the current view that is visible. It is the active view that is highlighted in light blue in the Views Docking Area. The Item Linkage Override view is hidden behind Item Group Level. The Select Constraint Items view is minimized and has a **Restore** icon next to its name in the Views Docking Area.

Resizing Pivot Table Row and Column

You can resize column width and row height along an axis to fit the data into the pivot table:

- Resizing Single Row and Column
- Resizing Multiple Rows and Columns

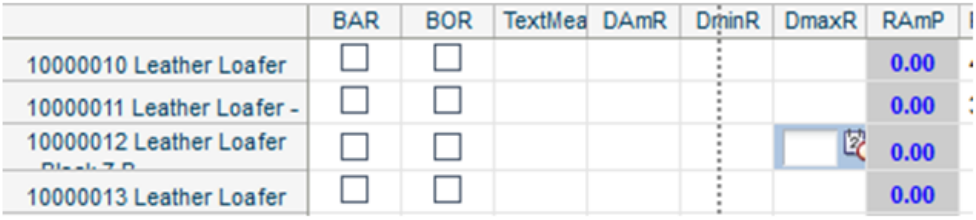
Note that when images are displayed, they will be scaled down proportionally if they are too large for the available space, but will not be scaled up if they are too small.

Note: When using zoom in the Google Chrome browser on scrollable components such as Pivot Table, the user must refresh the page to avoid alignment issues.

Resizing Single Row and Column

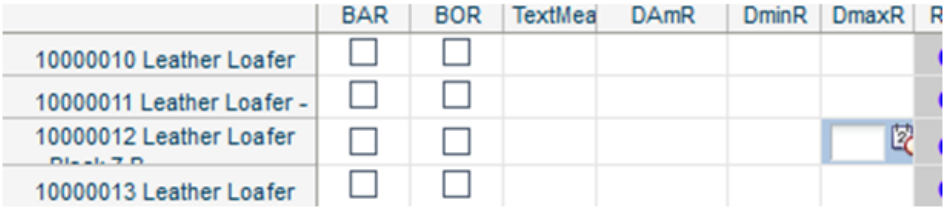
You can select a single column and adjust the width. In Figure 2–22, the width of the DAmR column is adjusted by dragging it to right.

Figure 2–22 Resize the Width of a Single Column



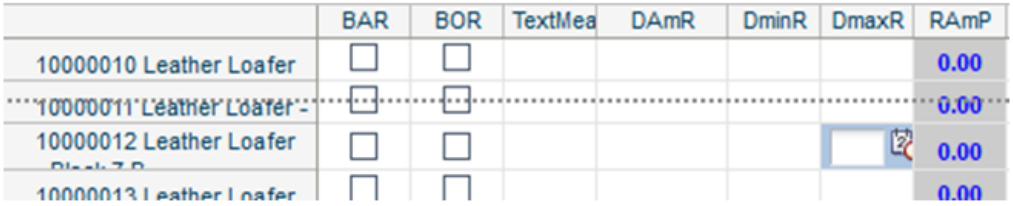
The width of the DAmR column is increased, as shown in Figure 2–23.

Figure 2–23 Width Increased for a Single Column



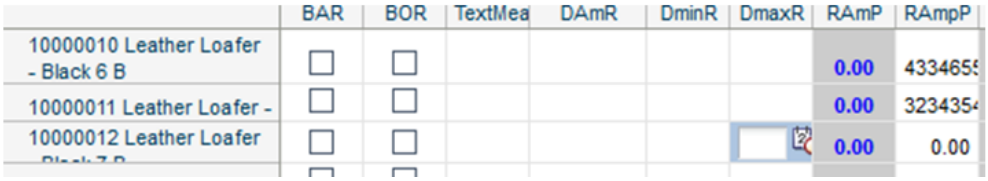
You can select a single row and adjust the height. In Figure 2–24, the height of the 10000010 Leather Loafer row is adjusted by pulling it down.

Figure 2–24 Resize the Height of a Single Row



The height of the 10000010 Leather Loafer row is increased, as shown in Figure 2–25.

Figure 2–25 Height Increased for a Single Row



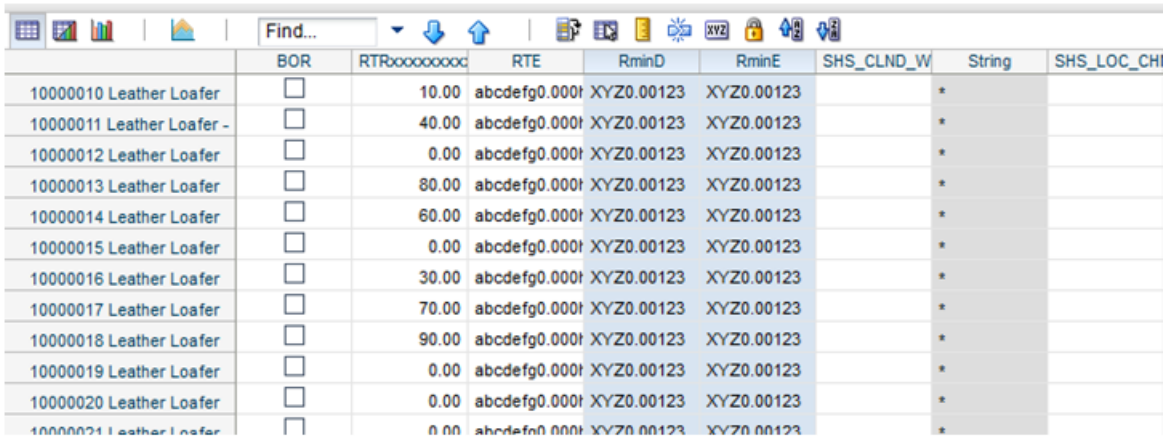
The row height and column width changes are persisted by saving the workbook. These changes can also be saved as formatting settings. For more information, see "Saving Formats" in Chapter 5.

Note: If there are no members on the X or Y axis, the row height or column width adjustments are not persisted.

Resizing Multiple Rows and Columns

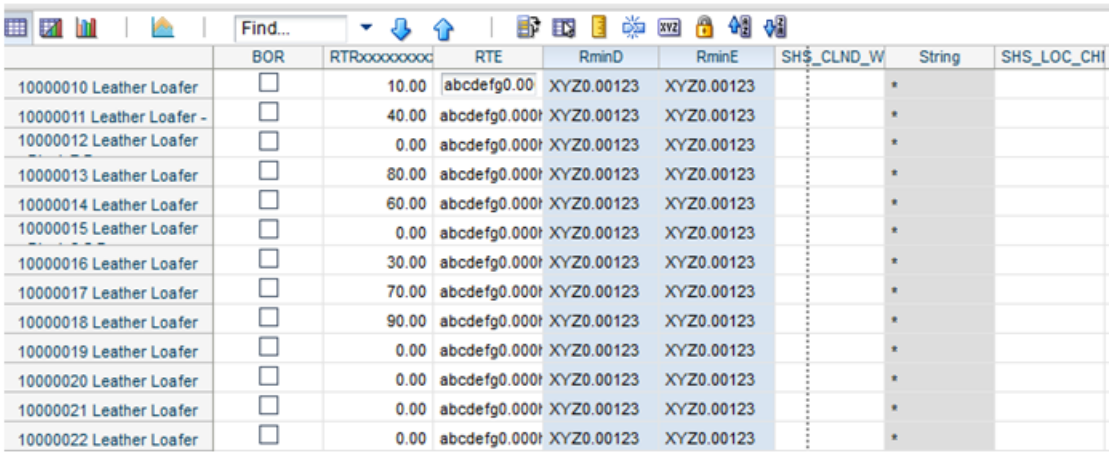
You can select multiple columns and adjust the width. The columns can be contiguous or non-contiguous. In Figure 2–26, the RminD and RminE columns are selected.

Figure 2–26 Select Multiple Columns



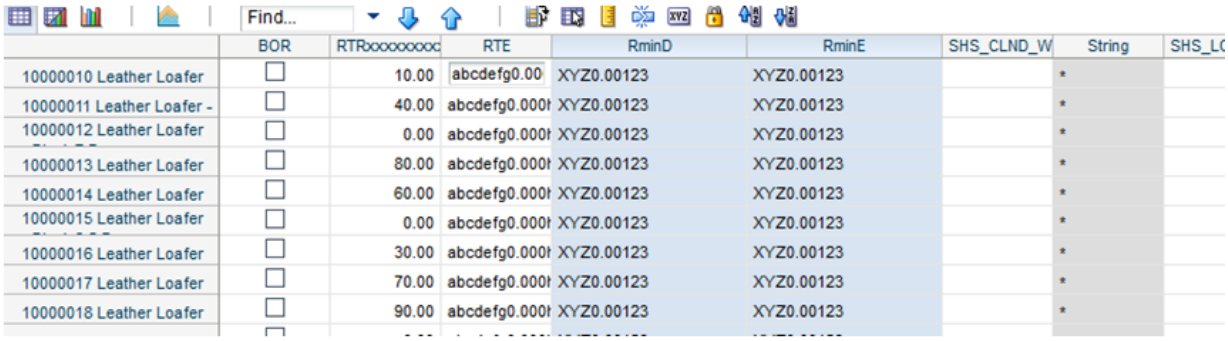
In Figure 2–27, the widths of the RminD and RminE columns are adjusted by dragging one of the columns to the right. In this figure, the RminE column is dragged to the right to adjust the width of both columns.

Figure 2–27 Resize the Width of Multiple Columns



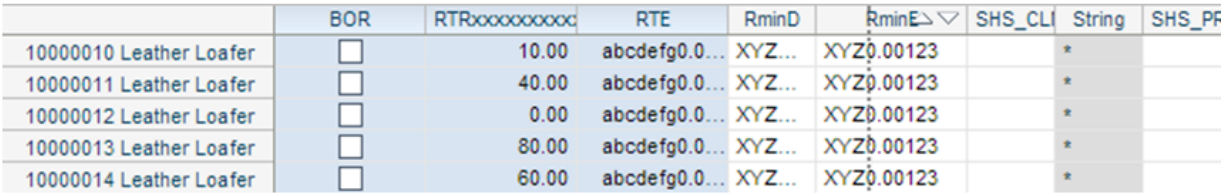
The widths of the selected columns are increased, as shown in Figure 2–28.

Figure 2–28 Width Increased for Multiple Columns



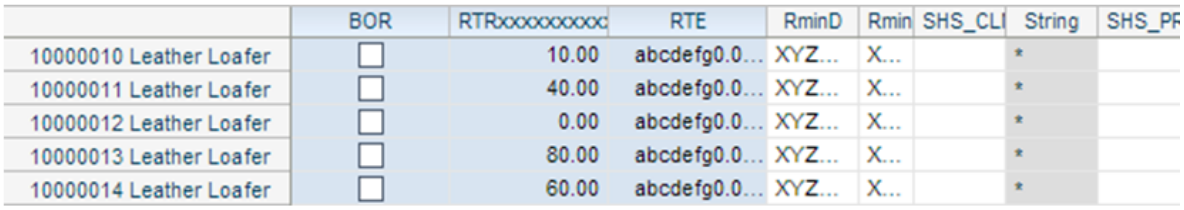
If you change the width for a single column that is not part of the selection, the behavior is same as a single column width change. In Figure 2–29, the RminE column, which is not part of the selection, is dragged to the left.

Figure 2–29 Resize the Width of a Single Column with Multiple Columns Selected



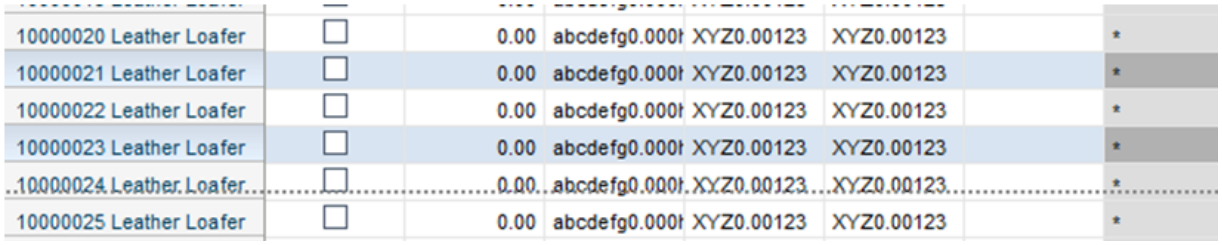
Only the RminE column is adjusted, as shown in Figure 2–30.

Figure 2–30 Width Decreased for a Single Column with Multiple Columns Selected



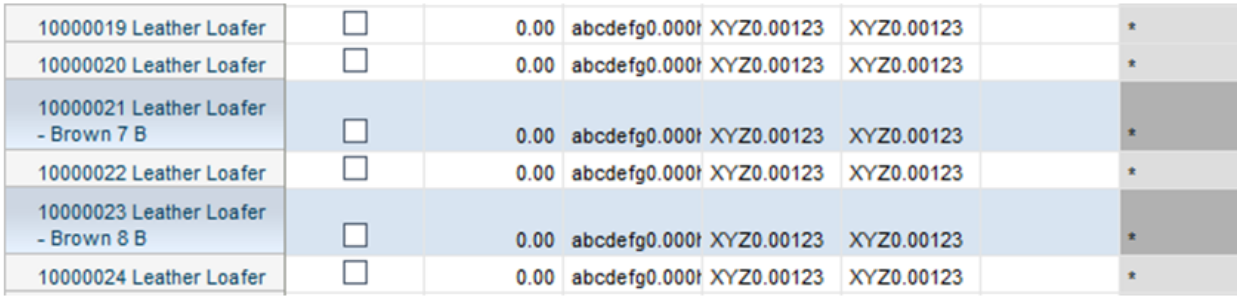
Similarly, you can change the row height for multiple rows. The rows can be contiguous or non-contiguous. In Figure 2–31, the 10000021 Leather Loafer and 10000023 Leather Loafer rows with the same heights are selected. The 10000023 Leather Loafer row is pulled down to adjust the row height.

Figure 2–31 Resize the Height of Multiple Rows



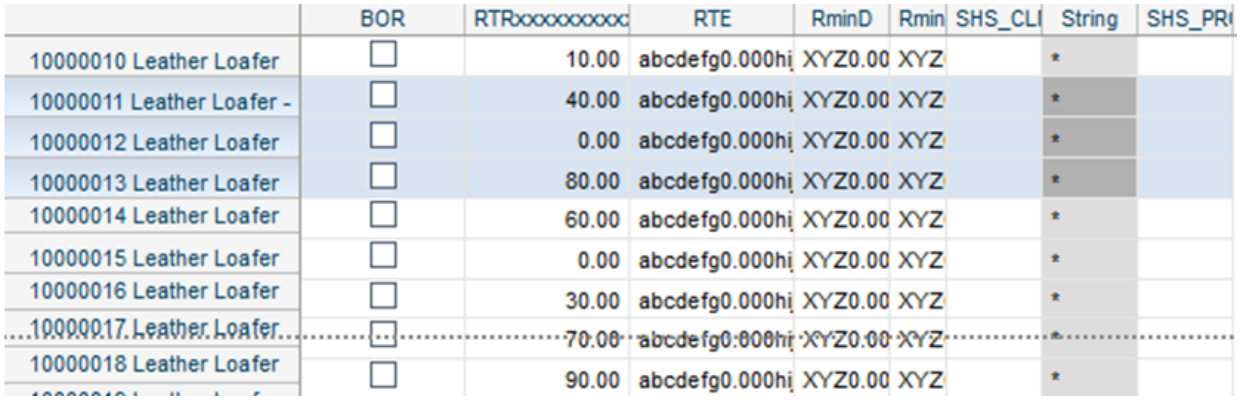
The new height is applied to both the selected rows, as shown in Figure 2–32.

Figure 2–32 Height Increased for Multiple Rows



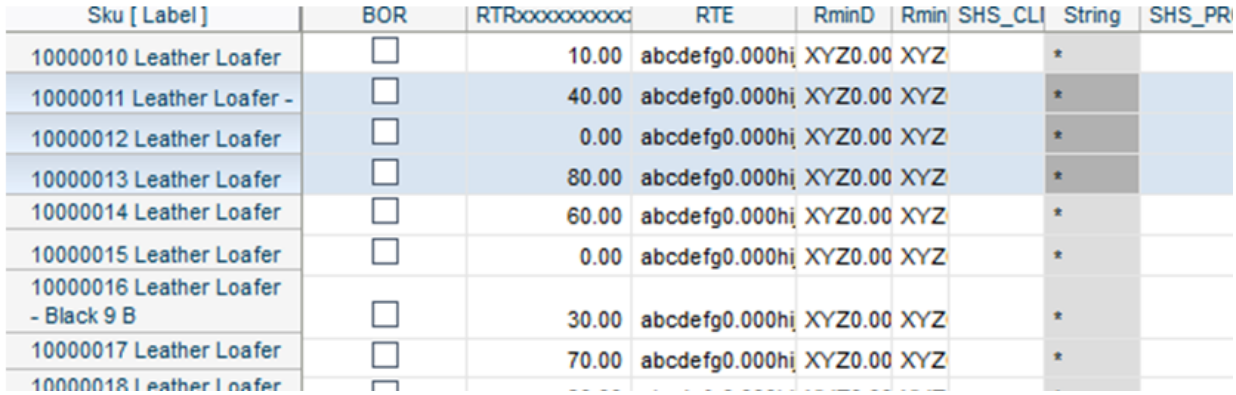
If you change the height for a single row that is not part of the selection, the behavior is the same as a single row height change. In Figure 2–33, multiple rows 10000011 Leather Loafer, 10000012 Leather Loafer, and 10000013 Leather Loafer are selected. The 10000016 Leather Loafer row, which is not part of the selection, is pulled down to adjust the row height.

Figure 2–33 Resize the Height of a Single Row with Multiple Rows Selected



Only the 10000016 Leather Loafer row is adjusted, as shown in Figure 2–34.

Figure 2–34 Height Increased for a Single Row with Multiple Rows Selected



The row height and column width changes are persisted by saving the workbook. These changes can also be saved as formatting settings. For more information, see "Saving Formats" in Chapter 5.

Note: If there are no members on the X or Y axis, the row height or column width adjustments are not persisted.

Pivot Swap and Move Using the Keyboard

For accessibility compliance, an alternative way to pivot the dimensions is to use the context menu available for every dimension tile on the edges of a pivot table. The context menu consists of menu options to either move or swap the dimension tiles along the edges and can be launched using corresponding browser's right-click shortcuts.

Menu Options Available for Pivot Swap

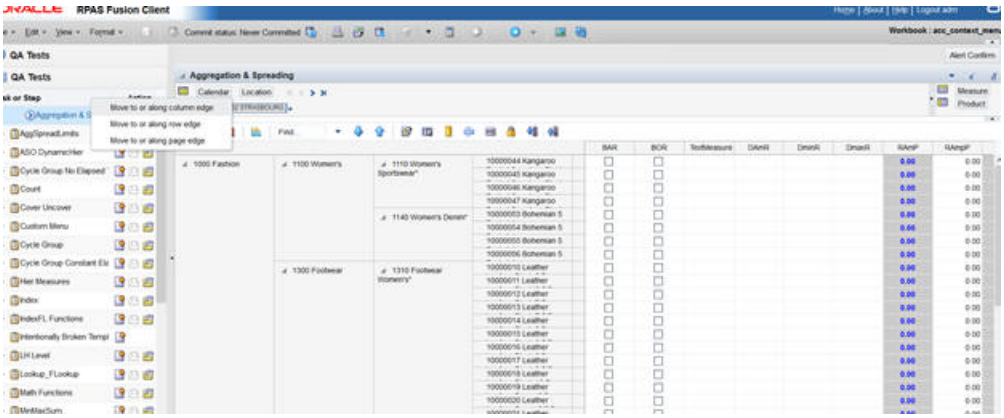
The dimension tile to be moved acts as the source of edge and layer data to be sent to the server to initiate the move. Which menu options are visible in the context menu depend on the edge of the targeted dimension tile.

The available sub-menus are:

- Move to or along column edge - This option is used to move the dimension tile to the column edge. If the selected dimension tile is already on the column edge and is the last one among the layers on that edge, this option will not show in the context menu. If the selected dimension tile is already on the column edge but is not the last one or on page edge or row edge, this option will be visible and selecting it will move the tile to the last index of the column edge.
- Move to or along row edge - This option is used to move the dimension tile to the row edge. If the selected dimension tile is already on the row edge and is the last one among the layers on that edge, this option will not show in the context menu. If the selected dimension tile is already on the row edge but is not the last one or on page edge or column edge, this option will be visible and selecting it will move the tile to the last index of the row edge.
- Move to or along page edge - This option is used to move the dimension tile to the page edge. If the selected dimension tile is already on the page edge and is the last one among the layers on that edge, this option will not show in the context menu. If the selected dimension tile is already on the page edge but is not the last one or on column edge or row edge, this option will be visible and selecting it will move the tile to the last index of the page edge.

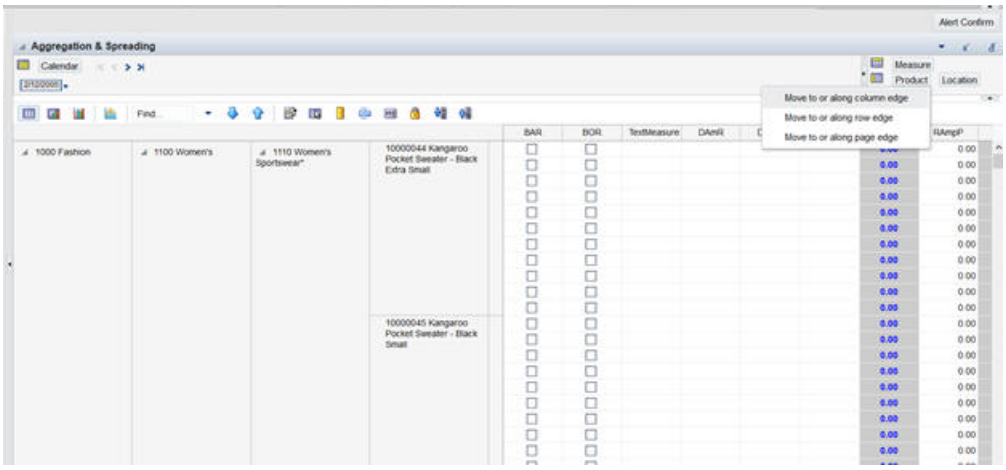
The list of all options available in the context menu for a dimension tile (Calendar) on page edge is shown in Figure 2–35.

Figure 2–35 Context Menu Options - Calendar



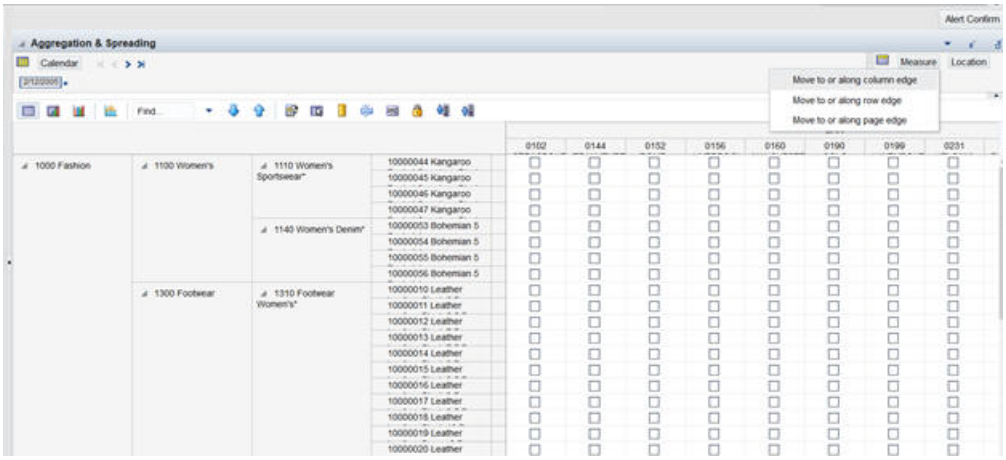
The list of all options available in the context menu for a dimension tile (Product) on row edge is shown in Figure 2–36.

Figure 2–36 Context Menu Options - Product



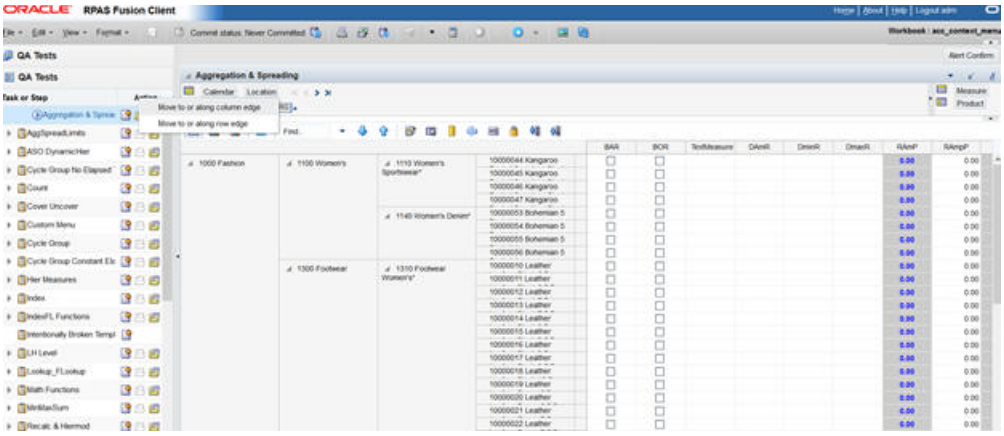
The list of all options available in the context menu for a dimension tile (Measure) on column edge is shown in Figure 2–37.

Figure 2–37 Context Menu Options - Measure



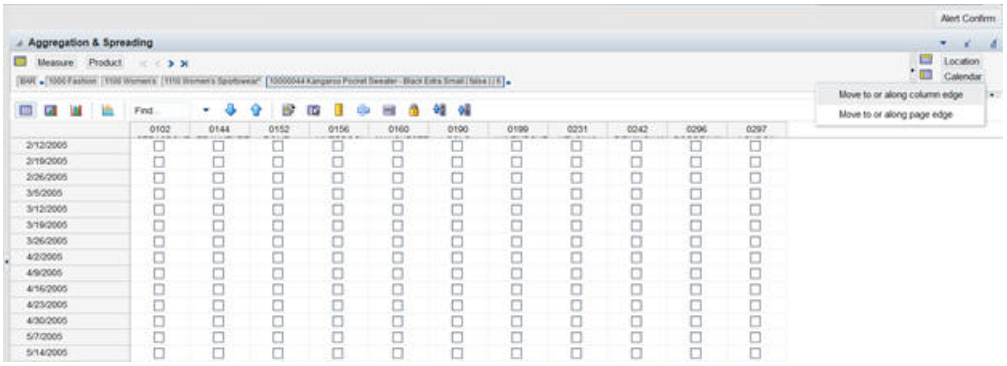
The list of options available in the context menu when the source dimension tile is the last one in that layer is shown in Figure 2–38. The Location dimension tile is the last one in page edge, so the Move to or along page edge option is not available.

Figure 2–38 Context Menu Options - Page Edge Option Not Available



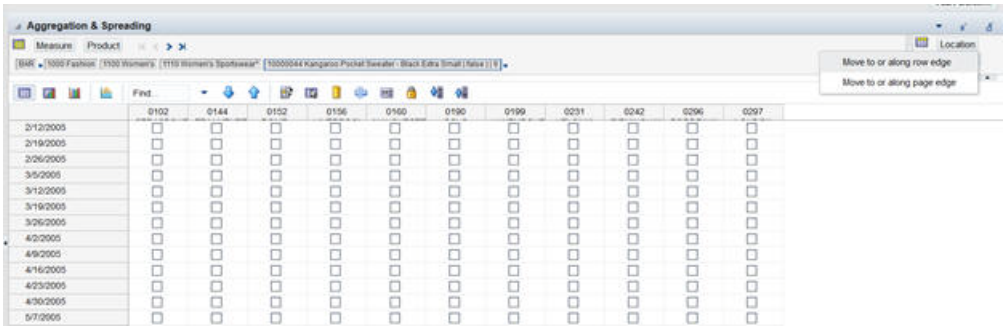
The list of options available in the context menu when the source dimension tile is the last one in that layer is shown in Figure 2–39. The Calendar dimension tile is the last one in row edge, so Move to or along row edge option is not available.

Figure 2–39 Context Menu Options - Row Edge Option Not Available



The list of options available in the context menu when the source dimension tile is the last one in that layer is shown in Figure 2–40. The Location dimension tile is the last one in column edge, so Move to or along column edge option is not available.

Figure 2–40 Context Menu Options - Column Edge Option Not Available



3

Workbooks

When you use an RPAS solution, you interact with the solution through a personal data repository called a workbook. A workbook contains the subset of the data (and metadata) from the domain, and its scope is constrained by the access rights available to a user. Workbooks are stored on the RPAS server and can be built using an online wizard process or via an automatic batch process.

This chapter describes the various tasks you can perform with the data in the workbooks. It includes the following sections:

- Saving Workbooks
- Renaming Workbooks
- Calculating Workbooks
- Refreshing Workbooks
- Committing Workbooks
- Synchronized Page Edge Scrolling

Loading Data to Workbooks

When a workbook is opened, the pivot table loads with a block of data from the server. If, during workbook use, you scroll to a cell outside the limits of that block of data, a new block of data is loaded from the server. The size of the block of data loaded is controlled by settings in the rpasConfigure.properties file. (This file is only accessible to users with permissions to configure settings governing operation of the application). See the *RPAS Administration Guide for the Fusion Client* for more information.

The size of the block of data loaded affects the performance of the application.

- If a large block of data is loaded, the workbook is slower to open but once loaded, you can scroll further before reaching cells where another block of data needs to be loaded.
- If a smaller block of data is loaded, the workbook will open more quickly, but you will not be able to scroll as far before another block of data needs to be loaded.

This affects the performance of the RPAS solutions. The optimum settings depends on the amount of data that you need to access when completing workbook tasks. These settings can vary from retailer to retailer and should be discussed when the application is being configured. This will ensure the best day-to-day experience.

Saving Workbooks

On the workbook screen, you can edit the cells in the pivot table, change the layout of views, and so on. The **Save** and **Save As** options enable you to save such workbook changes.

The **Save** option is available in the File menu and also as an icon on the toolbar. The **Save As** option is available only in the File menu.

Each time you save the workbook, the workbook is first automatically calculated before the changes are saved. If the calculate or save operation fails, an error message appears.

To save a workbook:

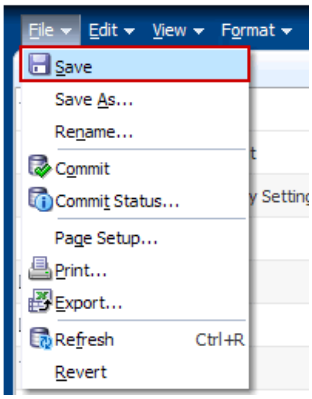
- After you complete the changes you want, click the **Save** icon on the toolbar.

Figure 3–1 Save Icon on the Toolbar

or

- From the File menu, click **Save**.

Figure 3–2 Save Option in the File Menu



Permissible File Names

When saving a workbook (or saving a copy using the **Save As** command), there are restrictions on the length of the file name and the characters that can be used.

- The file name can be a maximum of 32 characters.
- The filename can contain the following standard characters:
  - a - z
  - A - Z
  - 0 - 9
- The filename can contain the following special characters:
  - .
  - |

- _
- -
- /
- $
- &
- spaces

Any file name not meeting these conditions results in an error message.

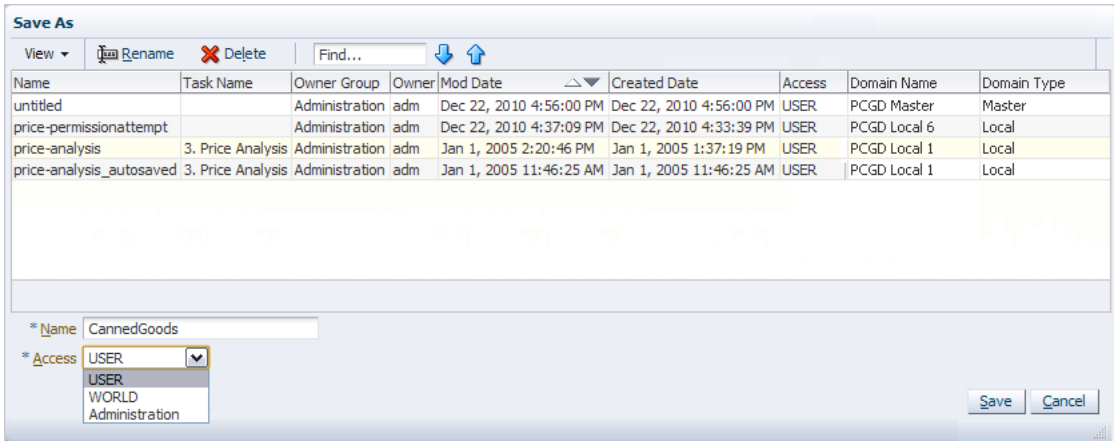
Save As Option

The File menu also includes a **Save As** option that enables you to save a copy of the workbook. It also enables you to set the access privileges for the workbook.

To save a copy of the workbook:

1. With the workbook open, click **Save As** in the File menu. The **Save As** dialog box appears.

Figure 3–3 Save As Dialog Box



2. In the **Save As** dialog box, enter appropriate details in the following fields:
   - **Name** – The name of the workbook.
   - **Access** – The access privilege to be set for the workbook. Select one of the following options:
     - **User**: This is the default option. Select this option if this workbook should only be accessible to you.
     - **[Group Name]**: Select a group if you want to allow access to all users in that group who have access to this workbook template.

       These other users may have to use View/All or View/Other Domain to see the workbooks that they do not own and that may be in a domain the users do not normally work in.
     - **World**: Select this option if you want to allow access to all the users who use the application who have access to this workbook template.
3. Click **Save**.

By default, the Name and Access fields retain the values set for the workbook that were saved previously. You can also select a different workbook from the list and then update it to make it a unique name.

Auto-Save

The RPAS Fusion Client has an Auto-Save workbook feature that saves a copy of an open workbook automatically. Auto-saved workbooks contain all the changes up to the last Calculate and Custom menu actions.

> **Note:** Cell edits that have not been calculated and formatting changes made in the previous session are not saved in the auto-saved workbooks.

The auto-save workbook feature enables you to quickly resume your work in case one of the following events occur:

- The web browser window is closed before you log out from the RPAS Fusion Client.
- The web browser window stops responding and closes abruptly.
- The network is disconnected or the web server stops responding.

When one of these events occurs, an auto-save takes place and a copy of the existing workbook is made. This copy has the same name of the workbook with _autosaved appended.

After one of these events occurs, you should first notify your administrator. After the issue is fixed and the servers are restored, you can open a new web browser window, log onto your domain again, and start using the auto-saved workbook or your last saved revision of the workbook.

> **Note:** If your implementation uses a clustered configuration and the web server stops responding, you will be redirected to the RPAS Fusion Client login page on another managed server that acts as a fail-over server. You can then log onto your domain and resume work using the auto-saved workbook.

Renaming Workbooks

When you have a workbook open, you can rename it at any time without affecting the data within the workbook or the other workbook information, such as the created date, modified date, formatting information, and so on.

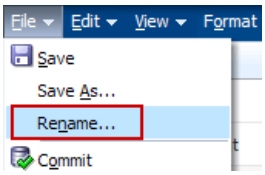
Note the following about renaming workbooks:

- You can only rename workbooks to which you have write access.
- Workbook names can be no longer than 32 characters.
- Workbook names cannot contain double or single quotation marks.
- Workbooks cannot be named “Untitled.” This name is reserved.

To rename a workbook, complete the following steps:

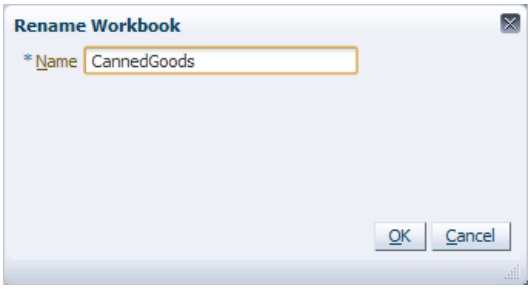
1. With the workbook open that you want to rename, select **Rename** in the File menu.

Figure 3–4 Rename Option in the File Menu



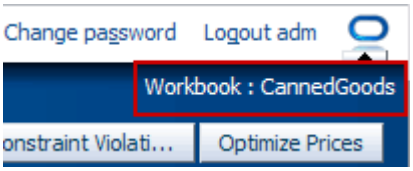
2. The Rename Workbook dialog box appears. Enter the new name and click **OK**.

Figure 3–5 Rename Workbook Dialog Box



3. The workbook refreshes and the new name appears in the top right corner.

Figure 3–6 Renamed Workbook



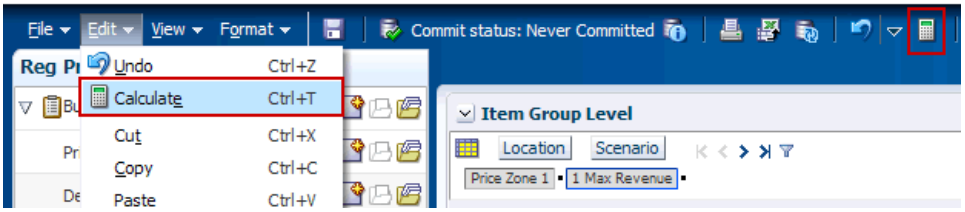
You can also rename a workbook from the Open Workbook window or the Save As window. For more information about this option, see Renaming a Workbook.

Calculating Workbooks

When you edit any cell value within a view, you must calculate the workbook to review the cells that are updated based on your action. The **Calculate** icon on the Quick Access toolbar and the **Calculate** option in the Edit menu enable you to calculate the workbook after you edit any cell value in a workbook.

The Calculate option may also affect the number of Real Time Alerts and their appearance. For example, some real time alerts may completely clear. Other real time alerts (where there are multiple alerts for a cell) may have one or more alerts cleared, leaving a different alert visible.

Figure 3–7 Calculate Option on the Quick Access Toolbar and Edit Menu



When you calculate a workbook, the updated cell value is sent to the server and the associated cells are recalculated based on the calculation rules already configured.

The formatting for edited cells are removed.

> **Note:** The **Calculate** option is disabled on the Quick Access toolbar and Edit menu when there are no changes in the workbook.

To calculate a workbook:

1. In the workbook, edit the cells you want. You can edit the unprotected cells only. There are some protected measures that you may not be able to edit. When you edit a cell, the formatting on the edited cell is removed.

   Alternately, because of protection processing, some cells are protected while you are editing other cells.

2. Click the **Calculate** icon on the Quick Access toolbar.

   or

   In the Edit menu, click **Calculate**.

> **Note:** You can also calculate the workbook using the keyboard shortcut **Ctrl + T**.

All associated cells are calculated and the updated workbook appears. As a result of the calculate operation, protected cells may become unprotected if they were protected as a result of a previous cell edit.

Refreshing Workbooks

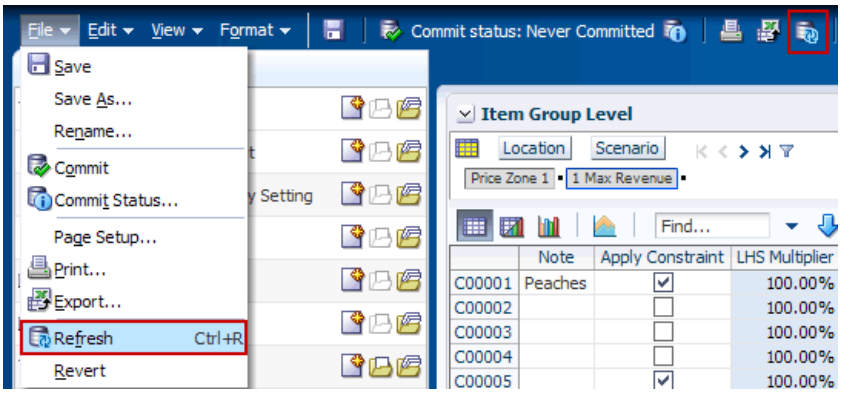
When you are working with a workbook, you can update it with the data that is currently stored in the domain. In this way, you can work with the most current data without having to rebuild the workbook. However, configured refresh rule expressions control which measures are updated during the refresh. See the *Oracle Retail Predictive Application Server Configuration Tools User Guide* for more information on setting up refresh rules.

Workbooks can be configured to have a single refresh rule group or multiple refresh rule groups.

> **Note:** If a refresh rule group does not exist for a workbook, the Refresh option is disabled.

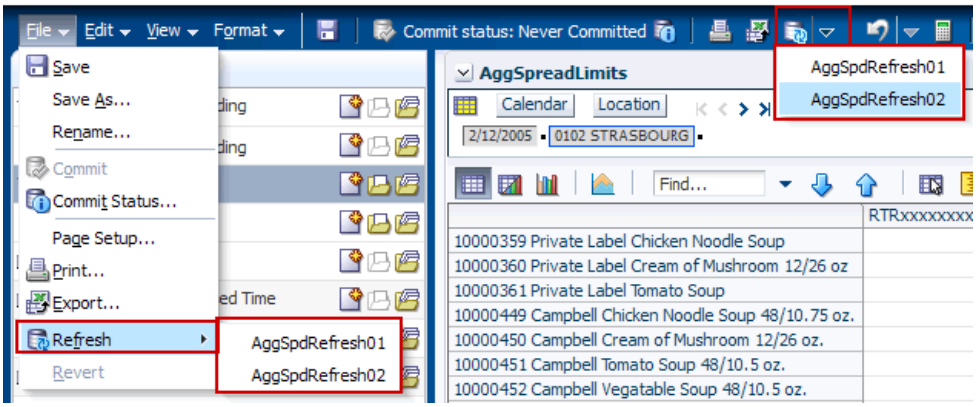
- **Single refresh rule group** – These contain refresh rules in a single rule group. This means that only one rule group is assigned as a refresh rule group in the configuration of the workbook.

Figure 3–8 Single Refresh



- **Multiple refresh rule groups** – Multiple refresh rule groups are set up and assigned to a workbook. When there are multiple refresh rule groups, the refresh options in the Edit menu and in the toolbar have a down arrow that shows a list of available refresh rule groups. You can choose the specific group to refresh the data in the workbook. Only one rule group can be selected or applied at a time.

Figure 3–9 Multiple Refresh



The refresh rule groups available for use in the Fusion Client are set up in the RPAS Configuration Tools. To learn how to create these rule groups, see the *Oracle Retail Predictive Application Server Configuration Tools User Guide*.

When the refresh option is used, the following occurs:

- When the refresh option is invoked, the Fusion Client runs the calculation before running the refresh operation.
- The uncommitted data is lost for measures that are refreshed or calculated as a result of the refresh. If the measure is not affected by the refresh process, then the uncommitted data is not affected.
- If a locked cell has updated data in the domain, the value in the cell changes to the domain value.
- In general, all locks are ignored and the data is updated with new values from the domain.
- It is possible that elapsed time is updated as part of the refresh. When you refresh, the elapsed setting can be updated; therefore, data for certain periods may become read-only.

Committing Workbooks

When you perform a save operation, the changes are saved to the workbook. Unless these changes are committed to the master domain, the updated information may be lost if the workbook is deleted or corrupted. You can use the Commit option to merge the changes you performed in the workbook to the master domain.

When you use the Commit option, it starts Commit ASAP. If the domain daemon goes down before all the commit operations in the queue have been completed, you must run auto-commit to complete these. It is a good practice to keep the auto-commit job because if a problem occurs, the auto-commit job can push the commits through. For more information on Commit ASAP, see *Oracle Retail Predictive Application Server Administration Guide for the Fusion Client*.

You can find the Commit option in the File menu and also as an icon on the toolbar. A Commit Status option is also available next to the Commit option. Use this to review the status of the commit requests.

To commit a workbook:

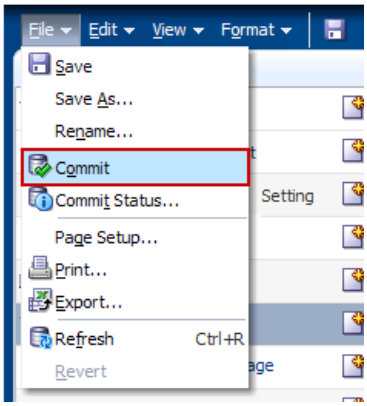
- After you make the changes you want, click the **Commit** icon on the toolbar.

Figure 3–10 Commit Icon on the Toolbar

or

- From the **File** menu, click **Commit**.

Figure 3–11 Commit Option in the File Menu



When you commit a workbook, a copy of the workbook is added to the commit queue and the commit status changes to *Pending*. This status is updated at a set time interval (which is configurable and defaults to 30 seconds) until the status changes to *Committed*. When the system resources are available, the changes are committed to the master domain. You can continue working on the workbook while the commit operation is in progress. If any changes made subsequent to the last commit operation need to be committed to the domain, then another commit operation is required.

Note: The Commit operation is similar to the Commit ASAP option in the RPAS Classic Client.

The following Commit statuses are available:

- Committed – Indicates that the changes have been committed successfully and no additional changes have been made.
- Modified – Indicates that the changes have been made (saved or unsaved) since the last commit.
- Pending – Indicates that the changes have been submitted to the queue and are waiting to be processed.
- In Progress – Indicates that the changes in the workbook are in the process of being committed.
- Failed – Indicates that the changes were not successfully committed. You may need to fix any errors in the workbook and try committing again.

> **Note:** If you commit an untitled workbook that has never been saved, the data is committed; however, the commit status in the toolbar is not updated until the workbook is saved for the first time.

An information icon is available to the right of the Commit Status. You must mouse over the Commit Status icon to view the current commit status.

Viewing Commit Statuses

Use the Commit Status dialog box to view the commit statuses for all the workbooks. In a combined taskflow, all the workbooks across all the domains to which you have access are displayed.

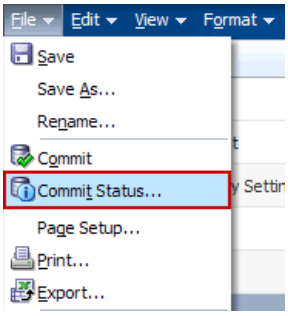
To view the commit statuses:

- On the Quick Access toolbar, click the information icon located to the right of the current Commit Status.

Figure 3–12 Commit Status Information Icon

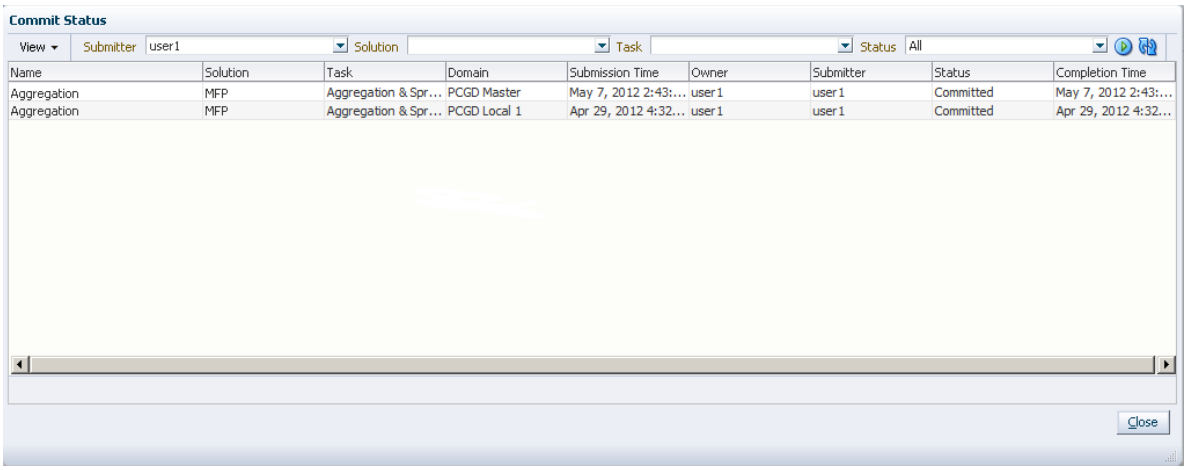
- Or, from the File menu, click **Commit Status**.

Figure 3–13 Commit Status Icon on the File Menu



The Commit Status dialog box appears, as shown in Figure 3–14.

Figure 3–14 Commit Status Dialog Box



By default, the Commit Status dialog box lists the statuses of the current commit operations. It also enables you to filter the list by the users, solutions, tasks, or status.

To view the commit status based on specific criteria:

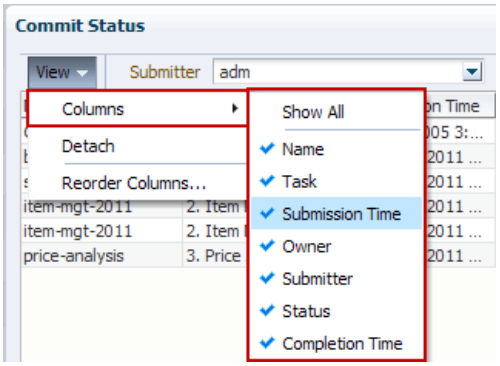
1. In the Commit Status dialog box, select the relevant values in the **Submitter**, **Solution, Task**, or **Status** drop-down lists.
2. After the specific criteria is selected, click the **Refresh** icon located to the right of the Status drop-down list.

Showing or Hiding Columns

By default, the Commit Status dialog box displays all the columns. To show or hide the columns, complete the following steps:

1. On the Commit Status dialog box, click **View**.

Figure 3–15 View Menu in the Commit Status Dialog Box



2. On the **View** menu, select the column you want in the **Columns** submenu.

Reordering Columns

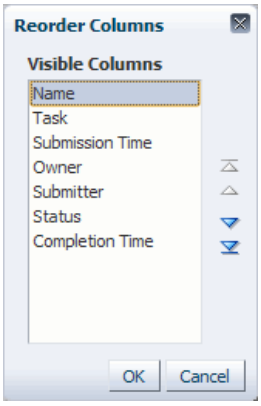
The Reorder Columns option in the View menu enables you to reorder the columns that appear in the Commit Status dialog box.

Note: You can also reorder the columns visible in the dialog box by dragging and dropping them to the position you want.

To reorder the columns:

1. In the Commit Status dialog box, click **View**.
2. In the **View** menu, click **Reorder Columns**. The **Reorder Columns** window appears.

Figure 3–16 Reorder Columns Window



3. In the Reorder Columns window, select the columns you want and click the up or down arrows to reorder the columns. Click the top (first) and bottom (last) arrows to move your selection to the top or bottom of the list.
4. Click **OK**.

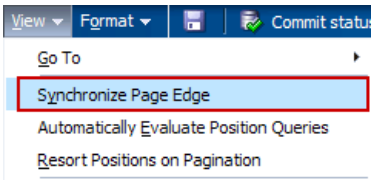
Synchronized Page Edge Scrolling

Synchronized page edge scrolling lets you simultaneously scroll through the page edge of multiple views. When synchronized page edge scrolling is enabled, all views that contain the same slice dimension scroll to the new slice position when one of those views is scrolled to a new position. When scrolling disabled, scrolling through slice positions in one view does not affect the slice position display of other views.

Synchronized page edge scrolling works for all views within a single workbook, and it remains enabled as you move through the tasks and steps within that workbook. Synchronized page edge scrolling is useful when you want to compare multiple views containing the same page or slice dimension.

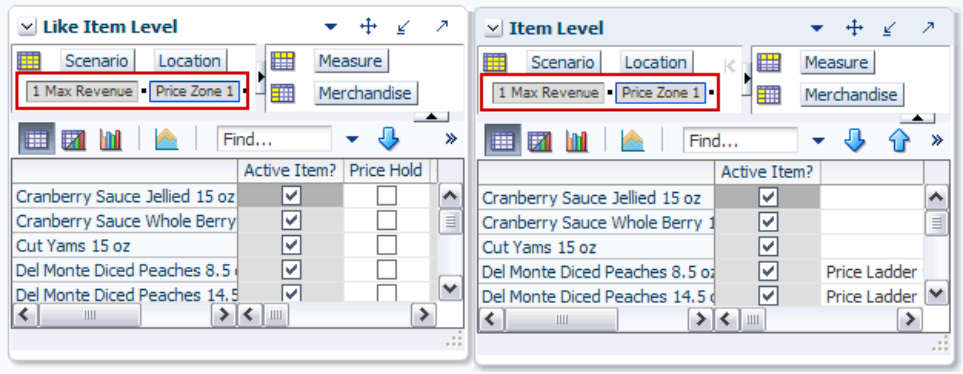
To enable synchronized page edge scrolling, click **Synchronize Page Edge** in the View menu, as shown in Figure 3–17.

Figure 3–17 Synchronize Page Edge Option in the View Menu



When synchronized page edge scrolling is enabled, a check mark appears by this option in the View menu. In addition, workbooks that are set at the same dimension levels are refreshed to show the same data within those levels.

Figure 3–18 Synchronized Views

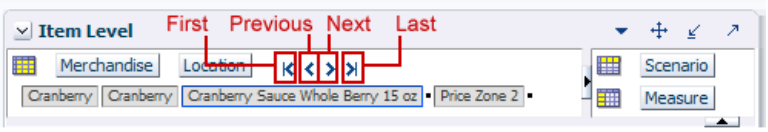


In Figure 3–18, the two views, Item Level and Like Item Level, have been synchronized to show the same data: 1 Max Revenue scenario and the Price Zone 1 location.

Note: The views in Figure 3–18 have been tiled vertically. For more about the tiling options, see View Menu Options.

After you have enabled synchronized page edge scrolling, you can use the navigation arrows (Figure 3–19) to view other positions within that level. As you use the navigation arrows on one view to move to a different position, the other views that have the same level displayed move to the same position.

Figure 3–19 Navigation Arrows



Note: When views do not share the same lowest level of a dimension, the views do not scroll together.

If you save the workbook with the synchronized page edge option turned on, it is saved with the workbook. Therefore, when you open the workbook again, the synchronized option is still enabled.

Per-Worksheet Setting for Client-Side Editing

The Fusion Client provides client-side editing, which is used to improve the performance of worksheet edits. The edits of numerical measures are all handled in the browser, so there are no server round-trips. You can enable or disable client-side editing. By default the client-side editing feature is turned off.

Client-side editing works best when the worksheet has only numeric-value measures. If you eliminate non-numeric measures from the worksheet, (such as check-boxes, drop-down lists, and date pickers), the time taken to render the worksheet and to scroll the worksheet is reduced. Keyboard navigation performance is also improved when only numeric values are used because you do not experience a server round-trip for each cell.

If the editing of numeric measures is an infrequent activity, it is recommended that you turn off client-side editing. This will improve the performance of editing non-numeric measures and of scrolling.

A menu option lets you override the pre-configured setting for client-side editing on a per-worksheet basis.

Not all worksheets are configured alike. Some have only numeric measures. Some have a small number of positions. Some may not have any editable cells at all. Depending on the worksheet configuration, the client-side editing feature may or may not be beneficial. You can use the worksheet context menu option to turn the client-side editing facility for a particular worksheet either on or off. This setting is saved along with the workbook, so it does not have to be manually set every time the workbook is opened. It can also be saved to the workbook template.

The option has been added to the context menu item per worksheet, as shown in Figure 3–20, and to the global toolbar menu, as shown in Figure 3–21.

Figure 3–20 Client Side Editing Switch - Context Menu

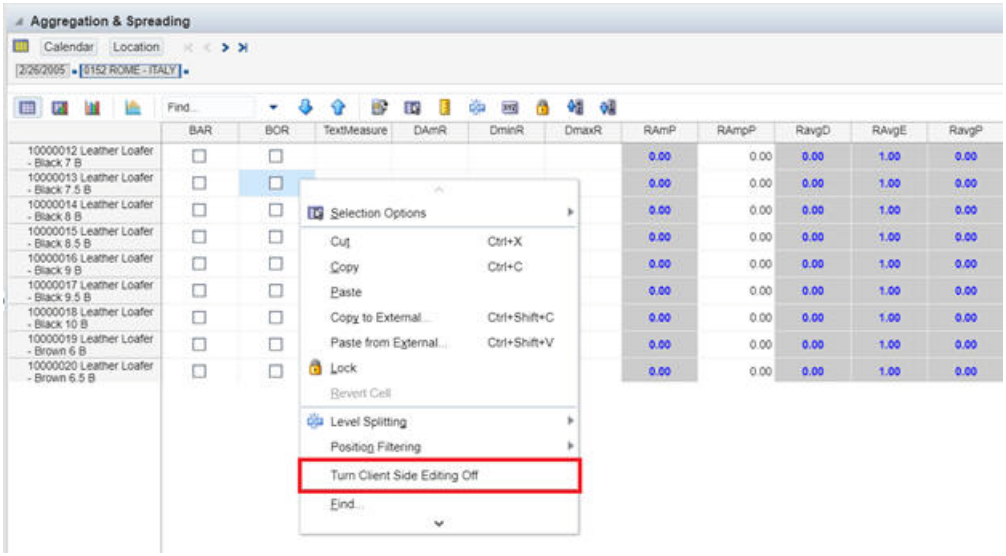
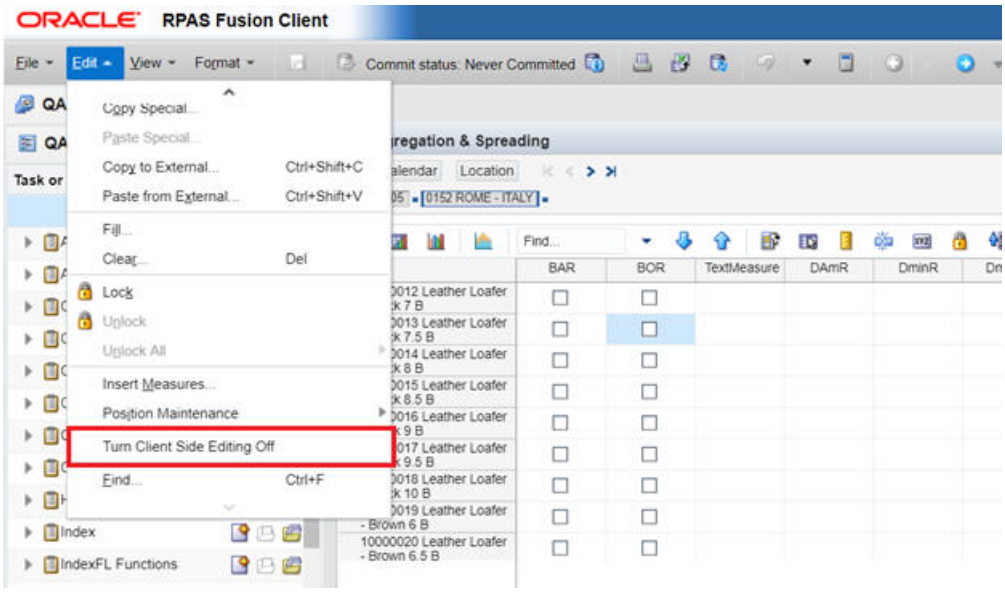


Figure 3–21 Client Side Editing Switch - Global Edit Menu



4

Cells

Your ability to edit multiple workbook cells at once and to move chunks of data in and out of the workbook is essential to using RPAS efficiently and effectively. This chapter describes how to select and edit cells as well as how to cut, copy, and paste information into cells. It also provides details about the various tasks you can perform with the data in cells. It includes the following sections:

- Select and Manipulate Cells
- Navigation Shortcuts for Editing Cells
- Enter or Change Values in a Cell
- Modify Data with Cell Formulas (Smart Edits)
- Clear and Fill Cells in a View
- Modifying Cell Data
- Cut, Copy, and Paste
- Cut, Copy, and Paste Special
- Copy to External and Paste from External
- Read-Only Measures
- Locking and Unlocking

Select and Manipulate Cells

Cells or groups of cells must be selected in the pivot table before certain operations can be performed on them. Operations such as cutting and copying data, filling or clearing data cells, and displaying data in chart form are typically performed on a subset of cells that you must select before invoking the menu command.

> **Note:** Certain cells are read only to prevent them being edited. By default, read-only cells are indicated by a gray background. Cells are specified as read only during configuration. This cannot be changed by the user. For more information, see Read-Only Measures.

There are several ways to select cells in the pivot table. Generally, you should make your selections in the view axes (where the column and row headers appear) and not in the cells themselves.

Note: You cannot select multiple cells for copying or cutting when an edit is in progress. While an edit is in progress, only the current edited text is copied. To copy multiple selected cells, click **Escape** to exit and then select the multiple cells again.

Select a Single Cell

Click inside the cell. When selected, the cell is shaded. Alternatively, press the F2 key when the focus is on the cell. This is typically used when the user has used the cursor keys to navigate from a read only cell into an editable one.

Select all Cells in a Row

Click the row header for that row of cells.

Select all Cells in a Column

Click the column header for that column of cells.

Select a Group of Contiguous Cells in the Same Row

1. Click the first cell in the row of cells you want to select.
2. Hold the **Shift** key and click the last cell in the group. The cells become shaded.

Select a Group of Contiguous Cells in the Same Column

1. Click the first cell in the column of cells you want to select.
2. Hold the **Shift** key and click the last cell in the group. The cells become shaded.

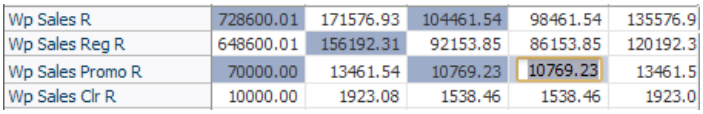
Select a Block of Contiguous Cells

1. Click the top-most, left-most cell in the block you want to select.
2. Hold down the mouse and drag the cursor to the bottom-most, right-most cell in the block that you want to select.

Select a Group of Non-Contiguous Cells

1. Click the first cell you want to select. The selected cell becomes shaded.
2. Hold down the **Ctrl** key and click the other cells you want to select. All selected cells become shaded.

Figure 4–1 Non-Contiguous Cells



Wp Sales R	728600.01	171576.93	104461.54	98461.54	135576.9
Wp Sales Reg R	648600.01	156192.31	92153.85	86153.85	120192.3
Wp Sales Promo R	70000.00	13461.54	10769.23	10769.23	13461.5
Wp Sales Clr R	10000.00	1923.08	1538.46	1538.46	1923.0

See the Paste section for information about copying and pasting non-contiguous cells.

Navigation Shortcuts for Editing Cells

When you are editing cells in a pivot view, a number of navigation options are available that you can use to move to the next cell. Table 4–1 lists these navigation options.

Table 4–1 Navigation Options

Action	Effect
Tab	Move to next editable cell to right
Shift + Tab	Move to next editable cell to left
Enter	Move to next editable cell below
Shift + Enter	Move to next editable cell above

When you use these options, the cell you navigate opens in editable mode (unless the cell is read-only). To exit editable mode, use the Escape key.

Note: You can also use the Ctrl-Up, Ctrl-Down, Ctrl-Right, and Ctrl-Left arrow keys to move between cells when editing.

When you navigate to read-only cells or move to cells that are not in editable mode, you can use the cursor keys.

Note: Use the Escape key to exit Editable mode. Use the Escape sequence (!#) to revert an edited value and exit Editable mode.

Enter or Change Values in a Cell

The following are descriptions of actions you can take to change individual values in the pivot table.

Note: The type of data that cells can accept is predefined. If you try to enter another type of data into the cell, you will see an error message.

Numbers: Enter or overwrite a numeric value. Some cells may have constraints on the maximum values that can be entered. If you exceeding this limit, you will see an error message.

Alphanumeric Values or Plain Text: Enter or overwrite an alphanumeric value. Text may be entered up to a maximum value of 4096 characters. Any text string that exceeds this length will be truncated to this value.

Drop-Down List Items: Select the desired option from the drop-down list. Click the arrow and select an item from the drop-down list. For information about selecting dimension values in drop-down lists, see Single Hierarchy Select.

Check Box (Toggle) Items: Click the check box to change the status of the item (yes or no, on or off).

Math Operations: For information about incrementing the value in a cell using a mathematical formula, see Modify Data with Cell Formulas (Smart Edits).

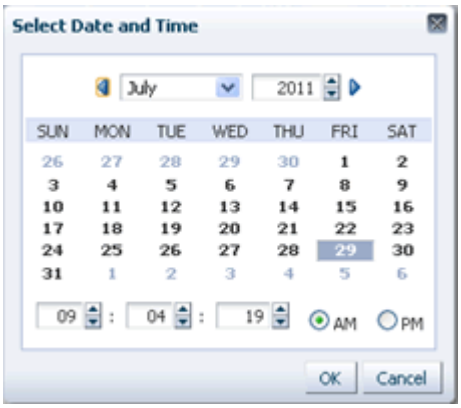
Date and Time Items: Select the desired date and time. (Some measures may be formatted to display only the date. You can only set the time when the date measure is formatted to display time.)

Click within the cell to display the Select Date and Time dialog box. Click the appropriate arrow keys to change the year, month, day, hour, minute, second, and

AM/PM. (The AM/PM option buttons are available only if the measure has been configured to use the 12-hour format.)

You cannot enter dates or times outside of the lower and upper bounds for the measure.

Figure 4–2 Select Date and Time Dialog Box



Modify Data with Cell Formulas (Smart Edits)

You can use cell formulas to modify the value of a data cell in the pivot table by applying an operator (+, -, *, or /) to that value. With this functionality, you can make changes to data values without having to manually calculate the result. To perform this function, click the data cell and type the operator that you want to add, subtract, multiply, or divide by.

For example, suppose that a particular data cell contains the value 10.

- **Add**: If you enter +10 in the cell, the value becomes 20.
- **Subtract**: If you enter + -10 in the cell, the value becomes 0.
- **Multiply**: If you enter *10 in the cell, the value becomes 100.
- **Divide**: If you enter /10 in the cell, the value becomes 1.
- **Percentages**: If you want to increase the value of a cell by 10 percent, multiply the value by 1.1 (enter *1.1)

Cell formulas have many applications for modifying data. Cell formulas can only be applied to one cell at a time, but changes made to aggregate level cells are spread down to lower-level cells along dimension lines. Similarly, any changes made to lower level cells are reflected in the aggregates of that data.

Using Math Formulas

In addition to the basic math operations, you can also extend the math operations and enter formulae in the cells. For example, entering **+30/2** in a cell with a value **70** will add **30** to the existing value, and then divide the result by **2**. Entering **10+30/2** in a cell will update the cell with a value 25.

Overriding Spread Methods

By default, making an edit in the aggregate level cell and calculating spreads the data based on the spread method of the measure.

However, you can override the default spread method of a measure and spread the aggregate data into individual cells using a different spread method. The override spread methods available are Replicate, Evenly, Proportionally, and Delta. Using this feature, you can spread data at an aggregate level down to the lower levels in a dimension.

For example, entering **40r** in a cell replicates **40** in the child dimension cells when the next calculate is performed. The calculation of the spread is done by the RPAS Server.

To override the default spread method, add one of the following letters as a suffix to the cell value:

Replicate: [value] r A value entered into a cell at an aggregate level is replicated (copied) into every cell at the aggregate cell's base level. This results in a higher aggregate cell total (the value entered multiplied by the number of base-level cells).

Evenly: [value] e A value entered into a cell at an aggregate level is evenly distributed among all cells at the aggregate cell's base level.

Proportionally: [value] p A value entered into a cell at an aggregate level is distributed proportionally among all cells at the aggregate cell's base level (proportional to the original values in the base-level cells).

Delta: [value] d The difference between a value entered into a cell at an aggregate level and the original value of that cell is distributed evenly among all cells at the aggregate cell's base level.

The spread action is performed after you click **Calculate**. For more information on Calculating, see Calculating Workbooks.

Enter Measure Data Using a Scaling Factor

Use the scaling factor feature to enter measure data that will be scaled or factored to an internal value that is recognized by the server in data calculations. When you enter a value for a measure that has a scaling factor, the value that you enter is multiplied by the scaling factor to arrive at this internal value. The display of the data and the ease of data entry can be greatly enhanced by use of a scaling factor.

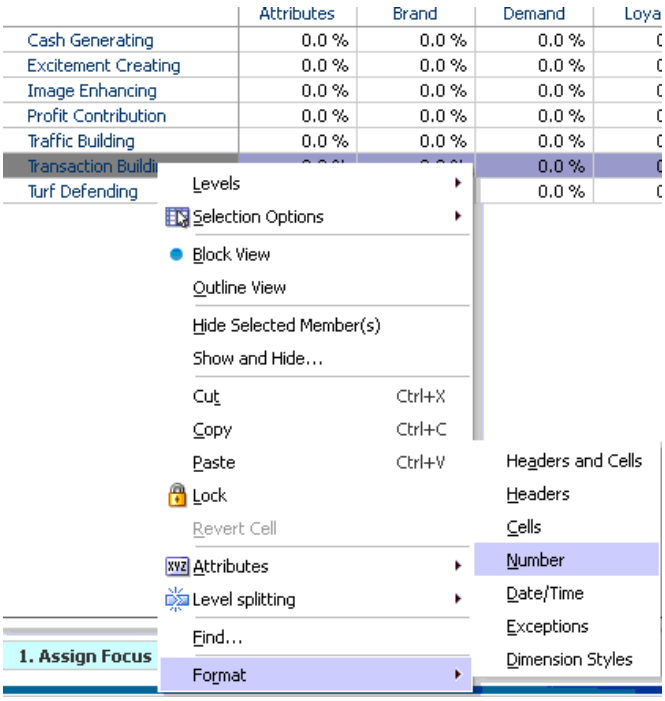
For example, suppose that you want to enter data in thousands of units. You might find it tedious to enter 1000, 2000, 6000, and so on. A more sensible approach is to enter the values 1, 2, and 6, and have the system apply a scaling factor (in this case 1000) to the entered data. The internal values of the three affected cells are 1000, 2000, and 6000, and these internal values are used in required data calculations. Removing the zeros from the display results in a cleaner, less cumbersome view appearance.

Scaling factors can be set in the RPAS Configuration Tools or through the formatting options in the RPAS Fusion Client. For more information about setting scaling factors in the Configuration Tools, see the *Oracle Retail Predictive Application Server Configuration Tools User Guide*.

To set scaling factors in the Fusion Client, complete the following steps:

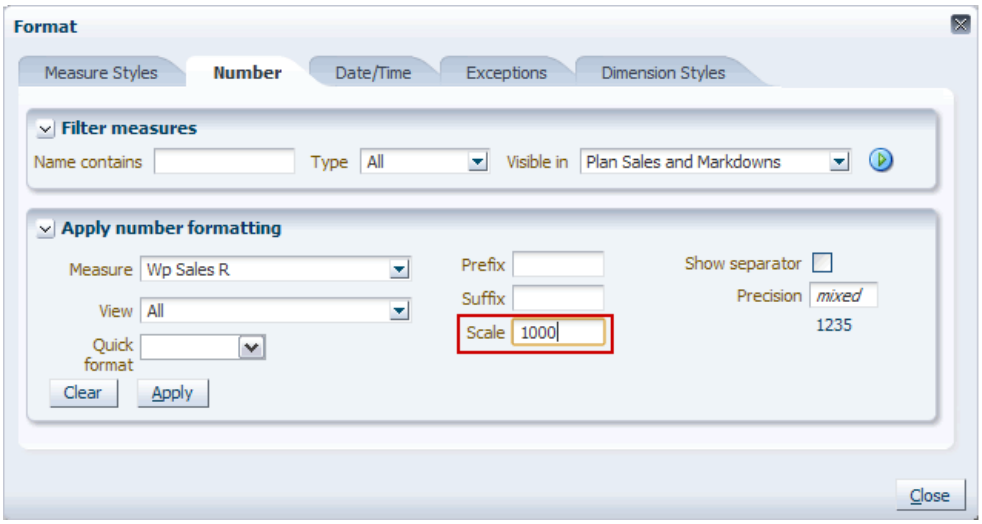
1. Right-click a measure. The right-click context menu appears.

Figure 4–3 Number Formats Option in the Right-Click Context Menu



2. Select **Format** and then select **Number**. The Format dialog box appears.
3. Select the measure and views for which you want to change the scaling.
4. Enter a value in the **Scale** option, as shown in Figure 4–4.

Figure 4–4 Setting the Scale Option in the Number Formatting Tab

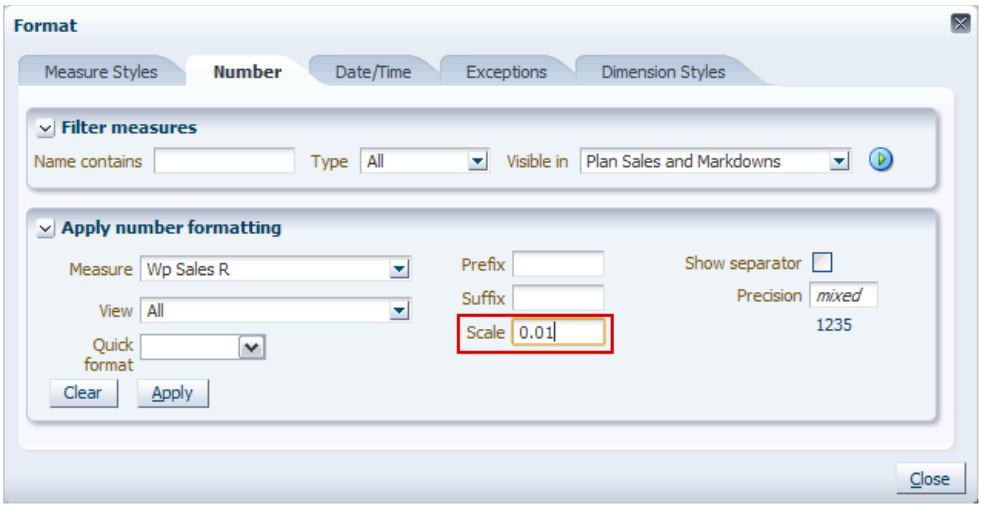


For example, if you enter 1000 as the scale factor, then all values in the view are displayed in thousands, meaning that a value of 35 actually represents 35,000.

5. When finished, click **Apply** and then **Close**.

You can use the scale factor for percentages as well. Enter a scale of **0.01** if you want to see values displayed as percentages, so that you see 19% rather than 0.19.

Figure 4–5 Using the Scale Option for Percentages



Clear and Fill Cells in a View

Your ability to edit multiple workbook cells and to easily move data in and out of the workbooks is essential to using RPAS to its fullest extent You can accomplish this by using the fill and clear functions. These are found in the Edit menu.

Figure 4–6 Fill and Clear in the Edit Menu

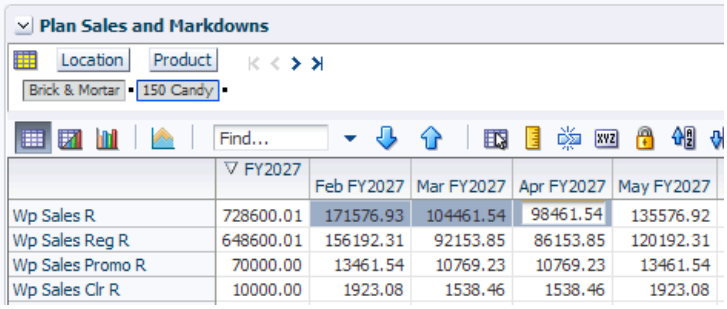
Clear

Use the clear feature to quickly clear the contents of cells in a view and set them to their NA value. With the clear function, you can clear one or more cells, a dimension level, or an entire slice.

Clear Cells

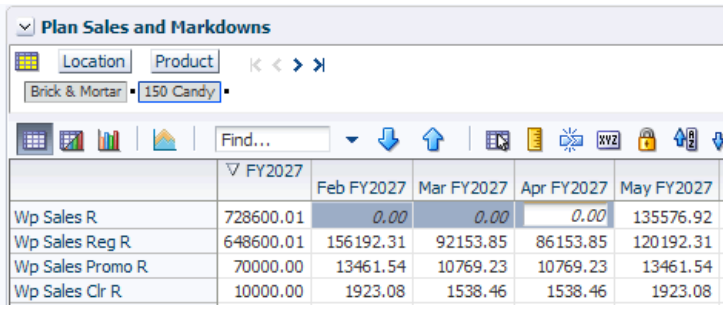
1. Select the cells you want to clear. In Figure 4–7, the **Wp Sales R** cells for three months have been selected.

Figure 4–7 Cells Selected to be Cleared



2. Select the **Clear** option in the Edit menu.
3. The selected cells are returned to their NA value, as shown in Figure 4–8.

Figure 4–8 Cleared Cells



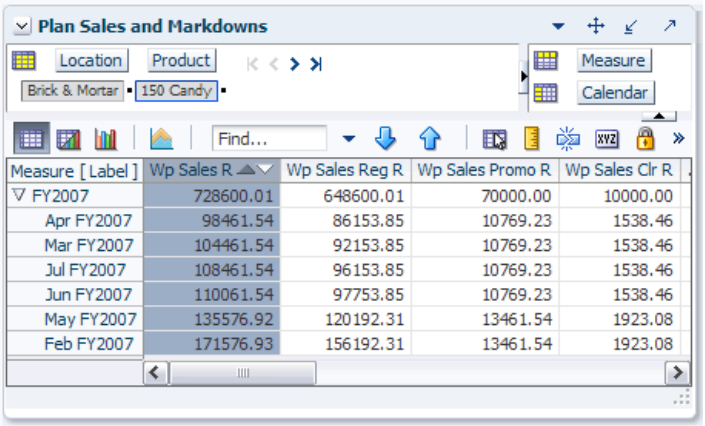
Clear a Dimension Level

The steps for clearing a dimension level vary depending upon which view you are in, outline or block. In block view, you can click **Clear** in the Edit menu just as you do when clearing cells. However, clearing a dimension level in outline view works differently if more than one level is in the selection.

To clear a dimension level in outline view, complete the following steps:

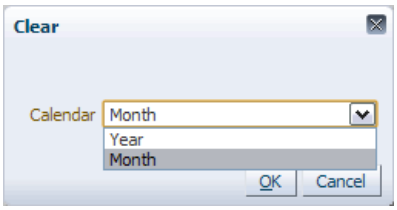
1. Select the cells you want to clear. In Figure 4–9, the entire Weekly Sales - Regular measure has been selected and two product dimension levels are selected, Fiscal Quarter and Fiscal Month.

Figure 4–9 Clearing Dimension Levels



2. Select **Clear** in the Edit menu or click **Delete**. The Clear dialog box appears.

Figure 4–10 Clear Dialog Box



3. Select the dimension level you want to clear and click **OK**. That dimension level clears in the background.
4. If you want to clear another dimension level, select it from the list and click **OK**. When you are finished clearing, close the Clear dialog box.

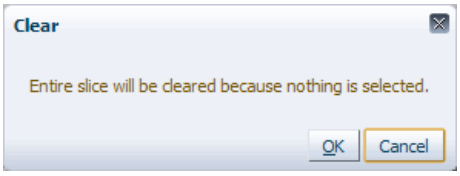
Clear a Slice

You can clear an entire slice, that is, all data shown in the view.

1. When you open the view, do not select any cell.

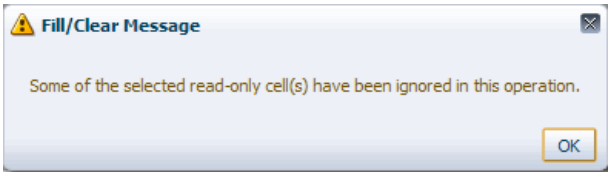
   If cells are selected, you can deselect them by clicking a dimension tile, opening the Dimension dialog box, and then clicking **OK** to close it.
2. With no cells selected in the view, click **Clear** in the Edit menu.
3. A message appears, stating "Entire slice will be cleared because nothing is selected." Click **OK**.

Figure 4–11 Clear Entire Slice Message



The entire slice is cleared. If any read-only cells exist in the slice, you see a message informing you that the read-only cells have not been cleared.

Figure 4–12 Fill/Clear Message: Ignored Read-Only Cells



If all selected cells are read-only, an error message appears, stating that none of the selected cells were editable and therefore the clear did not occur.

Undo Clear

To undo any type of clear, click **Undo** in either the Edit menu or the quick access toolbar. However, after the **Calculate** function is invoked, the Undo option cannot reverse the clear.

Fill

Use the fill feature to quickly populate many cells of a writable measure at a time. Depending on which view you are using, outline or block, one of the following dialog boxes appears.

> **Note:** The fill feature cannot be used for hyper-dynamic pick lists because the list of available selections may vary from cell to cell.

Figure 4–13 Fill Dialog Box in the Block View

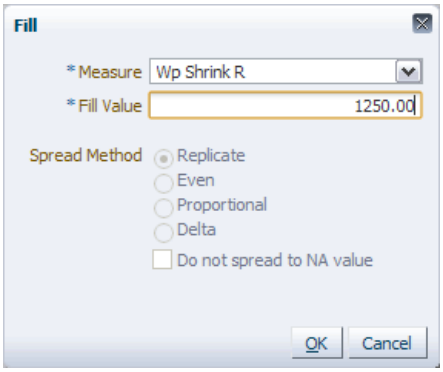
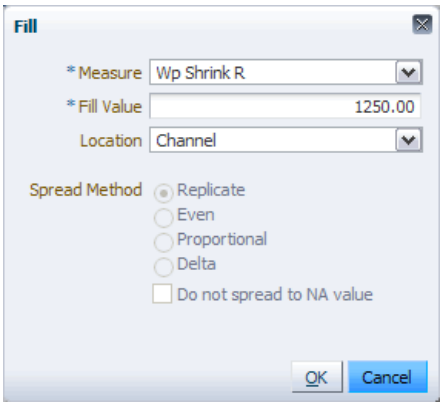


Figure 4–14 Fill Dialog Box in the Outline View

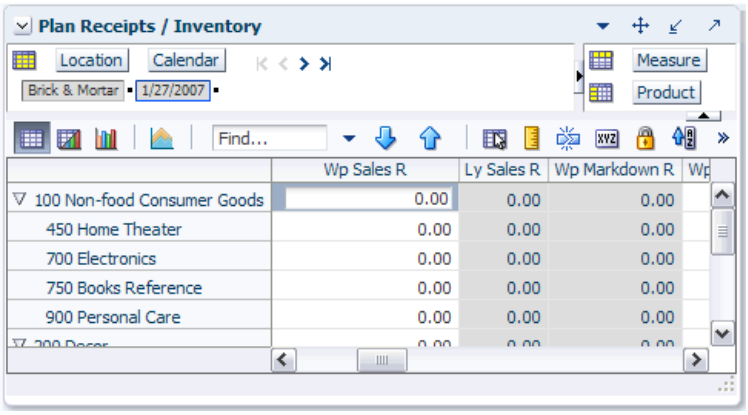


As shown in Figure 4–14, the outline view has additional dimension level fields. These are available whenever multiple dimensions are displayed in the outline view. You must choose which dimension level you want to fill with data.

To use the fill feature, complete the following steps.

1. Select what you want to fill. In Figure 4–15, the **Wp Sales R** measure for 100 Non-food Consumer Goods is selected. Its lower level has four positions within it.

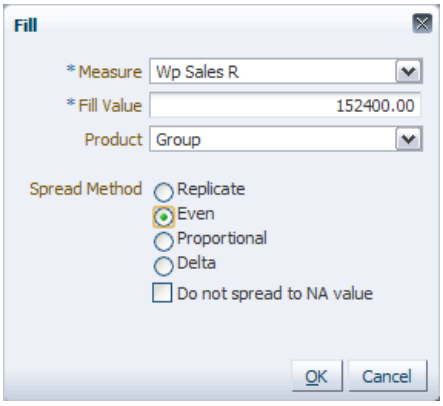
Figure 4–15 Selecting a Cell to Fill



2. With a cell selected, click **Fill** in the Edit menu.The Fill dialog box appears.

> **Note:** If no cells were selected before the fill feature was invoked, all cells within the measure that is selected in the Fill dialog box are filled. The fill applies to the current slice only.
>
> If only a few cells were selected in the grid, only those selected cells are filled.

Figure 4–16 Fill Dialog Box



3. Choose the measure you want to fill in the **Measure** field. If you select only one measure, as in the previous example, only one option appears.
4. Enter a value in the **Fill Value** field. The measure you select determines the type of data you can input as the fill value. For instance, if you choose a Boolean type measure, only true or false are available options for the fill value.
5. In the next field, select the level of the dimension that you want the fill to apply to. The name of this field varies according to the dimension you select.
6. Select the spread method to use to distribute that fill value among the lower levels that belong to the dimension level you select. For the spread method, choose among the following:
   - **Replicate**: Any value filled into an aggregate level cell is replicated exactly to every base level cell that comprises the aggregate total.

- **Even**: Any value filled into an aggregate level cell is spread evenly among that cell's lower level constituents.
- **Proportional**: Any value filled into an aggregate level cell is spread proportionally among all lower level constituent cells. This is based on the content of the cells before the fill.
- **Delta**: The difference between the value pasted in the aggregated cell level and the original value of the aggregate cell level is spread evenly among all lower-level constituent cells.

Note: The Spread Method options are disabled when the base or lowest level of a dimension is selected. They are disabled because it is not possible to spread a fill value to lower levels if the lowest level is already selected.

---

7. Decide whether you want the fill value to be spread to cells that currently have an NA value. If you select **Do not spread to NA Value**, the fill value data is not spread to lower level cells that contained an NA value before the fill. The NA values are left intact, and the aggregate data is spread to the remaining lower level cells.

Note: The **Do not spread to NA value** option is only enabled if the spread method option is enabled.

---

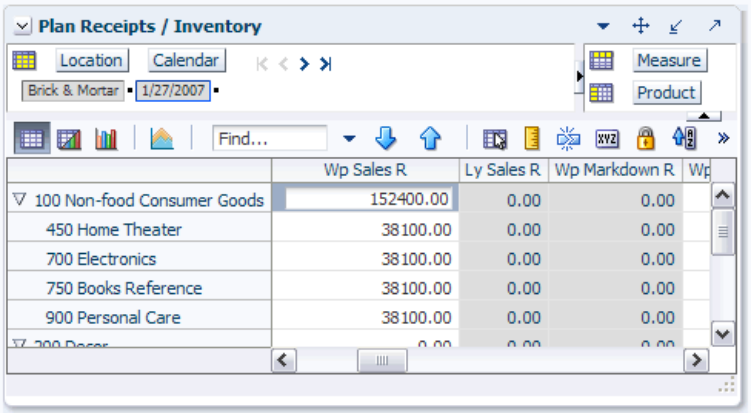
8. Click **OK** when finished. The Fill dialog box disappears.

Note: If some of the selected cells are editable and some are read-only, a message appears stating that the read-only cells have been ignored.

In the view, the new fill value appears in the cell. It is shown in italics because it has not been calculated or saved yet.

9. Click **Calculate**. The view refreshes and the fill value is now distributed throughout the lower levels. In Figure 4–17, the fill value is distributed evenly among the lower levels.

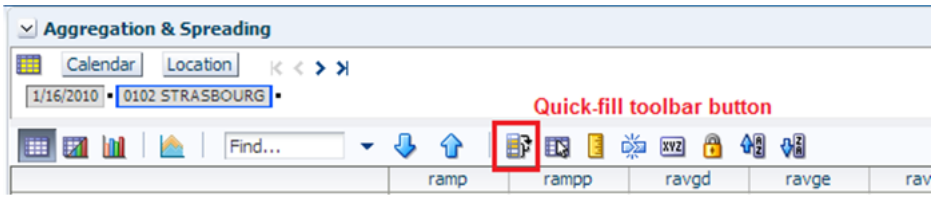
Figure 4–17 Fill Value Distributed Among Lower Levels



Fill from Pivot Table Toolbar (Quick Fill)

Use Quick Fill to replicate a value from one cell into other cells directly in the pivot table. To use Quick Fill, click the Quick Fill icon in the toolbar. The icon is shown in the following figure:

Figure 4–18 Quick Fill Toolbar Icon



Quick Fill works in a similar way to copy and paste, except it copies the fill value from the top left cell of your selection and pastes it to the other selected cells. Your selection can include cells of the same measure or cells of different measures, as long as they are of a compatible type. Quick Fill is slightly different from Fill using the edit menu. Quick Fill can be used in outline or block mode.

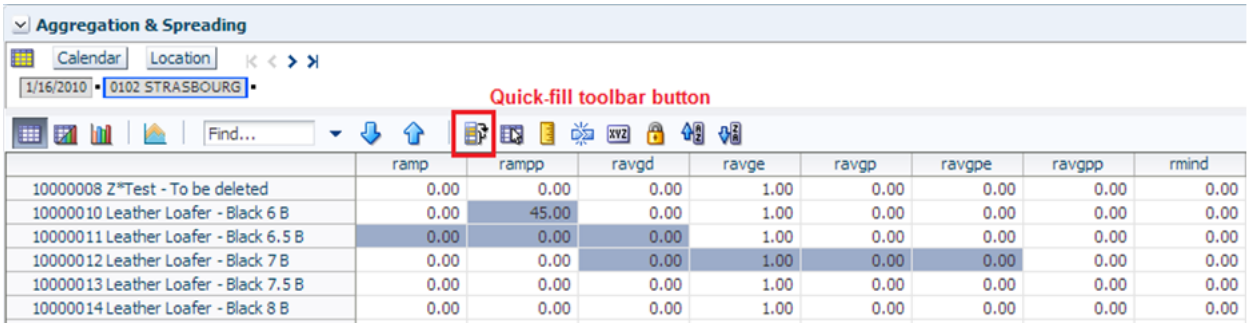
> **Note:** After using Quick Fill, you can do a calculation using the quick access toolbar or the calculate edit menu option. The updated cell value is sent to the server, and the associated cells are recalculated based on the calculation rules already configured.

To use Quick Fill:

1. Make a selection in the pivot table where the upper left cell is the value you want to copy into the other selected cells. If you want to fill a different value to the selected cells, change the top left cell value.

   In the example shown in the following figure, some of the cells are selected.

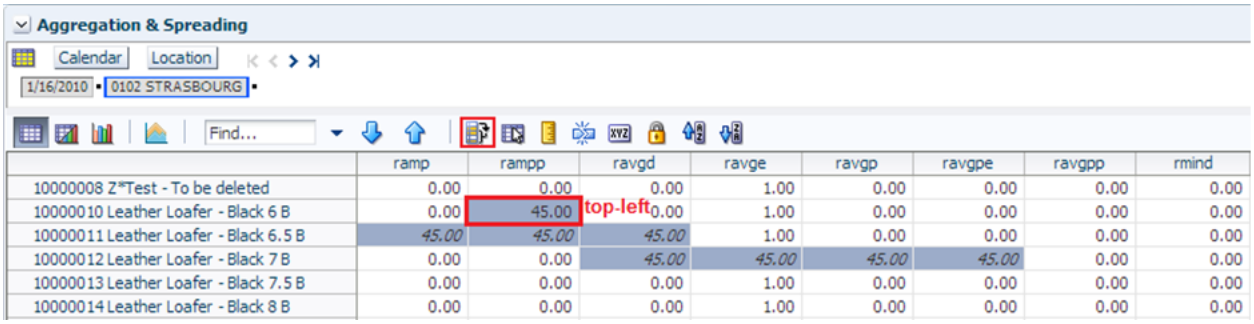
Figure 4–19 Quick Fill Selected Cells



	ramp	rampp	ravgd	ravge	ravgp	ravgpe	ravgpp	rmind
10000008 Z*Test - To be deleted	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
10000010 Leather Loafer - Black 6 B	0.00	45.00	0.00	1.00	0.00	0.00	0.00	0.00
10000011 Leather Loafer - Black 6.5 B	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
10000012 Leather Loafer - Black 7 B	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
10000013 Leather Loafer - Black 7.5 B	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
10000014 Leather Loafer - Black 8 B	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00

2. Click the Quick Fill icon, as shown in Figure 4–19.

Figure 4–20 Quick Fill Updated Cells



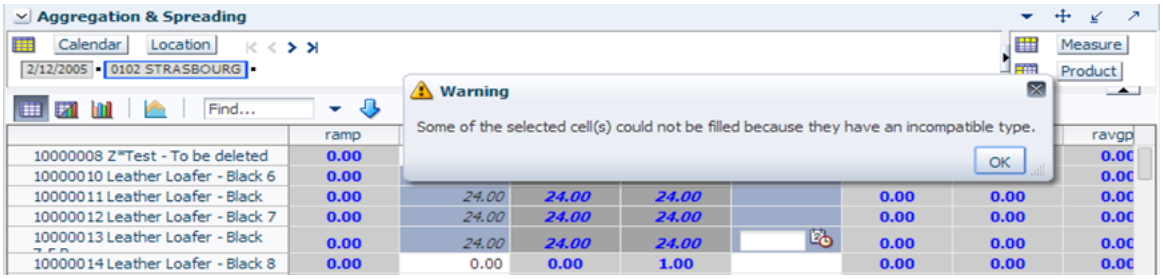
	ramp	rampp	ravgd	ravge	ravgp	ravgpe	ravgpp	rmind
10000008 Z*Test - To be deleted	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
10000010 Leather Loafer - Black 6 B	0.00	45.00	0.00	1.00	0.00	0.00	0.00	0.00
10000011 Leather Loafer - Black 6.5 B	45.00	45.00	45.00	1.00	0.00	0.00	0.00	0.00
10000012 Leather Loafer - Black 7 B	0.00	0.00	45.00	45.00	45.00	45.00	0.00	0.00
10000013 Leather Loafer - Black 7.5 B	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
10000014 Leather Loafer - Black 8 B	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00

The system fills the data (top left cell's value) into the selected cells. If some of the selected cells do not match the data type of the fill value (data type of top left cell from the selections), or some of the selected cells are in read-only mode, the system ignores those cells and fills the rest of the cells.

A warning message is displayed if some or all of the selected cells are ignored. Here are examples of a few of the warnings that may be displayed:

- When the selection contains all editable cells, but some of them are a different data type.

Figure 4–21 Quick Fill Warning Message Example 1

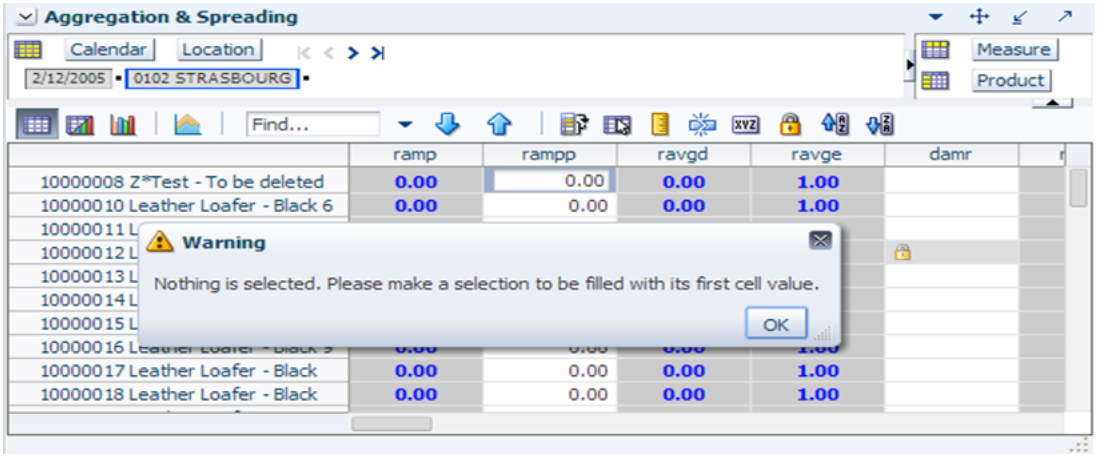


- When the selection contains editable, read-only, incompatible data type cells.

Figure 4–22 Quick Fill Warning Message Example 2

- When the Quick Fill icon is clicked and one cell or no cell is selected in the view.

Figure 4–23 Quick Fill Warning Message Example 3



After you use Quick Fill, as with any other edit, values that have not been calculated or saved yet are shown in italics. If the top left cell has an undefined or ambiguous value, the fill operation is not completed and the following warning message is displayed: "Cannot Fill using a value that is ambiguous or undefined."

If you are in outline view with multiple levels selected, you can still use Quick Fill, but when a calculation is completed, the system may only honor the edit at one of the levels.

Spread Method Quick Fill applies the fill value to the selected cells using the cells' default spread method, even when the value originally entered in the top left cell has a different spread method. For example, if you enter a value into the top left cell with a spread char, such as 10r, and quick fill that value to a selection, the filled cells do not use a spread method of r, unless that is their default spread method.

When you click the Quick Fill icon, the system fills the value to the selected cells that have same data type.

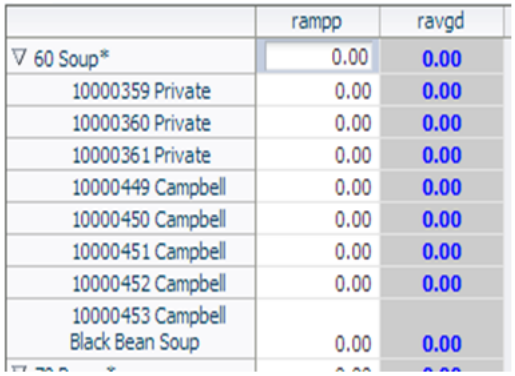
When you click Calculate, the view refreshes and the fill value is distributed throughout the lower levels. The spread method replicate (r) applies to the top left cell's measure only and values for rest of the edited measures use the measure's default spread method.

The following example illustrates how the spread method works. The example uses two measures, rampp and ravgd.

Measure	Default Spread Method
rampp	RATIO
ravgd	delta (d)

Figure 4–24 shows the initial cell values.

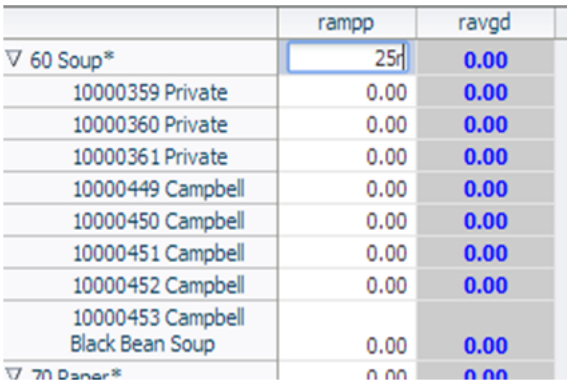
Figure 4–24 Quick Fill Initial Values



	rampp	ravgd
▽ 60 Soup*	0.00	0.00
10000359 Private	0.00	0.00
10000360 Private	0.00	0.00
10000361 Private	0.00	0.00
10000449 Campbell	0.00	0.00
10000450 Campbell	0.00	0.00
10000451 Campbell	0.00	0.00
10000452 Campbell	0.00	0.00
10000453 Campbell Black Bean Soup	0.00	0.00

Figure 4–25 shows the 25r (replicate spread method) entered into the top left cell.

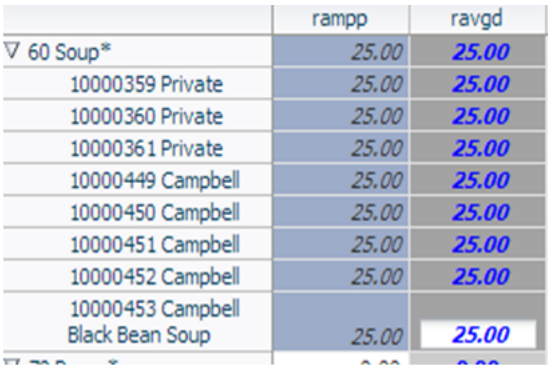
Figure 4–25 Quick Fill with Value Entered in Top Left Cell



	rampp	ravgd
▽ 60 Soup*	25r	0.00
10000359 Private	0.00	0.00
10000360 Private	0.00	0.00
10000361 Private	0.00	0.00
10000449 Campbell	0.00	0.00
10000450 Campbell	0.00	0.00
10000451 Campbell	0.00	0.00
10000452 Campbell	0.00	0.00
10000453 Campbell Black Bean Soup	0.00	0.00

Figure 4–26 shows the results after you click the Quick Fill icon.

Figure 4–26 Quick Fill Updated Cells



	rampp	ravgd
▽ 60 Soup*	25.00	25.00
10000359 Private	25.00	25.00
10000360 Private	25.00	25.00
10000361 Private	25.00	25.00
10000449 Campbell	25.00	25.00
10000450 Campbell	25.00	25.00
10000451 Campbell	25.00	25.00
10000452 Campbell	25.00	25.00
10000453 Campbell Black Bean Soup	25.00	25.00

Figure 4–27 shows the cells after a calculate.

Figure 4–27 Quick Fill Cells After Calculate

	rampp	ravgd
▽ 60 Soup*	25.00	3.13
10000359 Private	25.00	3.13
10000360 Private	25.00	3.13
10000361 Private	25.00	3.13
10000449 Campbell	25.00	3.13
10000450 Campbell	25.00	3.13
10000451 Campbell	25.00	3.13
10000452 Campbell	25.00	3.13
10000453 Campbell Black Bean Soup	25.00	3.13

After you use Quick Fill, when the system fills the value to the selected cell and when you calculate, the replicate spread method is applied to the rampp measure and the measure's default spread method (ratio) is applied to the ravgd measure. The final results are shown in Figure 4–27.

Undo Fill

To undo a fill, click **Undo** in either the Edit menu or the quick access toolbar. Note that once the **Calculate** function is invoked, the Undo option cannot revert the fill.

Modifying Cell Data

In the view, you can make changes to the data cells. You can make the edits by directly typing or updating a value in the cell, copying and pasting, or by importing changes from a file. You can also lock a cell value by clicking the **Lock** icon on the View toolbar. This ensures that any calculation performed during the cell edits do not affect the locked cell values.

In the Fusion Client, you can modify workbook data in the following manner:

1. Click on the cell that you want to edit. Alternatively, navigate to the cell using the cursor keys and press F2.
2. After you enter or change the value in the cell, you can navigate to any other cell by double-clicking on that cell or using the following keyboard keys to navigate:
   - **Enter** to scroll down.
   - **Shift + Enter** to scroll up.
   - **Tab** to scroll right.
   - **Shift + Tab** to scroll left.

To learn how to modify data with math formulas, see Modify Data with Cell Formulas (Smart Edits).

Revert Cell

After you complete an edit action, you can revert the cell to the last calculated value using the **Revert Cell** option in the right-click context menu. The **Revert Cell** feature works on a cell-by-cell basis. When you click **Revert Cell**, the edited cell reverts to the last saved or calculated value. Changes up to the last saved or calculated value are available in the Undo list.

Protection Processing

Protection processing is the process that makes some cells within a workbook read-only to ensure that during edits no conflicts occur within the RPAS engine in a Calculation Cycle. There are two types of protection processing:

- Measure Protection Processing – Locks cells in all the displayed views based on the measures that have been edited.
- Dimension Protection Processing – Locks cells based on the dimension intersections that have been edited.

Protection processing runs each time when a workbook with any locked cell or measure is opened, a cell is edited, a cell or measure is locked, and after each cell revert action. It runs only once when a group of cells is updated in one action. Protected cells or measures appear highlighted in a different color in the view. This is a configurable feature.

Measure Protection Processing

In measure protection processing, cells become read-only when you make changes to enough measures. This ensures that there are no more possible changes that may cause conflicts.

For example, consider six measures (A, B, C, D, and E) set up with the following two rules:

- Rule 1 - A = B + C
- Rule 2 - B = D + E

In this scenario, both A and B are read-only before any edits are applied. Although B appears to be editable, since there are no reciprocal expressions for B's relation to D and E, it is not editable. Measures C, D, and E, however, are editable.

Typically, rule definitions are set up to include all equivalent derivations of any expression. This ensures that you can edit all of the measures contained in any expression in the rule.

Considering the previous example, Rules 1 and 2 will be configured as:

- Rule 1 A=B+C, B=A-C, C=A-B
- Rule 2 B=D+E, D=B-E, E=B-D

In this case, all measures are editable before you make any changes and the measures remain editable based on the edits you make.

Measure protection processing locks all instances of a measure when any position of the other measures in the rule are edited.

For example, consider the Rule 1 in a typical Product, Location, Calendar dimension.

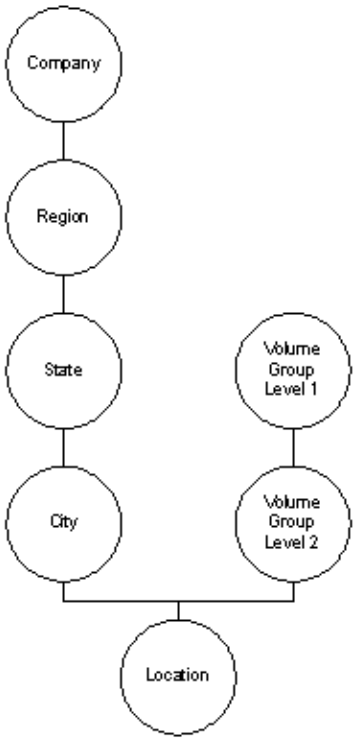
When you edit the measure B for product 1, location 1, and week 1 and measure C for product 1, location 1, and week 2, the measure A becomes read-only for all products at all locations in every week.

Dimension Protection Processing

Changes to cells at the aggregated levels occur during a spread action that changes values down to the base intersection of a measure. Dimension protection processing protects the intersections (combination of levels) to ensure that all changes made during the spread do not affect such a spreading path.

Considering the typical retail dimensions, the process applies at *product:color-location:store-calendar:week* and *product:style-location:region-calendar:month*. These two intersections are on the same path from the root to leaf. If the location dimension has roots for both region/state and Store Volume, any edit to a cell in the Volume Group dimension causes all cells included in an intersection with a company/region/state/city to become read-only.

Figure 4–28 Location Dimension Example for Dimension Protection Processing

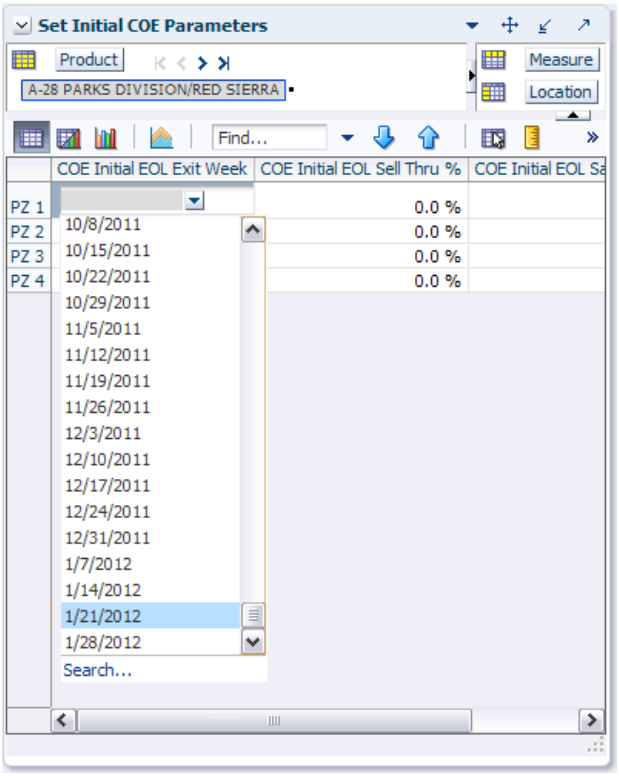


Dimension protection processing changes to the intersection of dimension and level are processed, and edits are allowed to cells as long as the edits are on one path from the root to the leaf level.

Single Hierarchy Select

If a measure has been set up to have dimension values as inputs, the measure cell displays a drop-down list of positions, as shown in Figure 4–29.

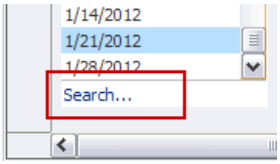
Figure 4–29 Single Hierarchy Select



For example, a Week Mapping measure can be configured to have the week position of the Calendar dimension as an input. The selection of the dimension is configured in the domain configuration for a measure.

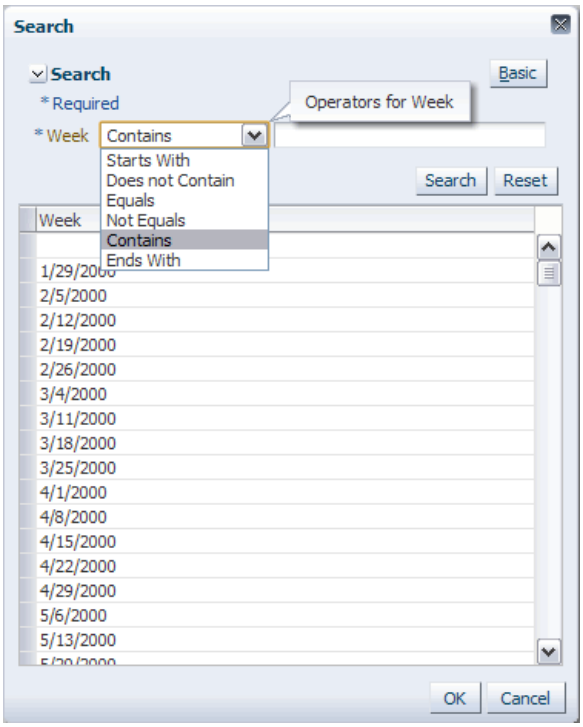
You can either select a value from the list or click **Search** at the bottom of the panel, as shown in Figure 4–30.

Figure 4–30 Single Hierarchy Search



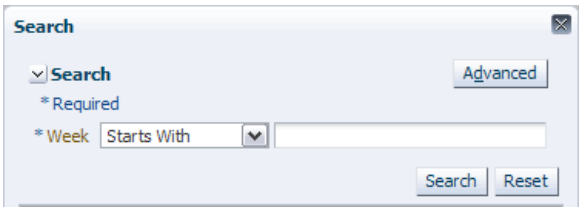
The Search link launches the Search dialog box, where you can search for specific values. The search dialog box automatically opens on the Advanced search option (Figure 4–31).

Figure 4–31 Single Hierarchy Search Dialog Box, Advanced



To use the basic search, click **Basic**. The Search dialog box refreshes with the basic search tools (Figure 4–32).

Figure 4–32 Single Hierarchy Search Dialog Box, Basic



Cut, Copy, and Paste

The cut, copy, and paste features provide flexibility to edit the workbook according to the business needs and transfer data from external applications (such as Microsoft Excel) to the system as well as from RPAS to those external applications.

To apply the operation, select data from the view. After selecting the appropriate cells, you can cut, copy, and paste. For more information, see the Cut, Copy, and Paste sections or Cut, Copy, and Paste Special and Copy to External and Paste from External.

Note: The maximum number of cells that can be copied, cut, or pasted is limited by memory. These operations should not be used to export entire workbooks. For more information, see Export.

You cannot cut or copy multiple cells when an edit is in progress. While an edit is in progress, only the current edited text is copied. To copy multiple selected cells, click **Escape** to exit and then select the multiple cells again.

Date and Time Data Handling in Cut/Copy/Paste Operations

Since date and time measures can be formatted to display no time, 12-hour formatted time, or 24-hour formatted time, date and time data is handled differently when it is cut, copied, or pasted.

When date and time data is cut, copied, or pasted internally, the full date and time data is captured, regardless of whether the measure is formatted to display the full date and time. If the measure is formatted to display no time and no time is entered in the cell, RPAS stores the time as 00:00:00 and is displayed as 12:00:00AM in 12 hour format and 00:00:00 in 24-hour format.

When date and time data is cut, copied, or pasted externally, you have two options:

- The **As displayed** option copies the data with its formatting
- The **Raw value** option copies the data without its formatting

If time data is stored in a cell but is not displayed due to the measure's formatting, when that data is pasted to a 12-hour or 24-hour formatted cell, the time data is reformatted to match the destination cell's formatting. Similarly, when time data is copied from a 12- or 24-hour formatted cell to a cell with no time formatting, the data is pasted but the time is not displayed. If a time is copied from a 12-hour formatted cell and pasted to a 24-hour one (or 24-hour to a 12-hour), the data is converted automatically during the copy/paste operation.

For more information about time formatting, see Modifying Date/Time.

Cut

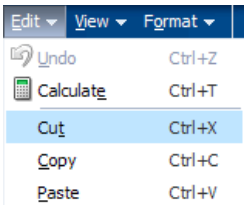
Use this procedure to copy and remove data from the cells of a view in order to move the data to another view or other applications. Note that data created from deferred calculations can be cut.

Notes: You cannot cut data from non-editable or read-only measures.

To cut data, complete the following steps:

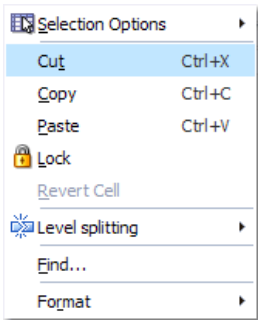
1. Select all data cells in the pivot table that you want to cut.
2. To cut the data and copy it to the clipboard, use one of these three methods:
   - From the **Edit** menu, click **Cut**.

Figure 4–33 Edit Menu – Cut



- Right-click and select **Cut** from the right-click menu.

Figure 4–34 Right-click Menu – Cut



- Use the shortcut command **Ctrl + X**.

3. Data from the selected cells is copied to the clipboard. The selected cells now contain NA values.
4. To paste the data to other cells or to another application, see the Paste section.

Note: To remove the last deferred entries after using the cut option, right-click and select **Revert Cell** from the right-click menu. Or, use the shortcut option **Ctrl + Z.** You can also select the **Undo** option.

Copy

Use this procedure to copy selected data to the application clipboard. Unlike the cut function, the copy function does not clear the data from the view cells. It keeps data in a clipboard that you can use to transfer data within RPAS as well as to an external application such as Excel. It also helps you to transfer large amount of data easily. When cells are copied, only the unformatted textual content is transferred.

When data is copied from a cell to the clipboard, the string representation of the cells is copied to the clipboard so that it can be pasted into either other cells in the pivot table or to external applications. Data containing deferred calculations can also be copied. There is no need to invoke **Calculate** before copying.

Table 4–2 shows what is actually copied to the clipboard, based on cell (measure) type.

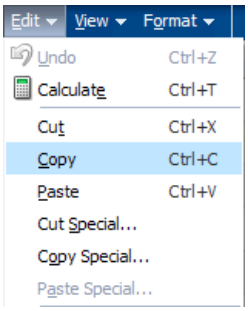
Table 4–2 Copied Data

Cell (Measure) Type	Behavior
Boolean	True, or checked, values are copied as 1. False, or unchecked, values are copied as 0.
Date/Time	The formatted date is copied and visible in the cell. If the measure is configured to contain the time, the time is copied as well.
Integer	The formatted number as displayed in the cell is copied. Prefixes and suffixes, such as $ or %, are copied as well separators.
Picklist	The value displayed in the cell is copied.
Real	The number as displayed in the cell is copied. The format, such as $ and %, is copied as well.
Single dimension	The value as displayed in the cell is copied.
String	The value as displayed in the cell is copied.

To copy data, complete the following steps:

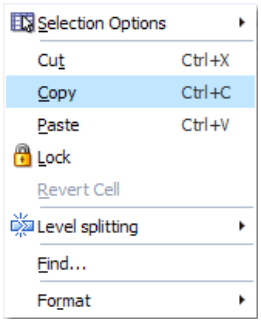
1. Select all data cells in the pivot table that you want to copy.
2. To copy the data to the clipboard, use one of these three methods:
   - From the **Edit** menu, click **Copy**.

Figure 4–35 Edit Menu – Copy



   - Right-click and select **Copy** from the right-click menu.

Figure 4–36 Right-Click Menu – Copy



   - Use the shortcut command **Ctrl + C**.

Note: If no cells are selected, the **Edit** menu and right-click options are grayed out. If no cells are selected when the **Ctrl +C** method is used, a warning message appears that states, "No positions have been selected for this operation."

The selected cells are copied to the clipboard.

Paste

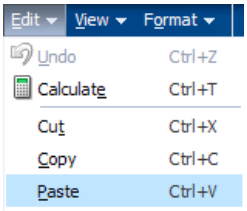
After you have copied or cut data from a view, you can paste the data to other cells within the RPAS Fusion Client or you can paste it to an application such as Excel. The Paste option pastes the data that was last placed on the clipboard into the selected cells.

Note: Although non-contiguous data cells can be copied, they cannot be pasted as non-contiguous cells. Data copied from non-contiguous cells does not maintain the pattern in which it was copied. For information about selecting non-contiguous cells, see Select a Group of Non-Contiguous Cells.

To paste data, complete the following steps after you have copied or cut data from another location:

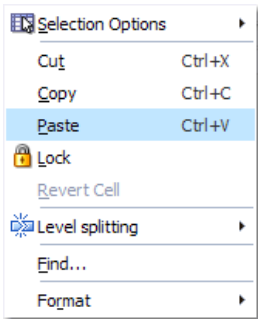
1. Select the cells into which you want to paste the data.
2. To paste the data into the cells, use one of these three methods:
   - From the **Edit** menu, click **Paste**.

Figure 4–37 Edit Menu – Paste



   - Right-click and select **Paste** from the right-click menu.

Figure 4–38 Right-Click Menu – Paste



   - Use the shortcut command **Ctrl + V**.

Note: If protection processing does not allow data to be pasted into the selected cell, the paste operation is aborted.

Cut, Copy, and Paste Special

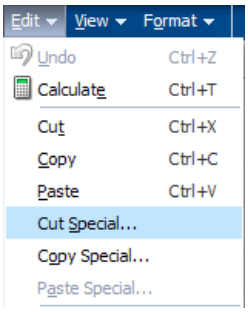
The following sections describe the cut, copy, and paste special features.

Cut Special

You can also cut data at the base level or higher level intersection across page slices. If multiple levels (such as product group or style) are represented in the pivot table selections, the cut option is performed at the lowest level actually selected. After data is cut from the selected cells, it can be pasted into other selected cells in the pivot table. To cut data, complete the following steps:

1. Select all data cells in the pivot table that you want to cut.
2. From the **Edit** menu, click **Cut Special**.

Figure 4–39 Edit Menu – Cut Special



3. The Cut Special menu appears.

Figure 4–40 Cut Special Menu

Select from the following options:

- **Cut all slices**: This option is enabled only if the current workbook view contains more than one page slice. Otherwise, this option is disabled. When this option is selected, the cut operation behaves as if all positions in the slice dimension's levels were selected prior to the cut. If the box is left unchecked, only the data from the current slice position is cleared and copied.
- **Cut selected level**: This option cuts only the selected level of data.
- **Cut at base level**: This option allows you to cut the data at the measure's lowest intersection.Although the cut function is performed at the base level, it seems that the aggregated level data has been cut since the data is rolled up.

Copy Special

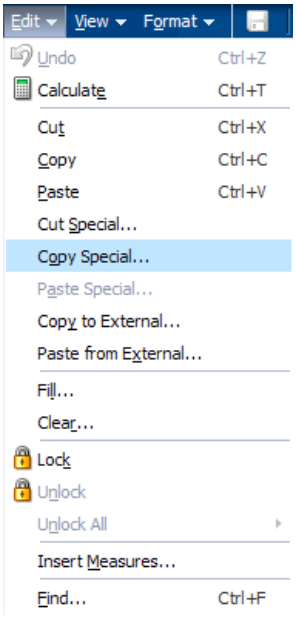
You can also copy data at the base level or higher level intersection across page slices. After data is copied from the selected cells, you can paste data to other selected cells in the pivot table. This feature allows you to view data at an aggregate level while copying data at a dimensional level not currently displayed or while selecting data from the current slice while copying data from all slices. You can copy data at the base level only or copy from all slices without selecting the base level data or without selecting data from entire slices.

Note: Data copied using the Copy Special option is not copied to the clipboard. It is copied to the RPAS server.

To copy data, complete the following steps:

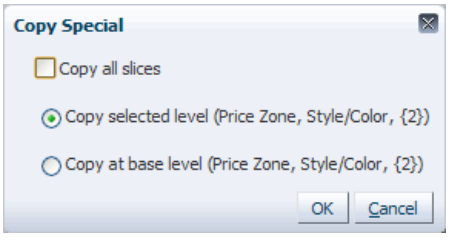
1. Select all data cells in the pivot table that you want to copy.
2. From the Edit menu, click **Copy Special**.

Figure 4–41 Edit Menu – Copy Special



3. The Copy Special menu appears.

Figure 4–42 Copy Special Menu



Select from the following options:

- **Copy all slices**: This option is enabled only if the current workbook view contains more than one page slice. Otherwise, this options is disabled. When this option is selected, the copy operation behaves as if all positions in the slice dimension's levels were selected prior to the copy. If the box is left unchecked, only the data from the current slice position is copied.
- **Copy selected level**: This option allows you to copy the level of data shown in the pivot table. The base level data from which the displayed data is created is not copied.
- **Copy at base level**: This option allows you to copy the base level data (the measure's lowest intersection), which may not be displayed in the pivot table. If this option is not selected, the data is copied for the selected dimension level only.

4. The selected data is copied to the RPAS server. It is not copied to the clipboard. You can paste the copied data to other selected cells in the workbook multiple times. The copied data is available to the RPAS server until the workbook is closed.

Paste Special

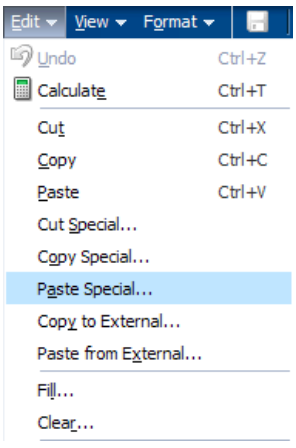
Use Paste Special to view data at an aggregate level while pasting it at the base level, which is not displayed in the current slices. It provides a dialog in which you can specify options for specialized paste functions.

If the levels of multiple dimensions are represented in the pivot table selections, the default paste option is performed at the lowest level.

To use special paste, complete the following steps:

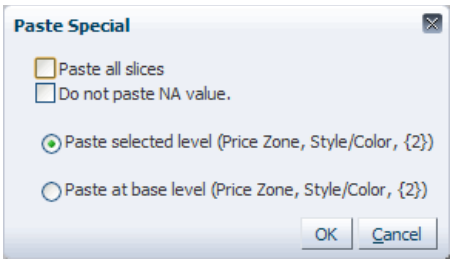
1. Before using paste, you have placed data in clipboard using **Cut Special** or **Copy Special** from the Edit menu.
2. Select **Paste Special** from the Edit menu.

Figure 4–43 Edit Menu – Paste Special



3. The Paste Special menu appears.

Figure 4–44 Paste Special Menu



Select from the following options:

- **Paste all slices**: This option pastes data to all slices. If this option is not selected, data is only pasted to the currently displayed slice position.
- **Do not paste NA values**: If this option is selected, NA data that has been cut or copied is not pasted into the current selection. Whenever the system encounters an NA value in the copied data, that value is ignored and the data cell being pasted keeps its original value. In other words, when this option is selected, the current pivot table data is not overwritten by NA values.
- **Paste selected level**: This option only pastes data at the level of data shown in the pivot table.
- **Paste at base level**: This option is enabled only if none of the base level measures are selected before the paste. Use this option to paste data at the base level, which may not be currently displayed in the workbook. You can view data at an aggregate level while pasting it at the base level.

4. Click **OK**. The selected data is pasted.

Copy to External and Paste from External

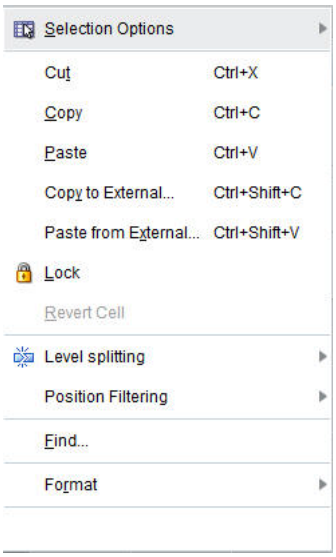
Use the Copy to External and Paste from External options to copy and paste data from the system clipboard when the browser's security restriction prevents the Fusion Client from copying to and pasting from the clipboard. These options are necessary for Mozilla Firefox and Google Chrome.

The following shortcut keys are available for this functionality:

- Use Ctrl-Shift-c to copy to external.
- Use Ctrl-Shift-v to paste to external.

These shortcuts can be used to activate the menu items, shown in Figure 4–47 and Figure 4–49. The shortcuts are also available on the right-click menu.

Figure 4–45 Right-Click Menu - Copy and Paste From External

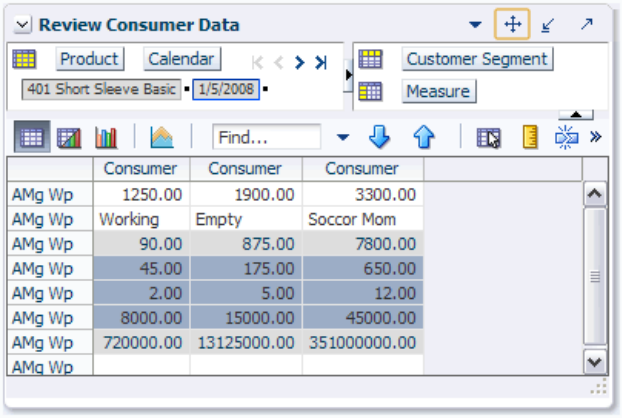


Copy to External

Use the Copy to External feature when data from the pivot table must be copied to an application other than RPAS Fusion Client, such as Microsoft Excel or Notepad. To use the Copy to External feature, complete the following steps:

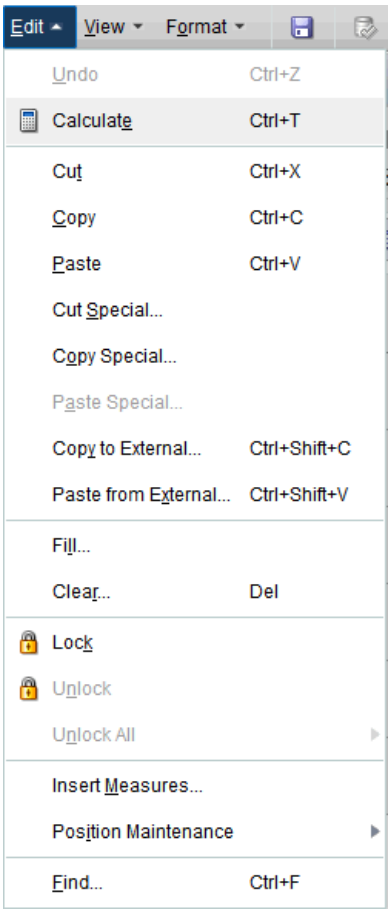
1. Select the cells to be copied in the pivot table.

Figure 4–46 Selecting Cells for Copy to External



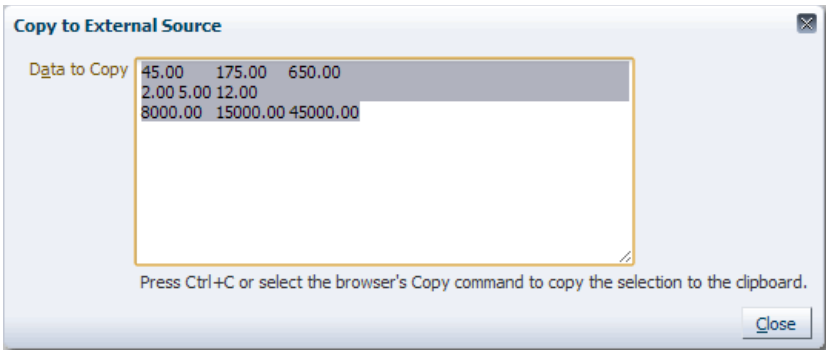
2. Click the **Copy to External** option in the Edit menu.

Figure 4–47 Edit Menu – Copy to External



A dialog box appears, containing the copied data from the pivot table. The data is formatted correctly and is selected in a text field.

Figure 4–48 Copy to External Source Dialog Box



3. To execute the browser's copy command, select the copy option from the browser menu or click **CTRL+C**. This copies the selected text from the text field to the system clipboard. Click **Close**.

The data can then be pasted into another application. It can also be pasted into the Fusion Client using the Paste from External option.

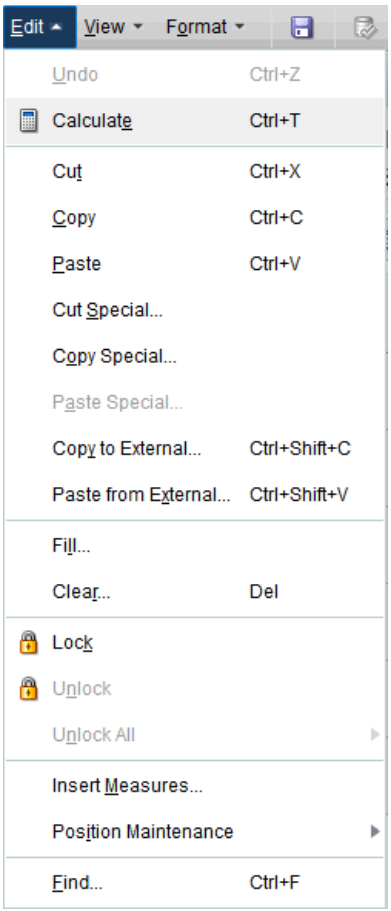
Paste from External

Use the Paste from External feature when you need to paste data into the Fusion Client from the system clipboard.

To use the Paste from External feature, complete the following steps:

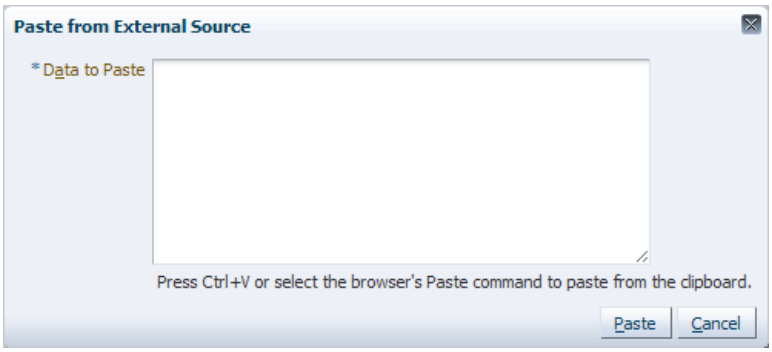
1. Copy the data in the correct format from another application.
2. Select the area to paste in the pivot table by selecting the upper left hand corner of the paste area or the exact cells to be pasted into.
3. Click the **Paste from External** option in the Edit menu.

Figure 4–49 Edit Menu – Paste to External



A dialog box appears, containing an empty text field.

Figure 4–50 Paste from External Source Dialog Box



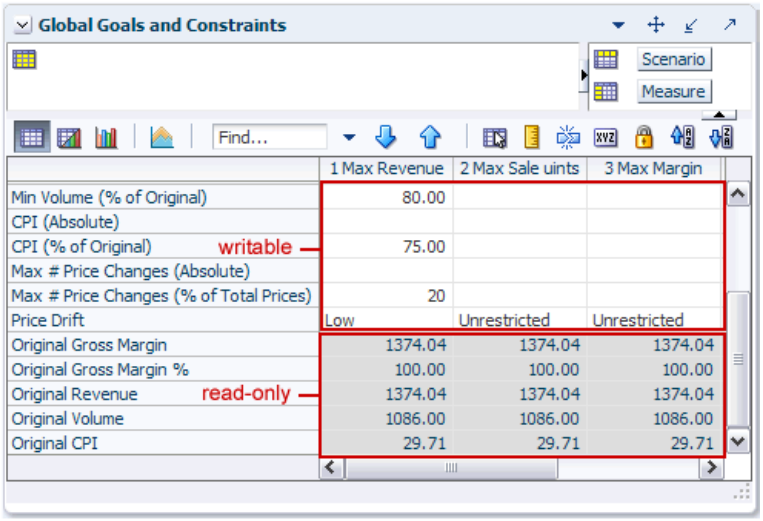
4. To paste the clipboard data into the text field, use the browser's paste command from the browser menu or click **CTRL+V**.
5. Click **Paste** in the dialog box to paste the data in the selected pivot table.

Read-Only Measures

Read-only measures are defined during the domain configuration process. The read-only status can be set at both the base intersection and aggregate levels. Read-only measures are indicated as non-editable cells based on measure information retrieved when the workbook is opened.

Read-only cells by default have a gray cell background color. This same default color is used to indicate protection processing protected cells and elapsed cells. If the visual indicator for read only is changed to be different than the visual indicator for protected cells and the cell is both read-only and protected, then the cell will display the visual indicator for protected cells. These cells are not editable from the RPAS Fusion Client.

Figure 4–51 Read-Only and Writable Measures



Locking and Unlocking

In addition to read-only workbooks and measures, the RPAS Fusion Client also provides a locking function in order to protect information. The locking function can be used on cells, measures, and positions.

Cell locking is available for any editable cell and invokes protection processing.

Measure locking is available for any measure and invokes protection processing.

Position locking is available for non-calendar dimensions and does not invoke protection processing.

Note: Locks are not recognized by operations such as custom menus and refresh. Locks are only recognized when a workbook calculation. is done.

Cell Locking

Use the cell locking feature to lock one or more editable cells in the pivot table. When a table cell is locked, calculations performed as a result of data manipulations do not affect the locked data values. This functionality allows you examine various what-if scenarios to determine the best course of action for planning or forecasting.

The RPAS Fusion Client iterates through the selected cells by measure, then by column, then by row. Locked cell information is immediately transferred to the RPAS server. The locked cell information is saved with the workbook and locked cells continue to be locked when the workbook is reopened.

The locked status of a cell is indicated by the presence of a picture of a lock on the left side of the cell. After an eligible cell is locked, the system determines whether the remaining table cells are eligible or ineligible for locking. For instance, if all the child cells of any parent cell are locked, the parent cell cannot be locked. Instead, any edits to the parent cell are spread to the child cells based on the ratio of the values locked into the cells. If a cell becomes ineligible for locking, the right-click menu associated with that cell does not contain the Lock option. Furthermore, any read/write cells that become ineligible for locking are made read-only.

You may choose to lock a data cell at any time to protect that cell from forced recalculations as a result of data manipulation elsewhere in the workbook. For example, you may want to see the effect of a change to sales value on inventory levels without forcing a change to receipts. Or, you may want to change sales value at an aggregate level (such as month) and spread the result to only three of the four weeks that comprise that month. In this case, you can effectively hold the second week's sales value constant while spreading the aggregate-level increase among the remaining three weeks.

Protection processing executes against locked cells as if they were edited to their current value. Cell locks do not appear in the Undo list, which appears next to the **Undo** icon in the toolbar when more than one edit has been made. In addition, cell locks are not affected by the **Undo** option from the menus. Only cell value edit changes appear in the Undo list. Cell lock or unlock actions do not force a calculation cycle to execute.

Measure Locking

Use the measure locking feature to simultaneously lock all of the cells that are associated with a given measure in a view. A measure can be locked or unlocked when

the header cell of the measure dimension is selected. As with individual cell locking, the locked status of each cell in the measure is indicated by the lock picture on the left side of each cell.

Locked measure information is immediately transferred to the RPAS server. The locked measure information is saved with the workbook, so locking measures enables the save features of the workbook. The locked measure information is saved with the workbook and locked measures continue to be locked when the workbook is reopened.

Protection processing executes against a locked measure as if the measure has been edited to the same value.

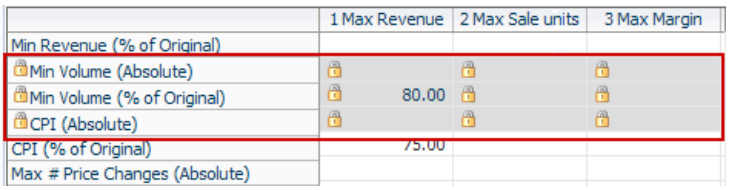
If multiple measures are selected, they are locked or unlocked in row or column order. A measure may be locked even if it is already protected by protection processing.

Note: You can only make a selection at one level in the headers of a multidimensional header. Lock and unlock apply to the selected measure only. Locked measures are designated by a lock icon in the header text of the measure and in its cells.

Position Locking

Use position locking to lock all measures in all displayed views along one or more positions of non-calendar dimensions. Cells along unlocked positions are still editable and can also change as a result of calculations. Locked positions are designated by a lock icon in front of the position name. The cells of the locked position are shaded as read-only.

Figure 4–52 Locked Positions



Protection processing does not run against cells locked by a position lock. Unlike cell locks, a parent position becomes locked if all its children are locked. A parent position becomes unlocked if any of its children are unlocked. Hidden children are considered when deciding if a parent position becomes locked. Unlocking or locking the parent unlocks or locks all the children. Hidden child positions are treated in the same way as visible children. Unlike a measure lock, the lock indicators do not show up in each of the cells, only in the header cells, even though the cells are displayed as read-only.

Locked position information is immediately transferred to the RPAS server. The locked position information is saved with the workbook, so locking positions enable the save features of the workbook. The locked position information is saved with the workbook and locked positions continue to be locked when the workbook is reopened.

A position cannot be locked when locking it affects an edited or locked cell. A warning modal dialog is displayed and asks you to revert the affected edits and calculate the workbook or cancel the position locks. You are warned if a cell lock is affected and given the choice of canceling the position lock or unlocking the affected cell locks and continuing. If both edits and cell locks are affected, then you see both dialogs, with the

edit dialog appearing first. If you cancel the position lock from either dialog, then no action is taken against either locked or edited cells.

Locking and Unlocking Methods

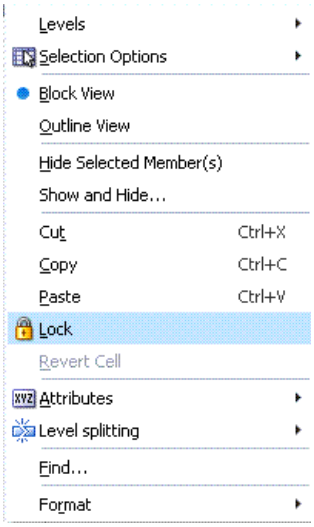
You can initiate locks by selecting a cell, measure, or position within the pivot table and then selecting one of three options to initiate a lock or unlock action. Locking and unlocking can be done through the following:

- Locking Using the Right-Click Context Menu
- Locking Using the Edit Menu
- Locking Using the Lock Icon

Locking Using the Right-Click Context Menu

One way that you can lock or unlock a cell, measure, or position is by using the right-click context menu. Depending upon what is selected, the context menu determines whether the **Lock** or **Unlock** option is shown.

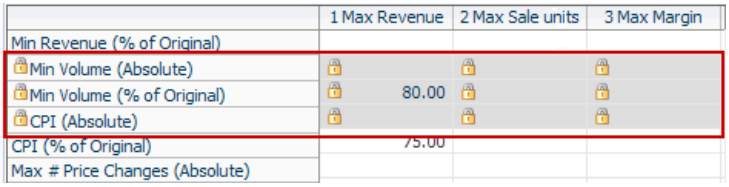
Figure 4–53 Locking: Right-Click Context Menu



To lock using the context menu, complete the following:

1. Select a cell, measure, or position. After it is selected, it is shaded.
2. Right-click the mouse. The context menu appears. If the cell, measure, or position is not already locked, the **Lock** option appears in the menu.
3. Select the **Lock** option.
4. The selected item or items show a lock symbol.

Figure 4–54 Lock Symbol Shown in a Locked Measure

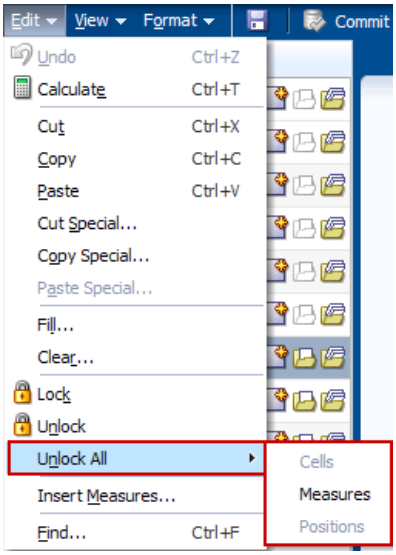


Locking Using the Edit Menu

You can lock a cell, measure, or position by using the Edit menu. The Edit menu contains several locking options:

- Lock
- Unlock
- Unlock All Cells
- Unlock All Measures
- Unlock All Positions

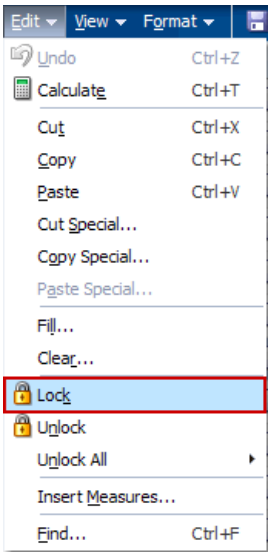
Figure 4–55 Locking Options Using the Edit Menu



To lock using the Edit menu method, complete the following:

1. Select a cell, measure, or position. After it is selected, it is shaded.
2. From the Edit menu, click the **Lock** option.

Figure 4–56 Locking Using the Edit Menu



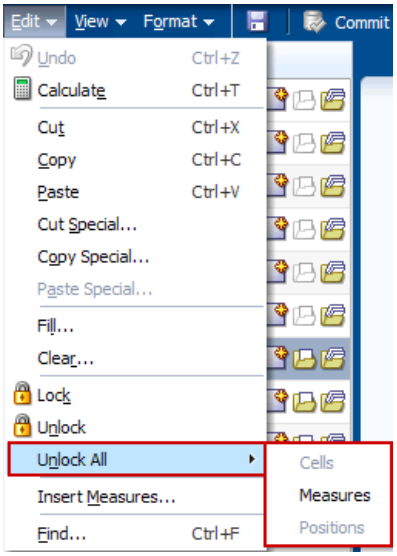
The selected item or items show a lock symbol.

To unlock using the Edit menu method, complete the following:

1. Select the cell, measure, or position that is locked.
2. From the Edit menu, click **Unlock**.

   Or, if you want to unlock all cells, measures, or positions, select **Unlock All** and choose the type you want to unlock.

Figure 4–57 Locking Options in the Edit Menu



Locking Using the Lock Icon

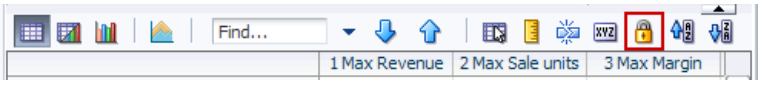
You can lock a cell, measure, or position using the Lock icon in the toolbar. If some selected cells are already locked, they are ignored. If all selected cells are already locked, then the selected cells are unlocked instead of locked. If an error occurs when any of the selected cells measures or positions are locked, then an error message will

be displayed and all of the applied locks will be reset. Cells that were already locked when the lock action started will remain locked.

To lock using this method, complete the following:

1. Select a cell, measure, or position. After it is selected, it is shaded.
2. Click the **Lock** icon in the toolbar.

Figure 4–58 Locking with the Lock Icon



The selected item or items show a lock symbol.

5
Formatting

You can configure formatting settings of workbooks and save those settings for future use in RPAS. You can configure some formatting within the Fusion Client as well as through the RPAS Configuration Tools. For more information about configuring formatting with the Configuration Tools, see the *Oracle Retail Predictive Application Server Configuration Tools User Guide*.

Formatting settings are created in the Format dialog box. In the Format dialog box, you can set and clear formats that apply to measures or dimensions. You can make changes to single or multiple measures and dimensions and apply those changes across one, many, or all views in the workbook.

Note: The following formatting choices do not apply in the Fusion Client: Text Font, Text Size, Border Style, and Border Color.

Default Cell Formats

Some formatting cannot be altered in the Fusion Client. Read-only and protected cells as well as edited cells have default formats that are configured in a property file for the entire solution. The default formats are shown in Table 5–1.

Table 5–1 Default Formats

Cell State	Configurable Style	Default Style
Read-only cells	Cell Style	Light grey background color
Protected cells	Cell Style	Light grey background color
Invalid cells	Cell Style	Dark grey background color
Editable Cells	Cell Style	None (white background color)
Edited Cells	Text Style	Italic font, white background color

Note: These default styles can be changed by editing the PivotTableStyles.properties file. For instructions on editing this file, see the "PivotTableStyles.properties File" section in the *Oracle Retail Predictive Application Server Administration Guide for the Fusion Client*.

Read-only cells are those that cannot be edited for any reason. In Figure 5–1, the cells of the Ly Sales R measure are read-only since the data is from last year and cannot be changed because it occurred in the past.

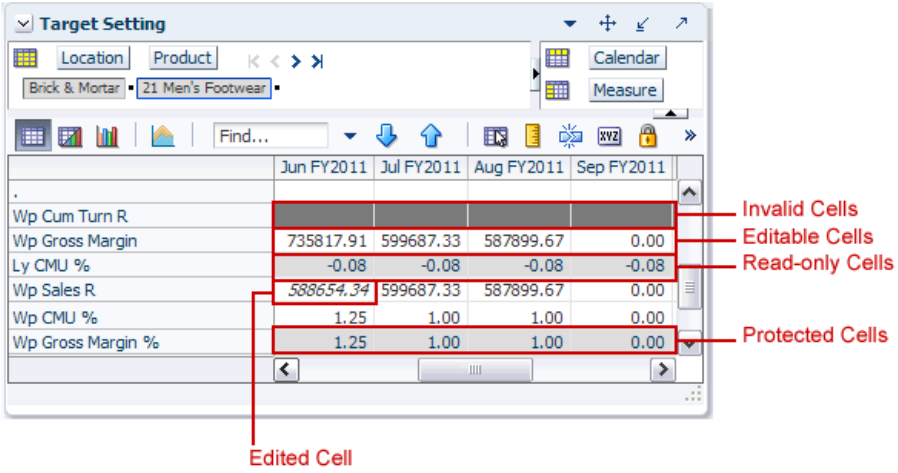
Protected cells are read-only in order to protect them from editing. In Figure 5–1, the cells of the Wp Sales AUR measure are protected because that measure is based on the data from Wp Sales U, which has been edited. For more information, see Protection Processing.

Invalid cells are at a level in the view below the base intersection of the measure. In Figure 5–1, the Wp BOS R measure has a base time level of Half, and so it is invalid at the week level. Therefore, the cell in the Sprg Fy2010 is editable, but the cells in the week columns are invalid.

Editable cells can be edited. In Figure 5–1, the cells of the Wp Sales R and Wp Sales U measures are editable and therefore have white cell backgrounds.

After a cell has been edited, it retains its white cell background, but its font becomes italic. In Figure 5–1, the 2/13/2010 cell in the Wp Sales U measure has been edited.

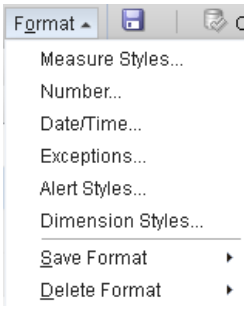
Figure 5–1 Default Cell Formats



Modify Formatting

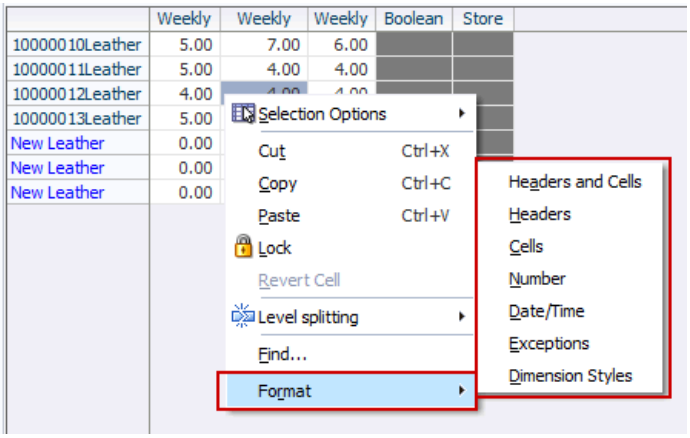
To access the Format dialog box, select an option in the Format menu.

Figure 5–2 Format Menu



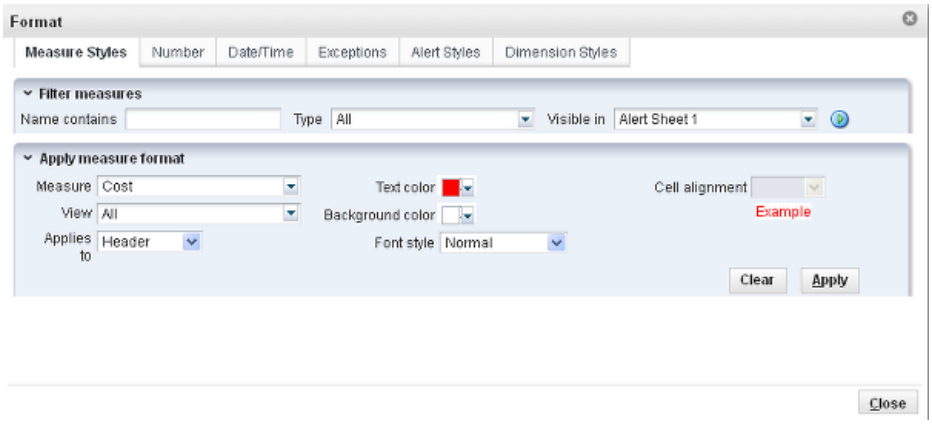
Or, right-click a dimension position in the page edge, column axis, or row axis.

Figure 5–3 Format Option in the Right-Click Context Menu



The Format dialog box appears. From the Format dialog box, you can modify measure styles, number formatting, exceptions, and dimension styles.

Figure 5–4 Format Dialog Box



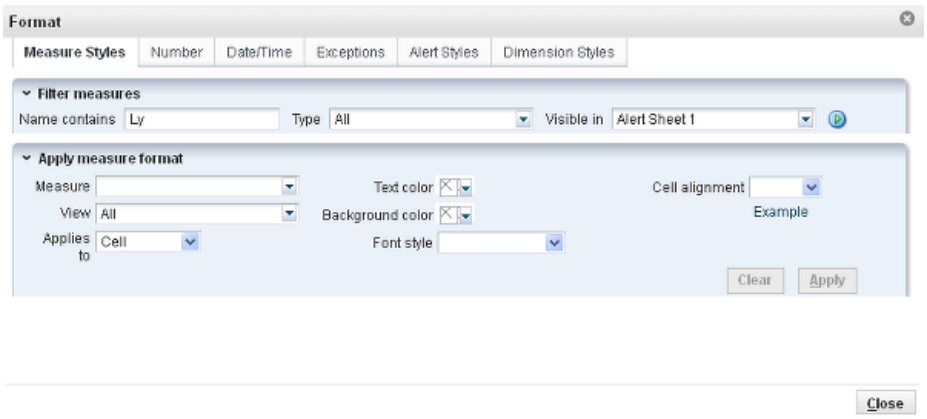
Using the Filter to Find Measures

You can use the filter to find measures that share a common name, type, or location. To use the filter, complete the following steps:

1. Enter data in at least one of the following fields:
   - **Name contains:** Enter the word or phrase you want to find. The word or phrase is searched for in the entire label string, including any displayed attributes. This field is not case sensitive.
   - **Type**: Select the type of measure you are searching for. The options are integer, real, date, text, Boolean, or all types.
   - **Visible in**: Select the view that you want to search in. You can select one, several, or all.

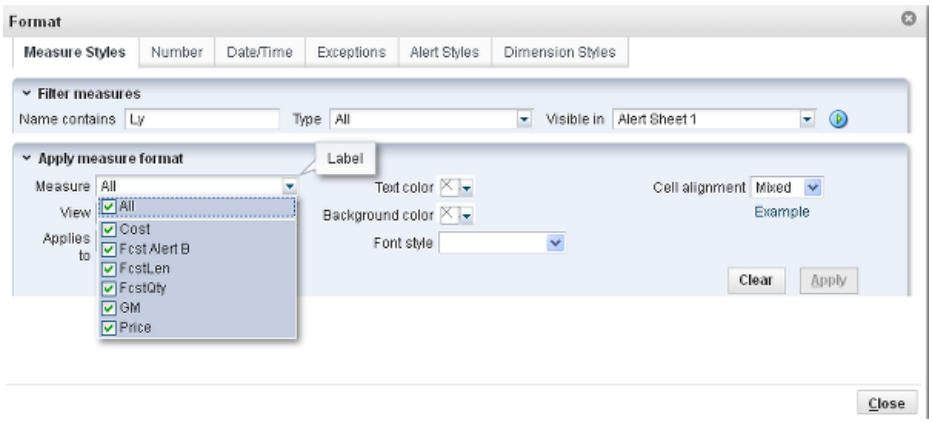
   In Figure 5–5, the string "Ly" is searched for in all types of measures within the Alert Sheet 1 view.

Figure 5–5 Filtering Measures



2. After you have entered the search criteria, click the blue arrow to the right of the Filter measures area. The measures that fit your search criteria are shown in the **Measure** field within the Apply measure format area.

Figure 5–6 Filter Results



Extended Measures

Extended measures also appear in the Measure field. Some extended measures have the same label as the measure from which they were created. As a result, when displaying measure labels in the Measure field, use a series of attributes to describe the measure. The attributes are separated by a delimiter character.

The order of attributes is usually displayed as **[Label] | [%] | [Aggregation]**

For example:

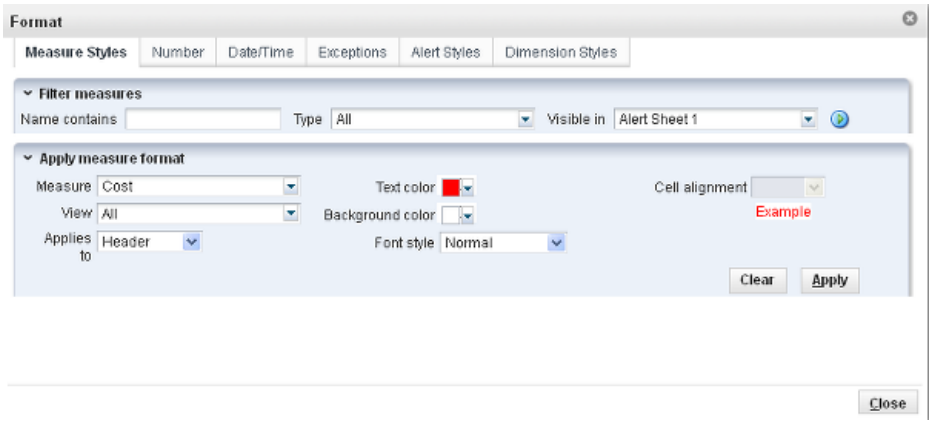
- Wp Gross Margin | | TOTAL
- Wp Sales contrb Prod R% | % Product | TOTAL
- Wp Sales contrb Time R% | % Calendar | TOTAL

Modifying Measure Styles

From the Measure Styles tab of the Format dialog box, you can locate measures with the filter feature and then modify the measure style for those measures. Measures can be modified by altering the appearance of the headers cells.

When the filter feature is not in use, the measures that appear in the **Measure** field within the Apply measure format section shows the measures that are contained in the current view.

Figure 5–7 Measure Styles Tab of the Format Dialog Box

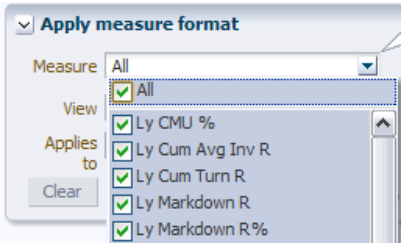


Applying Measure Formats

After you have found the measures you want to change, you can edit or clear the existing formats for those measures and add new ones. To alter the measure format, complete the following steps:

1. Use the filter to find the measures you want to alter. See Using the Filter to Find Measures.
2. Select the measures from the Measure field. You can select one, several, or all.

Figure 5–8 Select Measures



3. In the **View** field, select the views in which the measures you want to change appear.
4. In the **Applies to** field, select the part of the measure formatting that you would like to alter.
5. In the Text color, Background color, Cell alignment, and Font style fields, choose the settings you want to apply.

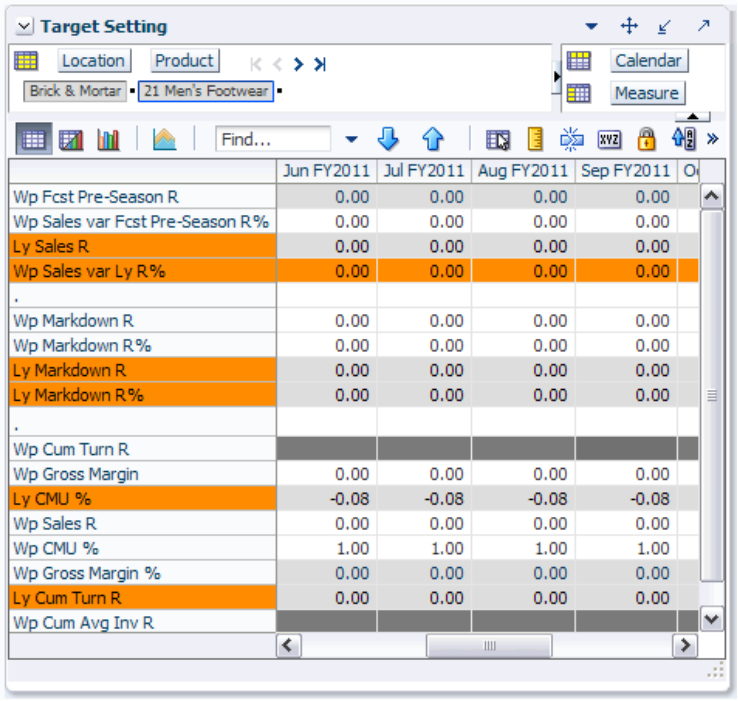
> **Note:** The cell background for read-only measures cannot be altered.

6. When finished, click **Apply** and **Close**.

The Format dialog box closes. In the view, the new formatting is visible.

Note: **Mixed** appears as a formatting option when two positions have different formatting settings. For instance, if a user has selected bold as the font style for one measure and italics for another, when the user selects both measures at once, the font style drop-down displays **mixed**. The mixed option occurs only when there are multiple selections on the left side and the properties on the right side contain a drop-down list.

Figure 5–9 Formatted Measures

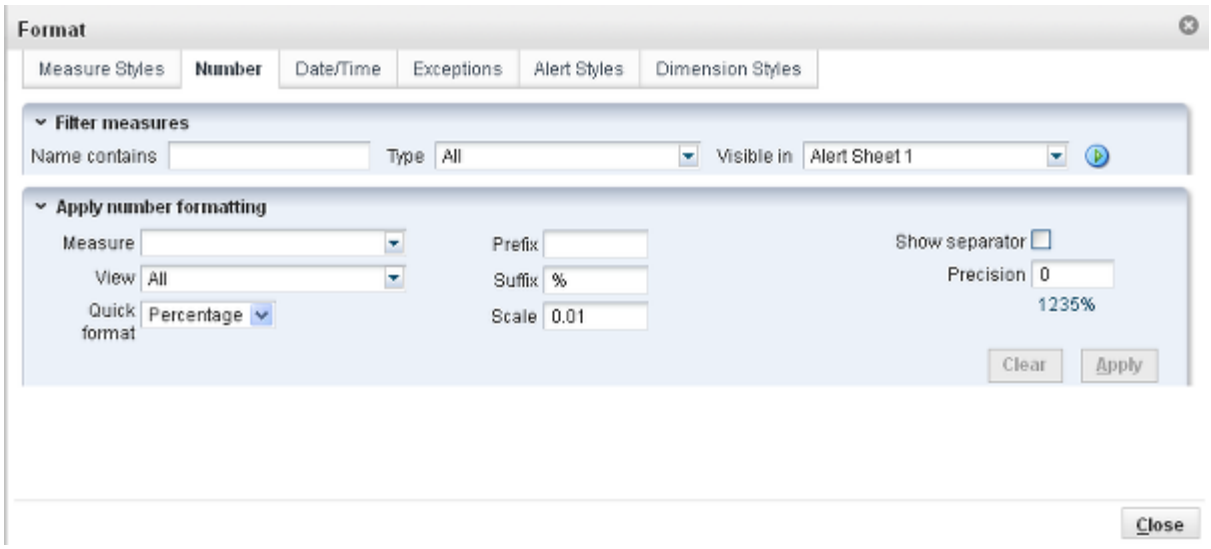


	Jun FY2011	Jul FY2011	Aug FY2011	Sep FY2011
Wp Fcst Pre-Season R	0.00	0.00	0.00	0.00
Wp Sales var Fcst Pre-Season R%	0.00	0.00	0.00	0.00
Ly Sales R	0.00	0.00	0.00	0.00
Wp Sales var Ly R%	0.00	0.00	0.00	0.00
.				
Wp Markdown R	0.00	0.00	0.00	0.00
Wp Markdown R%	0.00	0.00	0.00	0.00
Ly Markdown R	0.00	0.00	0.00	0.00
Ly Markdown R%	0.00	0.00	0.00	0.00
.				
Wp Cum Turn R				
Wp Gross Margin	0.00	0.00	0.00	0.00
Ly CMU %	-0.08	-0.08	-0.08	-0.08
Wp Sales R	0.00	0.00	0.00	0.00
Wp CMU %	1.00	1.00	1.00	1.00
Wp Gross Margin %	0.00	0.00	0.00	0.00
Ly Cum Turn R	0.00	0.00	0.00	0.00
Wp Cum Avg Inv R				

Modifying Number Formatting

From the Number tab of the Format dialog box, you can locate measures with the filter feature and then modify the number formatting for those measures. When the filter feature is not in use, the measures that appear in the **Measure** field within the Apply measure format section shows the measures that are contained in the current view.

Figure 5–10 Number Tab of the Format Dialog Box

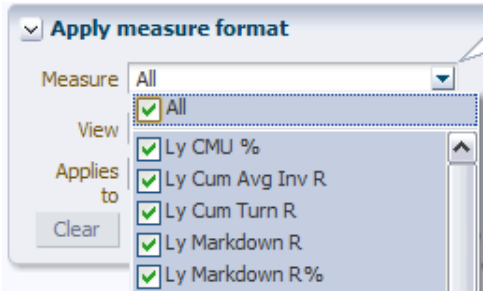


Applying Number Formats

After you have found the measures you want to change, you can edit or clear the existing number formats for those measures and add new ones. To alter the number format, complete the following steps:

1. Use the filter to find the measures you want to alter. See Using the Filter to Find Measures.
2. Select the measures you want to alter from the Measure field. You can select one, several, or all.

Figure 5–11 Select Measures



3. In the **View** field, select the views in which the measures that you want to alter appear.

   The **Quick format** field contains four preconfigured number formats: currency, percentage, thousands, and millions. If one of these formats suits your needs, select it. The values in the **Prefix**, **Suffix**, and **Scale** fields adjust accordingly. If the quick formats do not suit your needs, continue to the next steps to adjust the remaining fields.

Table 5–2 Quick Format Options

Quick Format	Description
Currency	The currency format as a scale factor of 1 and a prefix of $. It has a precision of 2. For example, $1223.45.

Table 5–2 (Cont.) Quick Format Options

Quick Format	Description
Percentage	The percentage format has a scale factor of 0.01 and a suffix of %. It has a precision of 0. For example, 16%.
Thousands	The thousands format has a scale factor of 1000 and a suffix of k. It has a precision of 0. For example, 1,235k.
Millions	The millions format has a scale factor of 1000000 and a suffix of M. It has a precision of 0. For example, 1,235M.

In the **Prefix** field, enter a string up to seven characters that you want to appear before number. Prefixes are often used for a currency symbol.

In the **Suffix** field, enter a string up to seven characters that you want to appear after the number. Suffixes are often used to denote scaling factors (k, m) or percentages (%).

In the **Scale** field, enter the factor to be applied to displayed values to produce an internal value. For instance, you can use this to display a fractional value as a percentage with a scale factor of 0.01.

Select the **Show separator** option to use the thousands separator in the view. The thousands separator depends upon the regional setting. Often though, it is a comma.

In the **Precision** field, enter the number of places to the right of the decimal to be displayed. The precision value for integers is 0.

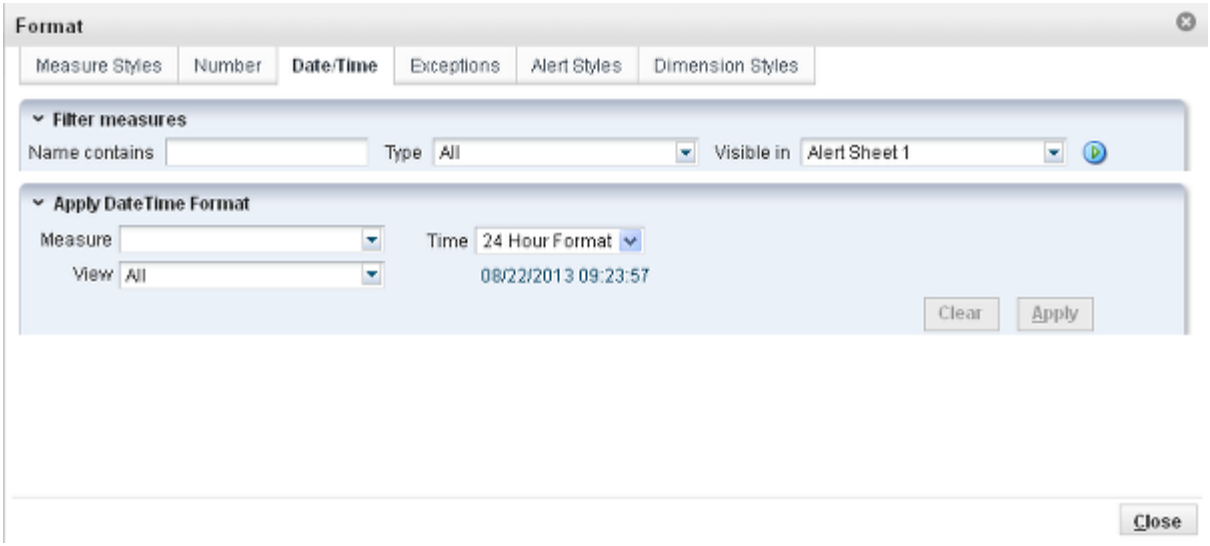
Note: Below the Precision field is an example of how the formatted number appears.

When finished, click **Apply** and **Close**. The number formatting is applied to the selected measures in the view.

Modifying Date/Time

From the Date/Time tab of the Format dialog box, you can locate date measures with the filter feature and then modify the date/time formatting for those measures. When the filter feature is not in use, the measures that appear in the **Measure** field within the Apply DateTime format section shows only date measures that are visible in the current view.

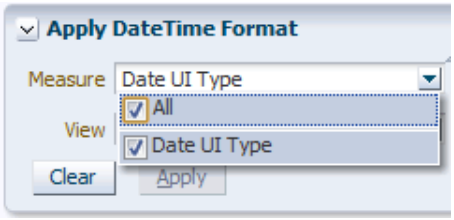
Figure 5–12 Date/Time Tab of the Format Dialog Box



Applying Date/Time Formatting

1. Use the filter to find the measures you want to alter. See Using the Filter to Find Measures.
2. Select the measures you want to alter from the Measure field. Only date/time measures are displayed in this list. You can select one, several, or all.

Figure 5–13 Select Date Measures



3. In the **View** field, select the views in which the measures appear that you want to alter appear.
4. Use the **Time** field to configure how the time is displayed.
   - Choose **No Time** if you do not want the time data to be displayed with the date.
   - Choose **12 Hour Format** to display the time in 12-hour format. Example: 10:58PM.
   - Choose **24 Hour Format** to display the time in 24-hour format. Example: 22:58PM.

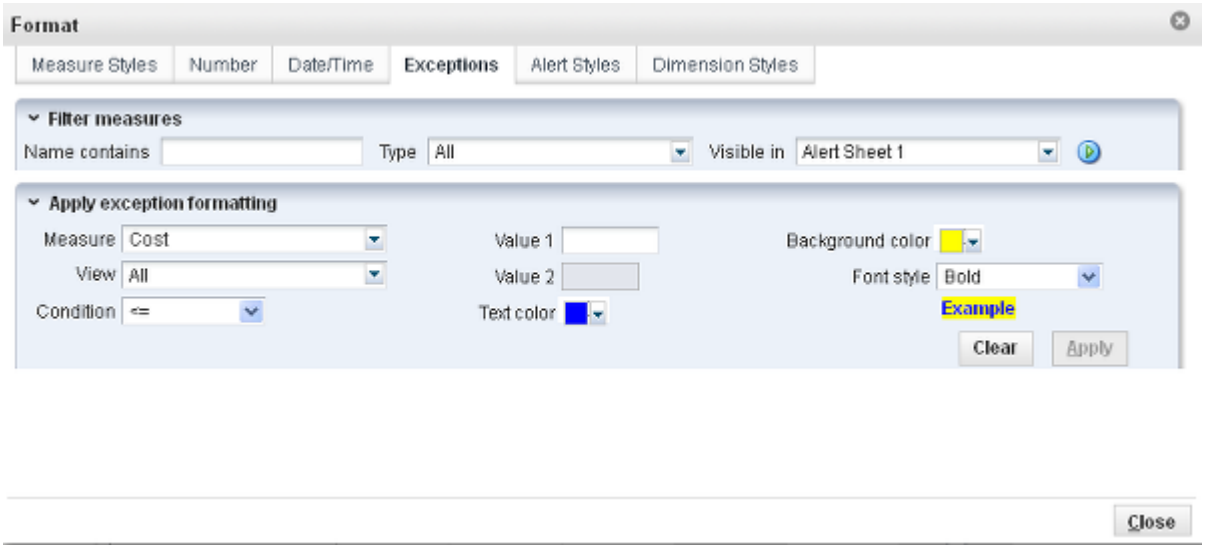
   An example of the time format you have chosen appears below the time field.
5. When finished, click **Apply** and **Close**. The date/time formatting is applied to the selected measures in the selected views.

Modifying Exceptions

Exception formatting is used for numeric measure types. Exception formatting defines the styles to be applied to a cell's value when it falls outside a defined range.

From the Exceptions tab of the Format dialog box, you can locate measures with the filter feature and then modify the exception formatting for those measures. When the filter feature is not in use, the measures that appear in the **Measure** field within the Apply measure format section shows the numeric measures that are contained in the current view.

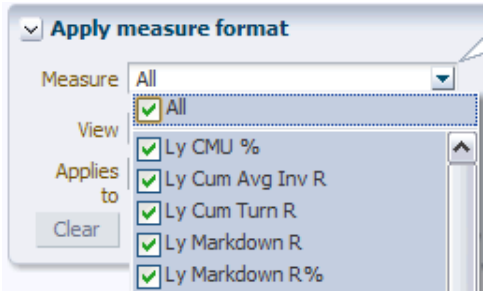
Figure 5–14 Exceptions Tab of the Format Dialog Box



Applying Exception Formatting

1. Use the filter to find the measures you want to alter. See Using the Filter to Find Measures.
2. Select the measures you want to alter from the Measure field. You can select one, several, or all.

Figure 5–15 Select Measures



3. In the **View** field, select the views in which the measures that you want to alter appear.
4. Use the **Condition** and **Value** fields to set the parameters of the exception.
   - In the **Condition** field, select one of three options:

- **< =**: Use this to select values that are *less than* or equal to **Value 1**.
- **> =**: Use this to select values that are *greater than* or equal to **Value 1.**
- **Not between**: Use this option to select values that do not fall between **Value 1** and **Value 2**. This is a way to set both the **<=** and **>=** conditions to have the same formatting styles.

- In the **Value** fields, enter the following:
  - If you chose **<=** or **>=** as the **Condition**, enter the value in **Value 1** that the exception needs to be greater or less than.
  - If you chose **Not between** as the **Condition**, enter the values that the exception should not fall between in **Value 1** and **Value 2**.

Note:

- If entering a value that has a scale factor, such as a percentage, enter the raw value. For example, if you want to enter 10%, you should enter .1.
- Exceptions applied to integer measures must have integer values for **Value 1** and **Value 2**. Otherwise an error occurs.

5. In the **Text color**, **Background color**, and **Font style** fields, choose the settings you want to apply.

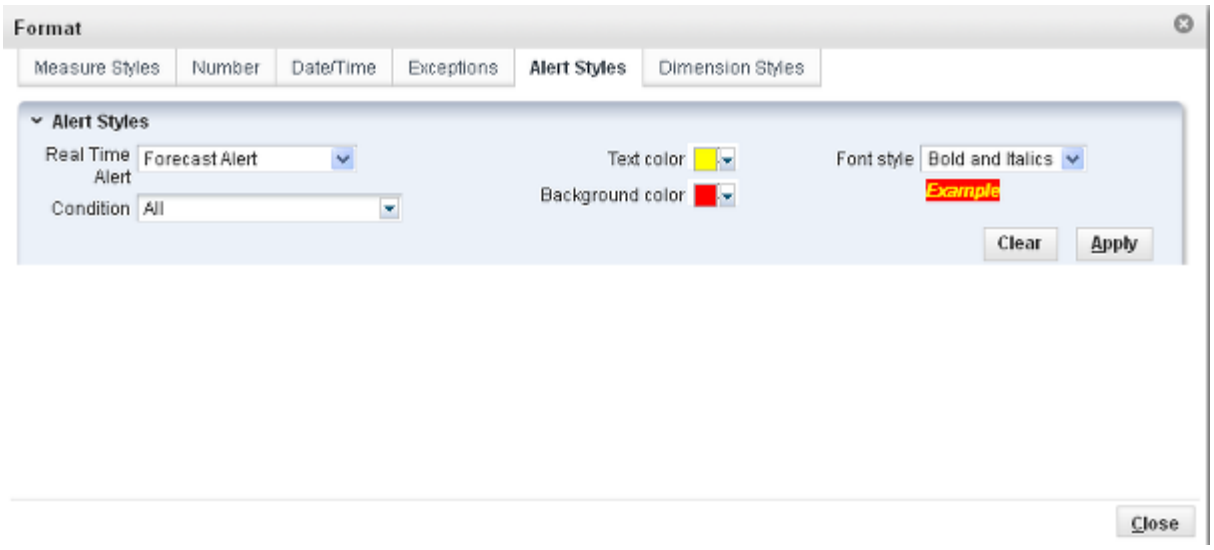
Note: An example of a formatted exception is displayed below the Font Style field.

6. When finished, click **Apply** and **Close**. The exception formatting is applied to the selected measures in the view.

Modifying Alert Styles

The alert styles can be modified for Real Time Alerts. This enables users to customize their visual appearance. This option will only be available if Real Time Alerts are present in the workbook. The changes apply to the specific workbook the alert is in.

Figure 5–16 Alert Styles Tab of the Format Dialog Box



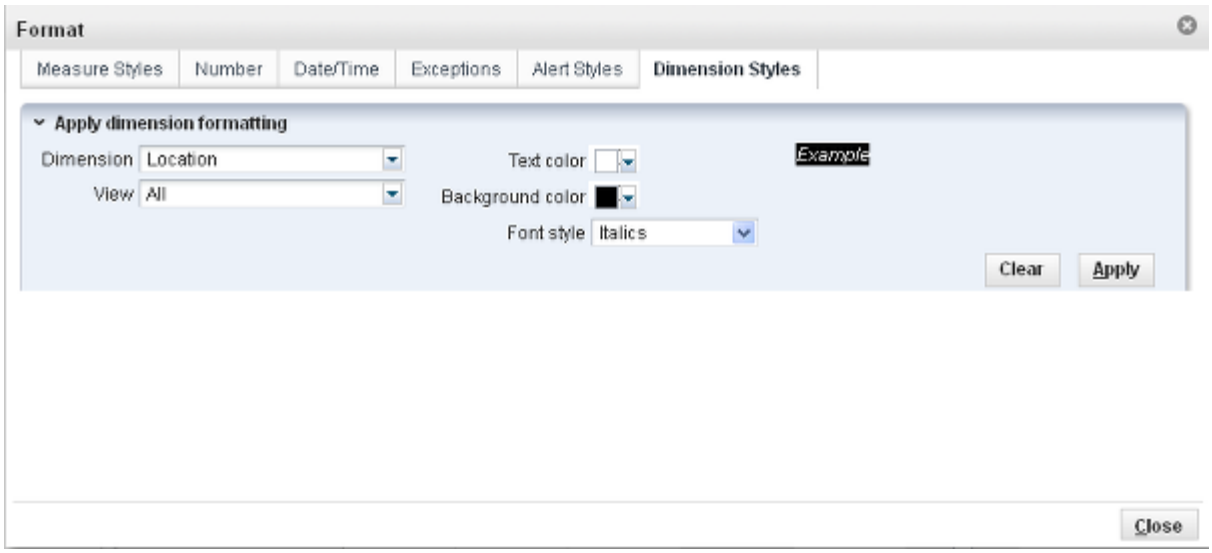
Applying Alert Formatting

1. Select the alerts you want to alter from the **Real Time Alert** field. You can select one, several or all.
2. In the **Condition** field, select the alert conditions you want to modify.
3. Use the **Text color**, **Background color**, and **Font style** options to configure the appearance of the alert. The visual appearance is then updated in the provided example.
4. When you are finished, click **Apply** and **Close**. The modified formatting is applied to the selected Real Time Alerts in the selected views.

Modifying Dimension Styles

From the Dimension Styles tab of the Format dialog box, you can specify header styles for one, a few, or all dimensions. The filter measure feature is not available on this tab because dimension formatting applies only to dimensions, not measures.

Figure 5–17 Dimension Styles Tab of the Format Dialog Box



Applying Dimension Styles

1. In the **Dimension** field, select the dimension that you want to alter. You can select one, a few, or all.

   Note: **Measure** appears as an option in the **Dimension** field. If you choose **Measure** as the dimension, you can set a default header style for measures, but not a default cell style.

2. In the **View** field, select the views in which these dimension styles should be used.
3. In the **Text color**, **Background color**, and **Font style** fields, choose the settings you want to apply.

   Note: An example of a formatted dimension header is displayed below the Font Style field.

4. When you are finished, click **Apply** and **Close**.

The Format dialog box closes. In the view, the new dimension styles are visible.

Saving Formats

RPAS lets you to configure the formatting settings of workbooks and views and save those settings for future use. You can configure the appearance of measures, grids, axes, and exceptions; set the type-specific parameters of measures; and enable synchronized page scrolling.

The following settings are saved in the formatting database:

- Dimension and measure tile locations
- Visible dimension levels (aggregate roll-ups)
- Measure order and format

- Format menu settings
- Slice selection
- Block view vs. outline view

Note: Split level/dimension settings and the sort order without attributes setting are not saved in the formatting database.

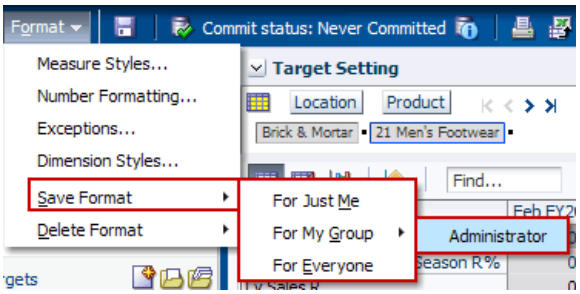
Format Levels

The formatting settings you create are stored along with the workbook in the domain. Because workbook formats are saved just as workbooks are, they can be made available to other users. Saved formats are used when being new workbooks.

A workbook format can be saved at three availability levels:

- **For Just Me**: The workbook format is available only to the user who created it.
- **For My Group**: The workbook format is available to all members of the user's group. Users who belong to more than one group can choose which group to make the workbook available to.
- **For Everyone**: The workbook format is available to all users in the organization.

Figure 5–18 Save Format



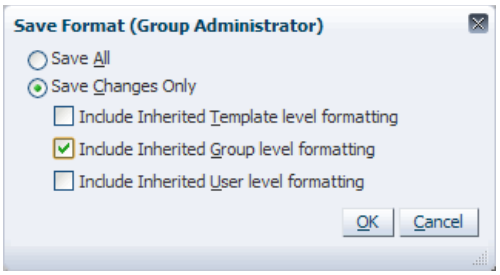
When a new workbook is created, the most specific set of workbook formats that apply are taken as the new workbook format. When a workbook formatting set exists for an availability level (user, group, world), the entire set is taken from that level and applied to the new workbook. For example, if there are user settings for the current user, all workbook formatting from those user settings are applied.

Note: When a new workbook is created, the user's default group is used for the group availability level check.

Saving Options

When saving formatting settings, you can save all formatting, using Save All, or just save the changes you have made, using Save Changes Only.

Figure 5–19 Save Format Options



Save Changes Only

The Save Changes Only option allows you to save only what you have changed so that a subset of the workbook's formatting is merged into the existing saved format. This subset consists of changes made since the workbook was first constructed. You can also include changes inherited from any of the saved styles. During the merge, any conflicting settings in the existing saved format are overwritten, and non-conflicting settings are left alone. This allows multiple users to manage group and template styles. Users can write to the same files without necessarily writing over the changes of others.

Since formatting is saved incrementally, non-conflicting changes to formatting can be propagated throughout different levels. When a workbook is created, a superset of all changes in the applicable user, group, and template level styles is made, with all conflicting changes resolved by the lowest level, user. Therefore, if a change is made to the group formatting, each group member sees it in every new workbook, as long as a conflicting formatting setting does not exist at the user level.

Note: The saved formats you inherit may have changed since you built your workbook. You should have a strategy in place for managing multiple users who save to the group and template formats.

Save All

The Save All option can be used if you do not want to inherit any changes made to a higher level. Selecting Save All writes an entry for each formatting setting, whether or not you changed it from the group or template format. Essentially, this blocks any changes that were made at a higher level from the level at which you are saving.

After Save All is applied to the user format, that user is not able to see changes made to the group or template level formatting again. Accordingly, if Save All is applied to a group format, then no member of the group can see the changes made to the template level. However, each group member maintains access to any user level overrides that he or she saved. Since Save All overrides all formatting, the only way to revert to Save Changes Only is to delete the formatting at that level.

Inheritance Formatting

You can select the check boxes on the Save Format dialog box to inherit the formatting information from other levels.

For example, for any setting at the group level that needs to be propagated to the template level, select **View** and then **Save Format for All**. The Save Format dialog box appears. Click **Save Changes Only** and then select **Include Inherited Group Formatting**.

For any setting at the template level that needs to be propagated to the user level, select **View** and then **Save Format for User**. The Save Format dialog box appears. Click **Save Changes Only** and then select **Include Inherited Template Formatting**.

Note: Chart format data is not merged into the existing saved format as other data is. It is saved as Save All (overwriting existing formatting), even if Save Changes Only is selected.

Deleting Formats

You can delete formats that you created. To delete a format, complete the following steps.

1. Open the workbook that has the formatting you want to delete.
2. From the View menu, click **Delete Format**.
3. Choose the level you want to delete it from.
   - **For Just Me**: The workbook format is deleted only for the user who created it.
   - **For My Group**: The workbook format is deleted for all members of the user's group.
   - **For Everyone**: The workbook format is deleted for all users in the organization. Only administrators can save for everyone.

6

Dimensions, Levels, and Positions

Dimensions describe the top-to-bottom relationship between the levels or positions of the dimensions in RPAS. They reflect the dimensions set up at your business and being used by the merchandising solutions.

RPAS supports many alternative dimensions that provide different roll ups and help you analyze the data from a different perspective.

Levels are subdivisions of a dimension. Levels group information of the same type. For instance, a level within the Product dimension could be Department. The Department level would contain all the departments that exist.

Positions are the individual members of the level.

This chapter describes the various tasks you can perform with dimensions, levels, and positions. It includes the following sections:

- Showing/Hiding Levels
- Expanding and Collapsing Levels
- Level Splitting
- Showing and Hiding Positions

Showing/Hiding Levels

Dimension levels that appear in the view are based on the configuration. Only levels configured for a view are visible in the view. In the Fusion Client, you can show or hide the levels using:

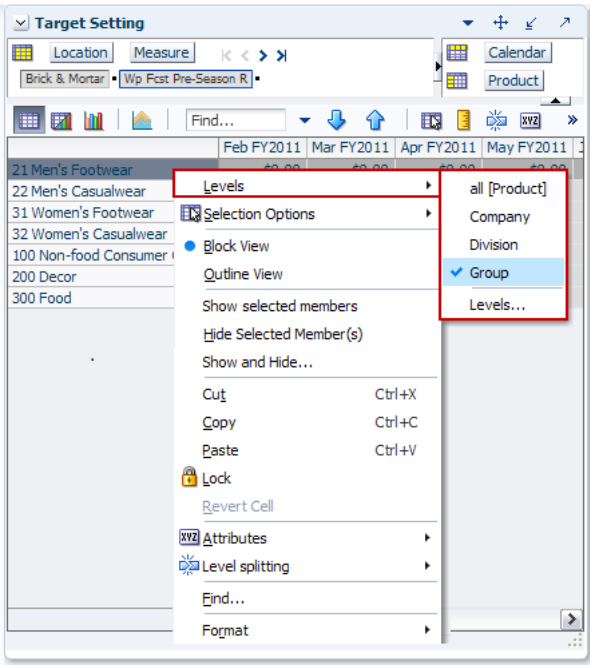
- Right-click menu
- Levels tab in the Dimension dialog box

Using the Right-Click Menu

To show or hide levels using the right-click menu:

1. In the view, right-click anywhere in the area that displays the dimension.
2. Select the level you want to show or hide.

Figure 6–1 Right-Click Menu



The view updates to display or hide the relevant level.

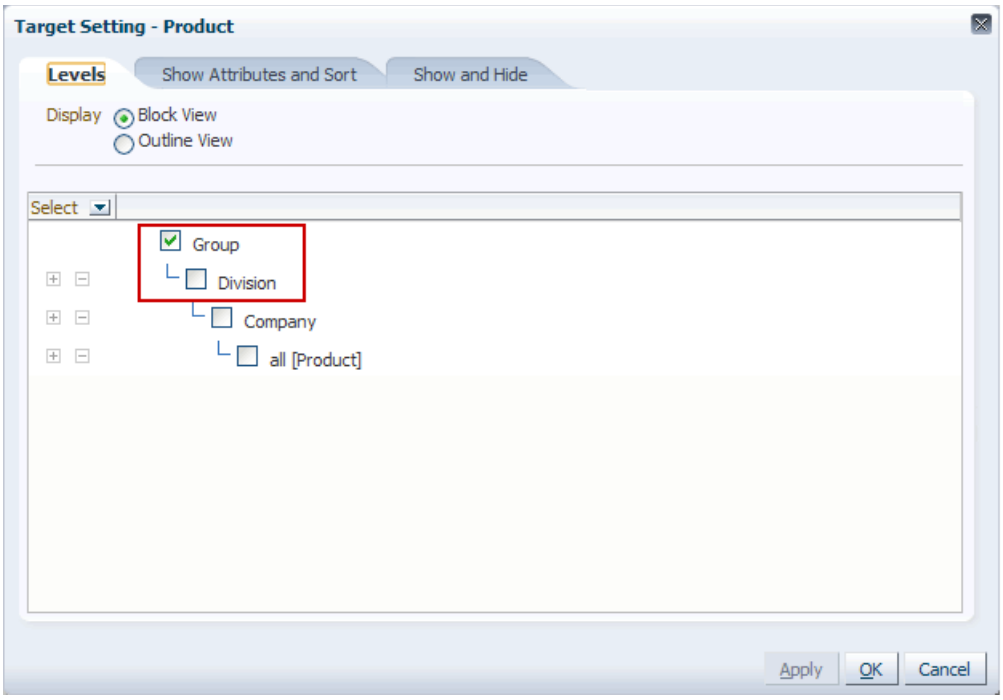
Note: You can perform the same action by accessing the right-click context menu in the page edge.

Using the Dimension Dialog Box

To show or hide levels and select the display type using the Dimension dialog box, complete the following steps:

1. In the page edge, click the dimension tile you want. The Dimension dialog box appears.

Figure 6–2 Dimensions Dialog Box, Levels Tab



2. Click the Levels tab. The Levels tab shows all the levels and alternate roll-ups and enables you to select one or more levels within a single dimension.
3. Select the levels you want to show or hide using the check boxes to the left of the level name.
4. Select **Block View** or **Outline View** as the display type.
5. Click **OK** to apply the changes and close the dialog box.

   Or, click **Apply** to apply the changes and continue working on the other tabs.

Expanding and Collapsing Levels

Although you can click the Expand/Collapse buttons next to each level displayed in the view, it can be time consuming if there are many levels. The Fusion Client includes the following options to help you expand or collapse levels easily:

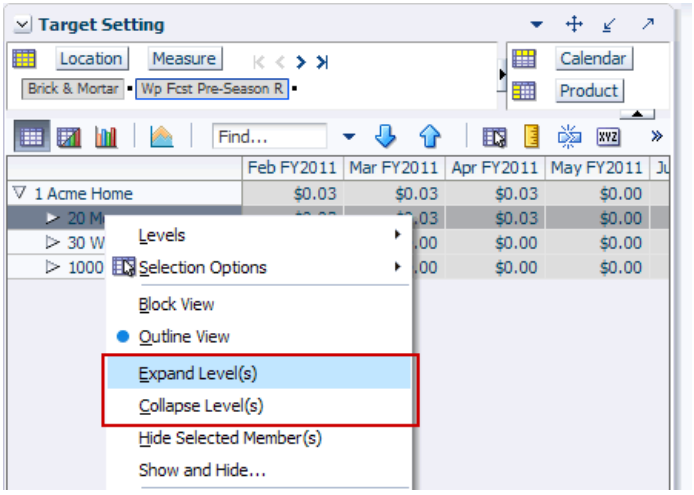
- Right-click menu
- Levels Tab in the Dimension pop-up

Using the Right-Click Menu

To expand or collapse levels using the right-click menu:

1. Select the levels you want to expand or collapse, and right-click.
2. On the right-click menu, select **Expand Level(s)** or **Collapse Level(s)**.

Figure 6–3 Expand Level and Collapse Level Options in the Right-Click Menu

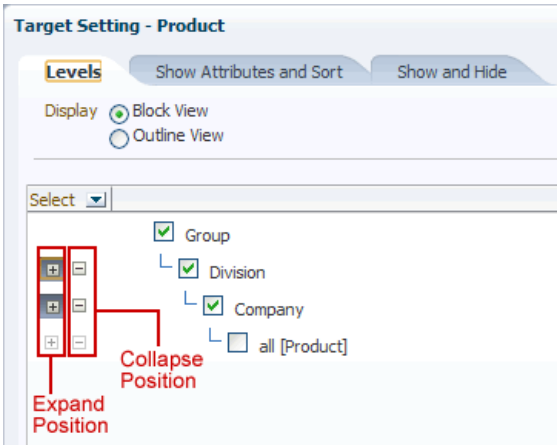


Using the Dimension Dialog Box

To expand or collapse levels using the Dimension dialog box:

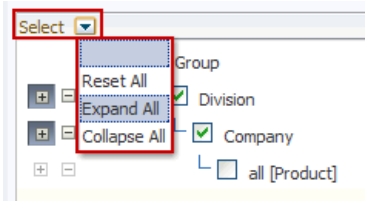
1. In the page edge, click the dimension tile of the dimension you want to collapse or expand. The Dimension dialog box appears.

Figure 6–4 Dimensions Dialog Box, Levels Tab



2. On the Levels tab, select the relevant check box to expand or collapse all the positions at the level. To expand or collapse all positions at all the visible levels, click the Expand/Collapse shortcut menu on the top.

Figure 6–5 Expand/Collapse Shortcut Menu



Note: The expand and collapse check boxes are enabled only for the levels selected.

3. Click **OK** to apply the changes and go back to the view.

   You can also click **Apply** to apply the changes and continue working on the other tabs.

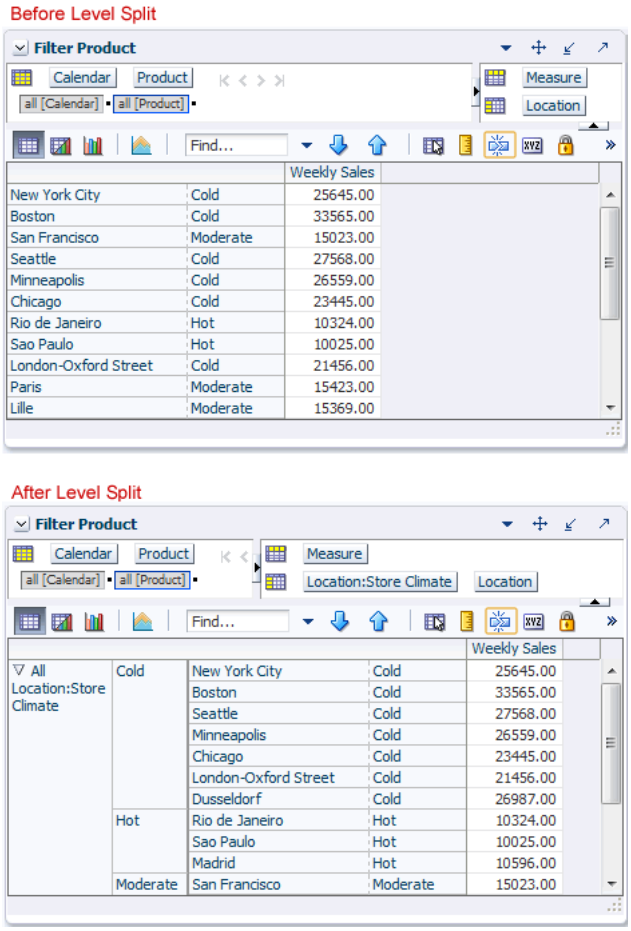
Level Splitting

Level splitting allows you to group dimension data based on position characteristics defined by attribute values.This enables users working with large sets of data to group together subsets of data to make the information easier to work with. These attributes can be either predefined (set up during the configuration process) or dynamic (defined by a user and made available globally).

For example, for an attribute that describes the climate of a store location, you can group those store locations by climate using a level split. This lets a planner working on the winter season to first work with stores in cold weather regions and then work with stores in more temperate regions.

Level splitting is applied to the entire workbook, although when the split was defined it may have been specified that the split should only be shown in some of the views in the workbook. As each dimension in the workbook can only have one split applied to it at any one time, applying a split to a view without any apparent grouping may still result in a message saying that a split already exists. Users then have the option of continuing with the existing split or clearing it and applying the new split to the entire workbook.

Figure 6–6 Level Splitting Example



As shown in Figure 6–6, the attribute values (cold, moderate, hot) act as positions within the level split. Each level split contains only the positions that have that attribute: only the cold locations appear in the cold split, only the hot locations appear in the hot split, and so on.

The level split has its own dimension tile. You can move this tile just as you would a dimension tile because level splits behave like independent dimensions. See Creating a New Split for more information.

Behind the scenes, a hierarchy is built based on attribute values at the level that is split, allowing the aggregations to be correctly calculated and providing a spreading for values edited at aggregated levels. Other capabilities, such as locking and protection processing, are fully functional on the positions of the split.

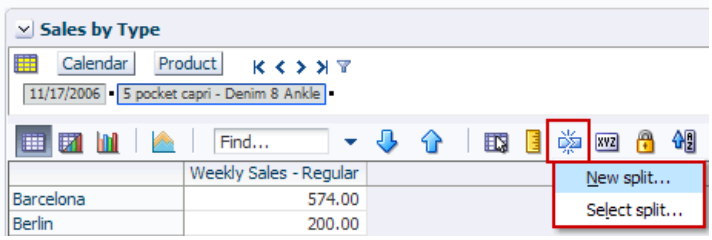
Creating a New Split

Before you can create a level split, you must have an attribute, dynamic or static, to base the split on. Static attributes are defined in the Configuration Tool and can only be changed by users with access to the tool. Dynamic attributes can be created by any user. To learn how to create a dynamic attribute, see Creating Dynamic Attributes.

You can define multiple splits for a specific dimension but only one of those splits can be applied to the dimension at any one time. If there are multiple dimensions in use for the pivot table, each of these dimensions can have a split applied to it.

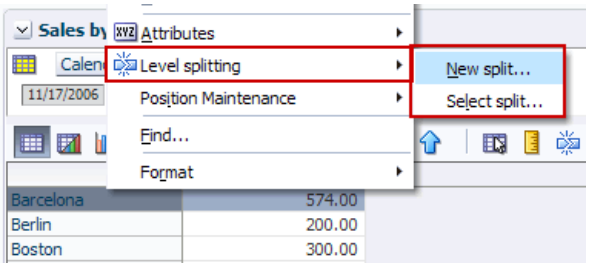
1. Click the **Level Splitting** icon in the toolbar. In the Level Splitting menu, select **New Split**.

Figure 6–7 Level Splitting Icon



Or, right-click a position. The right-click context menu appears. Select **Level Splitting**. In the Level Splitting menu, select **New Split**.

Figure 6–8 Level Splitting Option in the Right-Click Context Menu



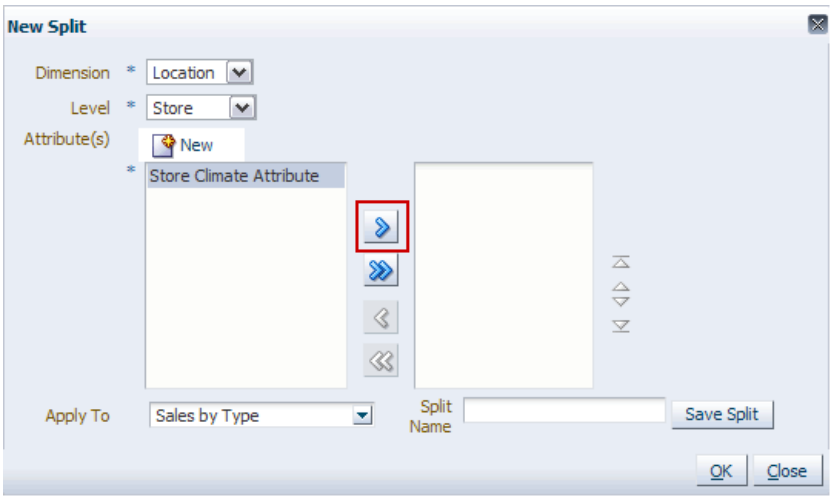
2. The New Split dialog box appears (Figure 6–9). Select the following options:

   - **Dimension**: Select the dimension that you want to split.
   - **Level**: Select the level that you want to split into groups.
   - **Attributes**: Check the attribute that you want to use to group the levels into and use the **Move** icon to move it to the right side. More than one attribute can be selected.

     If multiple attributes are selected for a split, the order they are selected will determine the order they are applied. The first attribute in the list will be used to group the dimension into bands. The second attribute in the list will then be used to subdivide within the initial bands, and so on. The order can be modified by using the up or down arrows in the New split dialog box.

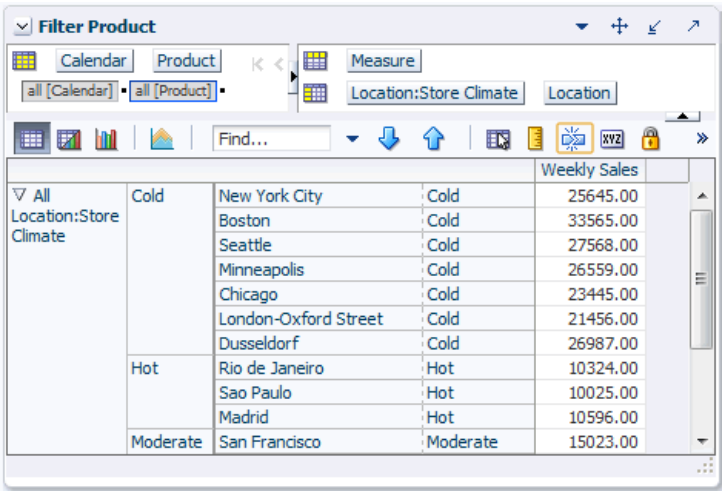
     If you want to create a new attribute, use the **New Attribute** icon.
   - **Apply To**: Select the views that the split should apply to. You can choose one view, some views, or all views.
   - **Split Name**: To save the split for later use, enter a name and click **Save Split**.

Figure 6–9 New Split Dialog Box



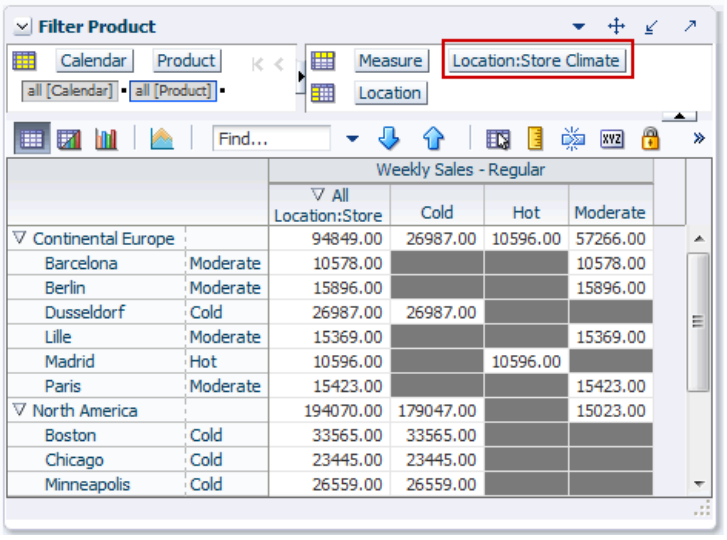
3. When finished, click **OK**. The dialog box closes, and the levels are split, as shown in Figure 6–10.

Figure 6–10 New Level Split



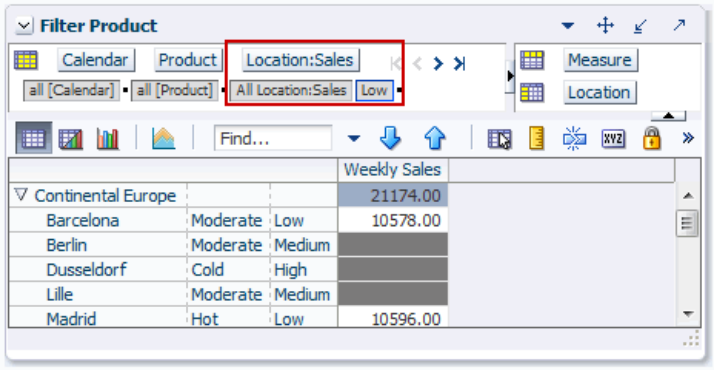
You can move the split dimension to a different axis, as shown in Figure 6–11. Moving the split dimension to a different axis can be helpful when you have aggregate levels of the base dimension. In Figure 6–11, the base dimension is Location. When aggregating that dimension, you can see the total Weekly Sales for regions by climate.

Figure 6–11 Split Dimension on Different Axis



You can also move the split dimension to the page edge, as shown in Figure 6–12.

Figure 6–12 Split Dimension on Page Edge

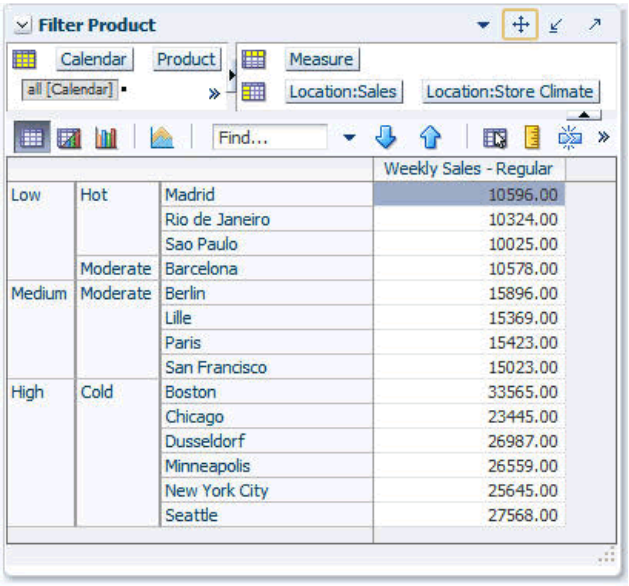


You can use more than one attribute to define a split for a dimension. In Figure 6–13, two attributes were used to define the split.

- Climate (Hot, Moderate, Cold)
- Sales (Low, Medium, High)

These are used in the priority order used to select them when the split was defined. Because Climate was the first attribute selected, the stores are first grouped by the climate bands. Within a specific climate band, the stores are then grouped by sales. These splits can be moved to different axes or the page edge.

Figure 6–13 A Split with Two Attributes

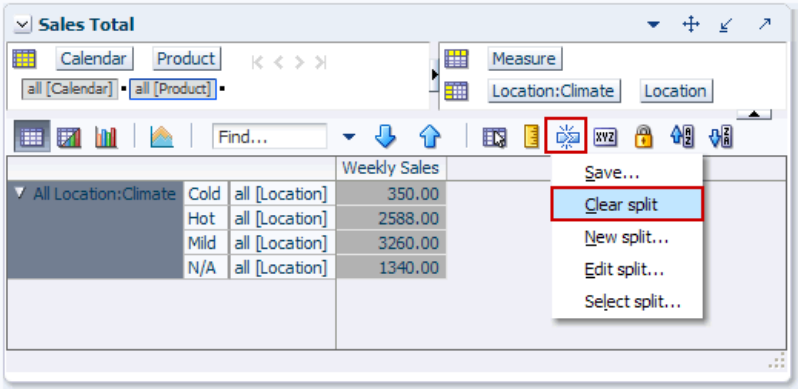


Clearing a Split

To clear or remove a split from the view, complete the following steps:

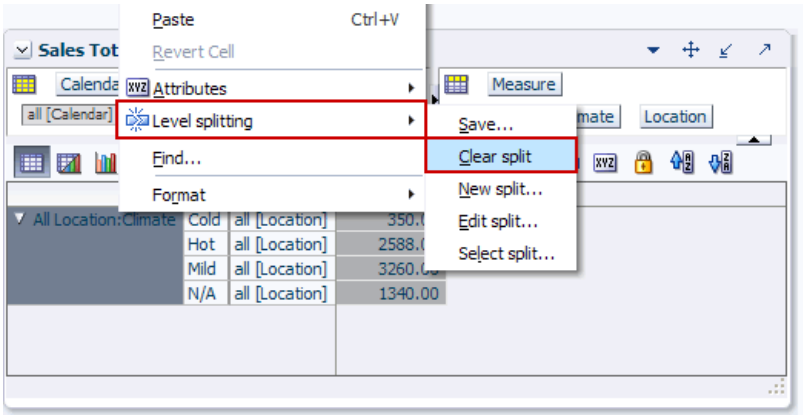
- Click the **Level Splitting** icon in the toolbar. Then select **Clear Split**.

Figure 6–14 Clearing a Split with the Level Splitting Icon



- Or, right-click a position. In the right-click context menu, select **Level Splitting**. Then, select **Clear Split**.

Figure 6–15 Clearing a Split with the Right-Click Context Menu



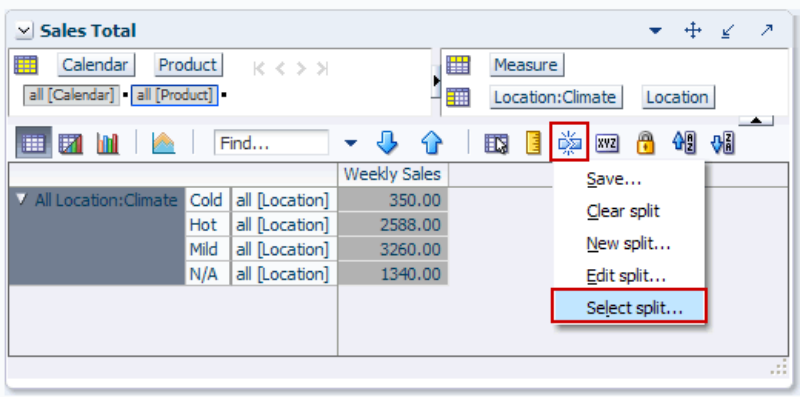
The split is removed from the view.

Selecting a Split

To apply a saved split to a view, complete the following steps:

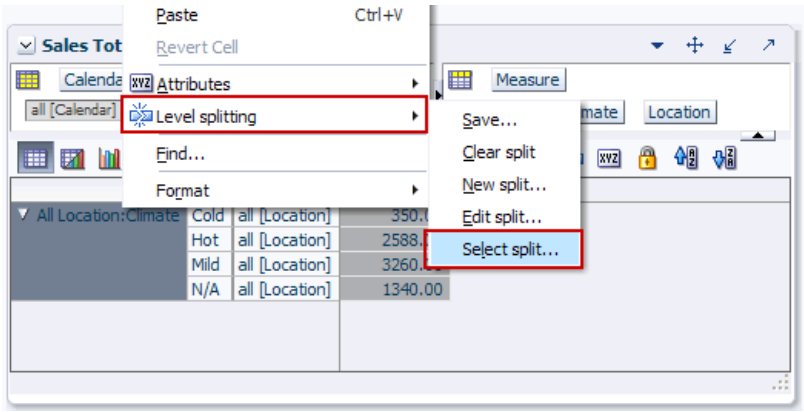
1. Click the **Level Split** icon in the toolbar and then click **Select Split**.

Figure 6–16 Select Split: Level Splitting Icon



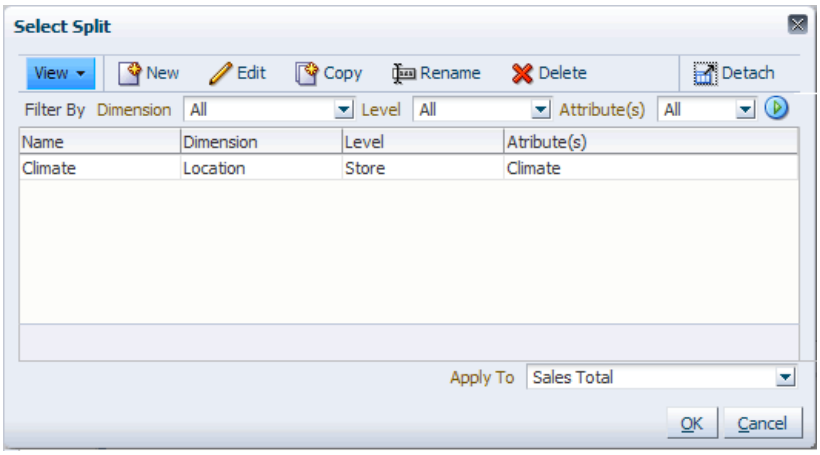
Or, right-click a position. In the right-click context menu, select **Level Splitting** and then **Select Split**.

Figure 6–17 Select Split: Right-Click Context Menu



2. The Select Split dialog box appears. Select the split you want to apply to the view.

Figure 6–18 Select Split Dialog Box



3. Click **OK**. The split is applied to the view.
   - If no existing split exists for the dimension the split is being applied to, the split will be immediately applied.
   - If an existing split exists for the dimension the split is being applied to, a warning dialog box will appear.

Figure 6–19 Existing Split Warning

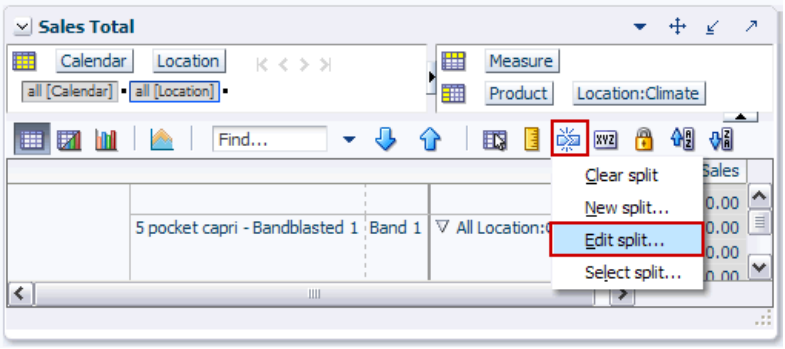
As only one split can be applied to a specific dimension at one time, users have the option of continuing with the existing split or removing it and applying the new one.

Editing a Split

To edit an existing split, complete the following steps:

1. Ensure that a split appears in the view.
2. Right-click the level split or click the **Level Split** icon.
3. From the Level Split menu, select **Edit Split**.

Figure 6–20 Editing a Level Split



4. The Edit Split dialog box appears.
5. Edit the split as necessary and click **OK**.

> **Note:** A split cannot be edited if it is in use in a worksheet. To edit the split, first clear the split from the workbook.

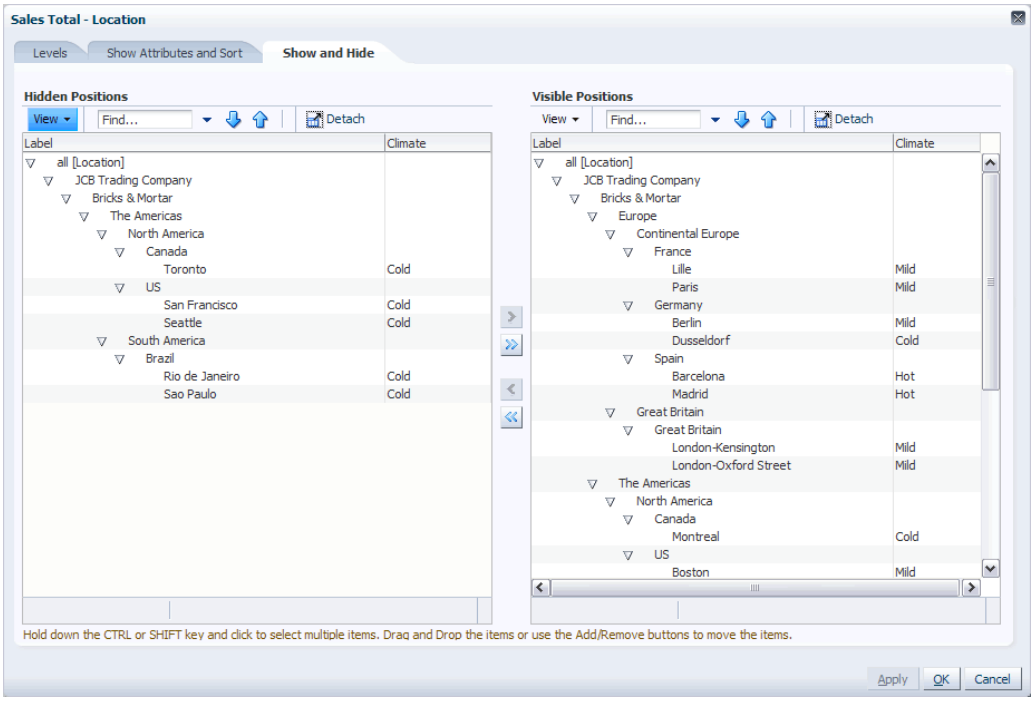
Showing and Hiding Positions

Positions that appear in the view are based on the configuration. Only positions configured for a view are visible in the view. In the Fusion Client, you can show or hide the positions using the Dimension dialog box.

To show or hide positions:

1. In the Page Edge and Tiles area, click the dimension tile you want. The Dimension dialog box appears.
2. In the Dimension dialog box, click the **Show and Hide** tab.

Figure 6–21 Dimension Dialog Box, Show and Hide Tab



3. Select the positions you want by holding down the CTRL or SHIFT key.
4. Click the **Add** and **Remove** arrows to move positions between the **Visible Positions** and **Hidden Positions** areas.

   Or

   Drag and drop the positions between these areas.
5. Click **OK** to apply the changes and go back to the view.

   You can also click **Apply** to apply the changes and continue working on the other tabs.

   Use the **Add All** and **Remove All** arrows to move all the positions between the Visible Positions and Hidden Positions area.

7

Measures

Measures represent the events or measurements that are recorded, while the positions in the dimensions provide a context for the measurement. Measures are defined based on the business rules set in the application. The dimensionality of a measure is configured through the definition of its base intersection, which is the collection of levels (one per appropriate dimension) defining the lowest level at which the information is stored for the measure.

Measure names are completely configurable and typically named using a convention that identifies each component and the meaning of the measure.

This chapter describes the various tasks pertaining to measures. It includes the following sections:

- Showing/Hiding/Reordering Measures
- Insert Measures

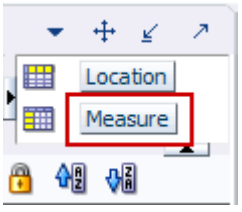
Showing/Hiding/Reordering Measures

Measures that appear in the view are based on the configuration, and only measures configured for a view are visible in the view. In the Fusion Client, you can show, hide, or reorder the measures using the dimension dialog box.

To show or hide measures:

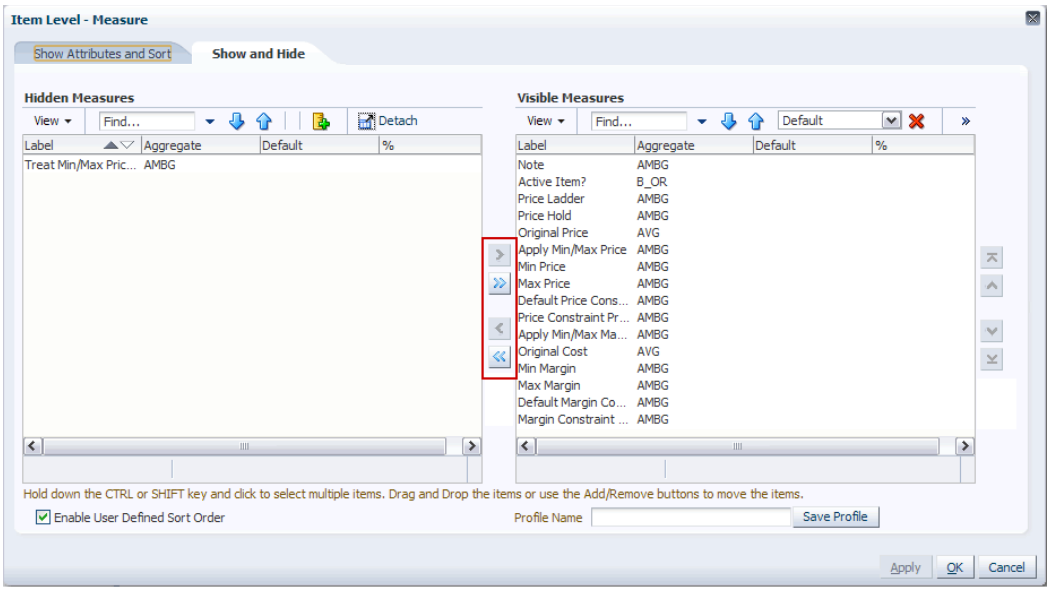
1. In the page edge, click the **Measure** tile.

Figure 7–1 Measure Tile



The Measure Dimension dialog box appears.

Figure 7–2 Measure Dimension Dialog Box, Show and Hide Tab



2. On the Show and Hide tab, select the measures you want by holding down the **Ctrl** or **Shift** key.
3. Click the **Add and Remove** arrows to move measures between the **Visible Measures** and **Hidden Measures** areas.

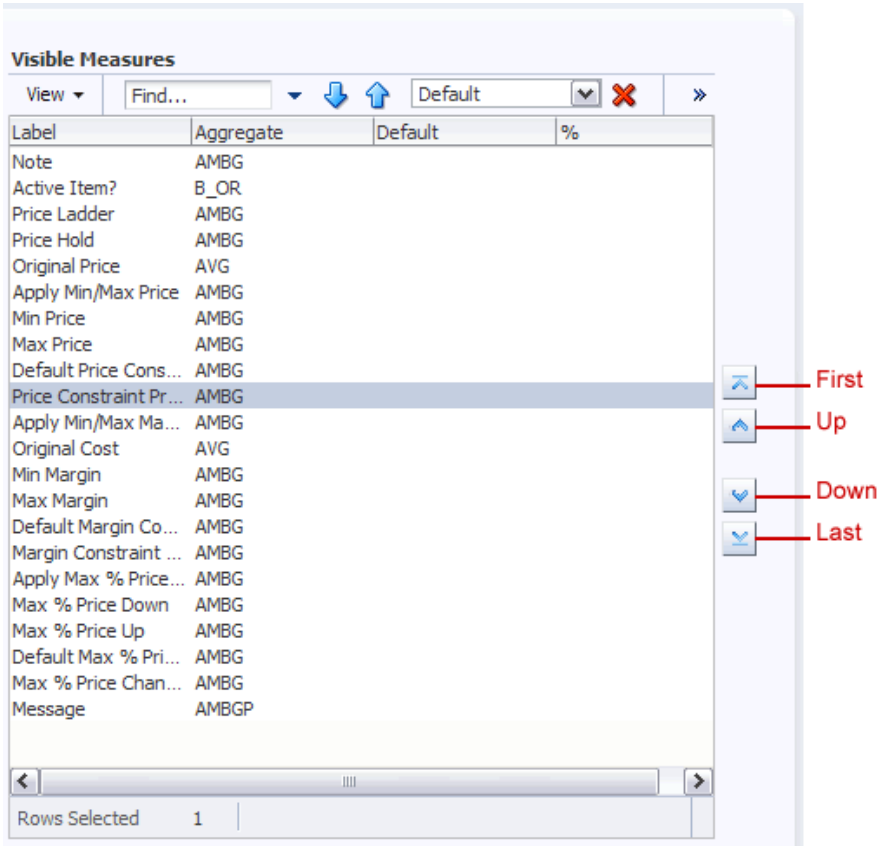
   Or, drag and drop the measures between these areas.
4. Click **OK** to apply the changes and go back to the view.

   You can also click **Apply** to apply the changes and continue working on the other tabs. Use the **Add All** and **Remove All** arrows to move all the measures between the Visible Measures and Hidden Measures area.

To reorder measures:

- On the **Show and Hide** tab, select the measures you want to reorder and click the **First**, **Up**, **Down**, or **Last** arrows until you get the order you want.

Figure 7–3 Measure Dimension Pop-Up > Show/Hide Tab



Note: Sorting the measures in the Visible Measures area does not reorder the measures in the view. To reorder the measures, use the **First**, **Up**, **Down**, and **Last** arrows.

Insert Measures

When you want to see a measure that is not part of the current workbook, but you do not want to build a new workbook to include that measure, you can use the Insert Measures feature. To use this feature, there must be an active view that defines the view where the measures will be inserted. You do not have to calculate the workbook to insert measures. The measures available for insertion depend upon the following criteria:

- Measure is configured to be insertable (the Insertable attribute is true).
- Measure security grants read/write or read-only access rights to the user.
- Measure has a storage database.
- Measure is not a recalc measure.
- Its base intersection is compatible with the base intersection of the workbook.
- Measure is not already present in this workbook.

Note: The visibility and editability of the inserted measure and any dependent measures varies, based on the permissions granted to the user for the inserted or dependent measures.

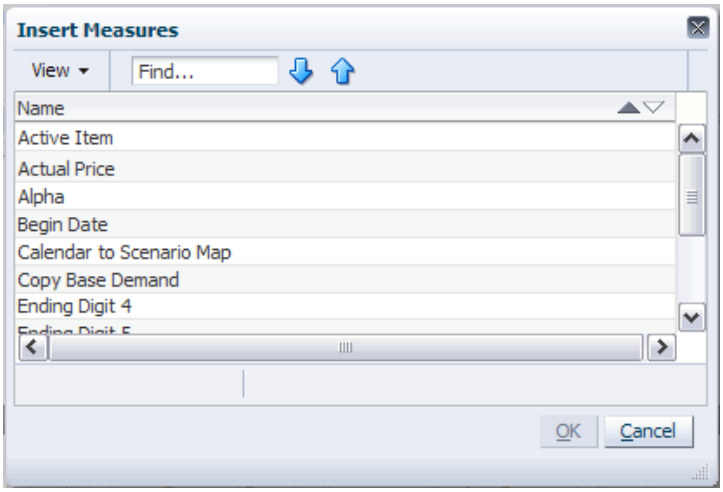
For more information about measure permissions, see the "Measure Rights View" section of the *Oracle Retail Predictive Application Server Administration Guide for the Fusion Client*.

Insert Measures Dialog Box

The Insert Measures dialog lists the labels of the measures available to be inserted. This list is initially sorted in ascending alphabetical order, but you can click the heading to change the sorting. You can also use the find option to locate a measure. Only measures that can be inserted in the current view appear in the list.

This dialog launches only if there is at least one insertable measure for the workbook. If not, an error dialog appears, stating "There are no measures to insert."

Figure 7–4 Insert Measures Dialog Box Menu



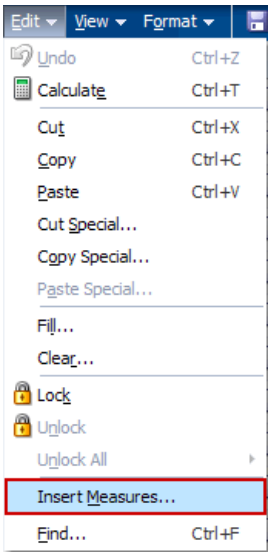
Accessing the Insert Measures Dialog Box

There are three ways to access the Insert Measure dialog box: the Edit Menu, the Context Menu, and the Show and Hide tab in the Measure Dimension dialog box.

From the Edit Menu

In the Edit menu, click **Insert Measures**.

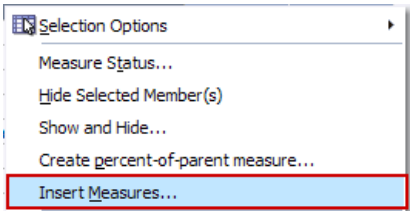
Figure 7–5 Insert Measures Option in Edit Menu



From the Right-Click Context Menu

Right-click a measure in the pivot table. The right-click context menu appears. Click **Insert Measures**.

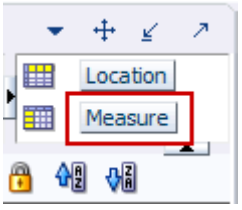
Figure 7–6 Insert Measures Option in Right-Click Context Menu



From the Show and Hide Tab

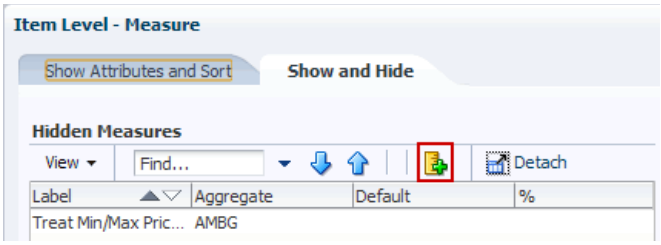
Click the **Measures** tile.

Figure 7–7 Measure Tile



The Measure Dimension dialog box appears. On the Show and Hide tab, click the **Insert Measures** icon.

Figure 7–8 Insert Measures Option on Show/Hide Tab



Inserting a Measure

To insert a measure, complete the following steps:

1. Open the Insert Measures dialog box from the Edit menu, Context menu, or Show and Hide tab, as described in Accessing the Insert Measures Dialog Box.
2. In the Insert Measures dialog box, select the measure you want to insert.

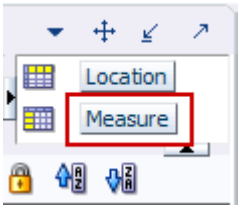
   To select more than one measure, hold the **Ctrl** key and click the measures. As the measures are selected, they become shaded.
3. Click **OK**.

The dialog box closes, and the selected measures are inserted in the workbook for the current view.

When inserting measures from the Show and Hide tab, you have the additional option of specifying where you want the measures to be inserted.

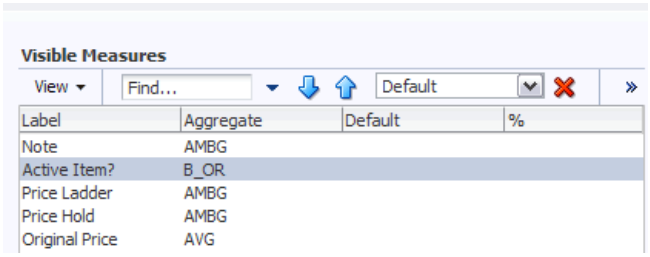
1. Click the **Measure** dimension tile. The Measure Dimension dialog box appears.

Figure 7–9 Measure Dimension Tile



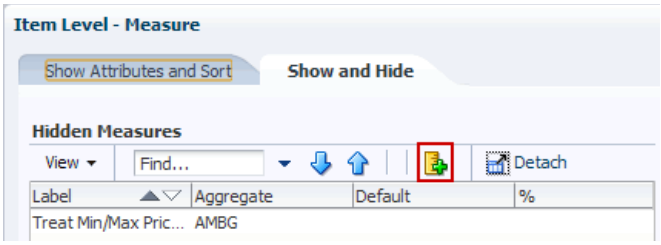
2. On the Show and Hide tab, in the Visible Measures section, select the measure that you want the inserted measure to appear under.

Figure 7–10 Selected Measure in the Show and Hide Tab



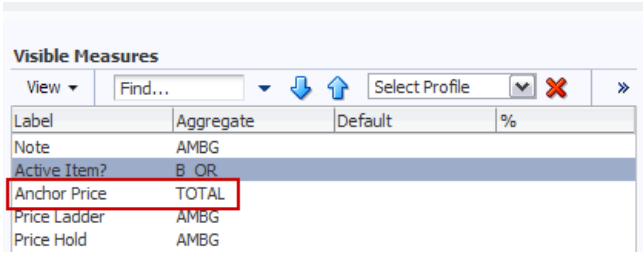
3. Click the **Insert Measures** icon.

Figure 7–11 Insert Measures Option on Show/Hide Tab



4. The Insert Measure dialog box appears. Select the measures you want to insert and click **OK**. The dialog box closes.
5. The inserted measure appears below the measure selected in Step 2.

Figure 7–12 Inserted Measure



About Inserted Measures

Here are a few things you should know about inserted measures.

- After measures are added to a particular view, they cannot be added to other views in the workbook. They do not appear in subsequent Insert Measures dialogs.
- After a measure is added to a workbook, it cannot be deleted. The only way to revert the workbook is to close it without saving and open a previously saved version.
- Each measure selected for insertion is added to the view and made visible.
- If the inserted measure has dependent measures, those are inserted as well. Dependent measures are measures configured to act as upper or lower bounds of the inserted measure. If the dependent measures have dependent measures themselves, those measures are also inserted.

  Dependent measures are inserted in the view but are not automatically made visible in the views. You can make them visible by moving them from the Hidden Measures section to the Visible Measures section in the Show and Hide tab of the Measure Dimension dialog box.
- Inserted measures have only a load rule. Inserted measures with writable access can be edited within the workbook, but because they have no commit rule, the edits cannot be committed to the domain.
- Inserted measures can be formatted, and that formatting can be saved to a template. However, the inserted measures are not added to the template and are not present when new workbooks are built. If measures are inserted later, they can still use the formatting saved in the template.

8

Measure Profiles

Measure profiles are customized groups of measures that you can create and use in views. Instead of adding or removing measures from the default measure list each time you work with a particular view, you can save that customized group of measures as a measure profile and load it into the view. By creating a measure profile for each set of measures that you frequently use, you reduce the amount of time it takes to set up a view.

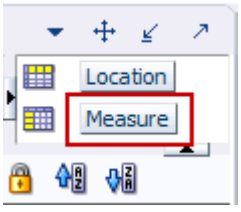
Measure profiles are created at the view level and are available in all views and copies of that view. Measure profiles are saved as part of the formatting. Depending on how you save the formatting, you can make your measure profiles available to other users. For more information, see Formatting.

Creating a Measure Profile

To create a measure profile, you first need to select the visible measures for the view. After you have selected the measures that you want to appear in the measure profile, you can create the measure profile.

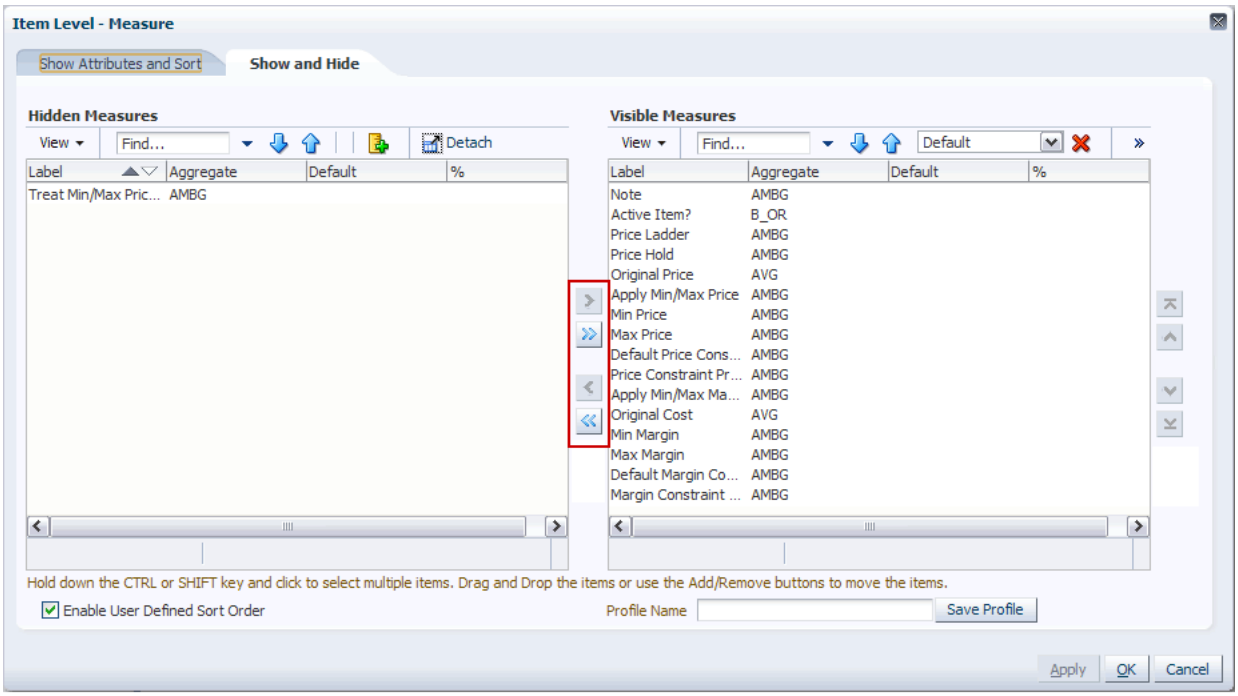
1. Open the view that you want to create a measure profile for.
2. Click the **Measure** dimension tile.

Figure 8–1 Measure Dimension Tile



3. The Measure Dimension dialog box appears. On the Show and Hide tab, use the arrows to move the measures to and from the Visible Measures box. Place only the measures that you want to appear in the measure profile in the Visible Measures box.

Figure 8–2 Moving Measures to the Visible Measures Box



4. Adjust the order of the measures in the Visible Measure box by using the **First**, **Up**, **Down**, and **Last** arrows located to the right of the Visible Measure box. This step is optional.

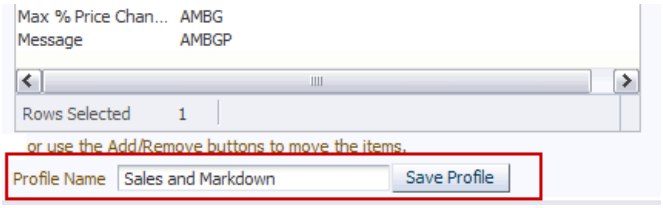
5. After all of the measures that you want to appear in the measure profile are in the Visible Measures box, you can save the measure profile using one of two methods:

   Method 1:

   a. In the **Profile Name** field below to the Visible Measures box, enter the name of the measure profile.

   b. Click **Save Profile**.

Figure 8–3 Measure Profile Name Field

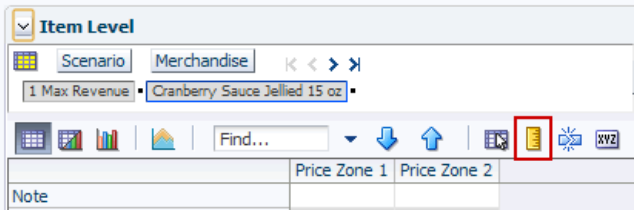


   Method 2:

   a. Click **OK**. The Measure Dimension dialog box closes and the view is visible again. The measures that you selected to be visible are shown in the view.

   b. Click the **Measure Profile** icon in the View toolbar.

Figure 8–4 Measure Profile Icon



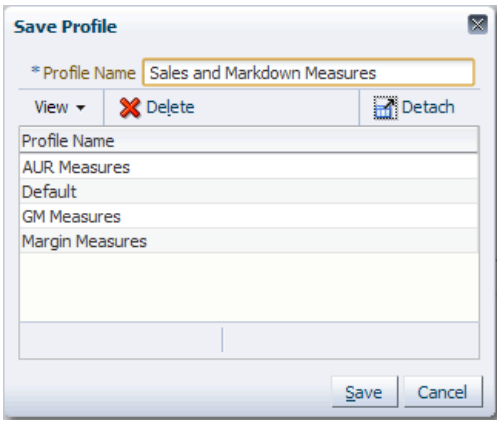
c. The Measure Profile menu appears. Click **Save**.

Figure 8–5 Measure Profile Menu: Save

6. The Save Profile dialog box appears. Enter the name of the measure profile and click **Save**.

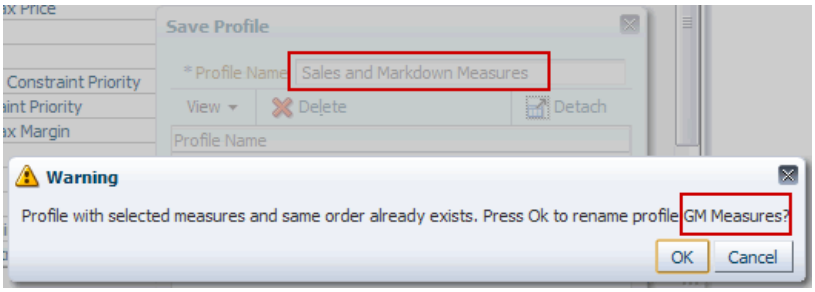
> **Note:** Existing measure profiles are visible in the Save Profile dialog box.

Figure 8–6 Save Profile Dialog Box



Regardless of the method you use, you cannot create a measure profile that contains the same measures and order of an existing profile. If you do create a measure profile that is identical to an existing one, a warning message appears and asks if you would like to rename the existing measure profile. Click **OK** to save it with the name you entered in the **Profile Name** field. Click **Cancel** to leave it as the existing name.

Figure 8–7 Measure Profile Warning Message



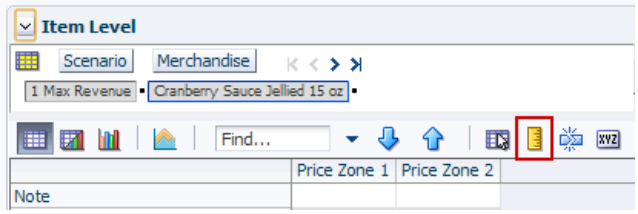
Similarly, you cannot save a measure profile with the same name as an existing measure profile.

Applying Measure Profiles

To apply an existing measure profile to a view, complete the following steps:

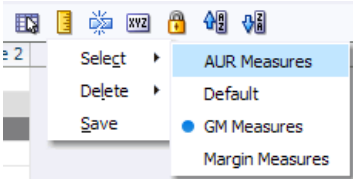
1. Click the **Measure Profile** icon in the view tool bar.

Figure 8–8 Measure Profile Icon



2. The Measure Profile menu appears. Click **Select**.
3. A list of existing measure profiles appears next to the menu. The measure profile in use is designated by a blue dot. Select the measure profile you want to apply.

Figure 8–9 Measure Profile Menu: Select



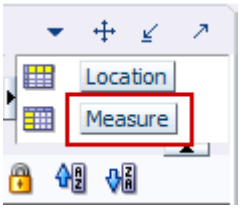
The view refreshes and the measures of the measure profile appear.

Updating Measure Profiles

To update an existing measure profile, complete the following steps:

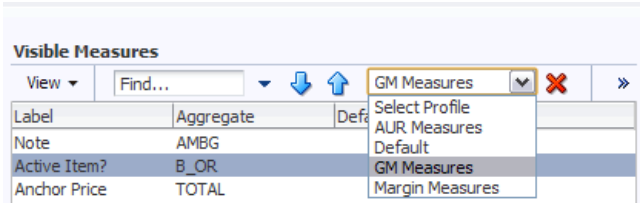
1. Click the **Measure** tile.

Figure 8–10 Measure Tile



2. The Measure Dimension dialog box appears. On the Show and Hide tab in the Visible Measures section, select the profile you want to update from the list.

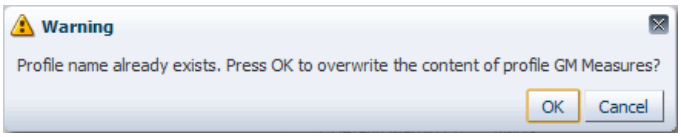
Figure 8–11 Measure Profile List



The Hidden Measures and Visible Measures lists are updated based on the profile selected.

3. Update the profile by adding or removing measures from the Visible Measures list.
4. When finished updating the profile, click **Save Profile**.
5. A warning message appears and asks if you want to overwrite the content of the measure profile. Click **OK**.

Figure 8–12 Update Measure Profile Warning Message



6. Click **OK** at the bottom of the Measure Dimension dialog box to return to the view.

The measure profile is updated.

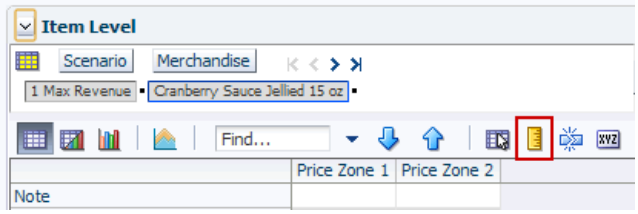
Deleting Measure Profiles

You can delete measure profiles that you have created. However, you cannot delete the default profile. To delete an existing measure profile, use one of the following methods:

Deleting a Measure Profile: Method 1

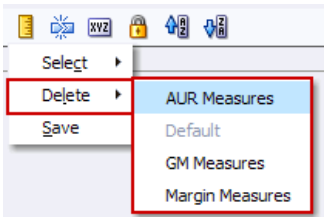
1. Click the **Measure Profile** icon in the View toolbar.

Figure 8–13 Measure Profile Icon



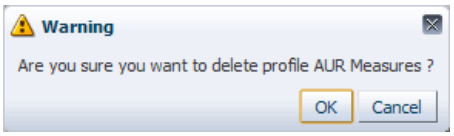
2. The Measure Profile menu appears. Click **Delete**.
3. A list of existing measure profiles appears next to the menu. Click the measure profile you want to delete.

Figure 8–14 Measure Profile Menu: Delete



4. A warning message appears, asking if you want to delete the profile. Click **OK**.

Figure 8–15 Measure Profile Warning Message: Deleting Profile



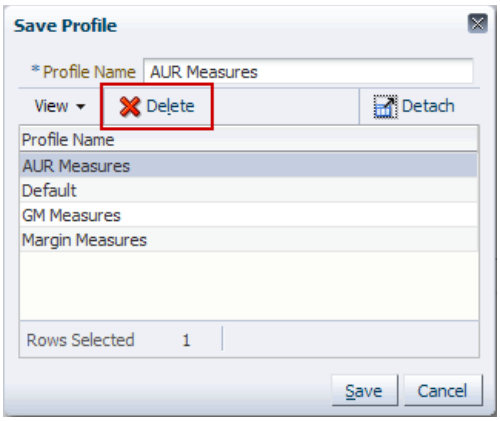
The measure profile is deleted.

Deleting a Measure Profile: Method 2

You can also delete a measure profile from the Save Profile dialog box:

1. From the Save Profile dialog box, select the measure profile you want to delete.
2. Click **Delete**.

Figure 8–16 Deleting from the Save Profile Dialog Box



3. A warning message appears, asking if you are sure you want to delete the profile. Click **OK**.

The measure profile is removed from the list.

9

Dynamic Position Maintenance

Dynamic Position Maintenance (DPM) enables users to dynamically add, edit, or remove positions to a non-calendar position while working in a workbook. These user-defined or informal positions are updated in both the domain and workbook dimensions. Positions added by the user are referred to as informal positions. Positions added during the load process are referred to as formal positions.

When an informal position is to be made formal, the position's name (a label is not necessary for the update to occur) must first be updated to reflect the correct position name that will be loaded during the load process. Prior to the load, an administrative utility is run against the environment to change the status of a position from informal to formal (see the *Oracle Retail Predictive Application Server Administration Guide for the Fusion Client* for more information on the updateDpmPositionStatus utility). This process enables the loading and purging of that position through the hierarchy load process and disables further DPM activities on the position.

Note: Access to the DPM menus and dimensions that DPM functionality can be applied is determined in the solution and workbook configuration (see the *Oracle Retail Predictive Application Server Configuration Tools User Guide* for more information on enabling DPM functionality).

DPM Restrictions

The following limitations for DPM exist:

- You cannot add a dynamic position to the calendar dimension. Due to the rolling nature of calculations for measures, were you to add a position to the calendar dimension, data for those measures and other measures that depend on them would be inconsistent.
- In a global domain environment, the DPM process cannot be used for maintaining positions at or above the partition level. For example, if a global domain is partitioned by department that rolls up to division, you cannot use DPM functionality to add informal departments or divisions.
- In a global domain environment, the DPM process cannot be initiated from workbooks in the master domain.

  When you creating a workbook for this purpose, pay attention to the “master domain” warning in the Select Domain dialog. When opening, look at the “Domain Type” column in the open dialog. This can steer you clear of master domains.

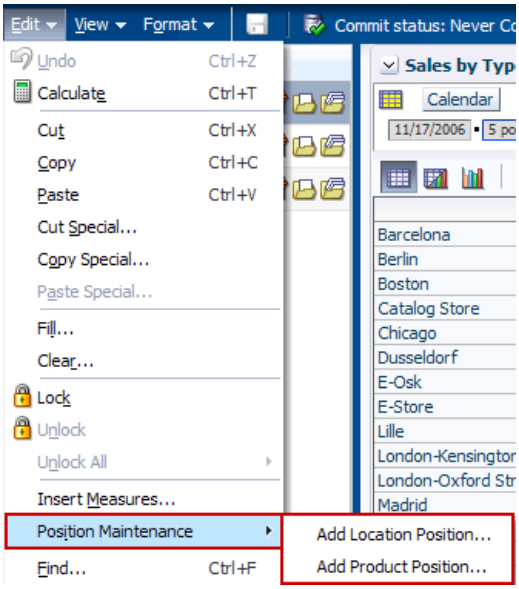
- Positions from alternate dimensions that are not already in the workbook cannot be imported into the workbook to be used as parents for new DPM positions.
- DPM cannot be performed in a master domain.

Add New Positions to a Dimension

To add new positions to a dimension, complete the following steps:

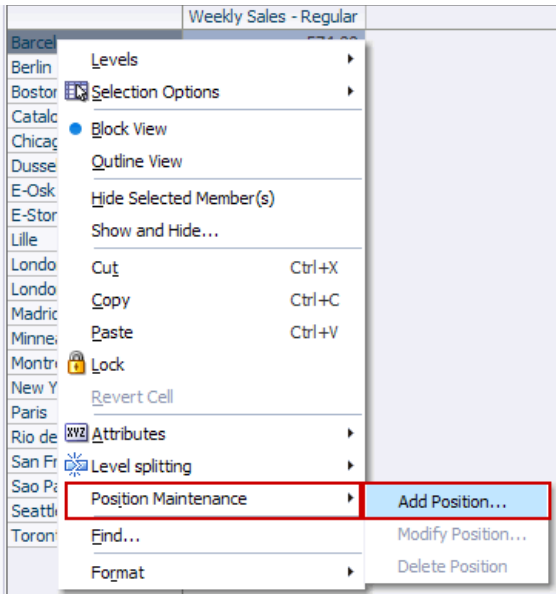
1. From the Edit menu, select **Position Maintenance** and then the dimension to which you want to add a dynamic position.

Figure 9–1 Position Maintenance Option in Edit Menu



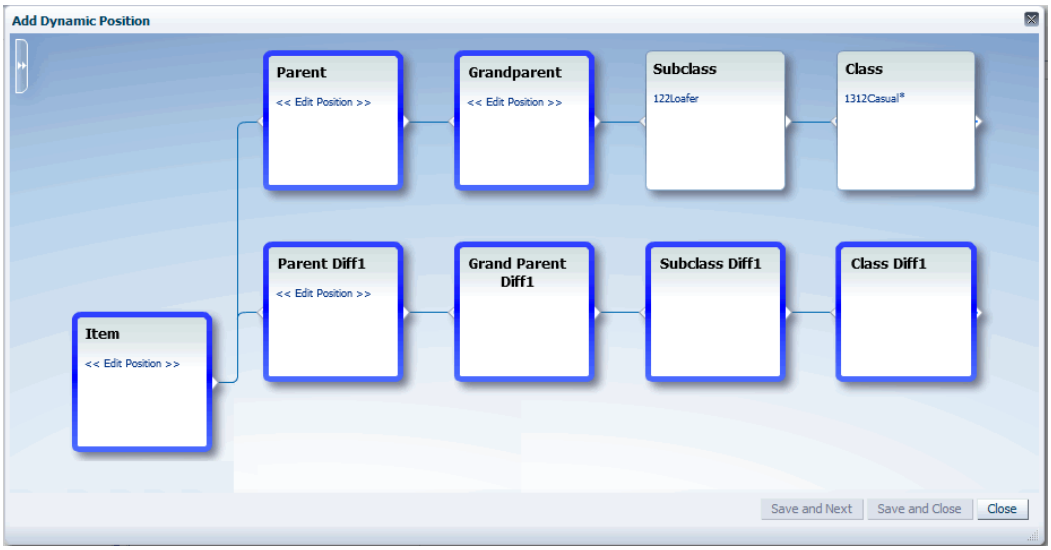
Or, right-click the position level to which you want to add a new position. The right-click context menu appears. Select **Position Maintenance** and then select **Add Position**.

Figure 9–2 Adding a Dynamic Position



2. The Add Dynamic Position window appears. The dimension levels outlined in a thick blue line are informal positions. Click the **Edit Position** link in the dimension level to which you want to add a position.

Figure 9–3 Add Dynamic Position Window



Note: The aggregate information (district, region, company, and so on) is populated only if the Add Dynamic Position window is accessed from the right-click menu. If you accessed this window from the Edit menu, these positions are empty.

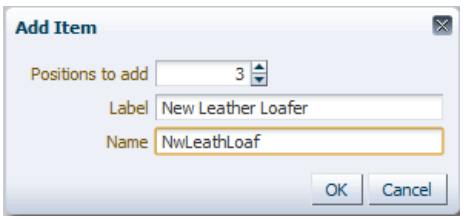
If DPM is enabled in the configuration and domain, you can create informal positions for workbooks that are based above the domain's base intersection. For these positions, RPAS populates the position's children with dummy positions. For example, you can create informal subclasses in a workbook that only goes to the subclass level while the domain goes to the style-color level. All lower level positions between subclass and style-color will be dummy positions.

If there are alternate branches off those child positions that are not in the workbook, and if they are DPM-enabled, RPAS generates dummy positions for those as well. If they are not DPM-enabled, the first existing formal position is selected. The position that is selected is non-deterministic.

3. The Add [Position] dialog box appears.

   - If you selected the lowest dimension level, the Add Position dialog box looks like Figure 9–4.

Figure 9–4 Add Position Dialog Box, Lowest Level



Enter information in the following fields:

– **Positions to add**: Enter the number of positions that you want to add at this level. All of the positions will have the same attributes.

– **Label**: Enter the name that you want to appear in the pivot table. If you are adding more than one position, this label is suffixed with a number.

For instance, if you enter 3 in the **Positions to add** field and new Leather Loafer in the **Label** field, three labels appear in the pivot table:

New Leather Loafer0000001

New Leather Loafer0000002

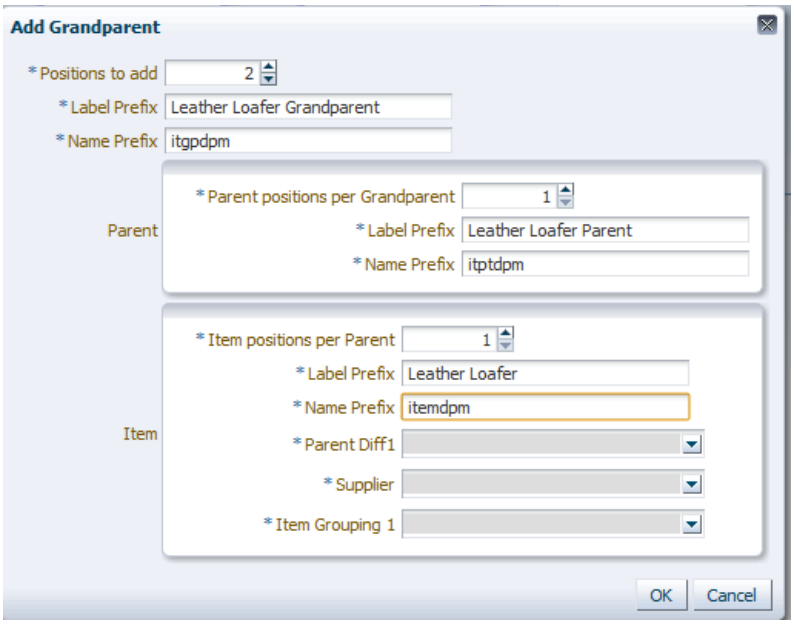
New Leather Loafer0000003

– **Name**: Enter the name of the position or use the system-generated one provided. When multiple positions are created, the name is concatenated with a sequence number. This name is used in the RPAS server.

Click **OK**.

- If you selected a dimension level other than the lowest dimension level, the Add Position dialog box looks like Figure 9–5.

Figure 9–5 Add Position Dialog Box, Higher Levels



Enter information in the following fields:

- **Positions to add**: Enter the number of positions that you want to add at this level. All of the positions will have the same attributes.
- **Label Prefix**: Enter the name that you want to appear in the pivot table. If you are adding more than one position, this label is suffixed with a number.

  For instance, if you enter 3 in the **Positions to add** field and Leather Loafer Grandparent in the **Label** field, three labels appear in the pivot table:

  Leather Loafer Grandparent0000001

  Leather Loafer Grandparent0000002

  Leather Loafer Grandparent0000003
- **Name Prefix**: Enter the name of the position or use the system-generated one provided. When multiple positions are created, the name is concatenated with a sequence number. This name is used in the RPAS server.

In addition to the fields for the selected level, there are additional fields for the levels below the level being added. In Figure 9–5, the selected level is Grandparent and the lower levels are Parent and Item. If needed, enter information for those fields as well.

Click **OK**.

Notes: If there are alternate hierarchies, the value can either be selected or added as new if the alternate hierarchy supports dynamic positions.

After multiple positions are added for a level in the position tree, the levels above that level can only support single position add or edit.

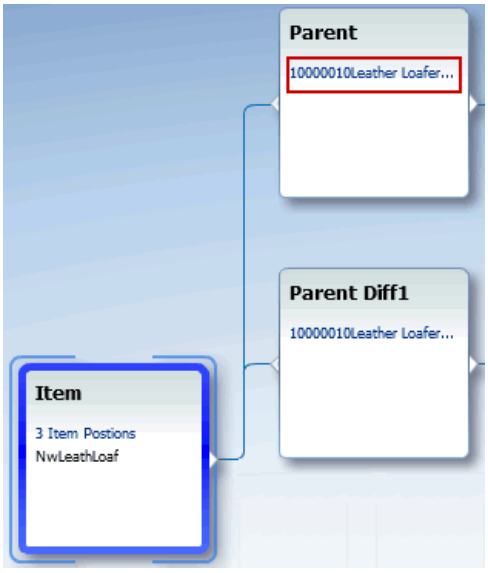
---

4. The Add Dynamic Position window refreshes with the new positions shown in the selected dimension level.

Figure 9–6 Added Dynamic Position

5. Modify the parent levels of the new positions. You can select an existing parent level or create a new (dynamic) one. To do either, click the link in a level above the new position.

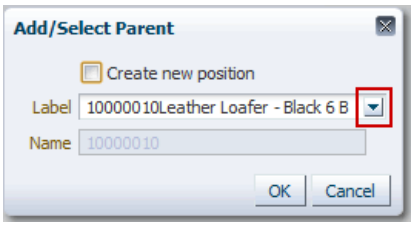
Figure 9–7 Modifying the Parent Level



6. Perform one of the two options:

   - To select an existing position as the parent of the dynamic position, select one from the drop-down list or search for one using the search link. For more information about the search feature, see Using the DPM Search Feature.

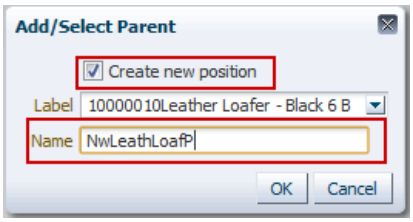
Figure 9–8 Selecting an Existing Parent Level



   - To create a new (dynamic position) parent level, type the name of the new parent in the Label field and select the **Create New Position** option.

The Name field is enabled. Enter the name of the new parent. When finished, click **OK**.

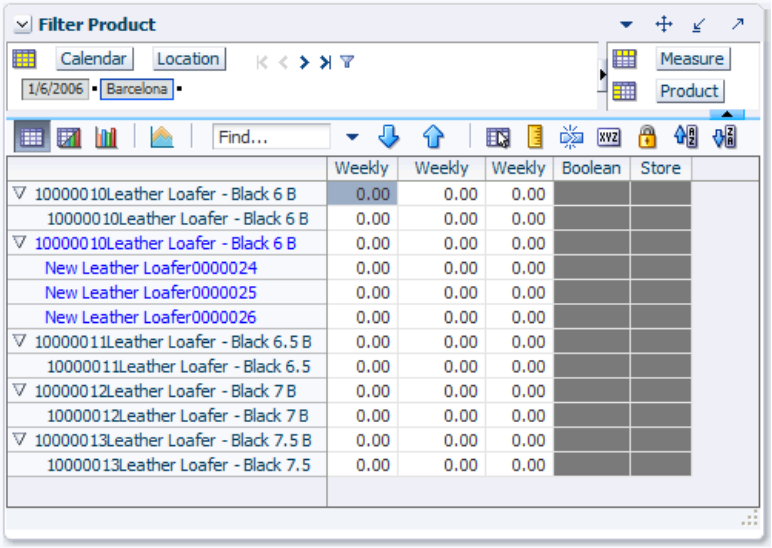
Figure 9–9 Creating a New Dynamic Parent



7. Repeat step 6 for other parent levels.
8. When finished, click **Save and Close**. Or, if you want to add another position, click **Save and Next**.

The Add Dynamic Position window closes. The view refreshes and the new position is shown in blue text.

Figure 9–10 New Dynamic Position in View



Note: If the active view has a PQD and the Automatically Evaluate Position Queries option is enabled, the newly created position may not appear in the view if its default value is set to false.

Modify an Informal Position

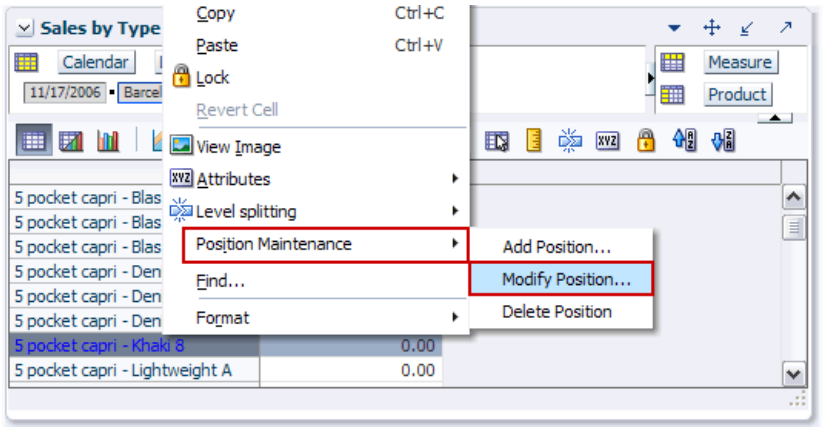
After dynamic positions are added to the hierarchy, the DPM process allows you to:

- Change the parent of a dynamic position to a different formal or dynamic parent.
- Update the position name and position label.

Note: Only dynamic positions can be modified using the DPM feature. The Modify menu is not visible if there are no dynamic positions in the workbook.

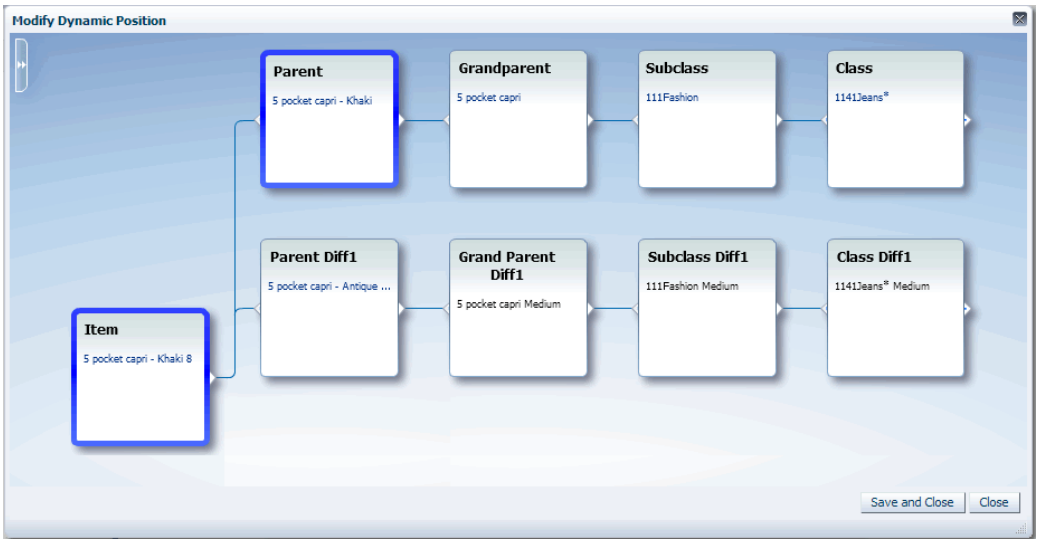
1. Right-click the dynamic position you want to modify.
2. From the right-click menu, select **Position Maintenance**, then **Modify Position**.

Figure 9–11 Modifying a Dynamic Position



3. The Modify Dynamic Position window appears. Select the existing dynamic position and modify the position label or position name. Or, select any parent of the dynamic position to change the parent assignment.

Figure 9–12 Modify Dynamic Position Window



4. When finished, click **Save and Close**.

Delete an Informal Position

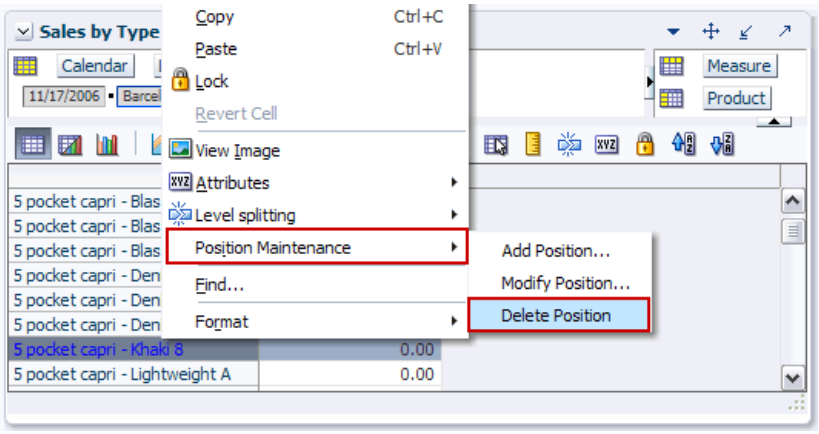
After a dynamic position is added, you can delete it and all child positions to which it is a parent.

Note: Only dynamic positions can be deleted using the DPM feature. The delete option is not be visible if there are no dynamic positions in the workbook.

When a workbook contains only one dynamic position (no other regular position or dynamic position), that position cannot be deleted. In such cases, the "Delete Position" menu is disabled. When a workbook contains more than one position (either regular and dynamic or more than one dynamic position), the "Delete Position" menu is enabled.

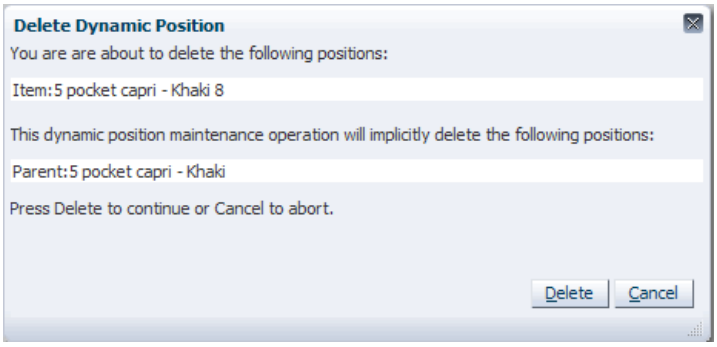
1. Right-click the dynamic position you want to delete.
2. From the right-click menu, select **Position Maintenance** and then **Delete Position**.

Figure 9–13 Deleting a Dynamic Position



3. The Delete Dynamic Position dialog box appears to indicate the dynamic position that will be deleted and any child positions associated with it that will be deleted as well. Click **OK**.

Figure 9–14 Delete Dynamic Position Dialog Box



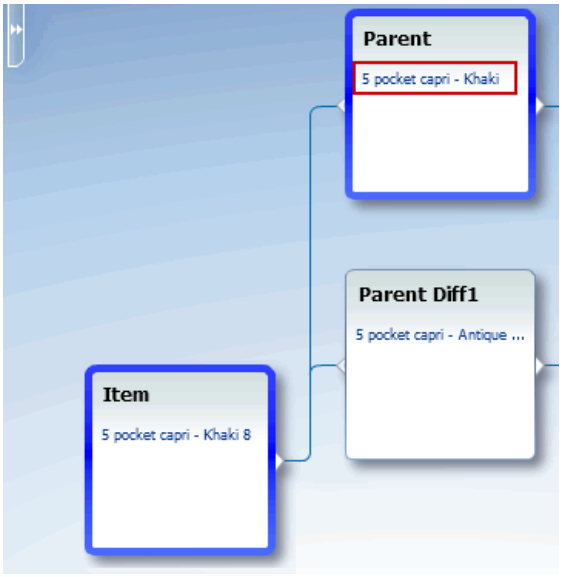
The dialog box closes, and the dynamic position is removed from the view.

Using the DPM Search Feature

When selecting the parent level that a new dynamic position belongs to, you can use the search feature to find the desired level.

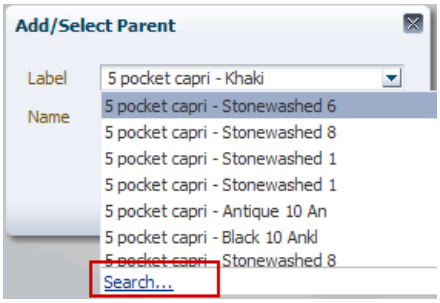
1. Click a level above the dynamic position you are creating, as shown in Figure 9–15.

Figure 9–15 Using the DPM Search Feature



2. The Add/Select [Level] dialog box appears. Click the Label field to access the Search link.
3. Click the **Search** link.

Figure 9–16 Search Link for DPM Search

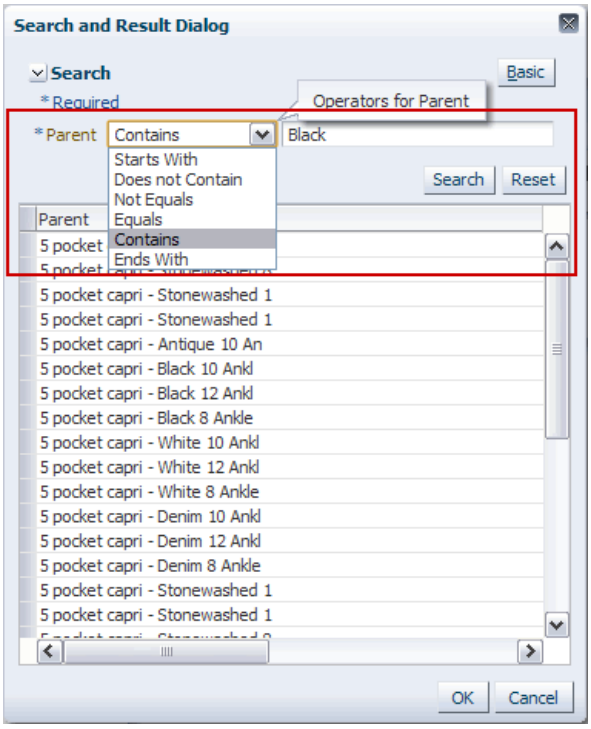


4. The Search and Result dialog box appears (Figure 9–17). Use the search features to search for a position. You can search with the following options:
   - Starts With
   - Does Not Contain
   - Not Equals
   - Equals
   - Contains

- Ends With

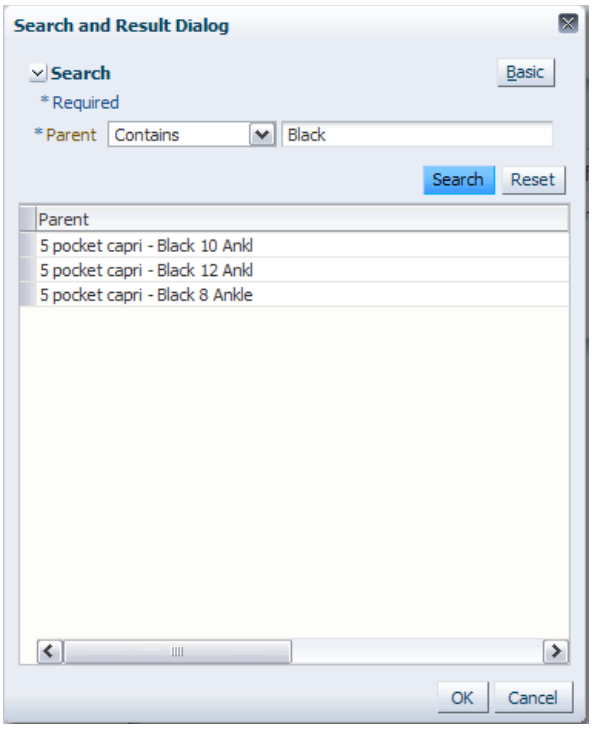
Enter a value in the search field and click **Search**.

Figure 9–17 Search and Result Dialog Box



5. The dialog box refreshes with the positions that match the search. Select the position you want and click **OK**.

Figure 9–18 DPM Search Results



The Search and Result dialog box closes, and the selected position is filled in the Add/Select [Level] dialog box.

Master Detail

Master Detail provides a named, pre-configured way to transition to another view, filtered using your initial selection. Both the Transition and the Worksheet are configured to support your specific application's needs. This appears as a View Detail menu when one or more transitions are applicable.

10

Dynamic Attributes

Dynamic attributes are attributes you can create in the RPAS Fusion Client. Dynamic attributes describe a particular dimension and level based on a measure's value at specified levels of other dimensions. The dynamic dimension attributes can be used for level splitting, sorting, and displaying in the workbook. For instance, you can create an attribute based on the weekly sales that describes stores in terms of their weekly sales rate: low, average, or high.

After you have created a dynamic attribute, it is saved to the domain. It is added to the workbook during workbook build process if the dimension is present and if the following conditions are met:

- The attribute is accessible by the user.
- The source measure exists in the workbook.
- The other positions of this attribute fit into the workbook context.

The attribute data is only updated when the attribute is used.

This chapter describes the various tasks you can perform with dynamic attributes. It includes the following sections:

- Accessing the Define New Attribute Dialog Box
- Creating Dynamic Attributes
- Managing Dynamic Attributes
- Updating Attribute Values

Accessing the Define New Attribute Dialog Box

Dynamic attributes are created in the Define New Attribute dialog box. You can access this dialog box in three ways: with the attributes icon in the toolbar, from the right-click context menu, or from the dimension dialog box.

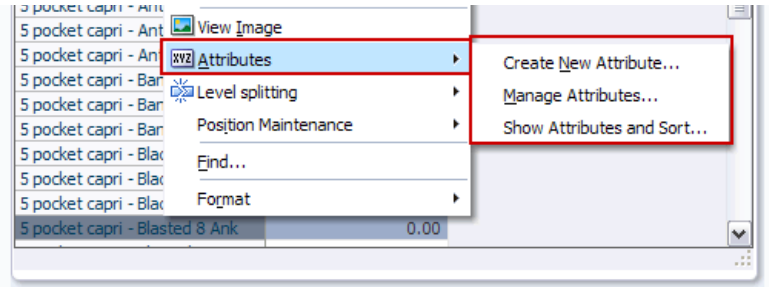
Attributes Icon in the Toolbar

Figure 10–1 Attributes Icon

From the Right-Click Context Menu

1. Right-click a dimension level. The right-click context menu appears.
2. Select **Create New Attribute**.

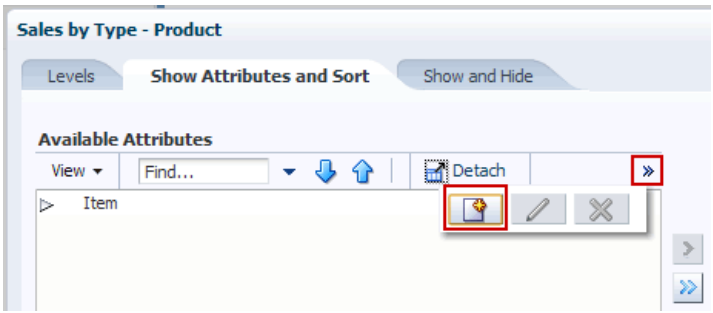
Figure 10–2 Create New Attribute: From the Right-Click Context Menu



From the Dimension Dialog Box

1. Click a dimension tile. The dimension dialog box appears.
2. Click the **Show Attributes and Sort** tab.
3. Click the **New Attribute** icon in the Available Attributes section.

Figure 10–3 Create New Attribute: From the Dimension Dialog Box

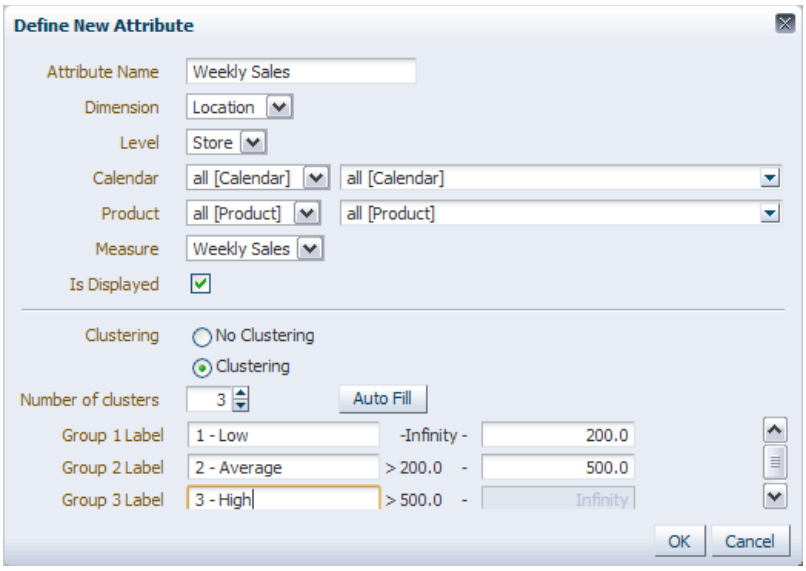


Creating Dynamic Attributes

To create a dynamic attribute, complete the following steps:

1. Access the Define New Attribute dialog box using the icon, right-click context menu, or the dimension dialog box, as described in the Accessing the Define New Attribute Dialog Box section.

Figure 10–4 Define New Attribute Dialog Box



2. Enter the following information:

   - **Attribute Name**: Enter a name for the attribute. The name must be unique across a level for a selected dimension and fewer than 80 characters.
   - **Dimension**: Select the dimension that the attribute should apply to.
   - **Level**: Select the level of the dimension chosen in the Dimension field. This is the level that the attribute should apply to.
   - **[Dimension1]** and **[Dimension2]**: These fields display the dimensions that were not chosen in the Dimension field. Select the dimension levels and positions that the attribute should be applied to for each.
   - **Measure**: Select the measure that the attribute should be based on.
   - **Is Displayed**: Check the check box if you want the created attribute to be displayed in the view after it is created. If this was not selected, the attribute is created but not visible. To make the attribute visible at a later time, select it for display in the Dimension window as described in Select Attributes for Display.
   - **Clustering**: Select **No Clustering** if you want the data from the measure to be replicated in the attribute. Select **Clustering** if you want to group the dimension by the values of the measure data.
   - **Number of clusters**: Choose the number of groups that you want the attribute to create. This option is visible only if clustering is selected.
   - **Group Label**: Enter the label of the attribute that you want to apply to that cluster of data. Specify how the clusters should be defined by entering a range.
   - **Auto Fill**: Click this button to automatically create the range for each cluster.

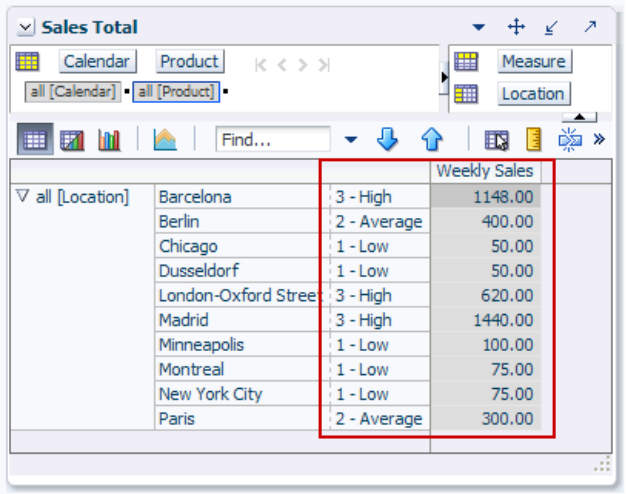
   Note: The cluster options are only available for real and integer measures.

3. Click **OK**.

The attribute is added to the pivot table.

After you have created the attribute, you can sort the positions by attribute. For more about sorting, see Attribute Sorting.

Figure 10–5 Dynamic Attribute: Clustering Example



Another way to use dynamic attributes is to duplicate measure data in the attribute. For instance, if you had a Climate measure that describes the climate of a location, you could create an attribute based on that measure and select **No Clustering**, as shown in Figure 10–6 and Figure 10–7.

Figure 10–6 Define New Attribute: No Clustering

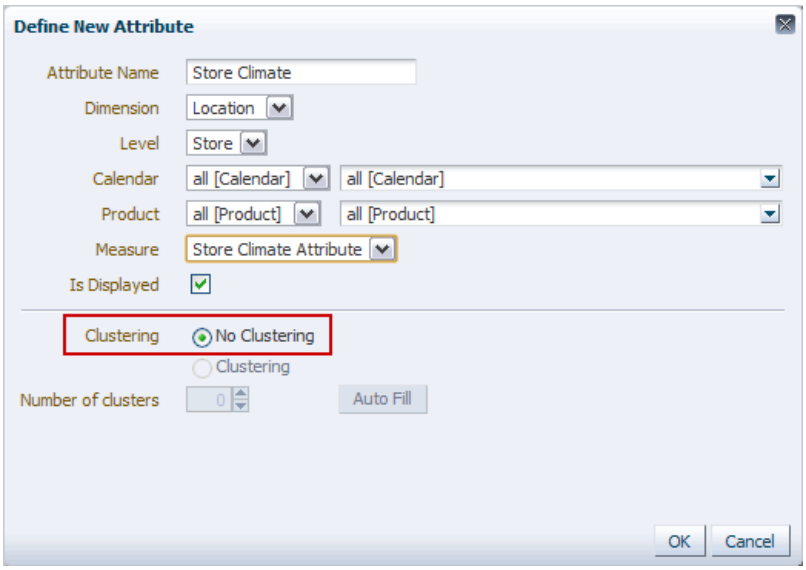
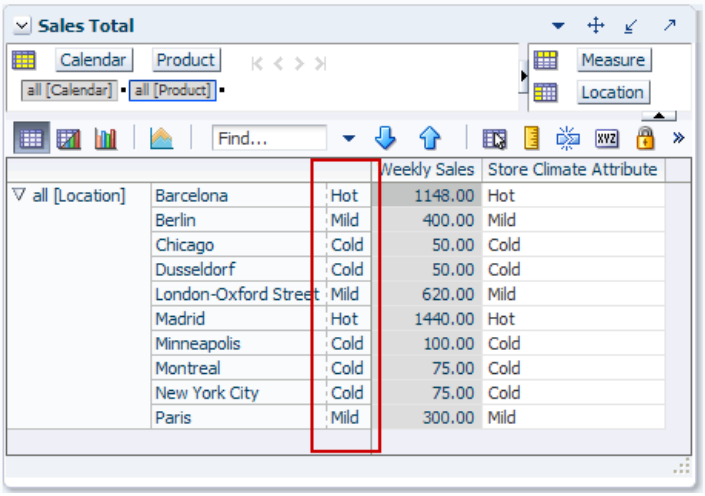


Figure 10–7 Dynamic Attribute: Non-Clustering Example

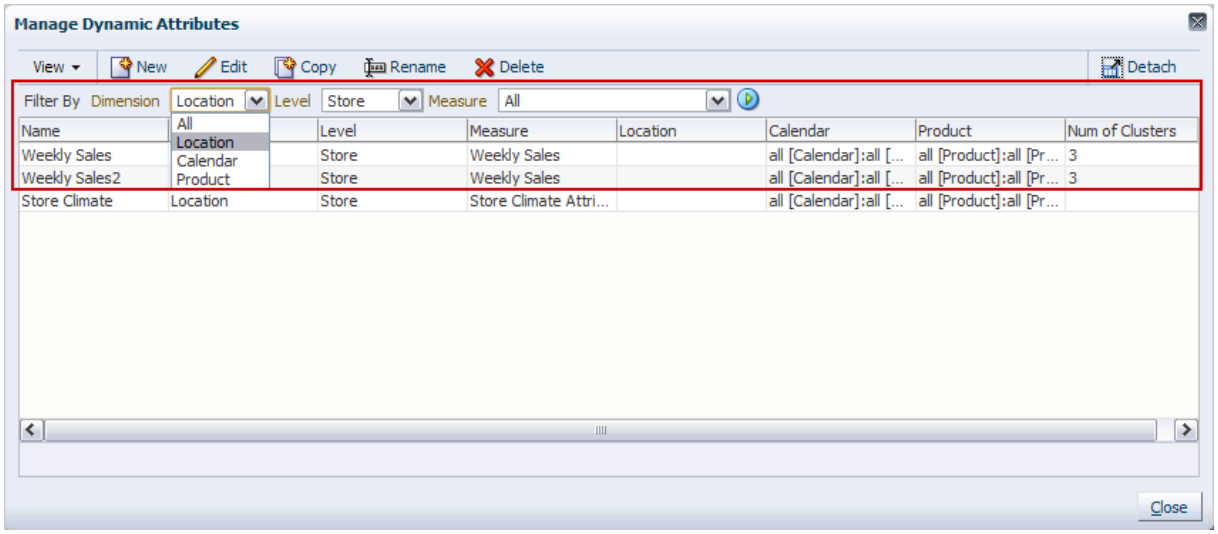


Managing Dynamic Attributes

After you have created a dynamic dimension attribute, you can edit, copy, rename, or delete it using the Manage Dynamic Attributes dialog box.

The Manage Dynamic Attributes dialog box displays all attributes for the selected dimension and level. You can search for attributes by using the attribute filter. You can search all dimensions and levels by selecting **All** in the Dimension drop-down list. Or, you can search by a particular dimension, level, and measure.

Figure 10–8 Filtering Attributes



By default, attributes for the innermost layer of the selection on the pivot table are listed. If there are no attributes for the selected level, attributes for all visible levels of the selected dimension are displayed.

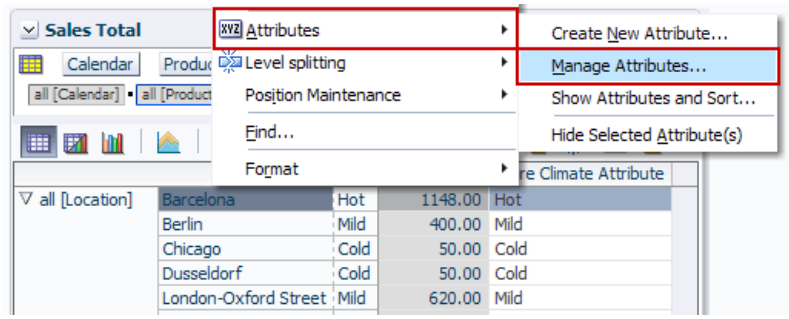
If there are no attributes for the selection dimension, all attributes across all dimensions are shown. If there are no attributes across any dimension, a message states that there are none.

Accessing the Manage Dynamic Attributes Dialog Box

To access the Manage Dynamic Attributes dialog box, complete the following steps:

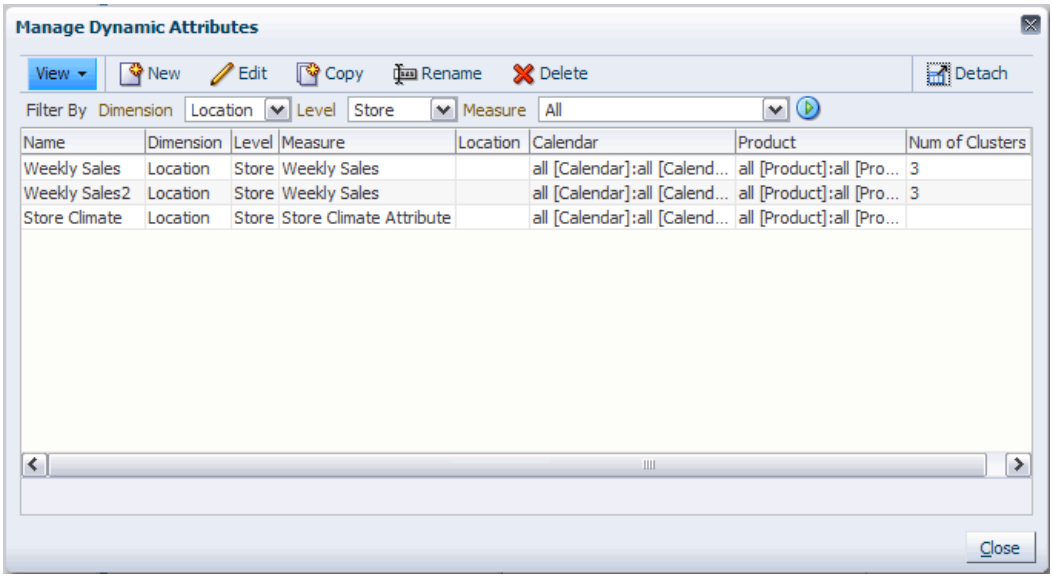
1. Right-click in the content area.
2. The right-click context menu appears. Select the **Manage Dynamic Attributes** option.

Figure 10–9 Manage Dynamic Attributes



3. The Manage Dynamic Attributes dialog box appears.

Figure 10–10 Manage Dynamic Attributes Dialog Box



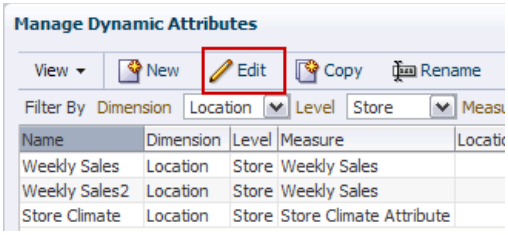
From the Manage Dynamic Attributes dialog box, you can edit, copy, rename, delete, or create attributes.

Editing Dynamic Attributes

To edit a dynamic attribute, complete the following steps:

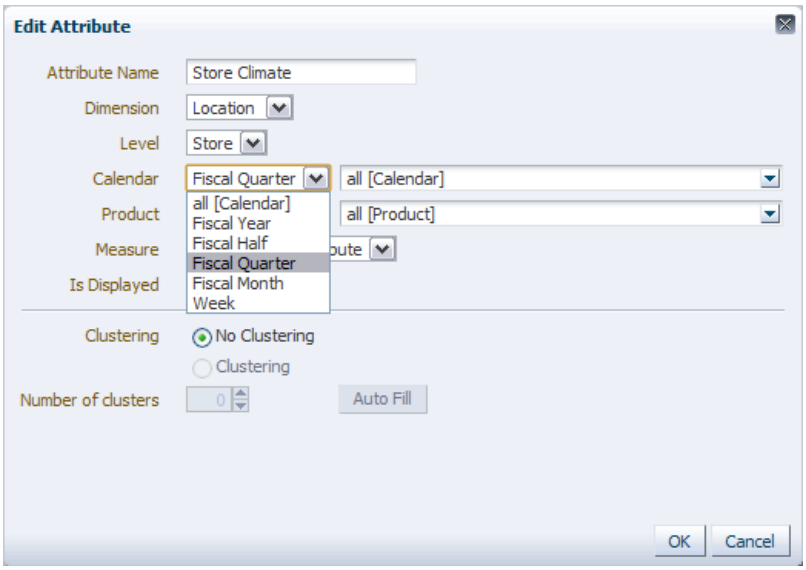
1. Access the Manage Dynamic Attributes dialog box as described in Accessing the Manage Dynamic Attributes Dialog Box.
2. Select the attribute you want to edit and click the **Edit** icon.

Figure 10–11 Editing a Dynamic Attribute



3. The Edit Attribute dialog box appears. Make changes to the attribute information. For details about the fields, see Step 2 of the Creating Dynamic Attributes section.

Figure 10–12 Edit Attribute Dialog Box



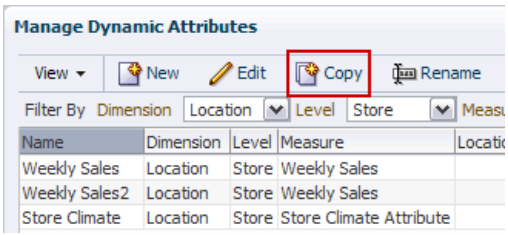
4. When finished, click **OK**.

Copying Dynamic Attributes

To copy a dynamic attribute, complete the following steps:

1. Access the Manage Dynamic Attributes dialog box as described in Accessing the Manage Dynamic Attributes Dialog Box.
2. Select the attribute you want to copy and click the **Copy** icon.

Figure 10–13 Copying a Dynamic Attribute



3. The Copy Attribute dialog box appears. Enter the name of the new attribute. The name must be unique across the level for a selected dimension and fewer than 80 characters.

Figure 10–14 Copy Attribute Dialog Box

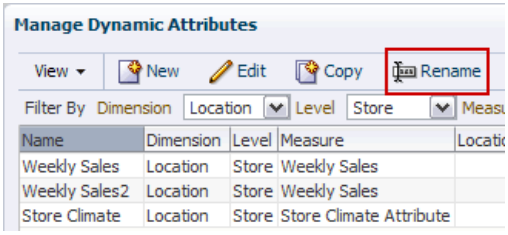
4. Click **OK**.

Renaming Dynamic Attributes

To rename a dynamic attribute, complete the following steps:

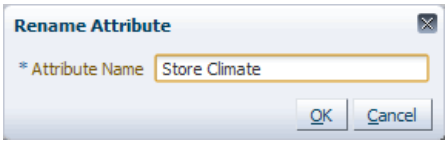
1. Access the Manage Dynamic Attributes dialog box as described in Accessing the Manage Dynamic Attributes Dialog Box.
2. Select the attribute you want to rename and click the **Rename** icon.

Figure 10–15 Renaming a Dynamic Attribute



3. The Rename Attribute dialog box appears. Enter the new name. The name must be unique across the level for the selected dimension and fewer than 80 characters.

Figure 10–16 Rename Attribute Dialog Box



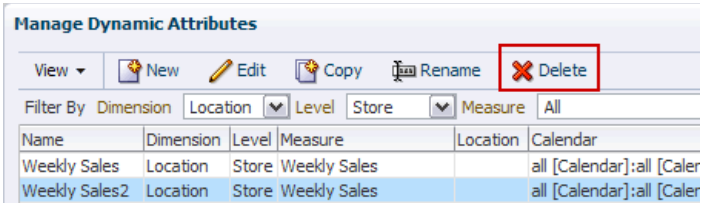
4. Click **OK**.

Deleting Dynamic Attributes

To delete a dynamic attribute, complete the following steps:

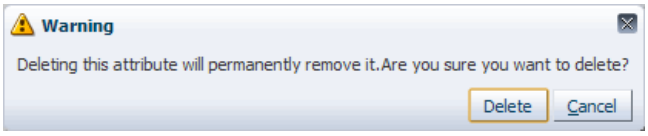
1. Access the Manage Dynamic Attributes dialog box as described in Accessing the Manage Dynamic Attributes Dialog Box.
2. Select the attribute you want to delete and click the **Delete** icon.

Figure 10–17 Deleting a Dynamic Attribute



3. A warning message appears. Ensure that you have selected the correct attribute and click **Delete**.

Figure 10–18 Delete Attribute Dialog Box



The attribute is deleted from the list.

Updating Attribute Values

If data in the base measure of the attribute has changed, you may need to recalculate the attributes to see the updated data. To do this, use the **Update Attribute Values** option in the View menu or the **Update Attribute Values and Level Splits** icon in the toolbar.

Figure 10–19 Update Attribute Values Option

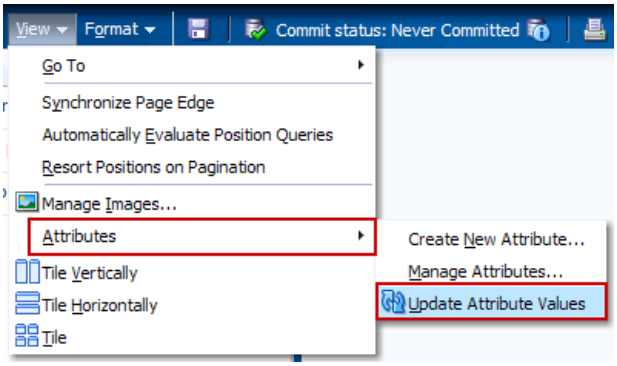


Figure 10–20 Update Attribute Values Icon

The values of the user-defined attributes must be recalculated based on the user edits. The update icon and menu are enabled only when attributes are displayed that need to be recomputed based on user edits. Clicking the update option or icon recalculates all sort attributes and level splits displayed in the workbook based on the user edits since the attribute or dimension split was applied to the data.

11

Sort, Find, and Position Queries

Easily sorting and finding data is essential when working with workbooks that contain thousands of items, hundreds of locations, and an endless number of dates. Being able to put this data in a logical order or find a specific piece of information is what makes planning possible.

This chapter describes the ways you can sort, find, and query data:

- Sort
  - Simple Sort
  - Attribute-Based Sort
- Find
- Position Query
- Position Filtering
- Working with Position Filters

Sort

There are two kinds of sort: simple sort and attribute sort. Both can be used to put the data in a meaningful order.

Simple Sort

You can sort positions in a level by using the sort icons on the toolbar or the arrows that appear on column headers. The positions are sorted based on the values of a measure's slice for that level. This sorting can be done without defining additional attributes.

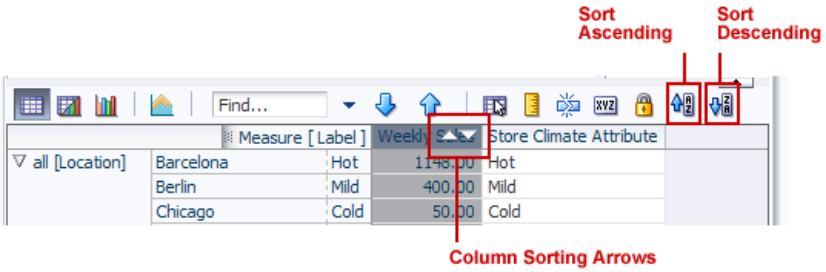
The sort occurs along a single measure, using only a single level in the sort. The sorting is limited to the current view, providing the user an ability to see the same data sorted differently in different views. Sorting is only available in the pivot table or split view. It is not available in the graph view.

Note: A slice is valid if it involves only one measure and if it has a unique value for each position along the level being sorted (meaning that one position along all other dimensions in the measure's intersection has been selected).

A simple sort cannot be applied to positions in a dimension along the page axis. However, you can pivot the desired dimension to either row or column axes, execute the sort along the desired slice, and then pivot the sorted dimension back to the page axis.

After you have selected the desired valid slice of measure data that you want to sort, the sorting arrows are enabled on the toolbar and in the columns, as shown in Figure 11–1.

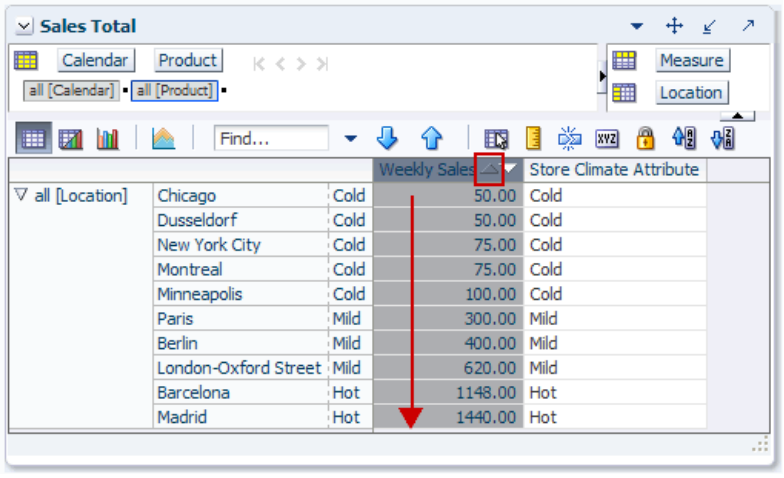
Figure 11–1 Sort Arrows



After you click one of the sort arrows, the selected positions are sorted according to the measure's values in the selected slice.

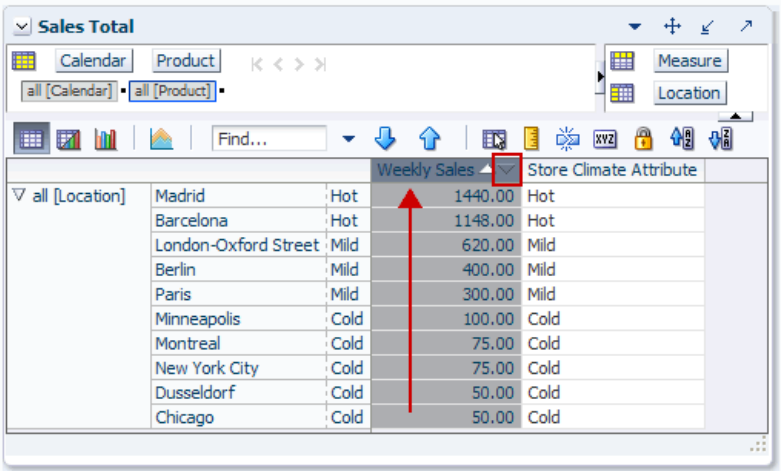
The Sort Ascending icons in the toolbar and columns order the data so that the lowest number appears at the top of the list and the highest at the bottom. After the data is sorted, the column header is shaded gray and the Sort Ascending arrow is shaded dark gray, as shown in Figure 11–2.

Figure 11–2 Sort Ascending



The Sort Descending arrows order the data so that the largest number is at the top. Again, after the data is sorted, the column header is shaded gray and the Sort Descending arrow is shaded dark gray (Figure 11–3).

Figure 11–3 Sort Descending



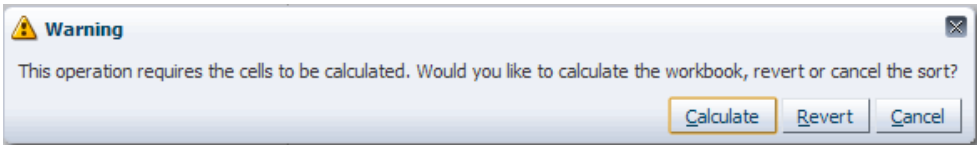
Sorting should be reapplied after operations that do not change the data. If you show or hide positions, change the rollup, or switch the mode from outline to block view or vice-versa, you should reapply the sort. Since a pivot operation resets the selected sort slice, you must reselect a valid slice and sort again.

If you use the View Attributes and Sort tab to perform a attribute sort, the simple sort is overridden. Previous sorts (either attribute-based or simple sort-based) are not maintained after a new simple sort.

Data editing operations like calculate, update, or refresh do not reapply the sort, and the positions remain in the last sorted order.

If you edit a cell and attempt to sort using the toolbar icon, a message appears that states that the edited cells need to be calculated before the sort operation can take place.

Figure 11–4 Uncalculated Cells Warning Message



You can choose to calculate, revert, or cancel:

- **Calculate**: The positions are sorted after the calculate operation is performed.
- **Revert**: The edits are reverted and the sort is performed.
- **Cancel**: The sort operation is canceled.

If you have edited the cells and attempt to sort using the column header icon, the page refreshes without applying the sort and the header no longer displays the icon to sort. If you perform other operations such as show and hide after the edits that have caused the page to refresh, the sort icon does not appear in the column header until the edited cells are calculated.

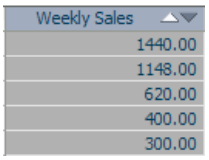
Sorting By Column Headers

You can sort data by mousing over the pivot table column headers to make the ascending and descending sort icon appear.

Figure 11–5 Sort Icons in Column Header

Click the icons to sort the positions along the row-edge based on the vales of a measure's slice for that dimension. The column is highlighted and the column header displays a selected sort icon (ascending or descending) based on the sort direction.

Figure 11–6 Sort Icons in Column Header After Sort

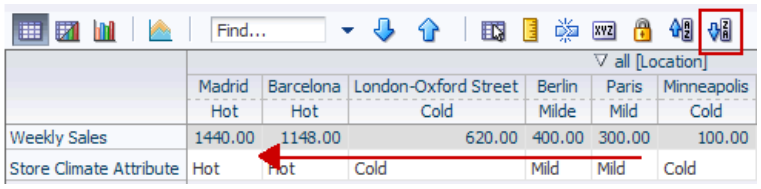


The sort icons do not appear on the column headers if the slice (with the selected column) is invalid. For example, when the measures are on the row edge, the sort icons do not appear on the column headers. Also, when there is more than one dimension on the column axis, the sort icons appear only on the inner layer.

Sorting with the Toolbar Icons

The sort icons in the toolbar are enabled if there is a valid slice involving a single measure being selected. Select either a column or row and click the one of the sort icons. The toolbar icons are more useful for sorting the rows.

Figure 11–7 Sort Icons in Toolbar



The selected position is sorted according to the measure's values in the selected slice. If the rows were sorted, only the row appears selected. If a column was selected, a sort icon appears in the column header.

If you select an invalid slice, for instance, multiple rows or columns, the sort icons are enabled but clicking them results in an error message that states the selected slice is not a valid slice for sorting.

Sorting in Outline Mode and Block Mode

You can sort in either the outline or block mode. Sorting in the outline mode sorts all the positions as well as the positions within those positions. Sorting in block mode, however, only sorts the highest aggregate position.

Outline Mode If the pivot table is in outline mode, that is, it displays aggregate levels of the dimension in separate rows or columns in the same grid, the aggregate positions as well as the positions within the aggregate positions are sorted.

In Figure 11–8, note how the 5 Pocket Capri position is listed first because it is larger than both the 5 Pocket Frayed Jeans and Bohemian 5 Pocket Jeans groups. Then, within the 5 Pocket Capri group, the style/sizes are listed in order of greatest to least, the "Antique 10 An" being the largest of all the departments.

Figure 11–8 Sorting in Outline Mode

	Weekly Sales - Regular
▽ 5 pocket capri	36759.00
5 pocket capri - Antique 10 An	7859.00
5 pocket capri - Denim 10 Ankl	6356.00
5 pocket capri - Antique 12 An	6253.00
5 pocket capri - Denim 12 Ankl	5789.00
5 pocket capri - Antique 8 Ank	5607.00
5 pocket capri - Denim 8 Ankle	4895.00
▽ 5 Pocket Frayed Jeans	6295.00
5 Pocket Frayed Jeans - Stonew	2756.00
5 Pocket Frayed Jeans - Antiqu	2036.00
5 Pocket Frayed Jeans - Lightw	1503.00
▽ 10000051Bohemian 5 Pocket Jeans	2869.00
10000054Bohemian 5 Pocket Jeans - Ston	789.00

Block Mode If the pivot table is in block mode, that is, it displays the dimension levels in separate rows or columns but not the aggregate levels, the simple sort still orders the aggregrate levels as well as the dimension levels within them.

In Figure 11–9, note how the 5 Pocket Capri, 5 Pocket Frayed Jeans, and Bohemian 5 Pocket Jeans groups do not have an aggregated number in the column. Nevertheless, the groups are still ordered greatest to least, as are the style/sizes within those groups.

Figure 11–9 Sorting in Block Mode

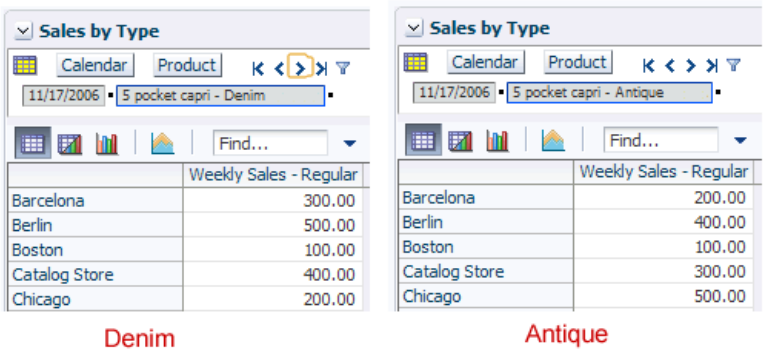
		Weekly Sales - Re
▽ 5 pocket capri	5 pocket capri - Antique 10 An	7859.00
	5 pocket capri - Denim 10 Ankl	6356.00
	5 pocket capri - Antique 12 An	6253.00
	5 pocket capri - Denim 12 Ankl	5789.00
	5 pocket capri - Antique 8 Ank	5607.00
	5 pocket capri - Denim 8 Ankle	4895.00
▽ 5 Pocket Frayed Jeans	5 Pocket Frayed Jeans - Stonew	2756.00
	5 Pocket Frayed Jeans - Antiqu	2036.00
	5 Pocket Frayed Jeans - Lightw	1503.00
▽ 10000051Bohemian 5 Pocket Jeans	10000054Bohemian 5 Pocket Jeans - Ston	789.00

Sorting Across Page Edge

When the positions are sorted on a specific slice, by default the positions stay in the previously sorted order as you page through the positions along the page-axis. In other words, the positions are not resorted based on the new selections in the page-axis. If you want to reapply the sort when paging through positions along the page-axis, you must enable the **Resort Positions on Pagination** option in the View menu.

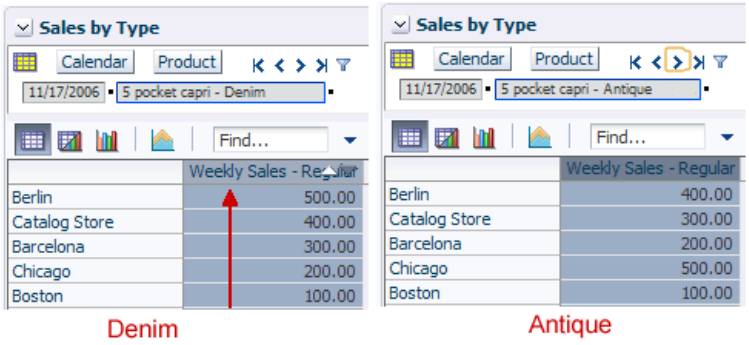
For example, there are two slices that display the sales of five stores: one slice displays data for the denim 5 pocket capri, the other displays data for the antique capri. Before sorting, the five stores are listed in alphabetical order, as shown in Figure 11–10. When the user scrolls from one slice to the other, the stores stay in alphabetical order.

Figure 11–10 Two Unsorted Slices



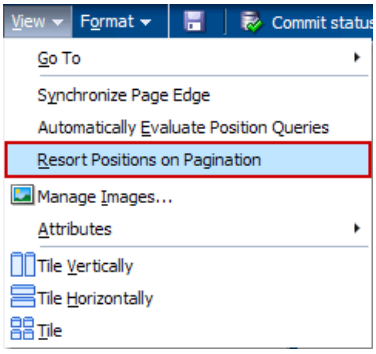
When a user sorts the denim slice by descending order, the stores are reordered so that the store with the highest sales, Berlin, is at the top. If the user scrolls to the antique slice, Berlin is still at the top even though the Chicago store has the highest sales. This is because the positions stay in the same order by default. They are not resorted according to the data. This is shown in Figure 11–11.

Figure 11–11 Sorted Slices, Default Setting



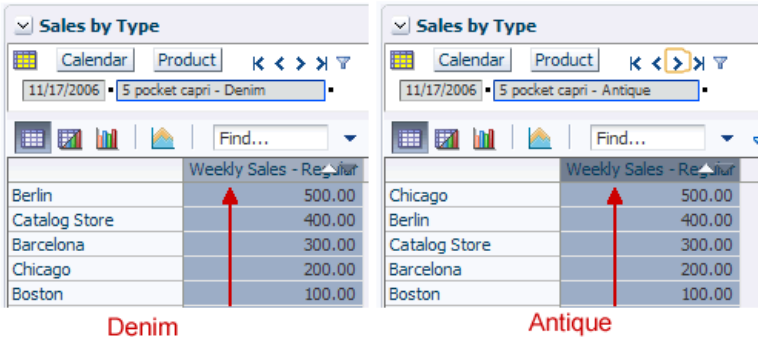
On the other hand, if the Resort Positions on Pagination feature is turned on, the positions are resorted according to the data. The Resort Positions on Pagination option is located in the View menu.

Figure 11–12 Resort Positions on Pagination



When the Resort Positions on Pagination feature is turned on and the first slice is sorted by descending order, when the user scrolls to the next slice, it too is sorted, as shown in Figure 11–12.

Figure 11–13 Sorted Slices with Resort Pagination



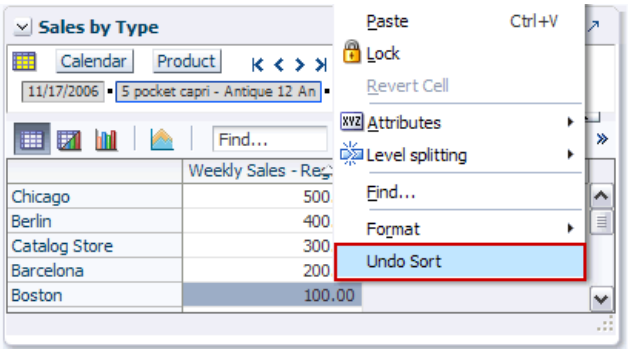
Note: Simple sort cannot be applied to positions in a dimension along the page axis. However, you can pivot the desired dimension to either row or column axes, execute the sort along the desired slice, and then pivot the sorted dimension back to the page axis.

The Resort Positions on Pagination option is saved with the workbook formatting. For more information about formatting and how formatting is saved, see Saving Formats.

Undo Sort Using the Context Menu

If you want to undo a sort, right-click and select Undo Sort from the right-click context menu.

Figure 11–14 Undo Sort in Context Menu



You do not need to select the exact slice; any slice on the sorted dimension renders the **Undo Sort** option. After you select the **Undo Sort** option, the simple sort is no longer applied and the positions appear in the original sort order that was shown when the view was first opened.

Attribute Sorting

An attribute is a piece of information that further describes a position at a given level. For example, the SKU level of the product dimension could have three attributes associated with it: label, color, and price. This means, any SKU in this product dimension could have attribute values of:

- LABEL:SKU00012 - Cashmere Sweater

- COLOR: Pale Blue
- PRICE: $62

Label is the only attribute that is required, but positions in a level can be described with any number of attributes. After they are established, attributes can be displayed in the view if desired. The dimension's attributes can also be used to decide display sort order for positions within that level.

But before you can sort by attributes, you need to select the desired attributes to appear in the view.

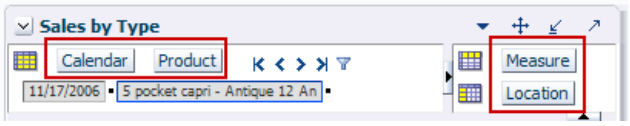
Select Attributes for Display

To see the available attributes that you can sort by, complete the following steps:

> **Note:** You use the Show Attributes and Sort tab to determine which image attributes are visible in the UI. For more information about images, see Chapter 2, Chapter 13, and Chapter 14.

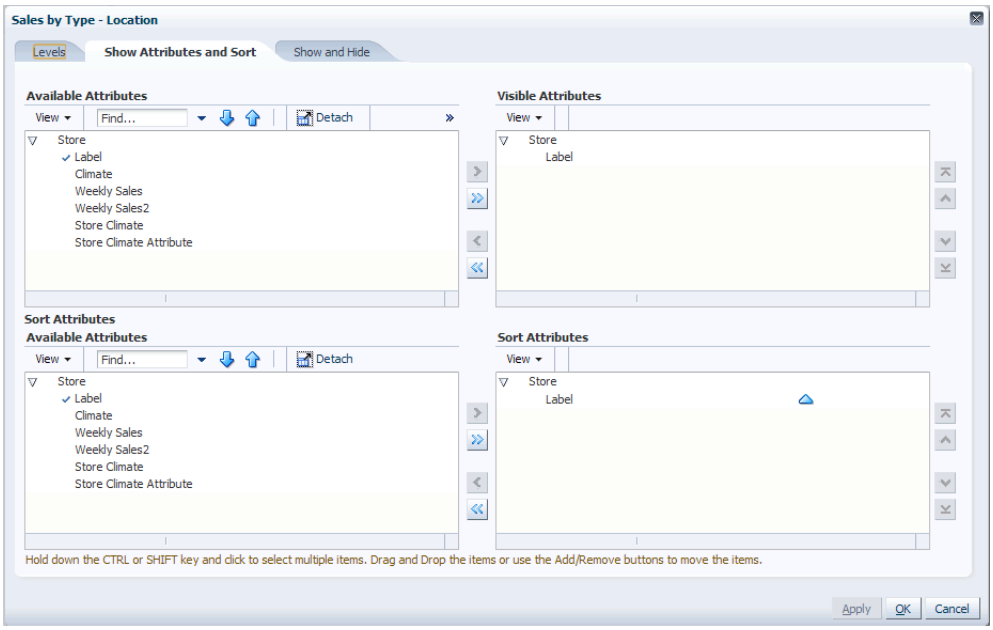
1. In an open view, click the dimension tile of the dimension that you want to sort by an attribute. In Figure 11–15, the Location dimension has been selected.

Figure 11–15 Dimension Tiles



2. The Dimension window appears. Click the **Show Attributes and Sort** tab.
3. In the Show Attributes and Sort tab, the available attributes for the dimension are listed in both the Available Attributes and Sort Attributes sections on the left. The attributes currently shown in the view are listed on the right. These attributes have a check mark beside them.

Figure 11–16 Show Attributes and Sort Tab



a. Select the attributes that you want to appear in the view from the Available Attributes section at the top.

b. Either click the right arrow to move the attribute to the Visible Attributes box on the right side or drag the attribute to the right side.

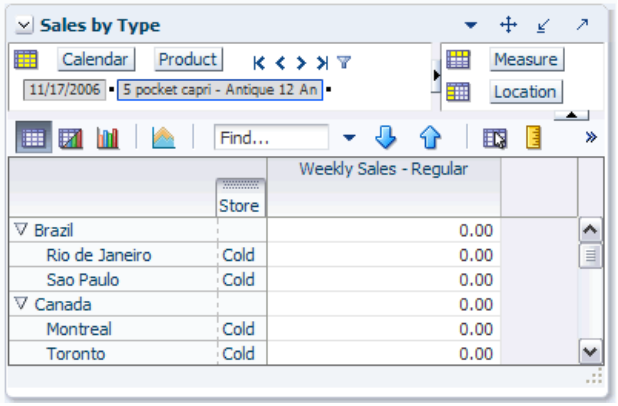
c. Repeat the same process for the attributes you want to sort by moving them to the Sort Attributes section at the bottom.

d. When you are finished, click **OK**. This saves your changes and closes the window.

If you want to make additional changes on other tabs in the Dimension window, click **Apply** instead. This saves your changes but leaves the Dimension window open so you can go to other tabs.

The attributes now appear in the workbook as shown in Figure 11–17.

Figure 11–17 Attributes Shown in a View



If you have selected image attributes to appear, they will be displayed as well. You can hover over the image in order to see the position and image label.

Displaying Attributes in Views

In the Fusion Client, you can display attributes in both the outline and block views.

Outline View

In the outline view, you can view the attributes in either the row edge or the column edge. In outline view, for each dimension, the first layer displays attributes with display order 1 merged across levels. This layer also features the expand and collapse icons. By default, after the first layer, each displayed attribute is rendered as a separate layer.

Views You can view attributes in two places in the outline view: the row edge and the column edge.

Figure 11–18 Outline View: Attributes in Row Edge

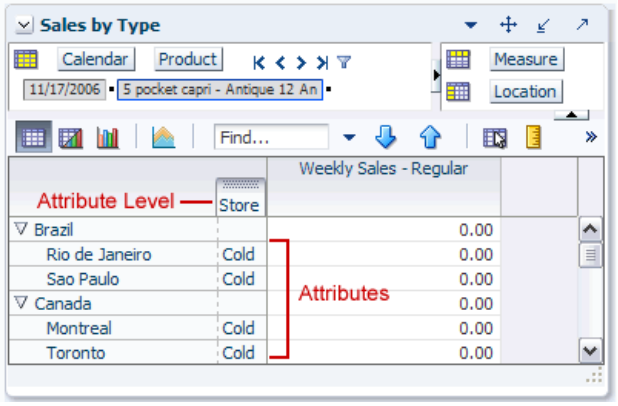
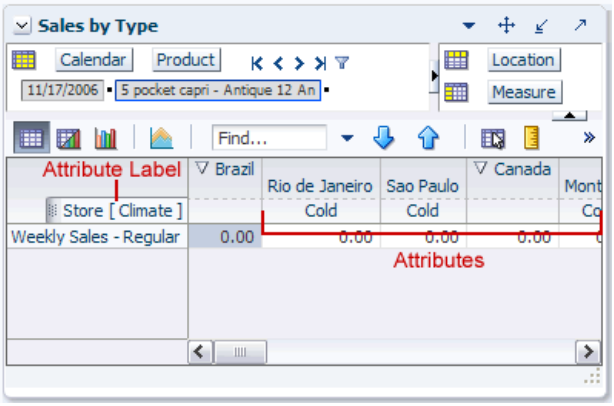


Figure 11–19 Outline View: Attributes in Column Edge



In the outline view, the default ordering of displayed attributes across levels is from higher to lower levels. For example, the attribute from the higher district level is displayed, first followed by the lower store level.

For each dimension, the first layer always features the expand/collapse icons. In addition, the label itself is an attribute, and you can choose to display it in any order or hide it altogether (as long as there is at least one attribute displayed for each level). For example, you can choose the label attribute for both the store and district levels as second in display order, with SKU Label reordered before District Label.

Attribute labels can be combined with levels and shown as Level Label (Attribute Label) format. For example, the **Store (Fmt)** shown in Figure 11–19. The attribute label hovers above the layer. However, hovering over the first layer just displays the dimension label.

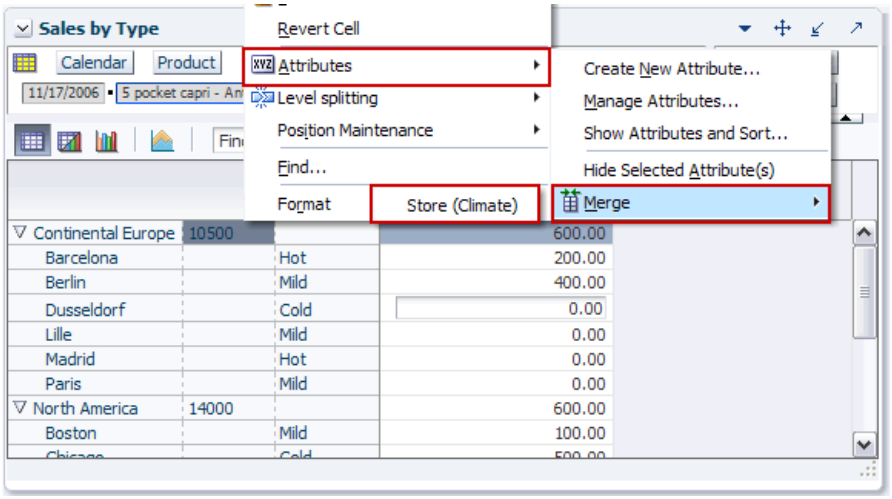
Merge and Split You can choose to display multiple attributes as a single layer by using the merge option in the right-click context menu. After you have merged two attributes together, you can split them using the split option in the context menu option.

> **Note:** The Merge and Split feature is only available in the outline view, not the block view.

To merge two attributes, complete the following:

1. Right-click one of the attributes you want to merge.
2. In the context menu that appears, select **Merge** and then select the other attribute from within the Merge menu. See Figure 11–20 for an example.

Figure 11–20 Merging Attributes



The attributes are merged together and appear in the same row or column. Note how the Store Count and Store Format attributes are now in the same column in Figure 11–21.

Figure 11–21 Merged Attributes

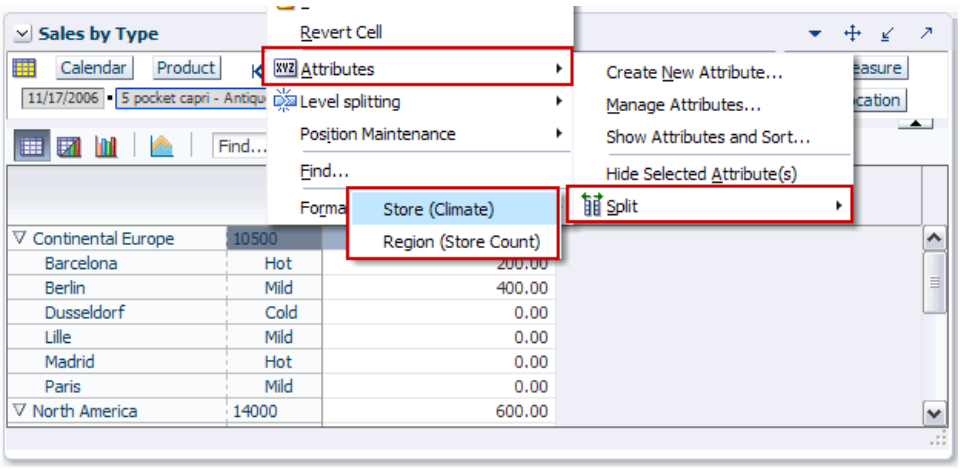
		Weekly Sales - Regular
▽ Continental Europe	10500	600.00
Barcelona	Hot	200.00
Berlin	Mild	400.00
Dusseldorf	Cold	0.00
Lille	Mild	0.00
Madrid	Hot	0.00
Paris	Mild	0.00
▽ North America	14000	600.00

Only attributes belonging to different levels can be merged. You cannot perform Merge and Split actions on the first layer in the outline view because this layer displays the first attribute across the merged levels.

To split two attributes that have been merged, complete the following:

1. Right-click a merged row or column.
2. In the context menu, select **Split** and then select one of the merged attributes from within the Split menu.

Figure 11–22 Splitting Attributes



In the outline view, you can merge or split attributes across levels using the right-click context menu. However, the first layer would always display attributes with display order one merged across levels. In addition, you cannot merge attributes that belong to the same level.

Note: The merge and split feature is session-only and is lost after you close the session.

Block View

In the block view, each layer renders one attribute and all the displayed attributes for a level are shown consecutively in the user-selected display order, as shown in Figure 11–23. The first layer in each dimension features the expand and collapse icons.

Figure 11–23 Block View: Attributes in Row Edge

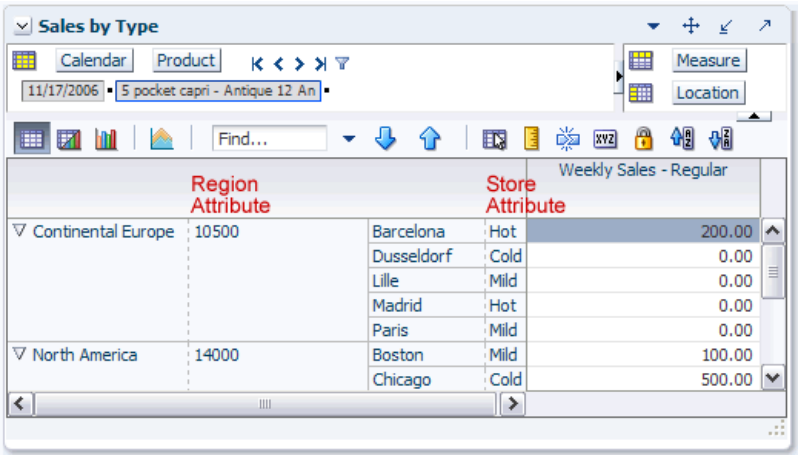
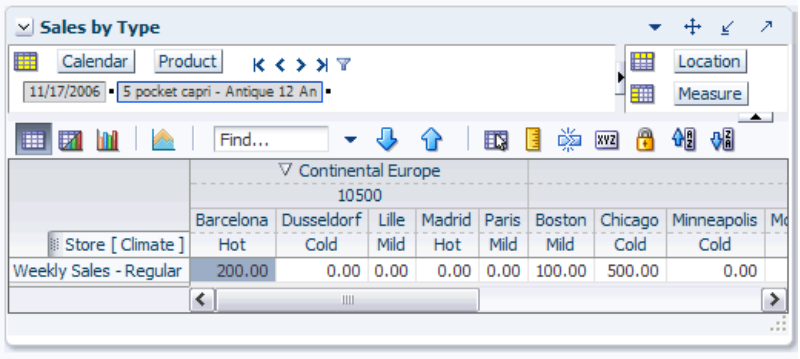


Figure 11–24 Block View: Attributes in Column Edge



In the block view, the attribute ordering always follows the display order you select. You can reorder using drag-drop, but that is the same as using the View Attributes and Sort tab to change the attribute display order.

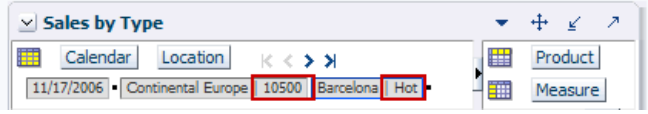
You can also right-click an attribute and hide the block view. This completely removes the associated layer from view.

As in outline view, the expand and collapse icons are on first layer for each dimension. You can display the label attribute in any order or even hide it altogether (as long as there is at least one attribute displayed for each level).

Page Edge

You can also see the attributes of a dimension that is in the page edge. The attributes are displayed on the page edge and are separated by a bar separator. The attribute labels are added to the level display when you mouse over.

Figure 11–25 Attributes on the Page Edge



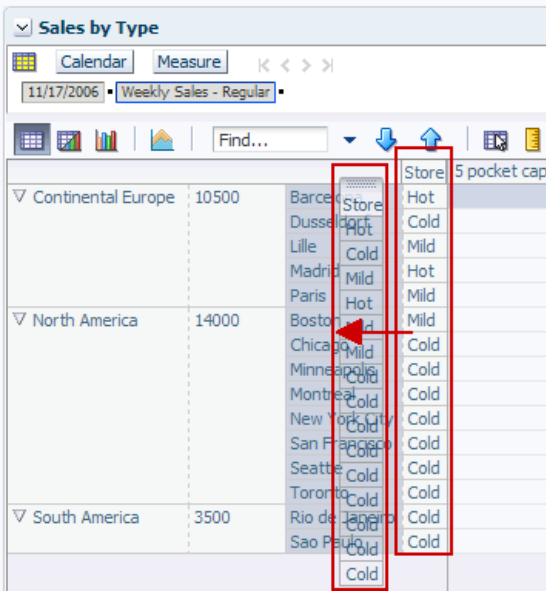
Reordering Attributes In both the outline and block views, you can reorder attributes across levels by dragging an attribute row or column to a different location.

Note: The reordering feature is persisted in the session only. After you close the session, the new order is lost.

To change the order of attributes, complete the following:

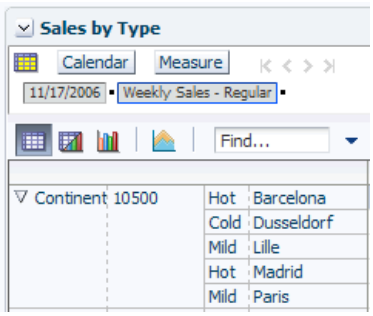
1. Mouse over the area above the row until the attribute label appears.
2. Click and drag the attribute label. As you move the attribute row or column, the available locations where you can drop the attribute are shaded gray.

Figure 11–26 Reordering Attributes



3. When the location where you want to move the attribute is shaded gray, drop the attribute.

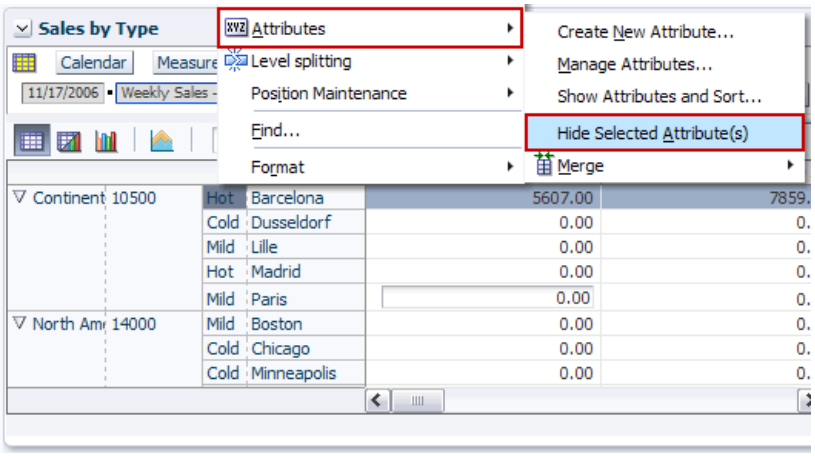
Figure 11–27 Reordered Attributes



Hiding Attributes You can hide an attribute in a view by right-clicking a cell within that attribute's row or column. In the context menu, select **Attributes** and then select **Hide Selected Attribute(s)**.

Note: The hiding feature is session-only and is lost after you close the session.

Figure 11–28 Hiding Attributes



Attribute-Based Sort

You can sort positions in a level using any of the level's attributes. Use the View Attributes and Sort tab to choose the attributes used for sorting. You can also define sort direction (ascending or descending) and the order that the attributes you select are to be applied during the sorting process. For example, the SKUs in the product dimension can be sorted primarily by price, and then within those prices by label.

The sort is applied dimensionally across multiple levels. For example, if the product dimension contains the levels company, division, class, style-color, and SKU, the positions within the company level are sorted first by the selected sort attributes for company, and then positions within each division, applying the division's selected sort attributes, and so on.

As with display, if an attribute is the default sort attribute for a level, the default sort is always applied if you have no other selection. The attribute-based sort order does not override any current simple sort selection, unless you:

- navigate to the View Attributes and Sort tab and click **OK** or **Apply**. This reapplies the attribute-based sort even if you do not make any changes on this tab.
- select **Undo Sort** in the right-click context menu.

For measure dimensions, the sort order you define is applied by default. You can choose the **Disable User defined Sort Order** option on the Show/Hide tab to disable the default behavior.

> **Note:** The RPAS Fusion Client displays a warning that when all sort attributes are removed from the Show Attributes and Sort table of the dimension pop-up, the values are displayed in default sort order. For the RPAS Fusion Client, the default sort order is Label. It is not the order returned from the RPAS Server. To get a guaranteed sort order, create a sorting attribute and populate it with values.

Find

Use the find feature to search for words, partial words, or phrases within the rows, column, and page axis of an active view. The search does not include the data within the view.

The find feature locates the phrase you looking for and shades it gray. If the matched position is not visible because it is hidden under a scroll bar, the view is automatically scrolled to reveal it. The search is performed through collapsed or hidden positions. When a matched position is found, the parent is expanded and the matched position is shaded gray.

The find feature can be accessible four ways:

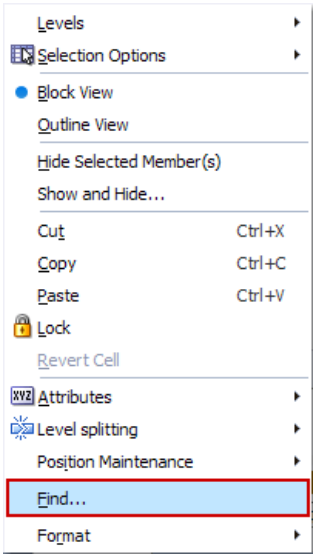
- The **Find** option in the right-click context menu
- The **Find** option in the Edit menu
- The shortcut **Ctrl + F**
- The **Find** field in the view toolbar

Find Using the Right-Click Context Menu

To use the find feature from the right-click context menu, complete the following:

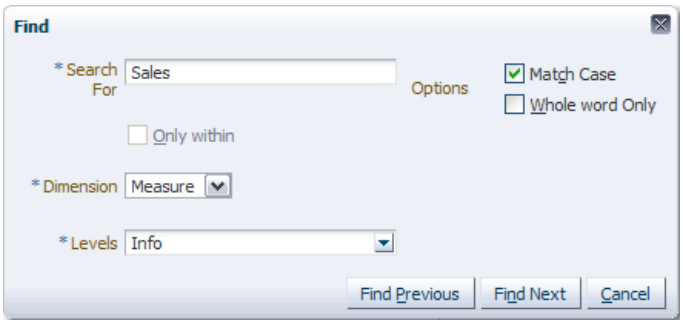
1. Right-click a measure, position, or attribute label to see the right-click context menu. Note that right-clicking on a data cell does not activate the find feature in the right-click context menu.
2. Click **Find**.

Figure 11–29 Find in the Right-Click Context Menu



3. The Find window appears.

Figure 11–30 Find Window



Enter the following:

- **Search For**: Enter the text you want to find.
- **Match Case**: Select this option if you want the search to locate text that use the same case as the text you entered. Leave it unchecked if you want the search to find all text that match yours, regardless of case.
- **Whole word Only**: Select this option if you want the search to find the text in a whole word rather than a partial one.

  For example, if you are searching for the letter **U** and you select the **Whole word Only** option, then the search will find the **Wp BOS U** measure, but it will not find the letter **U** within the **Wp BOS AUR** measure.
- **Only within...**: Select this option to search in a variety of ways:
  - Search for the text only within one or more measures, positions, or attributes that you right-clicked in Step 1. When this option is selected, the search ignores all matches outside of those measures, positions, or attributes.
  - Search within multiple positions by selecting more than one member to search through.
  - Find the text within a specific member and within its own dimension.
  - Find the text within a specific member and within another dimension.
  - In outline mode, use this option to find positions within different levels (style, SKU).
  - In block mode, use this option to find positions within the same level (either style or SKU).
- **Dimension**: Specify what dimension you want to search within. This is a required step.
- **Levels**: Specify which level of the dimension you want to search within. You can choose a specific level or you can choose **All** to search all levels. The search is performed level by level, not through parent and child. For example, when there are two levels, style and SKU, the search is performed in the style level first and then the SKU.

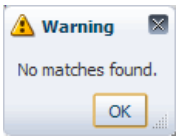
4. When finished, click **Find Next**. The view refreshes. If a match is found, it is shaded gray.

Figure 11–31 Match Shaded Gray by Find Feature

5. Click **Find Next** to see the next match. You can click **Find Previous** at any time to see matches you have already seen.

If a match is not found, the following message appears:

Figure 11–32 No Matches Found Message



Note: A similar message appears when you reach the end of the search and asks if you would like to start the search again.

Find Using Edit Menu or Ctrl + F

Using the **Find** feature from the Edit menu or **Ctrl + F** works in the same way as the right-click context menu.

1. After you have opened a workbook, click **Find** in the Edit menu or enter **Ctrl + F**. It is not necessary to select anything in the view.
2. The Find window appears. Enter the information as described in Step 2 of the Find Using the Right-Click Context Menu section.

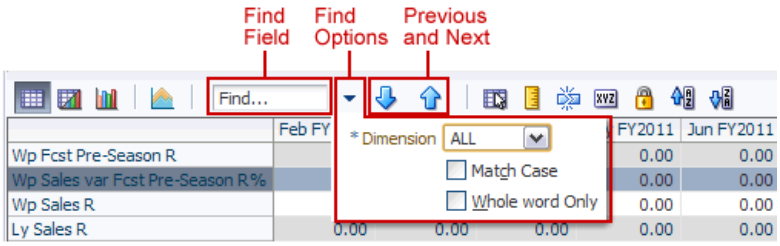
Note: If no position was selected in the workbook, the Dimension field will not have a dimension automatically selected. You must select a dimension from the list to perform the search.

3. When finished, click **Find Next**. The view refreshes behind the Find window.

Find Using the View Toolbar

The Find field within the View toolbar is a quick alternative to using the Edit or Context menus.

Figure 11–33 Find Field in the View Toolbar



To use the find option in the workbook toolbar, complete the following:

1. Enter a phrase in the **Find** field.
2. Click the **Find Options** arrow to manage the search parameters. This is an optional step. If you skip this step, the search is performed on all dimensions.
   - **Dimension**: Select the dimension you want to search in or select **All** to search all dimensions.
   - **Match Case**: Check this option if you want the matches to have the same case that you entered.
   - **Whole word Only**: Check this option if you want to find the text in a whole word rather than a partial one.
3. Click either the **Previous** or **Next** arrows to begin your search.

Position Query

Position queries are preconfigured rules that filter data so that only positions that fulfill the requirements of the query are shown in the view. Position queries are configured in RPAS Configuration Tools by an administrator. For instance, if an administrator has configured a position query to filter for the stores with sales greater than $3500, you can turn on that position query to display only those stores.

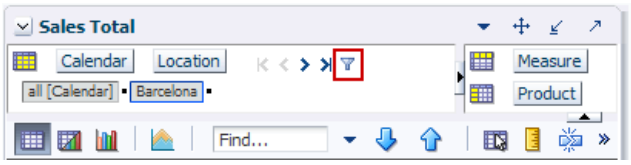
The dimension that the query is based on must be in the page edge (Z axis). This is known as the driving dimension. The dimensions in the X and Y axes are known as the query dimensions. The data in the query dimensions is based on the current position of the driving dimension.

When a position query is applied to a view, the positions in the query dimensions (X and Y axes) that fulfill the requirements of the query for the particular position of the driving dimension (Z axis) are the only ones shown in the view. All other positions are automatically hidden.

When more than one driving dimension is present, all of the driving dimensions have to be in the Z-axis for the position query to execute. If one or more driving dimensions are taken out of the Z-axis and placed in the X or Y axes, associated position queries are not executed. A given view can have more than one position query, driven by one or more dimensions in the Z-axis and driving different dimensions in the X and Y axes.

You can configure a worksheet with the Lock PQD dimensions. With these worksheets, you cannot move a driving dimension off the Z-axis. If the PQD's driving dimension is not on the page edge, or the driving level is not visible on the page edge, the PQD will not be visible until that is true, at which point the Lock will take effect.

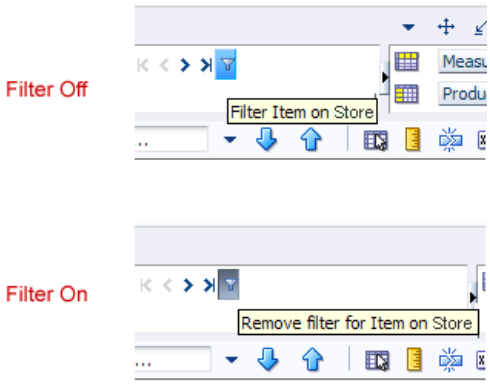
Figure 11–34 Position Query Icon



When the position query filter is turned off, the icon appears flat. When you mouse over the icon, the roll-over text says "Filter [Rule]."

When a position query filter is turned on, the position query icon is depressed. When you mouse over the icon, the roll-over text says "Remove filter for [Rule]."

Figure 11–35 Position Query Rollover Status

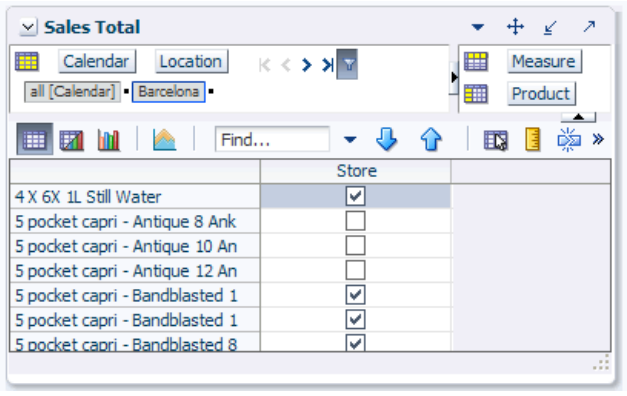


Using Position Queries

If you have a workbook that is configured to have a position query, you can filter to view only the positions that fulfill the requirements of that query.

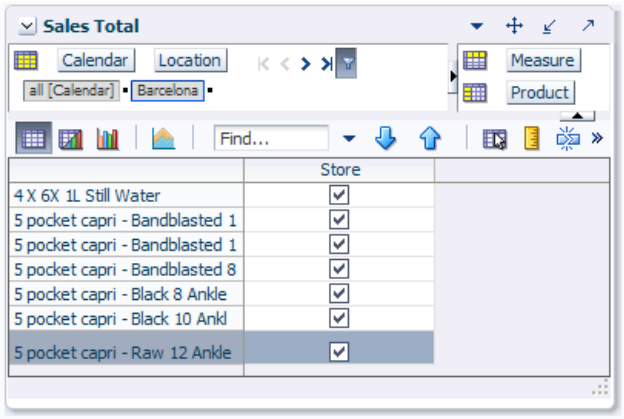
For this example, a Sales Total workbook has been configured to include a position query to filter locations with the Store measure selected. As shown Figure 11–36, the Sales view contains several items; some have Store selected and some do not.

Figure 11–36 Position Query Example, Filter Off



When you click the Position Query icon, the view refreshes and only the items with the Store measure selected are visible.

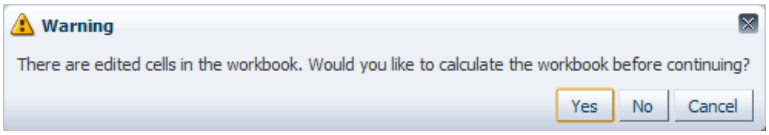
Figure 11–37 Position Query Example, Filter On



Position Query Filtering Without Calculating

If you edit the measure data and attempt to apply the position query filter without calculating first, a warning appears.

Figure 11–38 Position Query Warning for Edited Cells



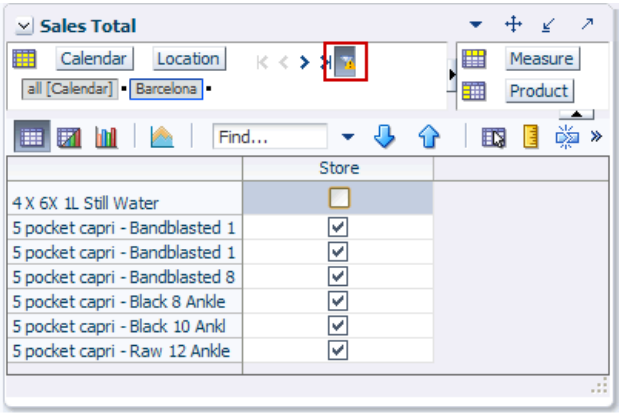
To calculate the data and then apply the position query filter, click **Yes**. To apply the filter without considering the edited data, click **No**. To cancel the action, click **Cancel**.

Updating Measure Data in Position Queries

After you have applied a position query filter to the data, if you edit the data and calculate, the position query filter does not automatically refilter according to the new values. When this happens, the filter icon changes to a warning icon. The warning icon means that the position query may have stale data in it.

For example, if you deselect the Store measure for the Still Water product and click **Calculate** while the filter is on, Still Water remains visible in the view and the filter icon changes to a warning icon.

Figure 11–39 Updating Measure Data in a Position Query



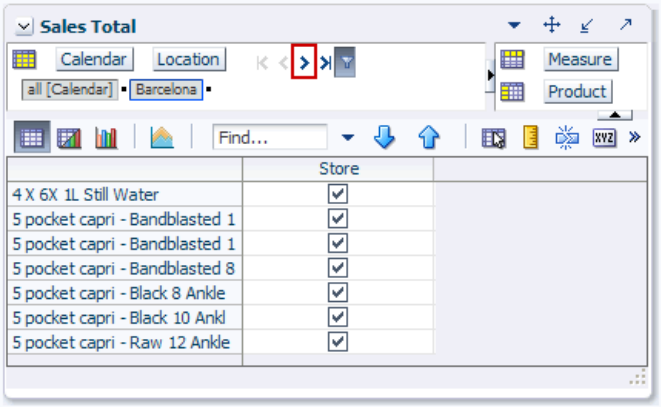
If you want the position query to automatically refilter the edited data, use the Auto Evaluate feature. For more information about this feature, see Using Position Queries with Auto Evaluate.

Scrolling in Position Queries

After you have filtered the slice, if you scroll to the next position, the position query filter is not reapplied to the new position and only the positions that were shown in the previous slice are shown in the current slice.

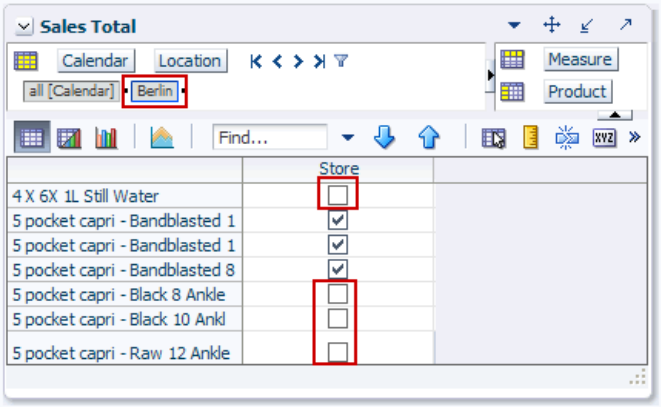
For example, click the **Next** icon to scroll to the next location.

Figure 11–40 Scrolling with Position Queries



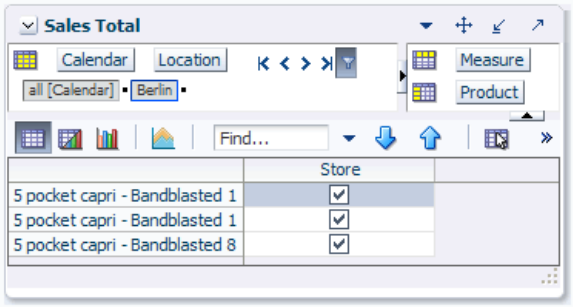
The view refreshes and the next location, Berlin, is shown (Figure 11–41). Note that the position query icon is no longer depressed. The same stores in the position query for Barcelona (Figure 11–40) are shown, even though two of the stores, Liverpool and Oslo, do not have sales greater than $3,500. This is because the position query has been turned off.

Figure 11–41 Position Query Scrolled to New Slice



If you wanted to reapply the position query, click the **Position Query** icon. The view refreshes, and only the stores that meet the requirements of the position query are shown in this slice.

Figure 11–42 Position Query Reapplied to a New Slice



If you want the position query to automatically update when you scroll to a new slice, use the Auto Evaluate feature. For more information, see Using Position Queries with Auto Evaluate.

Using Position Queries with Auto Evaluate

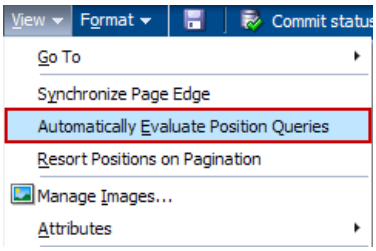
If you want position queries to automatically reevaluate data after a calculate, refresh, or slice move, use the auto evaluate feature.

The auto evaluate feature is located in the View menu. When enabled, the query is updated and the view refreshes with only the positions that meet the requirements of the position query. For performance reasons, this option is disabled by default.

When auto evaluate is turned on and the filter is turned off, auto evaluate will stop evaluating until you turn it back on. If you wants to edit any cell that is filtered because of PQD and do not want to remove auto evaluate, you must turn off filtering, edit the value, and turn it back on.

To turn auto evaluate on, click **Automatically Evaluate Position Queries** option in the View menu.

Figure 11–43 Automatically Evaluate Position Queries



Note: The setting of the Automatically Evaluate Position Queries option is saved with the workbook formatting. For more information on how formatting is saved, see Saving Formats.

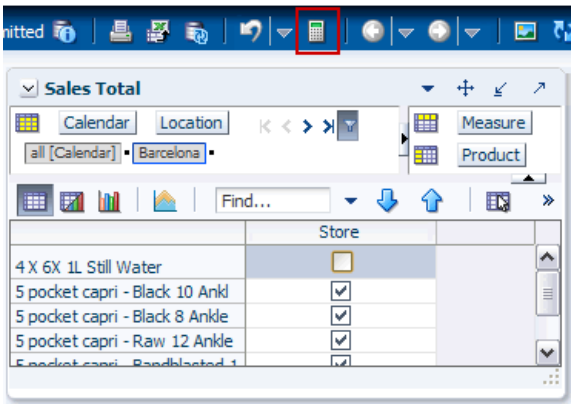
Note: Some worksheets can be configured with Auto PQD enabled for the worksheet. In such cases, PQDs are automatically evaluated for that worksheet, regardless of this workbook setting.

Updating Measure Data with Auto Evaluate

After you have filtered the data using the position query feature with auto evaluate turned on, if you edit the data and calculate, the position query filter automatically refilters according to the new values.

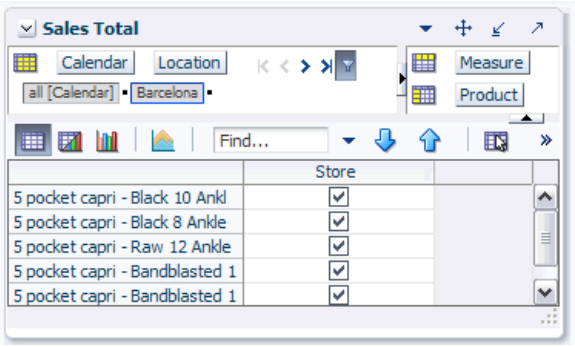
For example, change the Sales total for Luxembourg to zero and click **Calculate**.

Figure 11–44 Updating Measure Data with Auto Evaluate



The view refreshes and Luxembourg is no longer shown in the filter results.

Figure 11–45 Measure Data Updated with Auto Evaluate

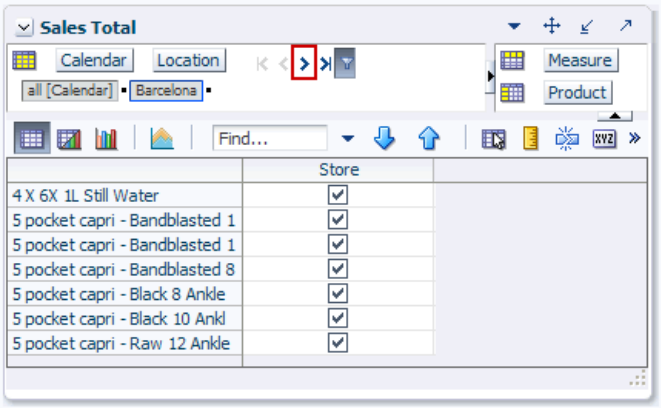


Scrolling with Auto Evaluate

After the slice is filtered, if auto evaluate is enabled and you scroll to the next position, the position query filter is reapplied to the new position. As a result, only the positions that meet the requirements of the position query are shown in the current slice.

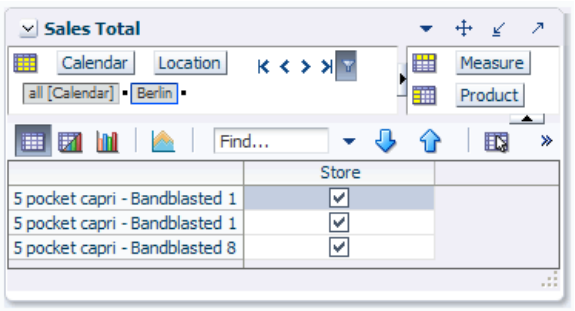
For example, click the **Next** icon to scroll to the next location.

Figure 11–46 Scrolling with Auto Evaluate



The view refreshes and the next location, Berlin, is shown (Figure 11–47). Note how the position query icon remains depressed and how different stores are shown compared to the previous slice (Figure 11–46). Because auto evaluate is enabled, the position query remains on and only the stores that meet the position query requirements are shown.

Figure 11–47 Position Query Scrolled to New Slice with Auto Evaluate



No Position Query Matches

If you scroll to a new slice where no position meets the requirements of the position query, all positions in the view are displayed and a warning appears.

Figure 11–48 Scrolling with No Position Query Matches

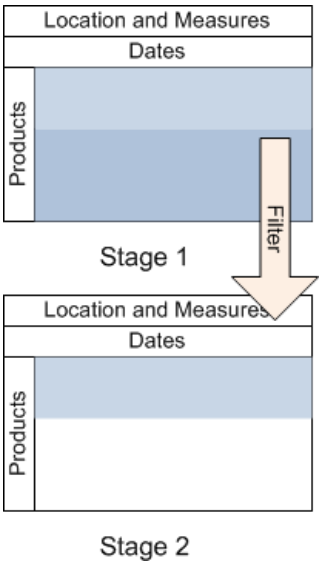
Position Filtering

Use position filtering to use the set of selected data cells in one worksheet view to filter another worksheet view. For example, you can select one or more cells in a pivot table that are associated with a group of items, locations, and measures. The intersection of selected cells can be used to filter another worksheet view.

Note: Position Filtering can be turned on or off using Config Tools.

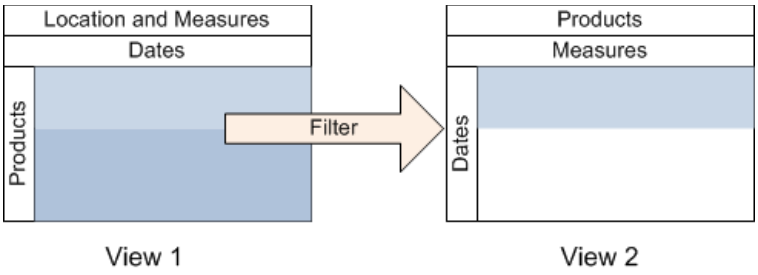
This provides you with a convenient way of filtering a large worksheet with one or more views down to the subset of data you are interested on working with.

Figure 11–49 Position Filtering in a Single View



In the example above a set of positions is selected in a single view. When position filtering is applied, the cells visible in the view are reduced to those specified by the selected positions.

Figure 11–50 Position Filtering in Two Views

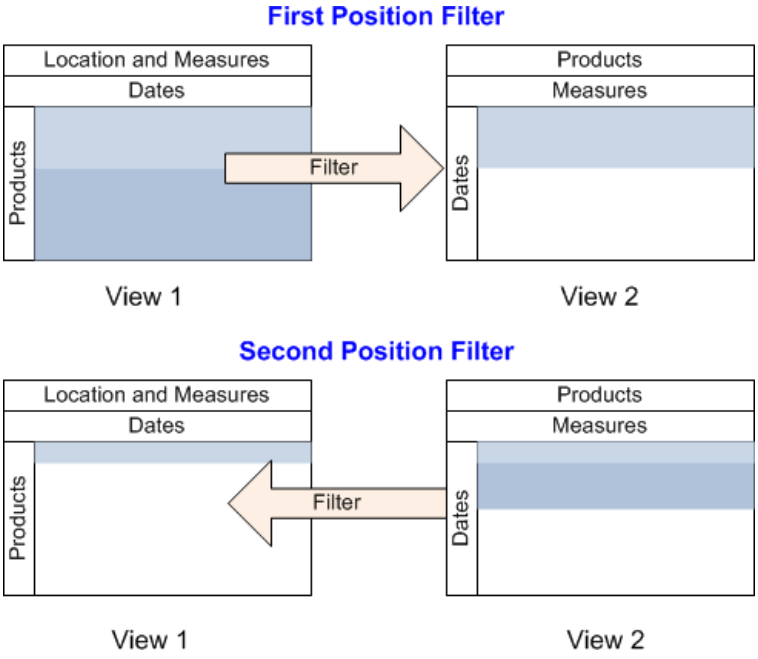


In the above example, a set of positions is selected in the first view. When the position filter is applied, a second view is selected. The positions in the second view are filtered to match those selected in the position filter in the first view.

Position filtering can be applied to multiple views. For example (providing the workbook has been configured to contain those views) position filters can progressively be applied to a sequence of four views.

Position filtering can also be regressive. A set of position filters can be selected in a view and then applied to a second view. This results in a subset of the data being displayed in the second view. The second view can then be have a set of positions selected and used to set a position filter for the first view.

Figure 11–51 Regressive Position Filters



Working with Position Filters

This section describes the basics of working with position filters.

Initiating Position Filtering

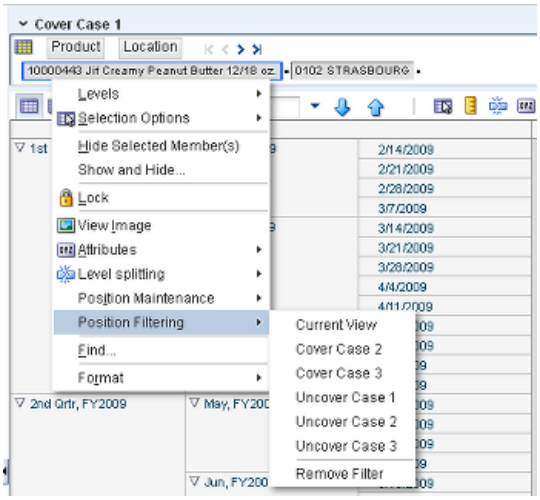
The position filtering option is available from the right click menu when you right click on a position from the page edge, selected rows or columns, or a specified set of cells.

Selecting from Page Edge Position

If you select a page edge position where position maintenance is available (most dimensions excluding the calendar dimension), the **Position Filtering** option will appear below the position maintenance option when you selected one or more rows or columns. Otherwise, the position filtering option will appear under the Level Splitting option.

Position filtering can then be applied to the current view or other views in the worksheet. The available views can be selected from the right click menu.

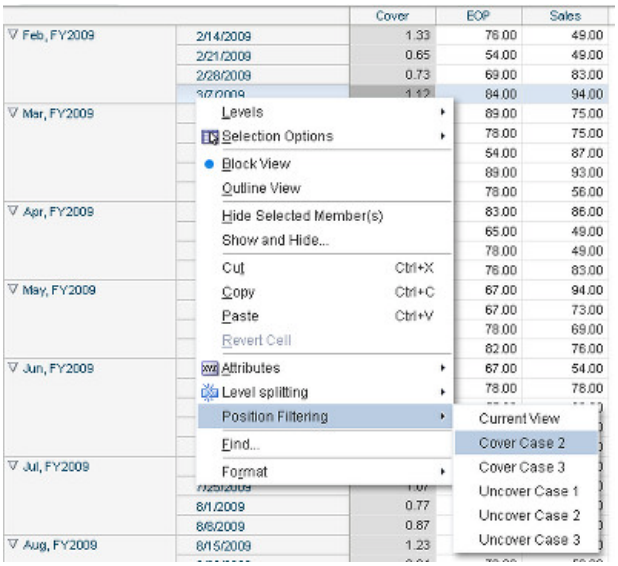
Figure 11–52 Right Click Menu - Position Filtering from Page Edge



Selecting from Rows or Columns

Position filtering can also be initiated by selecting from one or more rows or columns. Again, the right click menu can be used to initiate position filtering. It can be applied to the current view or to other views in the worksheet.

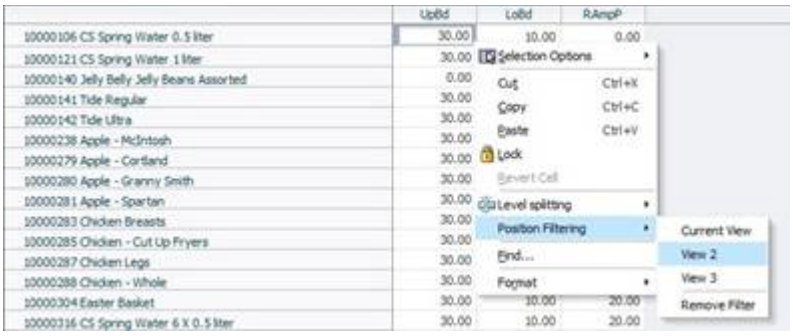
Figure 11–53 Right-Click Menu - Position Filtering from Row or Column



Selecting from Cells

The final way of initiating position filtering is to select one or more cells. Again, the right click menu can be used to initiate position filtering. It can be applied to the current view or to other views in the worksheet.

Figure 11–54 Right-Click Menu - Selecting Position Filtering from Cells



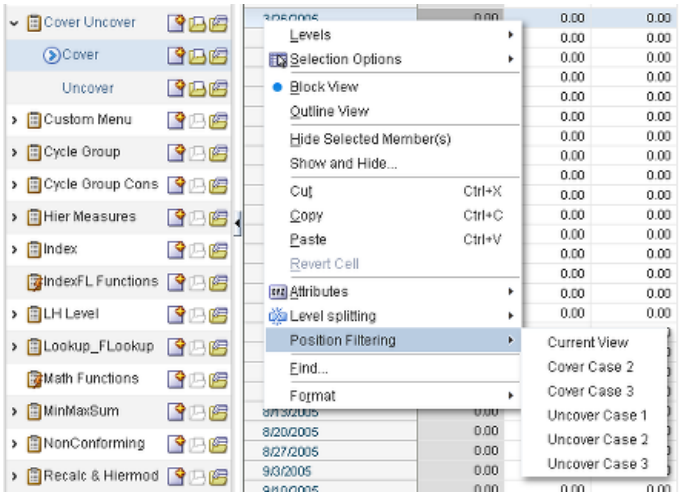
Using Position Filters

Position filters can be applied to all views in the current workbook.

- You can filter the current view. The current view will be filtered to show only those rows and columns selected in the filter. This is equivalent to using the **Show and Hide** options in the Dimensions dialog box to access any dimension tile in the page edge. An alternative is to access the **Show and Hide** options via the right click menu for any rows and columns.
- You can filter another view in the workbook. For this to be effective, the workbook template must be configured with two or more views. There must also be one dimension hierarchy in common with both the views or a filter cannot be applied.

If the worksheet template is only configured to show a single view, only the **Current View** option will be available in the right click menu.

Figure 11–55 Right-Click Menu - Example of Available Views



In the above example, a worksheet has been opened for the Cover step task. The available views are the Current View, Cover Case 2, and Cover Case 3. The next task

(Uncover) also has three views available from the right click menu: (Uncover Case 1, Uncover Case 2 and Uncover Case 3).

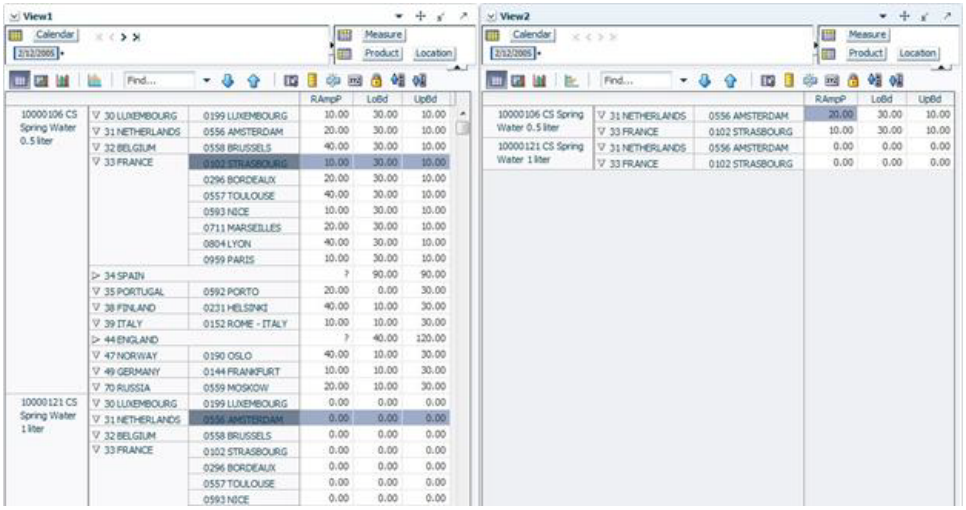
- If you select one of the other views in the current task (Cover Case 2 or Cover Case 3), the selected view will be filtered to show only the specified data.
- If you select a view in the Uncover task, the views will switch to the Uncover task views and the specified view will be filtered to show only the specified data.

Once the filter has been applied, the view to which the filters have been applied becomes the current view.

Tiling Views

One way of working with position filters is to tile the views. This can be done from the **View** menu on the global toolbar. In this way, two or more views can be shown simultaneously. The filter can then be applied to one of the views, leaving the filtered data showing in another view.

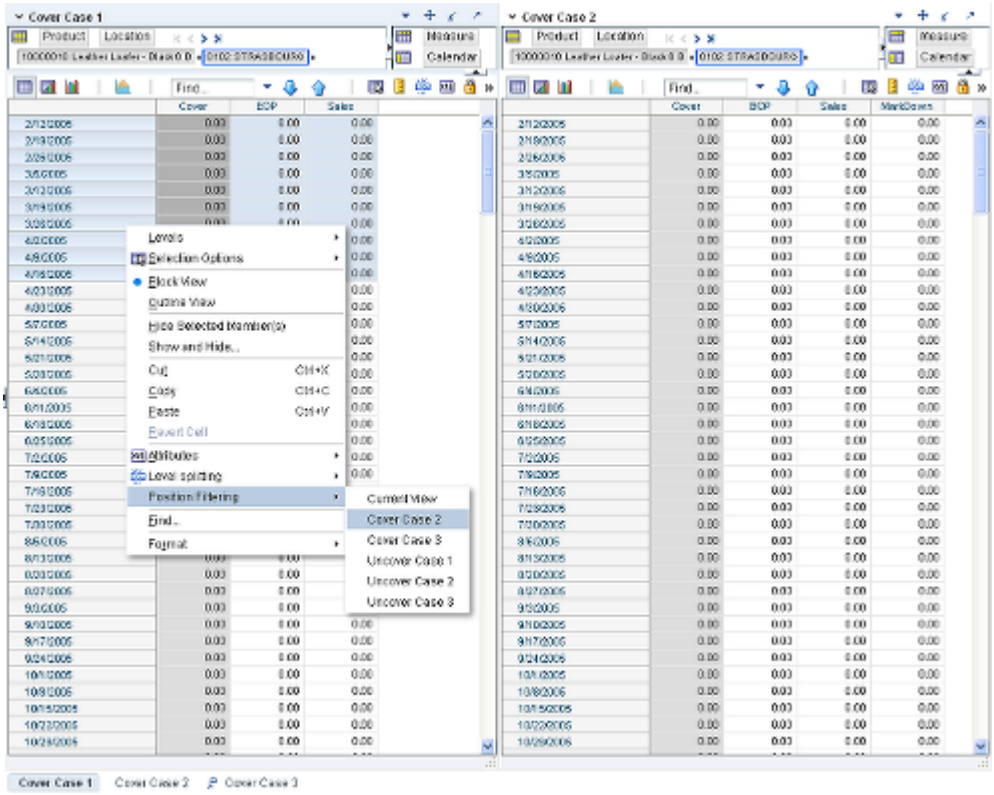
Figure 11–56 Example of Tiling



Basic Example of Applying Position Filters

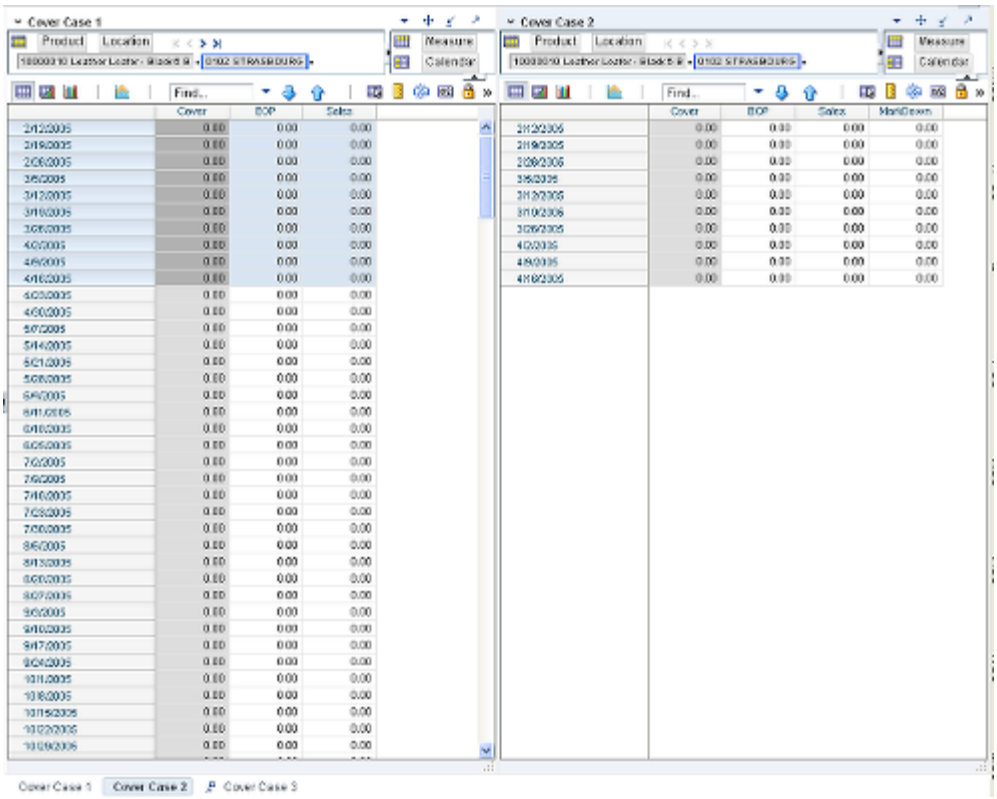
In this example, two views are open. A set of positions are selected in the left hand view and the second (right hand) view selected from the **Position Filtering** option on the **Right Click** menu.

Figure 11–57 Basic Example of Position Filtering - Stage 1



The positions selected for position filtering are highlighted during the selection process. They stay highlighted after the position filtering operation, enabling the user to see which rows are in use for position filtering.

Figure 11–58 Basic Example of Position Filtering - Stage 2



When the position filter is applied, the right hand view is restricted to those positions selected with the position filter in the left hand view. Filtering is based on all dimensions found on the row, column, and page (x, y and z) axis. If the row and column have nothing in common, the page edge (for example the calendar dimension) may still be used to apply the filter.

In the above example, the position filter has been used in the left hand view to select a subset of dates from the total range available. The right hand view now only contains data restricted to this range of dates.

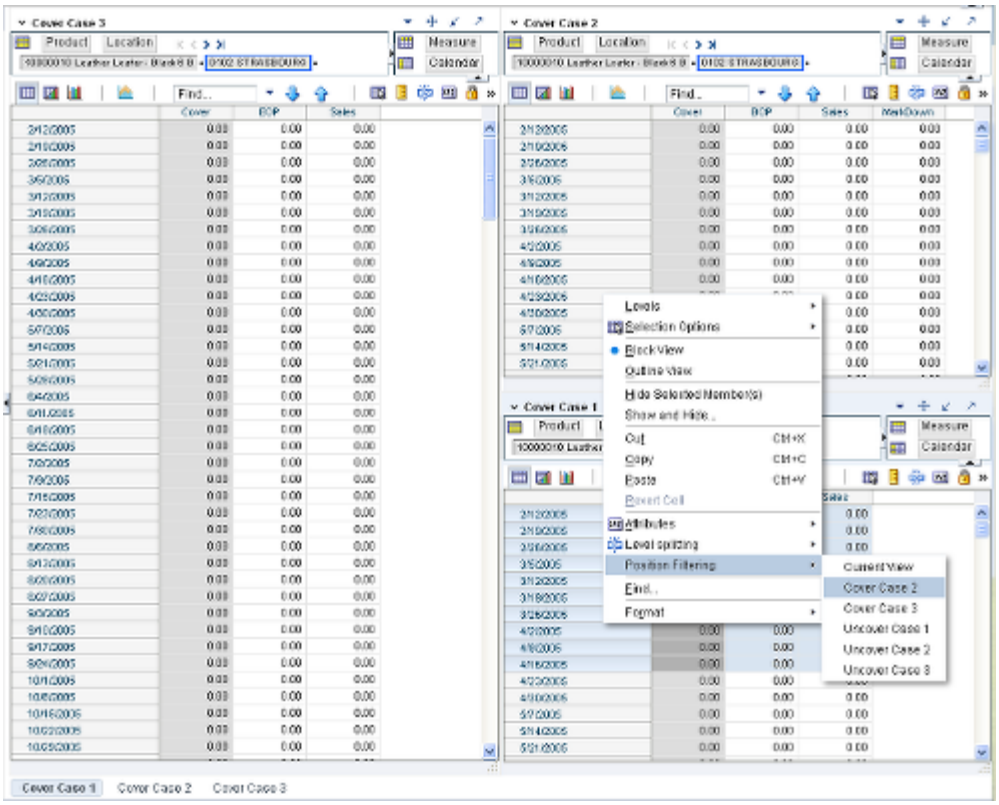
For example, you may want to isolate data restricted to a range of dates covering a promotional campaign for a product. As the promotional campaign may raise the quantities sold over the duration of the promotion, position filtering makes it easier for you to focus on the data pertinent to an advertising campaign.

Note: This can work equally well in reverse, with the positions selected and the filter applied in the right hand view. This results in the left hand view being filtered.

Additional Example of Applying Position Filtering

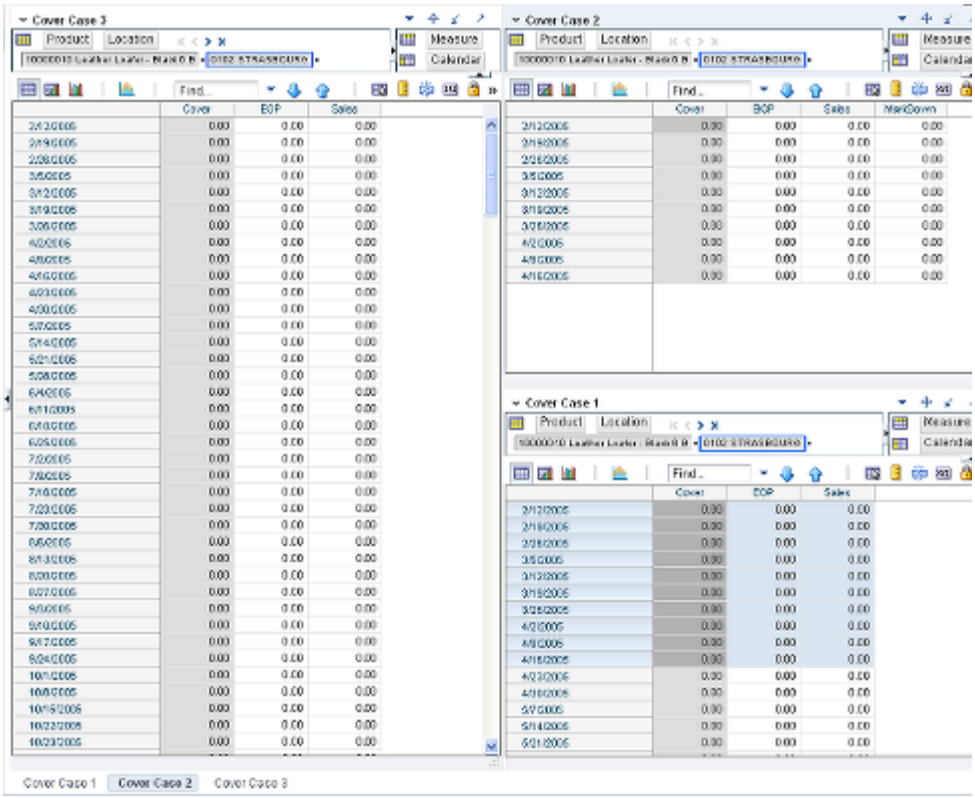
Position filtering can be applied to multiple views. In this example, three views are available. Position filtering starts in the lower right view, where a set of positions has been selected. Filtering is applied to the upper right view.

Figure 11–59 Additional Example of Position Filtering - Stage 1



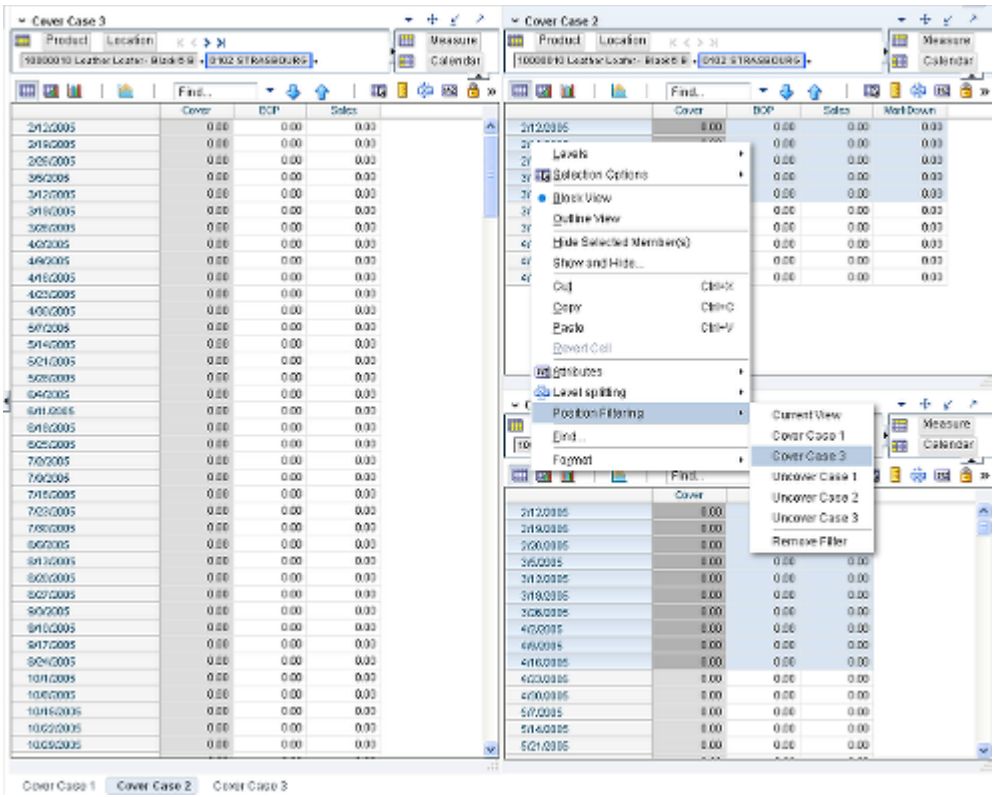
After position filtering has been applied, the upper right view displays a subset of data.

Figure 11–60 Additional Example of Position Filtering - Second Stage



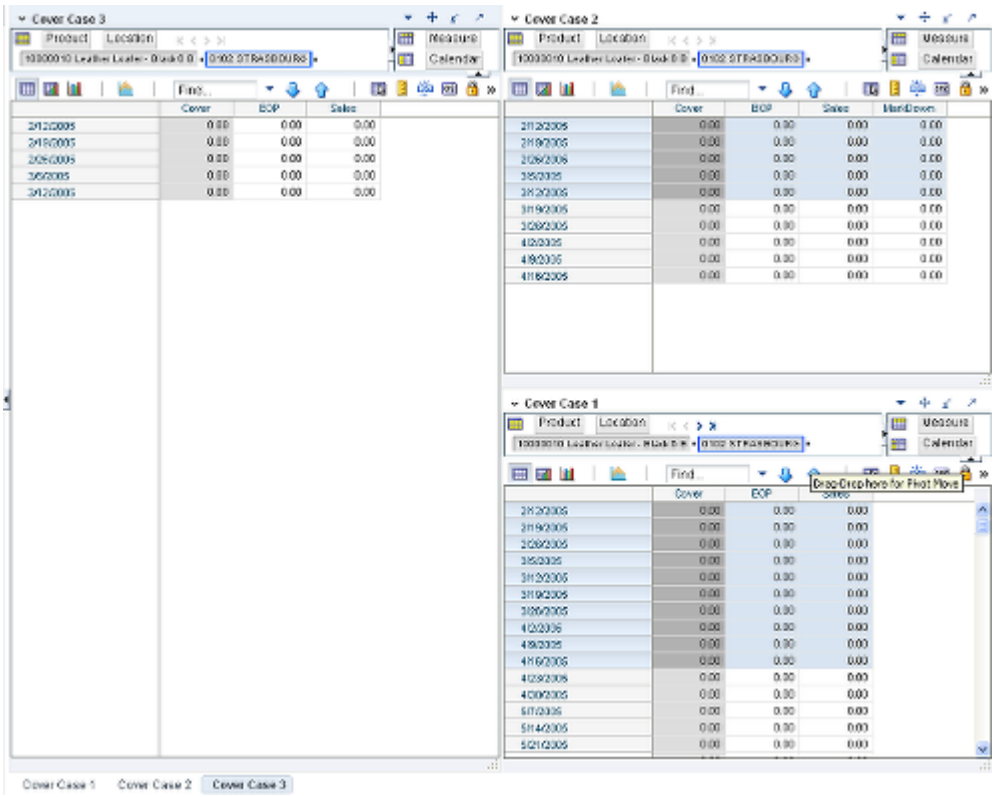
Another set of position filters can now be applied to the upper right hand view. As before, the positions selected for filtering remain highlighted.

Figure 11–61 Additional Example of Position Filtering - Third Stage



When the position filter is applied, the third (left hand) view is filtered.

Figure 11–62 Additional Example of Position Filtering - Final Result



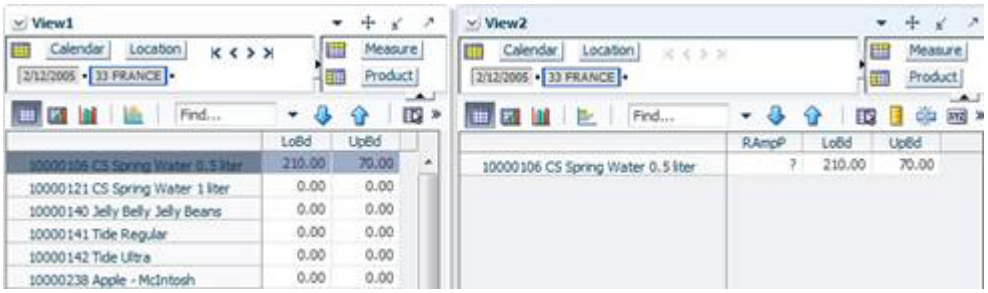
This is a complex example of what can be achieved with position filtering. If the position filtering is applied to the location dimension with the region, district, and store levels available, you can use the first view to filter stores down to a specific region (say France) and the second view to filter stores in France down to a specific district (say Northern France). As a result, the third view contains a list of stores in cities such as Calais, Cherbourg, and Dieppe.

This is an effective way to open a workbook with a large amount of data and then use position filters to swiftly isolate subsets of data to edit.

Page Edge Synchronization

When a position filter is applied, the information in the page edge is also filtered. If the **Synchronize Page Edge** option has been selected from the **View** menu, synchronized page edge navigation may not always be possible if a position filter has been applied.

Figure 11–63 Position Filtering - Page Edge Synchronization Example



In the above example, a position filter has been applied to View 2. This results in a single position, 33 France. If you now goes to View 1 and uses the page edge controls to scroll through the available locations, view 2 cannot synchronize because it only has a single location dimension. This situation will persist until more locations are made visible when another position filter is applied (or the show and hide option is used).

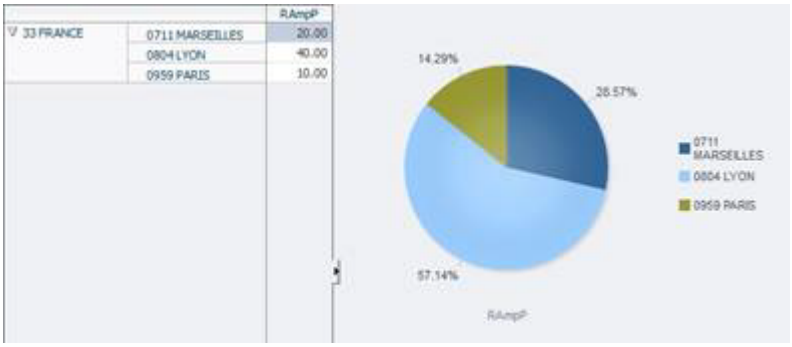
Position Filtering and Charts

Position filtering also updates charts. Where positions are hidden by the position filter, the graph is updated to reflect the changed data. In the example below, the pie chart is currently showing data for all stores in the district of France.

Figure 11–64 Chart Before Position Filter is Applied

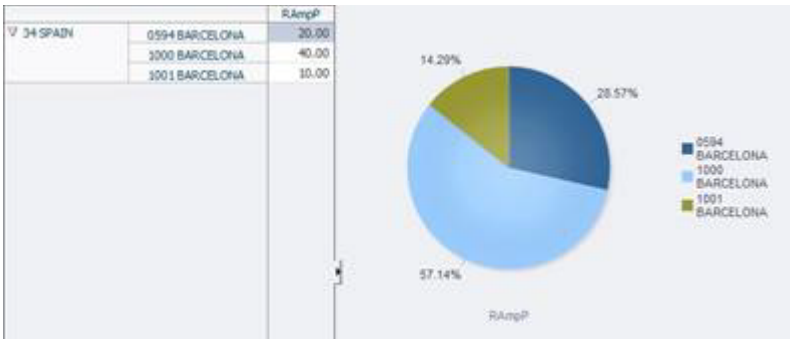
A position filter is then applied. As a result, the district of France is filtered so that only three stores are visible. The pie chart is updated accordingly.

Figure 11–65 Chart After Position Filter is Applied.



If a different position filter is applied, the chart will update accordingly. In the final example, the position filter has been reapplied, and as a result, the data from the Spain district is visible. The chart now shows the pertinent stores from Spain.

Figure 11–66 Chart After Position Filter is Reapplied



Position Filtering and Chart Drilling

Position filtering is not supported for chart drilling. See the section on chart drilling for more information.

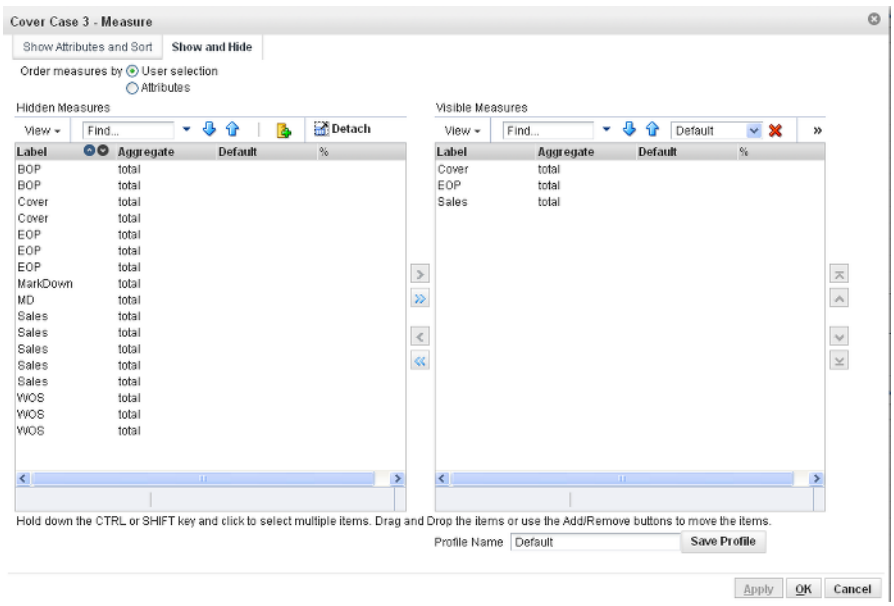
Factors Affecting the Use of Position Filters

Other RPAS functionality can affect the use of position filters.

Position Filtering and Hidden Positions

Position filtering only operates on visible measures. In addition, if the measures are hidden when the filter is applied, they will remain hidden after the filter has been applied. In order to see which measures are hidden, double click any dimension tile in the page edge. This brings up the **Dimension** dialog box. The **Show and Hide** tab shows which measures are visible and which are hidden.

Figure 11–67 Dimensions Dialog Box - Show and Hide Tab



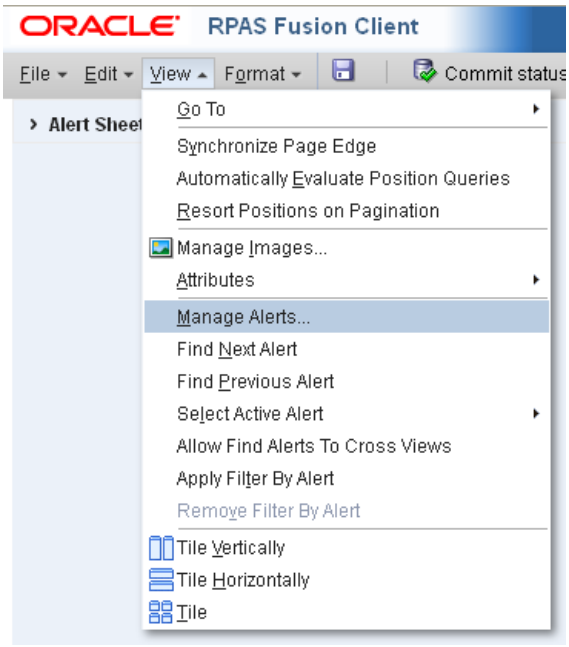
If you hides positions with the position filter applied, the position filter will remain in effect. If you show additional positions, the position filter will be overridden.

Show Members by Batch Alert Option

If you opt to view batch alerts, the current position filter will be removed. Batch alerts can be selected for viewing from the opening page or from the **View** menu if a workbook is currently open.

Once a workbook has been opened to show batch alerts, the alerts can be filtered using position filtering.

Figure 11–68 View Menu - Manage Alerts Option

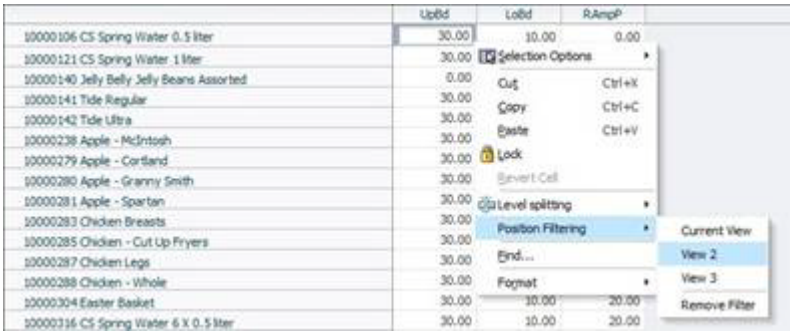


After the batch alerts have been displayed, you can reapply the position filter.

Removing Position Filters

Once applied, position filters can be removed using an option available on the right click menu. This option is not available until a position filter has been applied.

Figure 11–69 Right-Click Menu - Remove Filter Option Enabled.



Copying and Saving with Position Filtering

When workbooks are copied or saved with position filtering applied, the following applies:

Copying Workbooks

If a workbook view is copied, any position filters are copied as well. This means that the copied view will be identical to the original. you can remove the position filter in the copied view to show all positions.

Saving Workbooks

When a workbook is saved, the currently applied position filter are saved as well. When the workbook is closed and reopened, it will open with the position filter applied.

12

Working With Charts

You can use the charting feature to generate a visual representation of the data in the form of charts. This section describes the available chart types and provides instructions on the various tasks you can perform with charts. It includes the following sections:

- Viewing Charts
- Charts View User Interface
- Editing Data Through a Chart
- Customizing a Chart
- Saving a Chart as an Image
- Available Chart Types
- Charting and Drilling

> **Note:** Due to some limitations of Flash, chart axes and labels may not be visible at times and chart sizes may not adjust as expected.

Viewing Charts

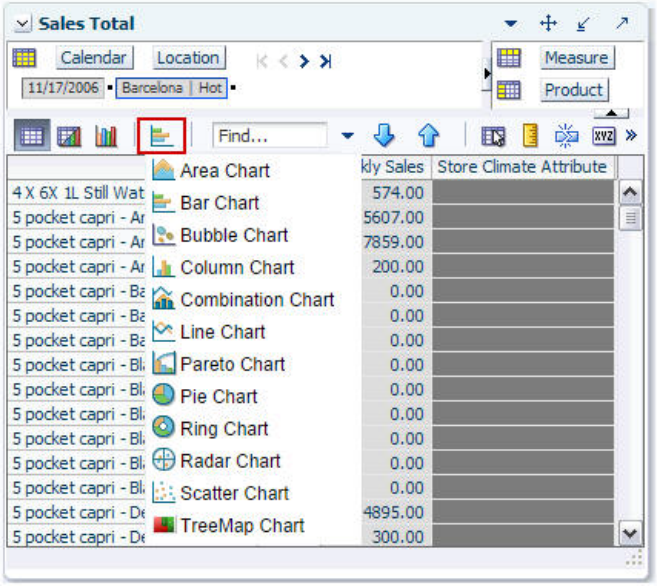
You can view charts using the following views:

- Chart View – In this view, the chart displays in the complete view area.
- Split View – In this view, the chart and data display together in two vertical panels.

To view a chart:

1. Select the data you want for the chart.
2. From the View toolbar, click the **Select Chart Type** icon, and then select the chart type.

Figure 12–1 Select Chart Type Icon on the View Toolbar



3. After you select the chart type, click one of the following icons:

   - **Switch to Chart View** – Select this icon to switch the view to charts.

Figure 12–2 Switch to Chart View Icon on the View Toolbar

   - **Switch to Split View** – Select this icon to see the pivot table and chart split in two vertical panels.

Figure 12–3 Switch to Split View Icon on the View Toolbar

To switch back to the pivot table, click the **Switch to Pivot Table View** icon.

Figure 12–4 Switch to Pivot Table View Icon on the View Toolbar

Cell Selection Considerations

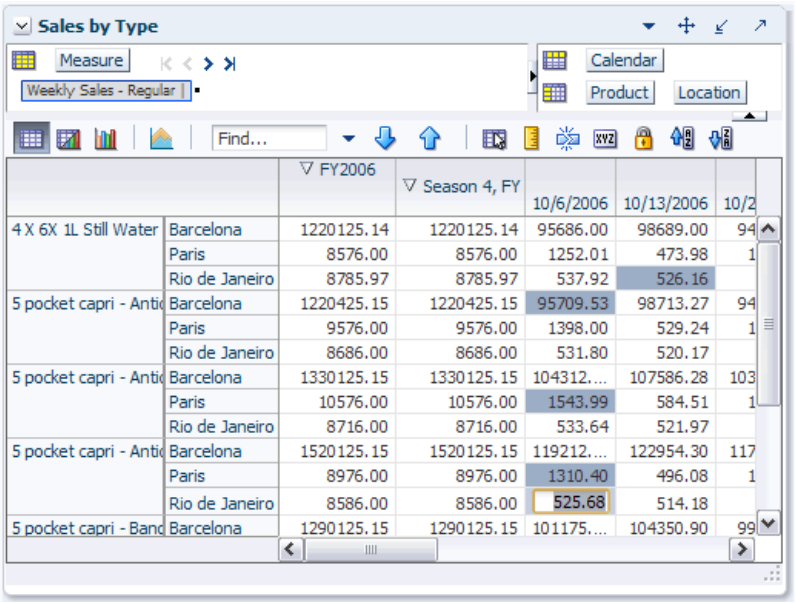
When you choose to view a chart, only the cells that you select are represented in a chart. Each available graph type requires that a specific amount of data or number of cells are selected for a graph to appear. Although you may select a subset, the cells must contain enough data to support the desired graph for the graph to be displayed. For more information on the information required for each graph type, see Available Chart Types.

Squaring the Selection

When the chart is rendered on screen, the cell selections in the view are automatically squared. In this operation, additional cells are added to your selection to represent a squared selection area. This ensures that the data is analyzed in a consistent manner.

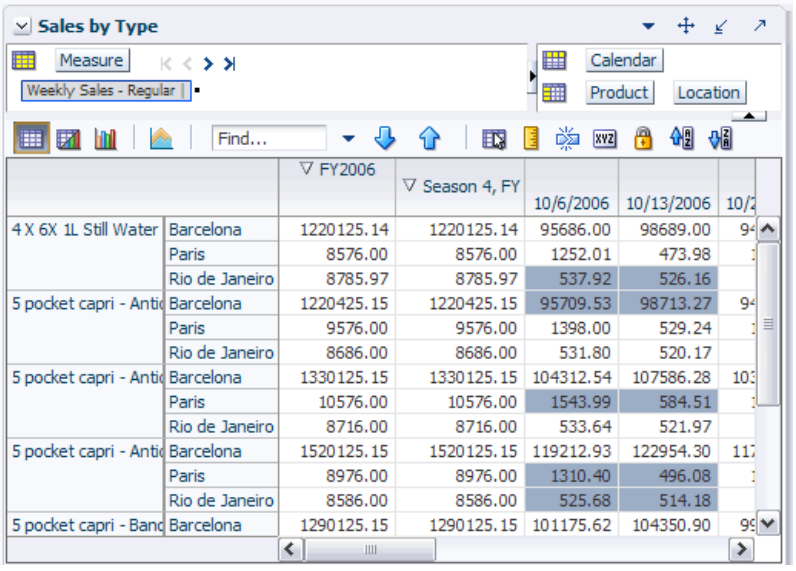
For example, if you choose to select some cells before viewing a chart, as shown in Figure 12–5:

Figure 12–5 Example of Cells Selected Before Viewing a Chart



After the chart appears, your selection in the view is squared, as shown in Figure 12–6:

Figure 12–6 Example of Squared Selection After the Chart Appears



Working with Charts

The following sections describe the charting functions.

Charts View User Interface

When you switch to the Chart View or Split View, the View toolbar appears with icons relevant to charts.

Figure 12–7 Charting Icons in the View Toolbar

In the Chart View, the following charting icons appear:

Table 12–1 Charting Icons in the View Toolbar

Legend	Icon Name	Description
A	Chart Formatting	Use to customize the format of the charts. For more information, see Customizing a Chart.
B	Save Chart to Image	Use to save the chart as an image (PNG format) file.
C	Flip Chart Axis	Click to swap the contents represented on the X and Y axes without manually performing a pivot operation.

Editing Data Through a Chart

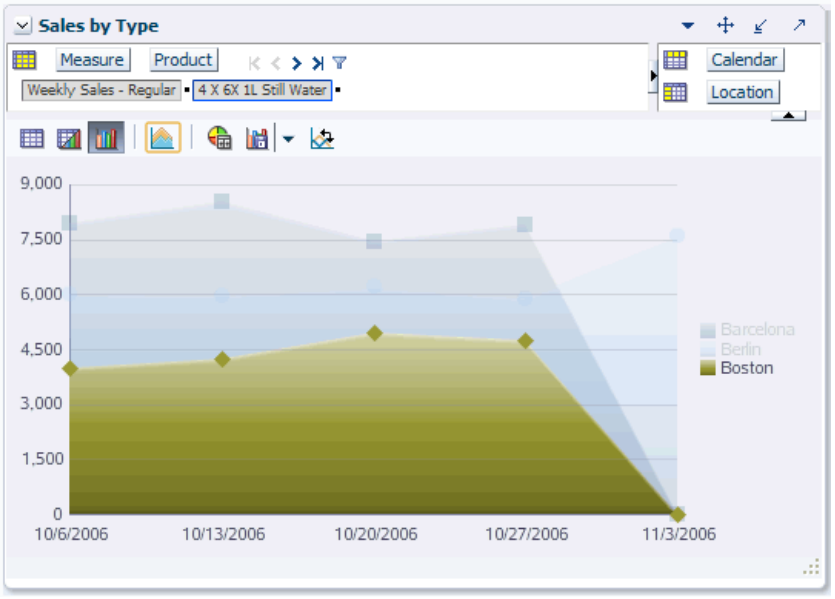
After the chart appears on screen, you can update the value of a specific series.

Editing Data Without the Drilling Operation Enabled

If no drilling operations have been carried out, data can be edited simply by clicking the series in the chart. To edit a chart:

1. In the chart, select the value for the specific series represented in the chart using the following steps:
   a. Mouse over the series or the legend. The specific series is highlighted automatically, and the other series are dimmed. See Figure 12–8.

Figure 12–8 Example of a Series Highlighted in Area Chart

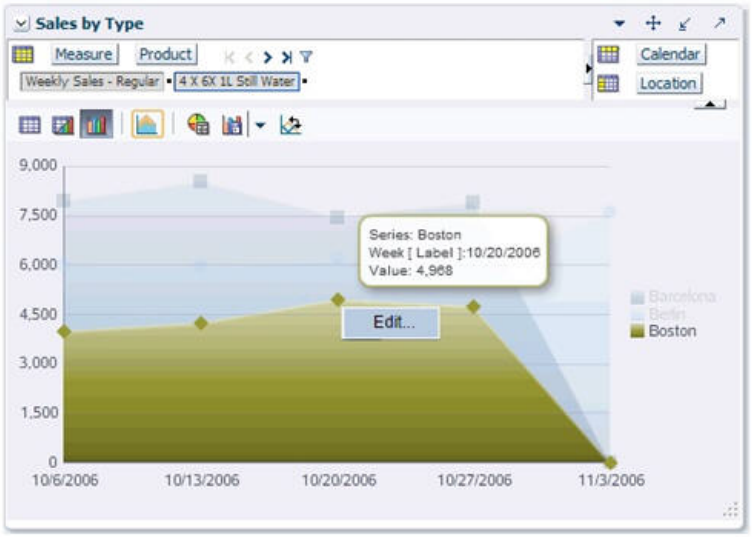


Note: This is a configurable setting and can be toggled on or off in the properties file. For more information, refer to the *Oracle Retail Predictive Application Server Administration Guide for the Fusion Client*.

b. After the series is highlighted, locate the value you want to edit on the chart and select the relevant area based on the following:

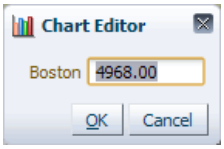
Chart Type	Area to Select
Area Chart	Right-click on the specific point and select Edit... in the context menu. The point is indicated by a tool tip pop-up when you point at it.
Bar Chart	Right-click the bar area and select Edit...
Bubble Chart	Right-click the bubble. and select Edit...
Column Chart	Right-click the column area and select Edit...
Combination Chart	Right-click on the relevant area based on chart type. Refer to the area for Area, Column, and Line Charts.
Line Chart	Right-click the specific point on the line and select Edit... (indicated by line marker).
Pareto Chart	Right-click on the column or the pareto line marker and select Edit...
Pie Chart	Right-click the slice and select Edit...
Radar Chart	Right-click the line marker point and select Edit...
Ring Chart	Right-click the slice and select Edit...
Scatter Chart	Right-click on the scatter marker (shape) and select Edit...
Treemap Chart	Right-click the node and select Edit...

Figure 12–9 Example of Value to be Selected in the Area Chart



The Chart Editor window appears.

Figure 12–10 Chart Editor Window



2. Enter the new value or values and click **OK**. The chart and the view data are updated with the new values entered.

> **Note:** The cell-editing and protection processing rules also apply to the editing of chart values. Read-only values are not editable.

Customizing a Chart

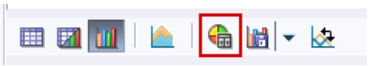
In Chart View, the View toolbar includes the Chart Formatting icon that you can use to format and customize the chart.

> **Note:** The Chart Formatting Window for the Treemap Chart is described separately in Understanding the Treemap Chart Formatting Window.

To customize the chart:

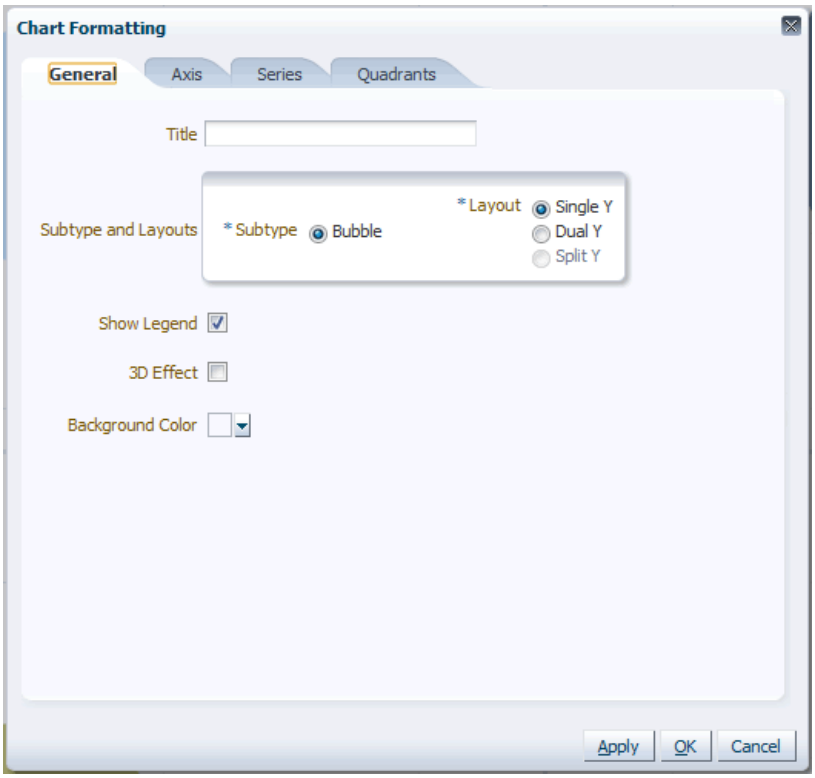
1. In the Chart View, click the **Chart Formatting** icon in the View toolbar.

Figure 12–11 Chart Formatting Icon in the View Toolbar



The Chart Formatting window appears.

Figure 12–12 Chart Formatting Window



2. In the **Chart Formatting** window, make the relevant changes. For more information on the Chart Formatting window, see Understanding the Chart Formatting Window.
3. Click the **Apply** icon to apply the changes and continue customizing your chart. When you click the Apply icon, the changes take effect immediately in the background.
4. After you have completed making changes, click **OK**. The changes are applied to the chart and the Chart Formatting window closes.

Note: The Chart Formatting Window for the Treemap Chart is described separately in Understanding the Treemap Chart Formatting Window.

Understanding the Chart Formatting Window

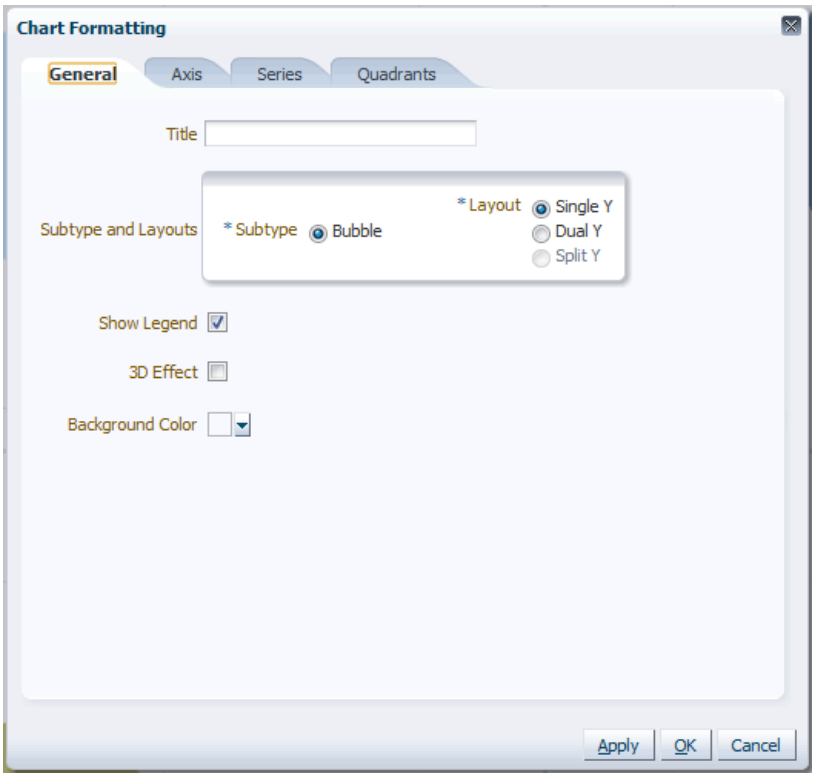
The Chart Formatting window can include the following tabs. Some tabs are only displayed for certain chart types.

- General Tab
- Axis Tab
- Series Tab
- Quadrants Tab

General Tab

Use the General tab to customize the general settings for the chart.

Figure 12–13 General Tab on the Chart Formatting Window



The General tab includes the following fields:

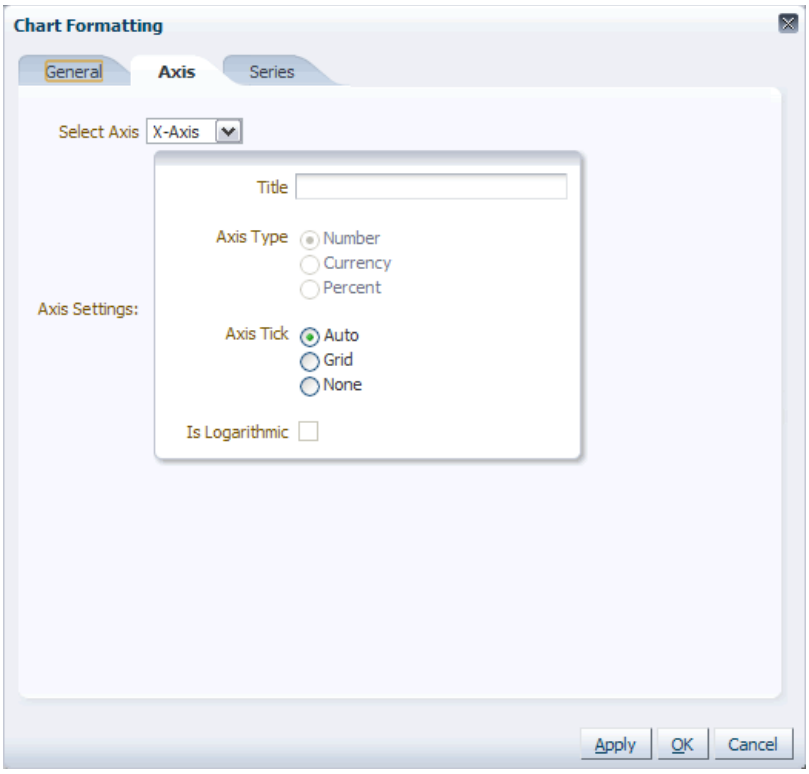
Table 12–2 Fields on the General Tab

Field	Description
Title	Use to set a title to the chart.
Subtype and Layouts	Subtype Selection includes the following options: ▪ Absolute (applies to Area, Bar, and Line Chart) ▪ Stacked (applies to Bar and Line Chart) ▪ Percentage (applies to Area, Bar, and Line Chart) ▪ Is Horizontal (Bar only) Layout Selection includes the following options ▪ Single Y (applies to the Bubble, Scatter, and all Absolutes/Stacked types) ▪ Dual Y (applies to the Bubble, Scatter, and all Absolutes/Stacked types) ▪ Split Y (applies to all Absolutes and Stacked types)
Show Legend	Select this check box to display a legend on the chart.
3D Effect	Select this check box to display the chart in 3-D.
Background Color	Use to select a background color for the chart.

Axis Tab

Use the Axis tab to customize the axes settings.

Figure 12–14 Axis Tab on the Chart Formatting Window



The Axis tab includes the following fields:

Table 12–3 Fields on the Axis Tab

Field	Description
Select Axis	Based on the type of chart, displays the axes for the chart. You can select each axes and set the parameters in the Axis Settings section.
Title	Use to set a title for the axis.
Axis Type	These options are available only for bubble and scatter charts. Use to set the data type for the axis. You can choose from the following options: ▪ Number (does not apply for percentage type graphs). ▪ Currency (does not apply for percentage type graphs). ▪ Percentage (automatic on percentage type graphs).
Axis Tick	Use to show or hide grid lines within the chart. Select from the following options: ▪ Auto ▪ Grid ▪ None

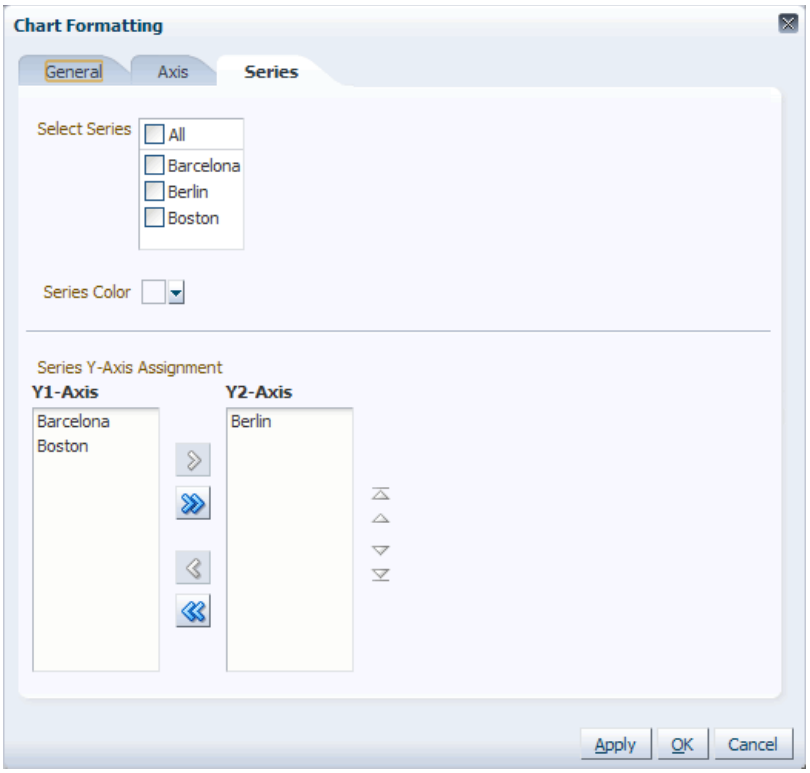
Table 12–3 (Cont.) Fields on the Axis Tab

Field	Description
Is Logarithmic	Changes the axis to use a logarithmic scale when plotting data. This is useful to display data with large range differences. For example, you may have the values 99999, 5002, and 250. Normally, the value 250 does not appear, due to its small value. If the Is Logarithmic box is checked, that value will be displayed properly in the bar chart.

Series Tab

Use the Series tab to set the series color and Y-Axis assignment.

Figure 12–15 Series Tab on the Chart Formatting Window



The Series tab includes the following fields:

Table 12–4 Fields on the Series Tab

Field	Description
Select Series	Displays the series that appear in the chart.
Series Color	Use to set a color for the series selected in the Select Series section.
Series Y-Axis Assignment	Use to Move/Move All/Remove/Remove All icons and assign series to the Y1 and Y2 axes.

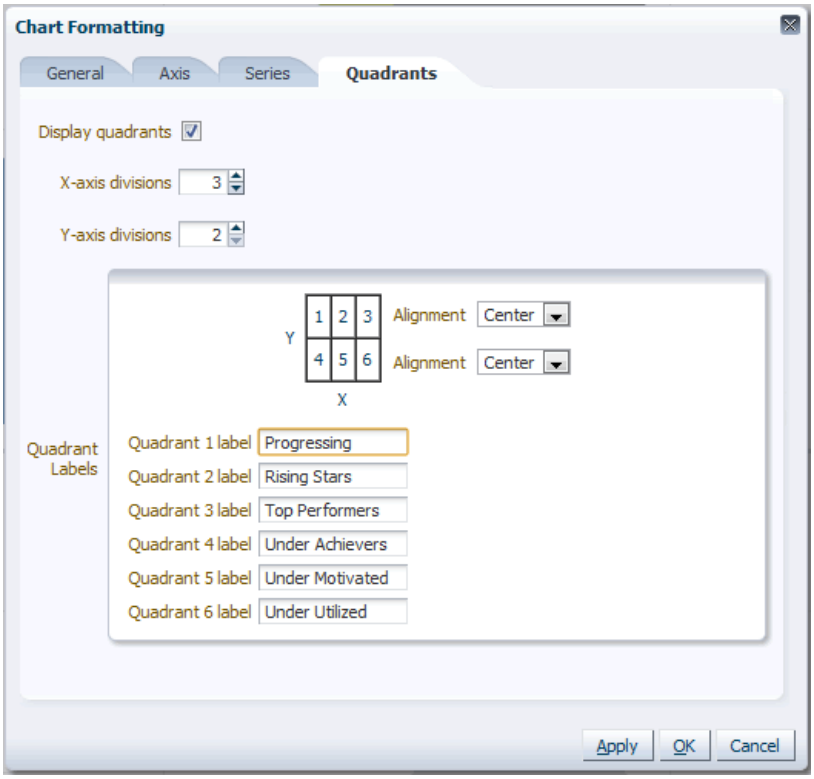
Quadrants Tab

Use the Quadrant tab to configure quadrants in the bubble charts. The tab only appears if the chart type is set to bubble. It does not appear for other chart types.

You can configure the chart to have more than four quadrants or sections. You can configure the chart to have up to 16 sections.

As you enter the desired number of X and Y axes divisions, the graph icon in the Quadrant Labels section refreshes to show a new representation of the chart. If you enter quadrant labels for the sections, you can adjust the placement of these labels with the Alignment feature.

Figure 12–16 Quadrant Tab on the Chart Formatting Window



The Quadrant tab includes the following fields:

Table 12–5 Fields on the Quadrant Tab

Field	Description
Display quadrants	Select this check box if you want to display the quadrant lines.
X-axis divisions	Use this drop-down box to select the number of quadrants or sections you want along the X axis. As you adjust this number, the graph icon refreshes to display your selection.
Y-axis divisions	Use this drop-down box to select the number of quadrants or sections you want along the Y axis. As you adjust this number, the graph icon refreshes to display your selection.
Alignment	Use this drop-down box to adjust the placement of quadrant labels within the quadrant. Options are **Center**, **Top**, and **Bottom**.
Quadrant Labels	Use these fields to enter names for each quadrant. This is optional.

Understanding the Treemap Chart Formatting Window

The Treemap chart formatting window is similar to the General Tab of other charts, but with the addition of Subtypes that are used to configure how node color is displayed.

Once you have made updates, you can click **OK** to refresh the display of the Treemap chart.

Figure 12–17 Treemap Chart Formatting Window

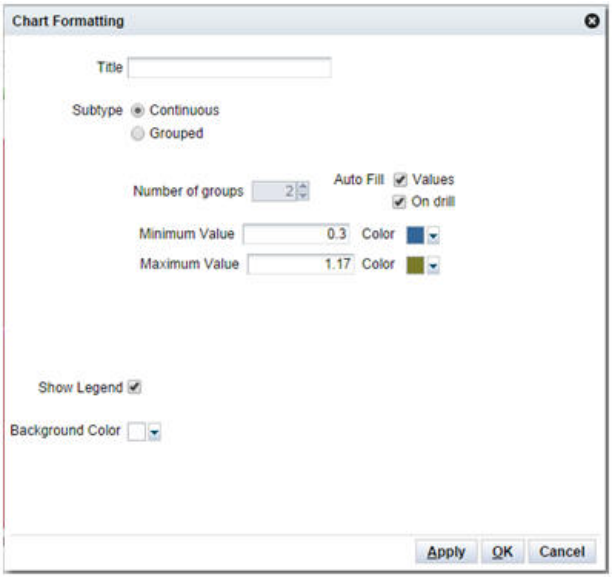


Table 12–6 Fields for Treemap Chart Formatting

Field	Description
Title	Use to set a title to the chart.
Subtype	Subtype Selection includes the following options: ▪ Continuous allows one color to be used in different shades for a node. The color shades transition from a minimum to a maximum value. ▪ Grouped allows specific colors to be assigned to defined groups.
Show Legend	Select this check box to display a legend on the chart.
Background Color	Use to select a background color for the chart.

Continuous Subtype

When you select the continuous subtype, you must manage the options for Auto Fill, Minimum Value, Maximum Value, and Color. The Number of groups value is disabled here as it only applies to the grouped subtype. See Treemap Chart Formatting Window.

Table 12–7 Continuous Subtype Options

Option	Description
Auto Fill	Select this check box if you want Values or On drill to be auto-calculated. These two options are both selected by default. Values. Select this option if you want the minimum and maximum values to be auto-calculated based on the chart data. The minimum value is set to the lowest chart data value, and the maximum value is set to the highest chart data value. You can override these auto-calculated values by entering a number for either value yourself. In this case, the Value check box becomes de-selected. On drill. Select this option so that after drilling down, the minimum and maximum values are re-calculated based on the new highest and lowest values instead of on the existing parent-level values. You may not need the On drill option when the data that drives color is aggregated as average, mean, median, or percent. This option is more relevant when color data aggregates as total, min, max, and so on.
Minimum Value/Maximum Value	Define the starting and ending values for the color transition. Treemap chart nodes that have values less than or equal to the minimum are shaded with the color associated with the minimum value, and nodes with values greater than or equal to the maximum are shaded with that associated color. Nodes with values in between are reflected by color shades according to their specific values. These values are auto-calculated if you select the Auto Fill check box.
Color	Associates a specific color with the minimum value and a specific color with the maximum value. The default values are selected from the chart color series.

Grouped Subtype

When you select the grouped subtype, you must manage the options for Number of groups, Auto Fill, Labels, Range cut-off values, and Color.

Figure 12–18 Grouped Subtype Option

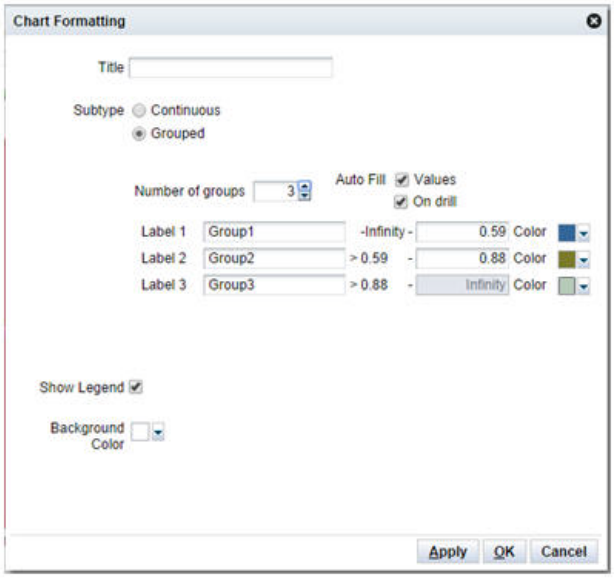


Table 12–8 Grouped Subtype Options

Option	Description
Number of groups	Defines the number of discrete groups that the nodes are grouped into. Each group is associated with a label. range cut-off value, and color. The default is 2.
Auto Fill	Values. Select this option if you want the range of cutoff values to be auto-calculated based on Number of groups and chart data. You can override these auto-calculated values by entering a range cutoff value yourself. In this case, the Value check box becomes de-selected. On drill. Select this option so that after drilling down, you want the range cutoff values to be proportional. The new cutoffs are based on the new color data and proportioned using the parent-level cutoffs. You may not need the On drill option when the data that drives color is aggregated as average, mean, median, or percent. This option is more relevant when color data aggregates as total, min, max, and so on.
Label	The name for each group. The default names are Group 1 and Group 2. You can change these names as appropriate. If you add a group (by changing the value in Number of groups), the new group will initially be assigned a default name, regardless of any changes you may have made.
Range cut-off value	Defines the cut-off value for the range associated with the group. All the nodes that have a color data value greater than the lower cutoff and lower than or equal to the upper cutoff are shaded with the associated color.
Color	Defines the color associated with each group. A node is assigned a color based on the range into which the value falls. The default color is assigned to each group using the chart color series.

Saving a Chart as an Image

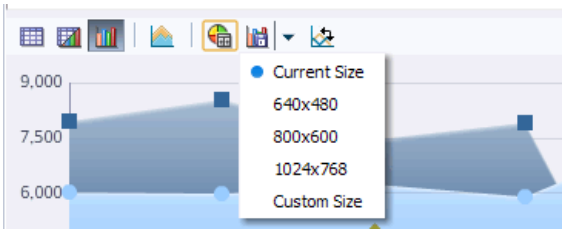
In Chart View, the View toolbar includes the **Save Chart to Image** icon that you use to save the chart as an image (in PNG format).

Figure 12–19 Save Chart to Image Icon on the View Toolbar

To save the chart as an image:

1. In the **Chart View**, click the drop-down arrow on the **Save Chart to Image** icon and select the image resolution.

Figure 12–20 Drop-Down Menu on the Save Chart to Image Icon

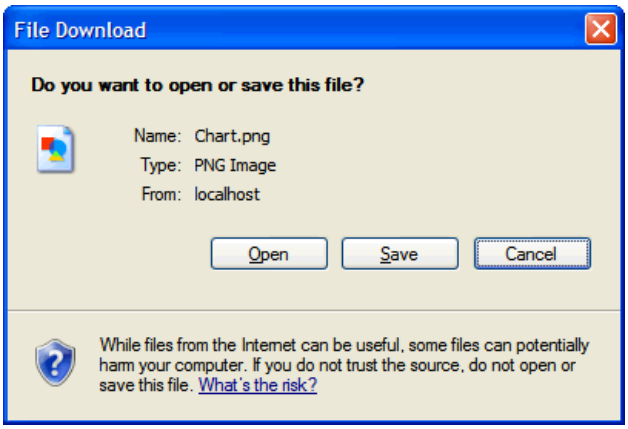


2. Click the **Save Chart to Image** icon to save the image.

3. The File Download dialog box appears. Click **Open** or **Save**, as shown in Figure 12–21.

   Clicking **Open** opens the chart as a PNG file. Clicking **Save** allows you to select a location to save the file.

Figure 12–21 File Download Dialog Box



Elapsed and Unelapsed Time

Line Charts and Area Charts can be displayed with a line that represents the division between elapsed time and unelapsed time.

This line is displayed if, for a given chart for a selection of data cells, the calendar dimension is selected and the time period selected includes the elapsed time. The line will only be displayed if the calendar dimension is on the X-axis and the calendar's positions are in sorted order. If the X-axis contains multiple dimensions that include the calendar dimension, then the line will not be displayed.

You can format this line using the General tab of the Chart Formatting window in order to select the color for the line or to hide/un-hide the line.

To configure the color for the line, select the color you want from the drop-down list and click **Apply**.

To hide a line that is currently displayed, un-check the Show Today check box and click **Apply**. To display the line, check the Show today check box and click **Apply**.

Boolean Flags

Line charts can be configured to display a Boolean flag.

To display a Boolean flag:

1. Select a group of measures that include Boolean measures.
2. Select Line Chart.
3. The Line Chart display a graph with the Y2-axis as the Boolean axis.

The Y axis is the default axis for the Boolean flag. You can change the default using the Edit Chart dialog box.

The default scale for the Boolean axis is 1. You can change this using the Formatting dialog box.

If you select more than one Boolean measure, all the measures you select will be displayed on the chart.

Available Chart Types

The following chart types are available with the charting feature:

- Area Chart
- Bar Chart
- Bubble Chart
- Column Chart
- Combination Chart
- Line Chart
- Pareto Chart
- Pie Chart
- Ring Chart
- Radar Chart
- Scatter Chart
- Treemap Chart

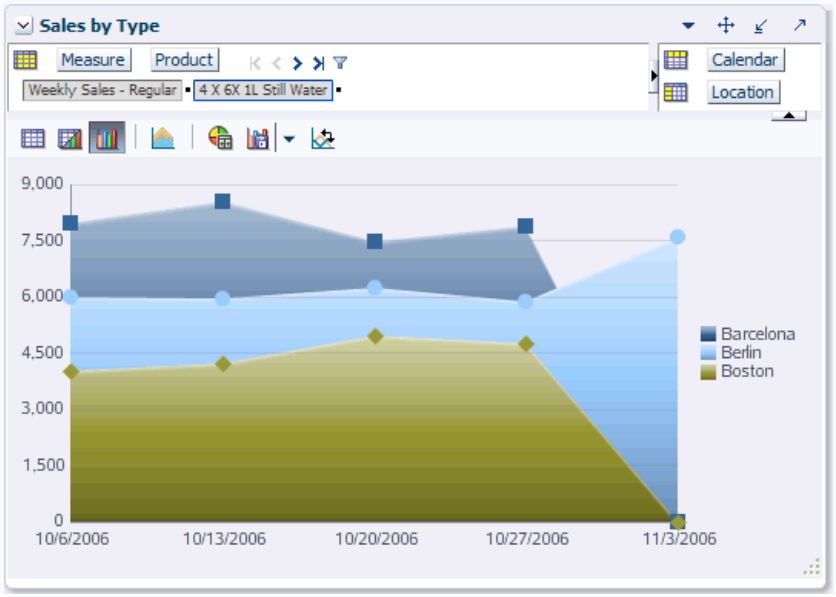
Area Chart

In a Area chart, the data is represented as a filled-in area. An area chart can be used to show trends over time, such as sales for the past 12 months. Area charts require at least two groups of data along an axis.

Area charts are available in the following types:

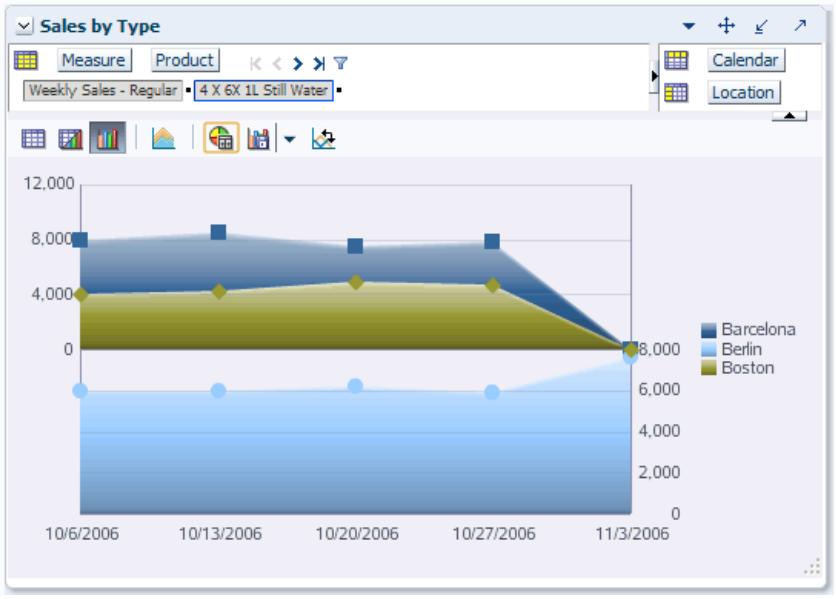
- Absolute Area Chart – Each area marker connects two data values. This type of chart has the following variations:
  - Absolute Area Chart with a Single Y-Axis

Figure 12–22 Absolute Area Chart with a Single Y-Axis



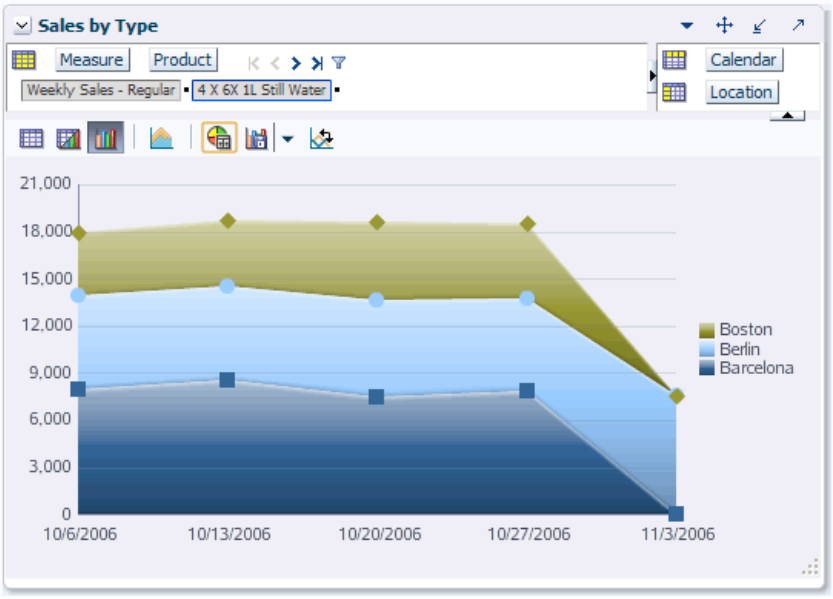
- Absolute Area Chart with a Split Dual Y-Axis

Figure 12–23 Absolute Area Chart with a Split Dual Y-Axis



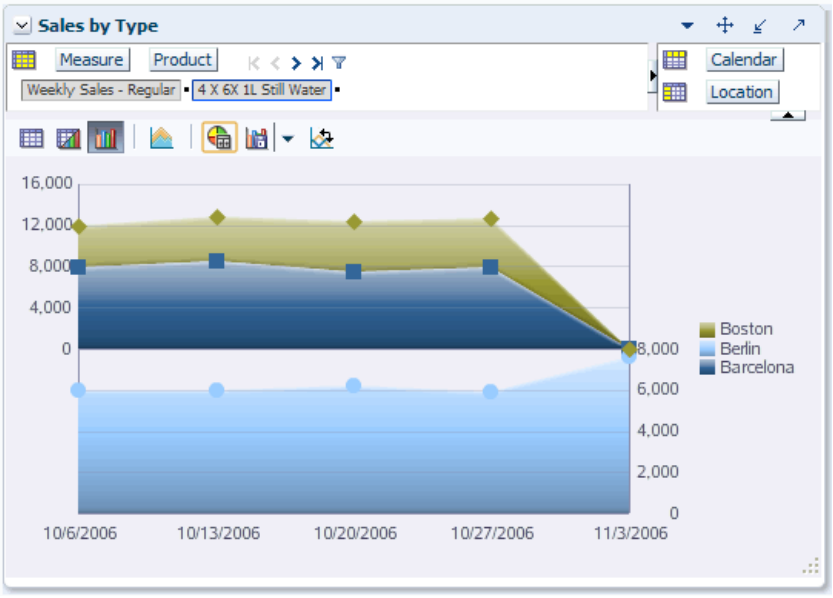
- Stacked Area Chart – Area markers are stacked, and the values of each set of data are added to the values of previous sets. The size of the stack represents a cumulative total. This type of chart has the following variations:
  - Stacked Area Chart with a Single Y-Axis

Figure 12–24 Stacked Area Chart with a Single Y-Axis



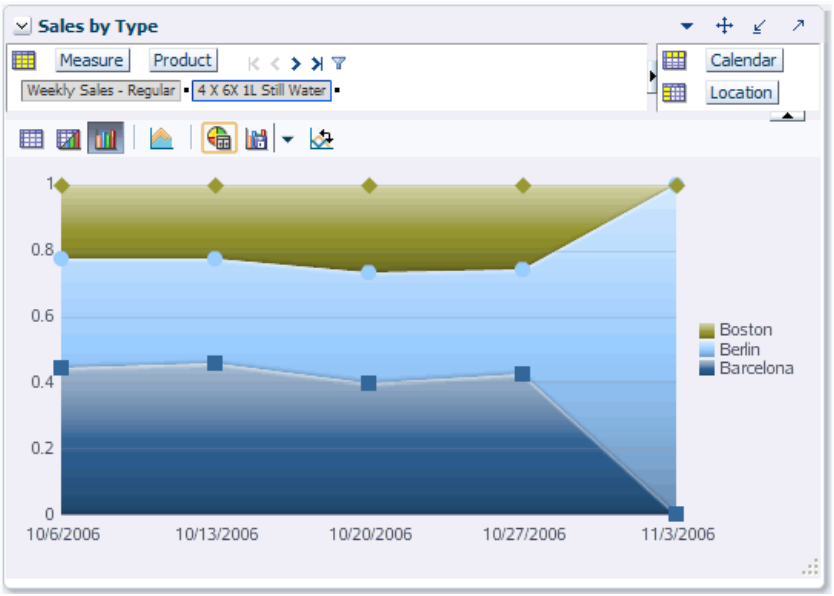
- Stacked Area Chart with a Split Dual Y-Axis

Figure 12–25 Stacked Area Chart with a Split Dual Y-Axis



- Percentage Area Chart – Area markers show the percentage of the cumulative total of all sets of data.

Figure 12–26 Percentage Area Chart



Bar Chart

A Bar Chart is similar to the Column Chart, except that the data is represented as series of horizontal columns.

Bubble Chart

In a Bubble Chart the data is represented by the location and size of round data markers (bubbles). Bubble charts show correlations among three types of values. They can be used when there are a number of data items present and you want see the general relationships. Bubble Charts require at least two data values. If two data values are used, the size of the bubbles will be the same.

Data is represented by the location and size of round data markers (bubbles). Each data marker in a bubble graph represents three group values:

- The first data value is the X value. It determines the marker's location along the X-axis.
- The second data value is the Y value. It determines the marker's location along the Y-axis.
- The third data value is the Z value. It determines the size of the marker. A negative values in Z coordinate is treated as an absolute (meaning that it has the equivalent size of a positive number in that position) in respect to the visual size. Once the bubble graph is plotted with two measures, you cannot edit the z-value (bubble volume), which is a constant for all the plotted bubbles.

For more than one group of data, bubble graphs require that the data must be in multiples of three. For example, in a specific bubble graph, you might need three values for Paris, three for Tokyo, and so on. An example of these three values might be: X value is average life expectancy, Y value is average income, and Z value is population.

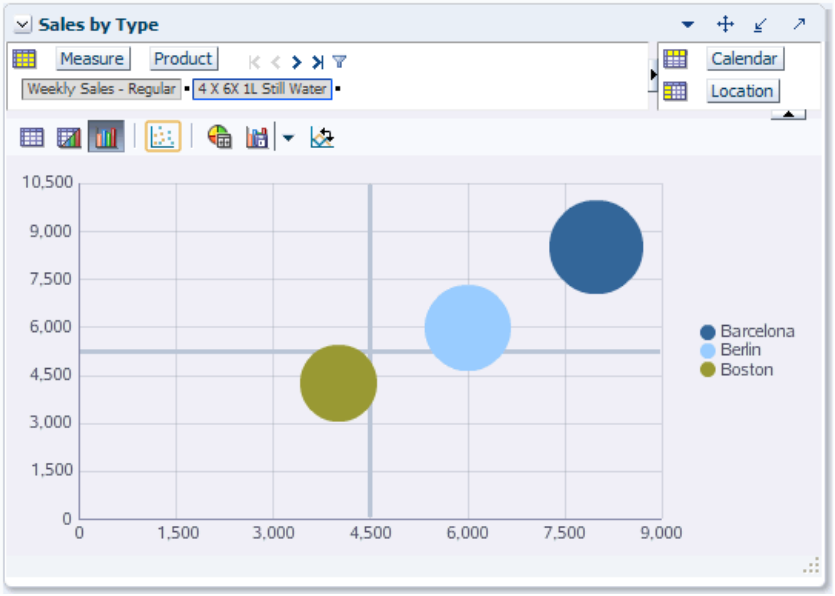
For the X and Y axes in bubble charts, only the minimum and maximum values are programmatically set to correspond to the minimum and maximum values of the data set on each axis. Otherwise, ADF auto scaling would start the axes at 0, and if all the values were relatively high, the bubbles would all be in the upper left area. Therefore,

if you were using quadrants, the quadrants would not be meaningful. For more about quadrants, see Quadrants Tab.

Bubble Charts are available in the following types:

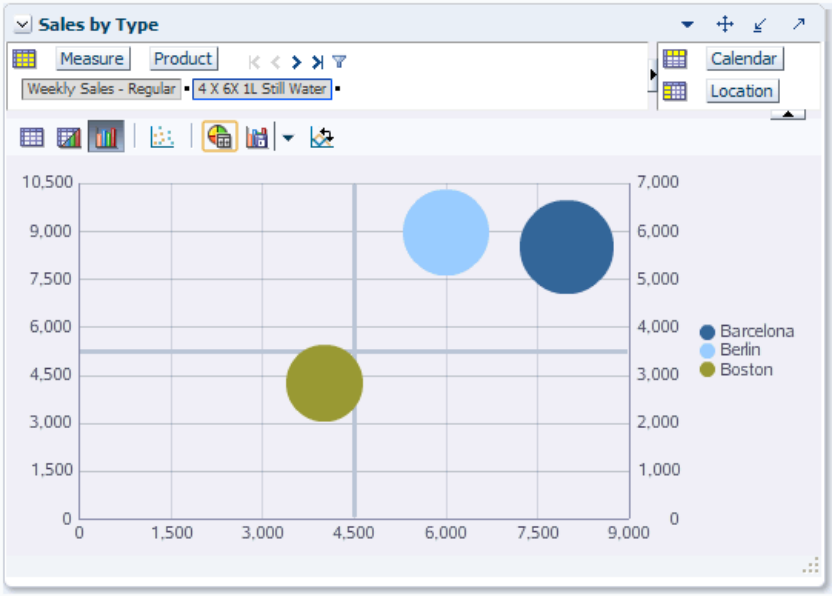
- Bubble Chart with a Single Y-Axis

Figure 12–27 Bubble Chart with a Single Y-Axis



- Bubble Chart with a Dual Y-Axis

Figure 12–28 Bubble Chart with a Dual Y-Axis



Note: The user must set the valid range of values to be viewed in the bubble chart using the maxIntegerDigits property value in GraphConfig.xml under the <FC Installation directory>. The valid maximum integer value that must be set for maxIntegerDigits is 0 - 3 in GraphConfig.xml.

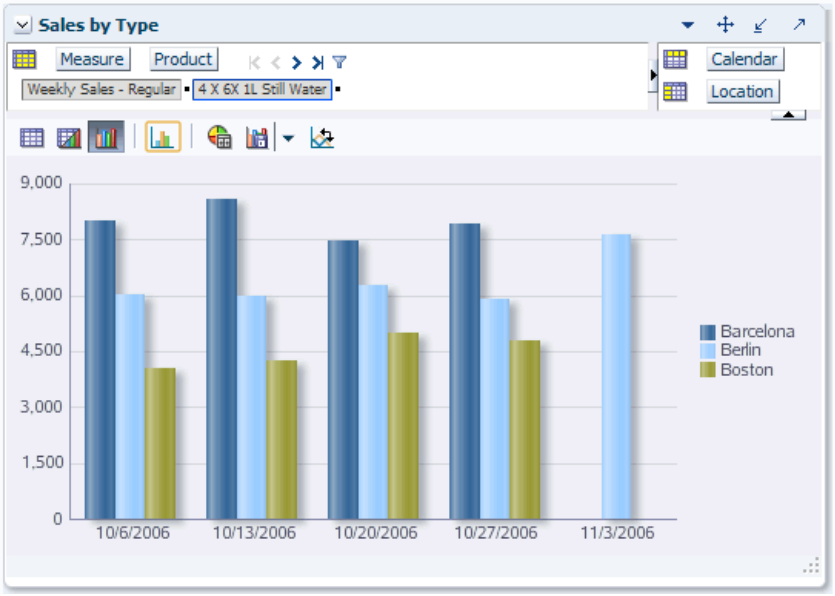
Column Chart

In a Column Chart, the data is represented as a series of vertical bars. A Column Chart can be used to examine trends over time or compare items at the same time (for example, sales for different product divisions in several groups).

Column Charts are available in the following types:

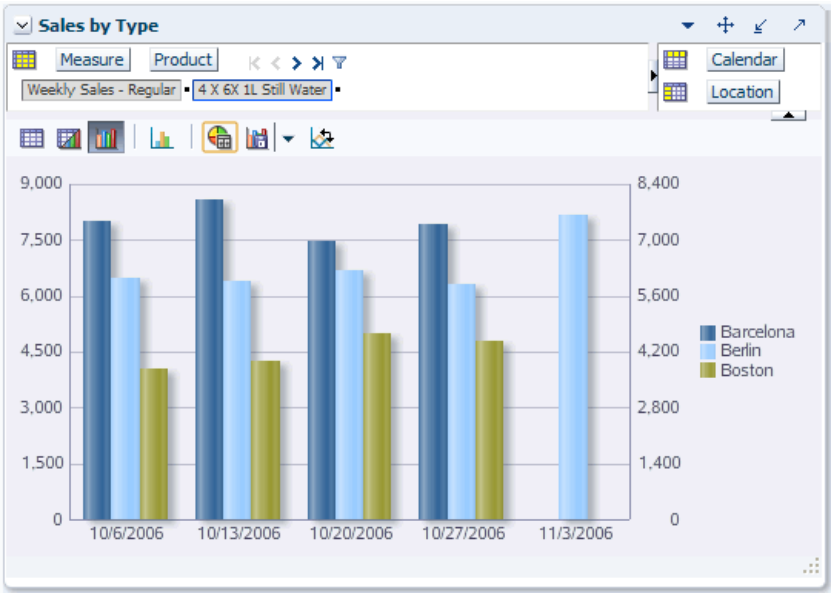
- Clustered Column Chart – Each cluster of columns represent a group of data. This type of chart has the following variations:
  - Clustered Column Chart with Single Y-Axis

Figure 12–29 Clustered Column Chart with Single Y-Axis



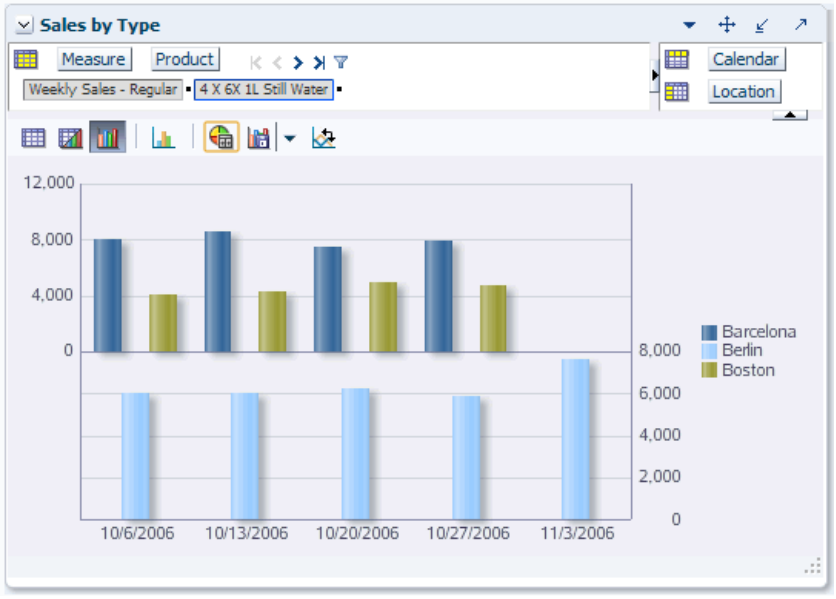
  - Clustered Column Chart with Dual Y-Axis

Figure 12–30 Clustered Column Chart with Dual Y-Axis



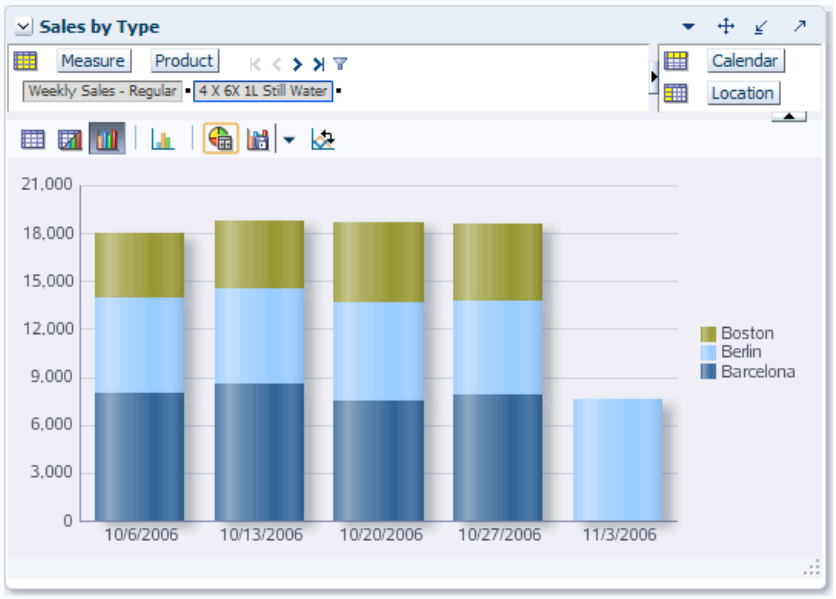
- Clustered Column Chart with Split Dual Y-Axis

Figure 12–31 Clustered Column Chart with Split Dual Y-Axis



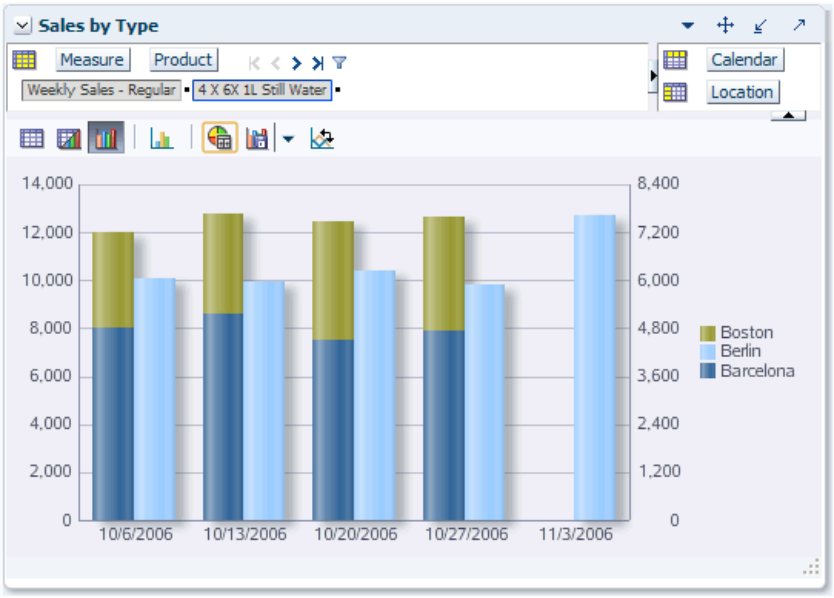
- Stacked Column Chart – Bars of each set of data are appended to the previous sets of data. The size of the stack represents a cumulative data total. This type of chart has the following variations:
  - Stacked Column Chart with a Single Y-Axis

Figure 12–32 Stacked Column Chart with a Single Y-Axis



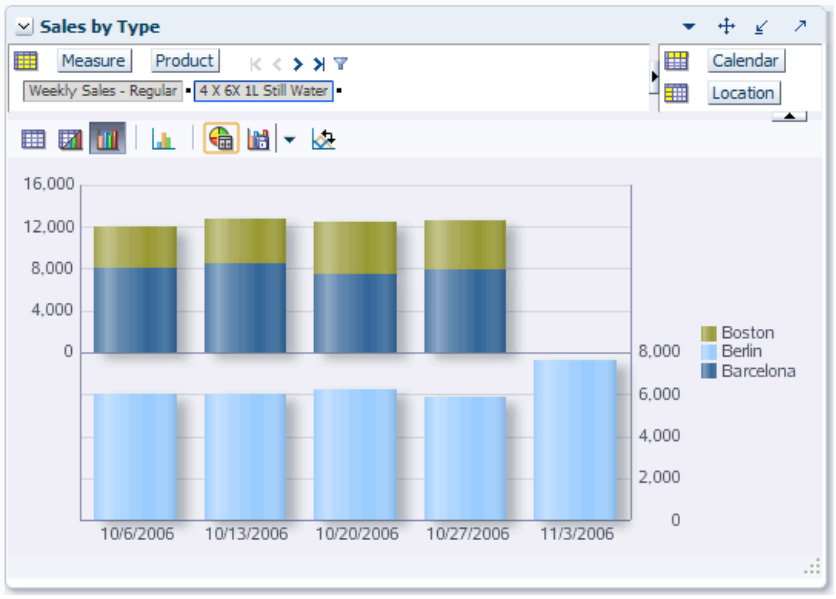
- Stacked Column Chart with a Dual Y-Axis

Figure 12–33 Stacked Column Chart with a Dual Y-Axis



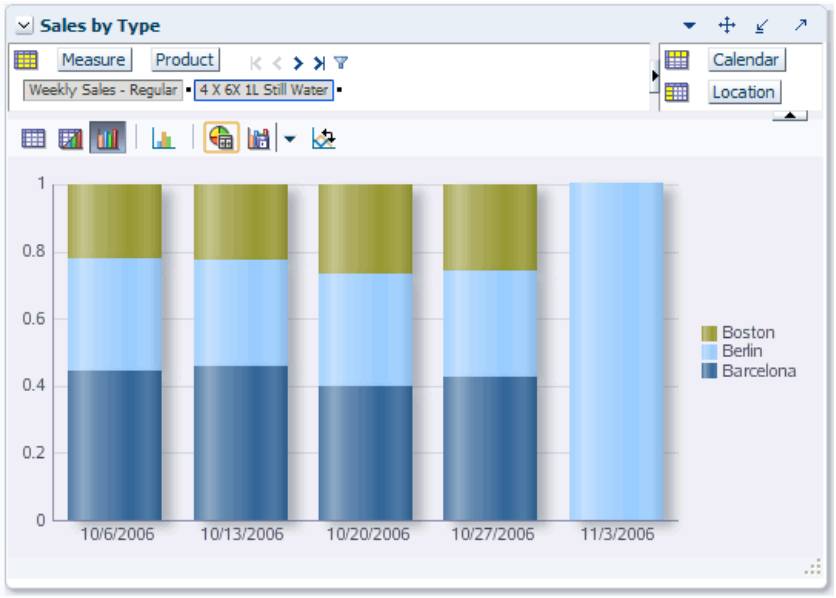
- Stacked Column Chart with a Split Y-Axis

Figure 12–34 Stacked Column Chart with a Split Dual Y-Axis



- Percentage Column Chart – Bars are stacked and display the percentage of a given set of data relative to the cumulative total of all sets of data. Percentage Column Charts are arranged only with a single Y-Axis.

Figure 12–35 Percentage Column Chart



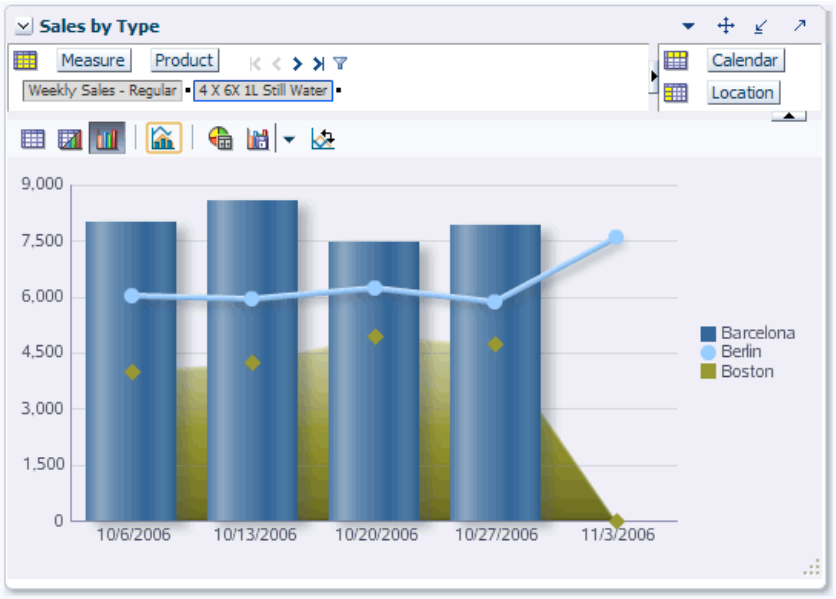
Combination Chart

The Combination Chart uses three different types of data markers to display different kinds of data items. The Combination Chart can be used to compare bars and lines, bars and areas, lines and areas, or all three combinations. Combination charts require at least two groups of data for the chart to render an area marker or a line marker.

Combination Charts are available in the following types:

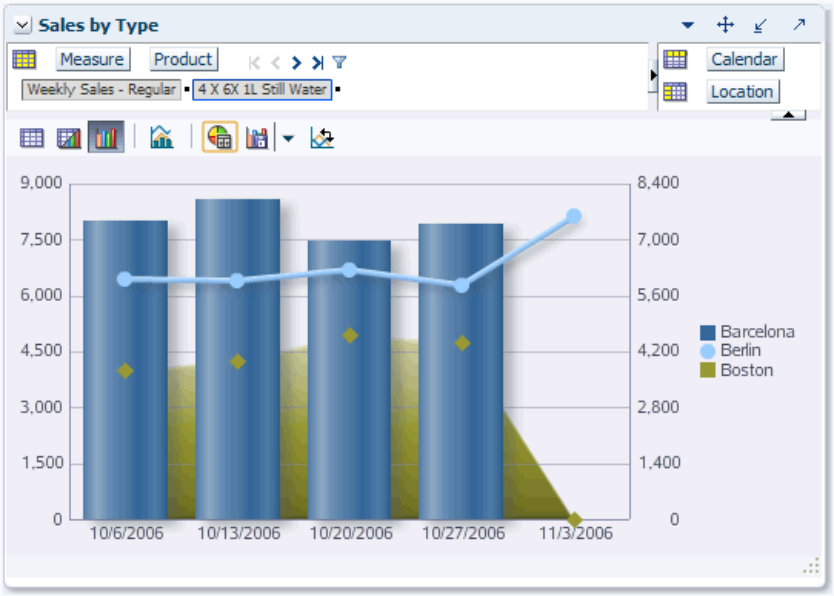
- Combination Chart with Single Y-Axis

Figure 12–36 Combination Chart with Single Y-Axis



- Combination Chart with Dual Y-Axis

Figure 12–37 Combination Chart with Dual Y-Axis



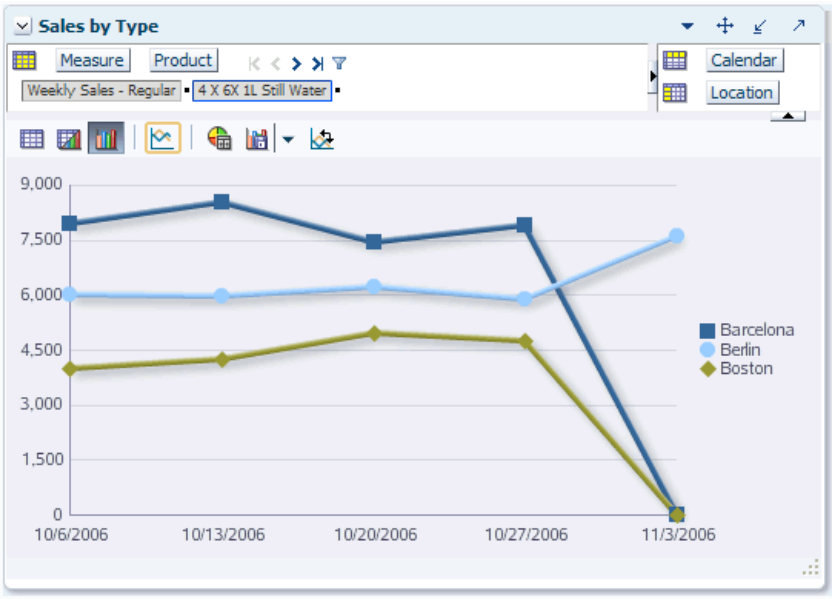
Line Chart

In a Line Chart, the data is represented as a line, series of data points, or data points connected by a line. Line Charts require data for at least two points for each member in a group.

Line Charts are available in the following types:

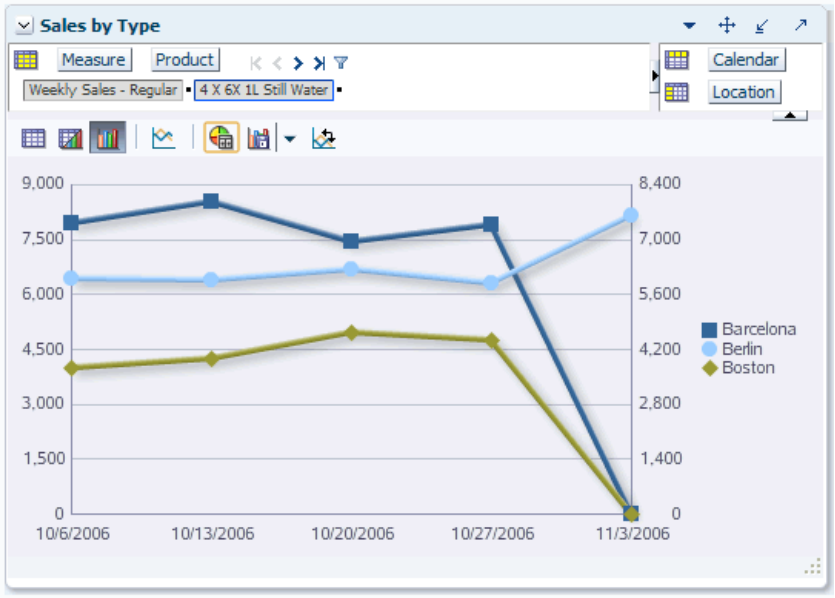
- Absolute Line Chart – Each line segment connects two data points. This type of chart has the following variations:
  - Absolute Line Chart Single Y-Axis

Figure 12–38 Absolute Line Chart Single Y-Axis



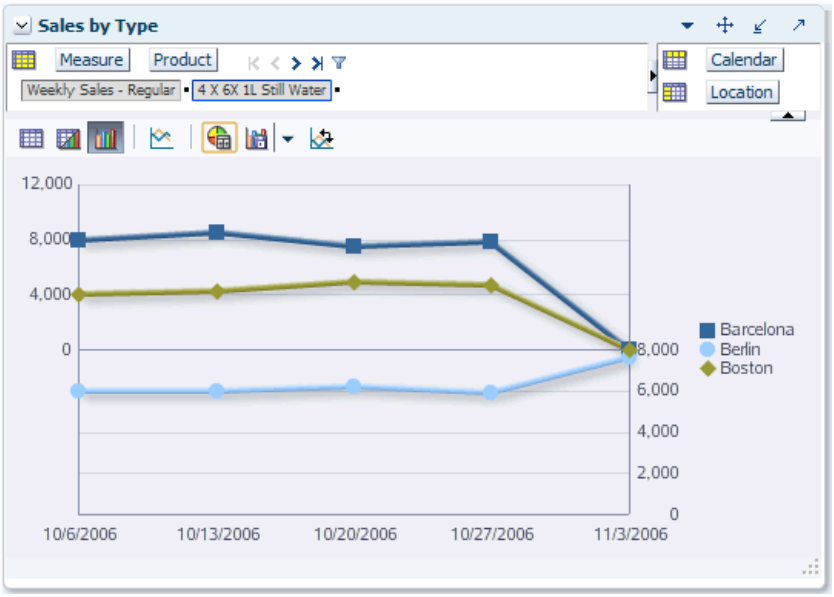
- Absolute Line Chart Dual Y-Axis

Figure 12–39 Absolute Line Chart Dual Y-Axis



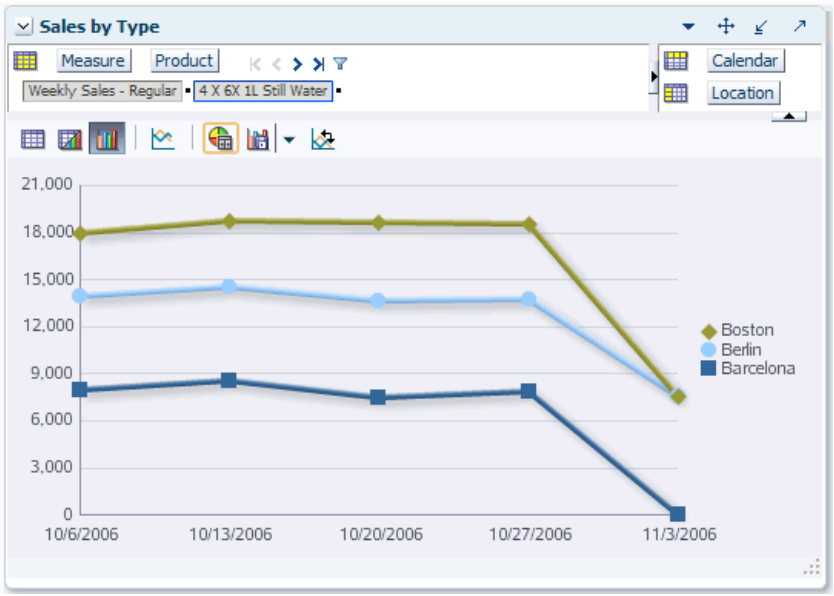
- Absolute Line Chart Split Y-Axis

Figure 12–40 Absolute Line Chart Split Dual Y-Axis



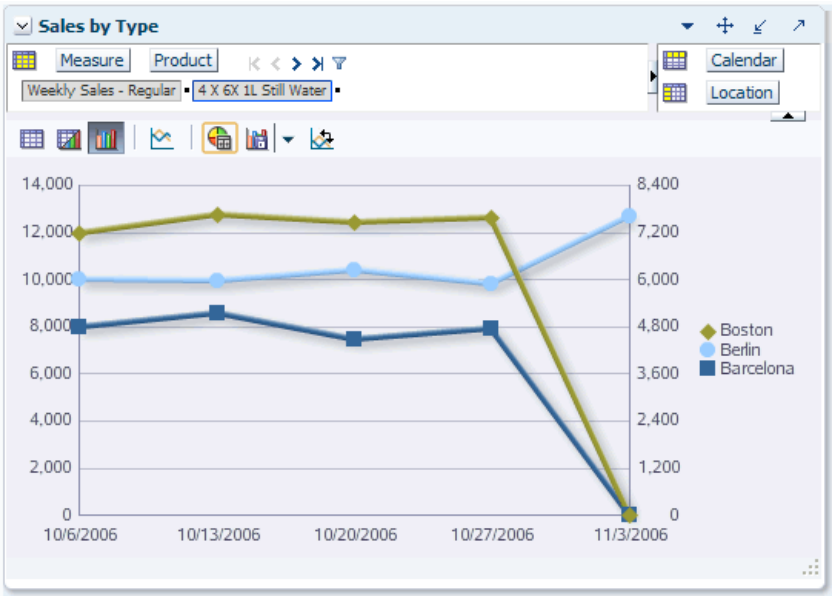
- Stacked Line Chart – Each set of data is appended to previous sets of data. The size of the stack represents a cumulative data total. This type of chart has the following variations:
  - Stacked Line Chart Single Y-Axis

Figure 12–41 Stacked Line Chart Single Y-Axis



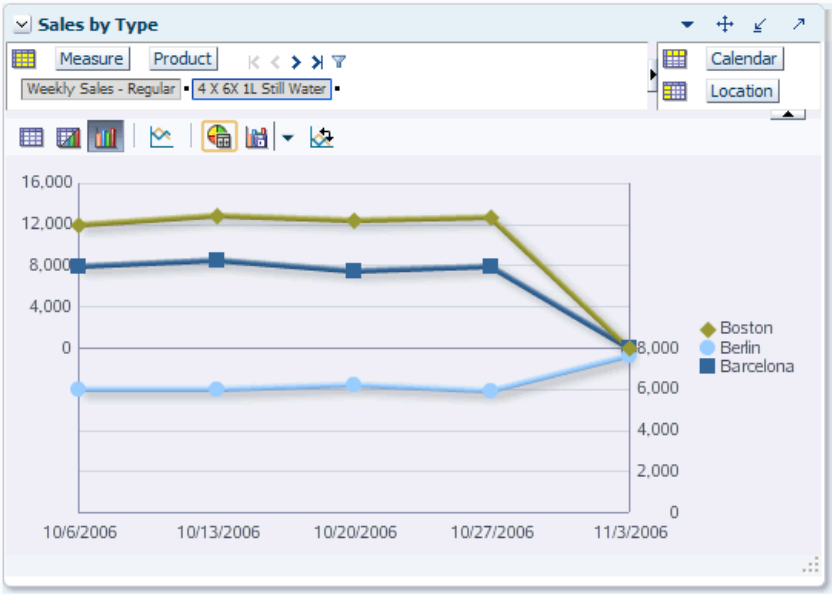
  - Stacked Line Chart Dual Y-Axis

Figure 12–42 Stacked Line Chart Dual Y-Axis



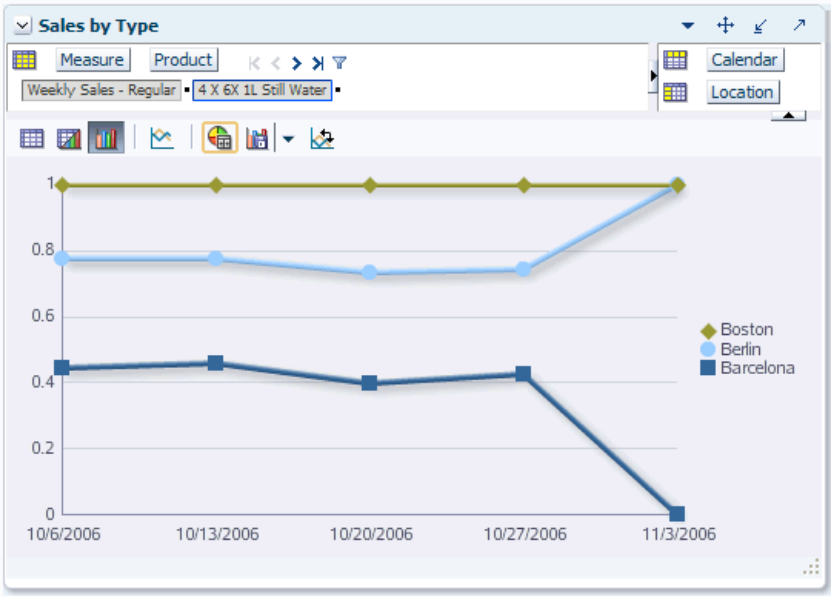
- Stacked Line Chart Split Y-Axis

Figure 12–43 Stacked Line Chart Split Dual Y-Axis



- Percentage Line Chart – The lines are stacked, and each line shows the percentage of the given set of data relative to the cumulative total of all sets of data. Percentage Line Charts are arranged only with a single Y-Axis.

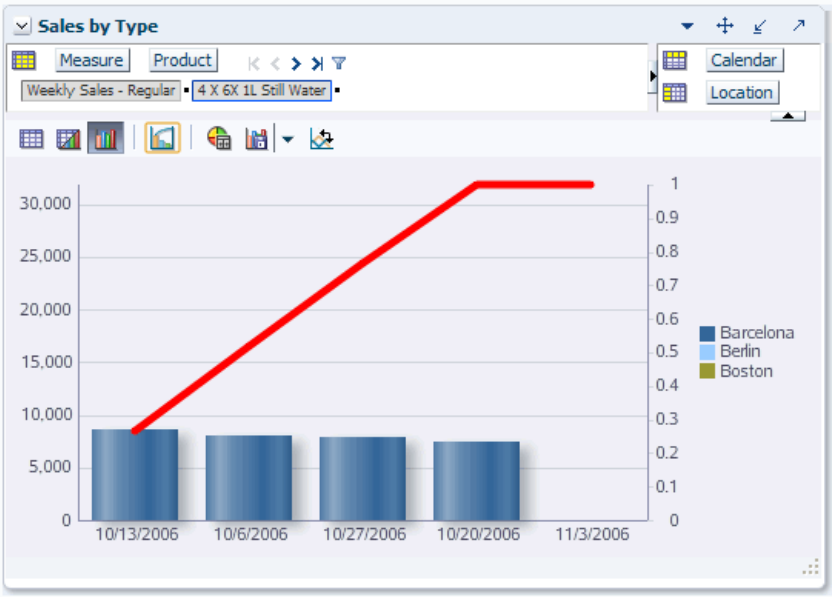
Figure 12–44 Percentage Line Chart



Pareto Chart

In a Pareto Chart, the data is represented by bars and a percentage line that indicates the cumulative percentage of bars. Bars are arranged by value from left to right, from the largest to the lowest. A Pareto Chart is always a Dual Y-Axis chart. The first Y-Axis corresponds to values that the bars represent and the second Y-Axis runs from 0-100 percent and represents the cumulative percentage values.

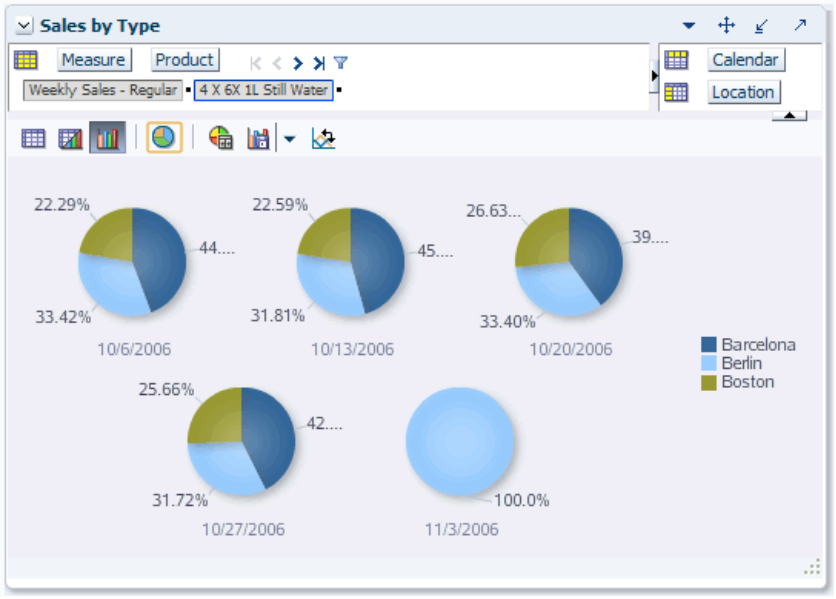
Figure 12–45 Pareto Chart



Pie Chart

In a Pie Chart, the data is represented as sections of a circle. Pie charts can be used to show the relationship of parts to a whole.

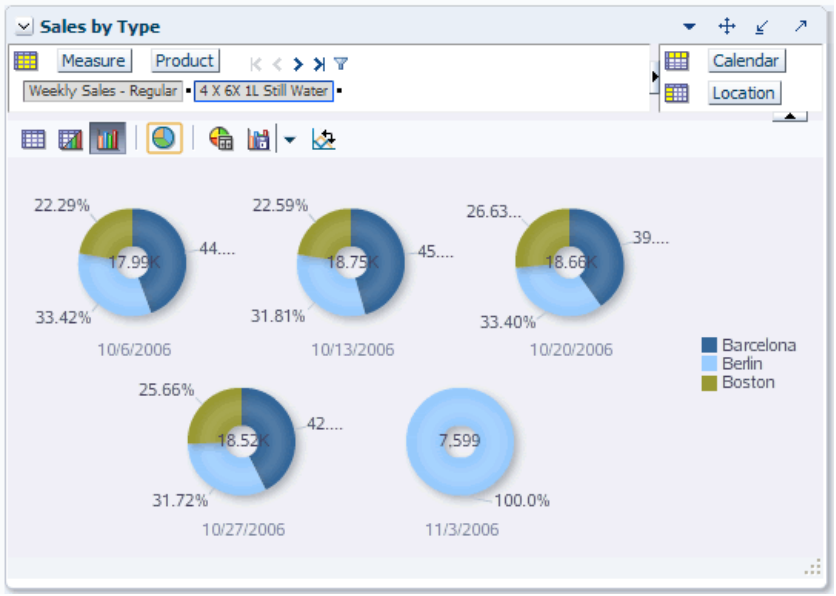
Figure 12–46 Pie Chart



Ring Chart

Ring Charts are similar to the Pie Chart, except that the center of each circle displays the total pie value.

Figure 12–47 Ring Chart



Radar Chart

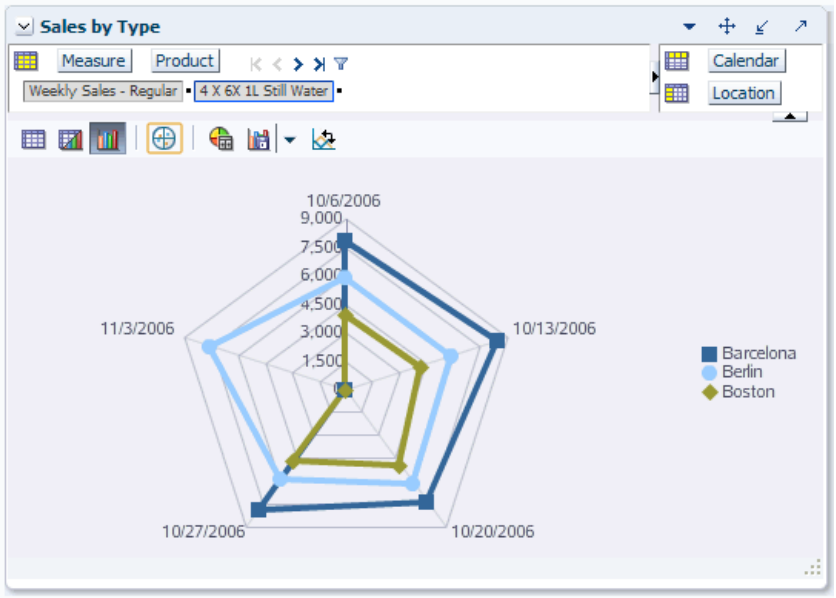
In a Radar Chart, the data is represented in a polygon layout. Radar Charts are used to show patterns that occur in cycles, such as monthly sales for last three years.

The data structure of a Radar Chart is:

- Number of sides on the polygon is equal to the number of groups of data. Each corner of the polygon represents a group.

- A series or set of data is represented by a line, markers of the same color, or both (labeled by legend text).

Figure 12–48 Radar Chart



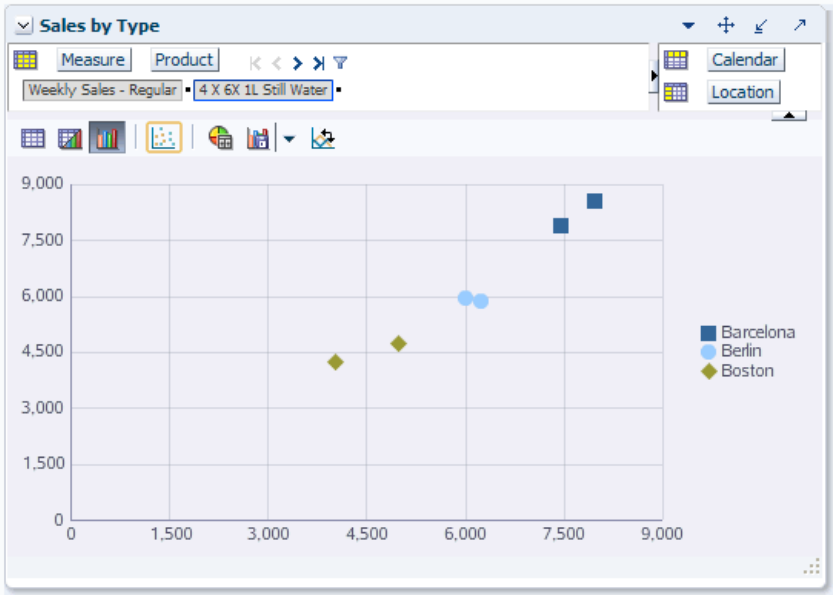
Scatter Chart

In a Scatter Chart, the data is represented by the location of data markers. Scatter Charts can be used to show the correlation between two different kinds of data values.

Scatter Charts are available in the following types:

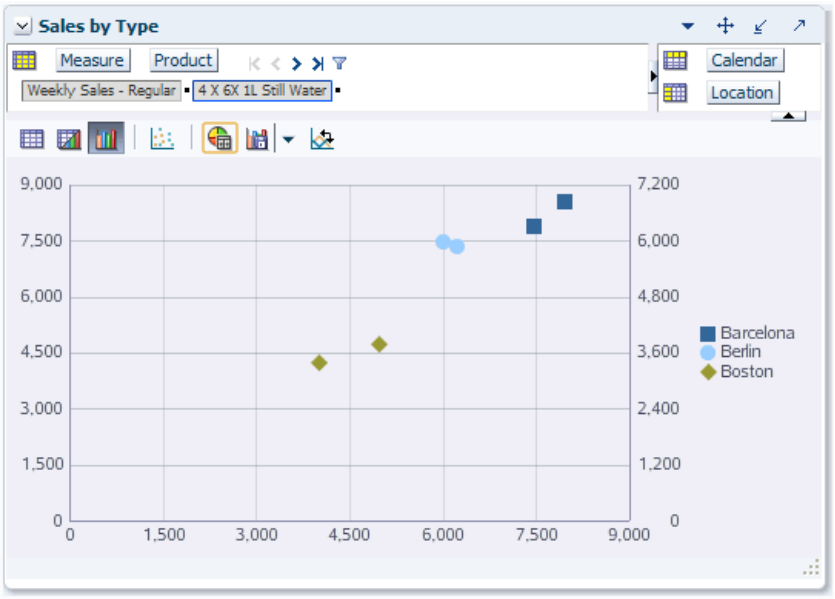
- Scatter Chart with a Single Y-Axis

Figure 12–49 Scatter Chart with a Single Y-Axis



- Scatter Chart with a Dual Y-Axis

Figure 12–50 Scatter Chart with a Dual Y-Axis



Treemap Chart

In a Treemap chart, the data is represented by the size and color of the rectangular area markers (nodes). A Treemap chart shows correlations between two types of data values and is used to examine relative performance between a number of data items.

The first data value determines the area size. A zero or negative value will be ignored and no node will be shown on the chart. The second data value determines the area color. You can reverse this via the Flip size/color option that is available on the right-click context menu. Selecting it refreshes the chart so that it displays the new orientation of the data.

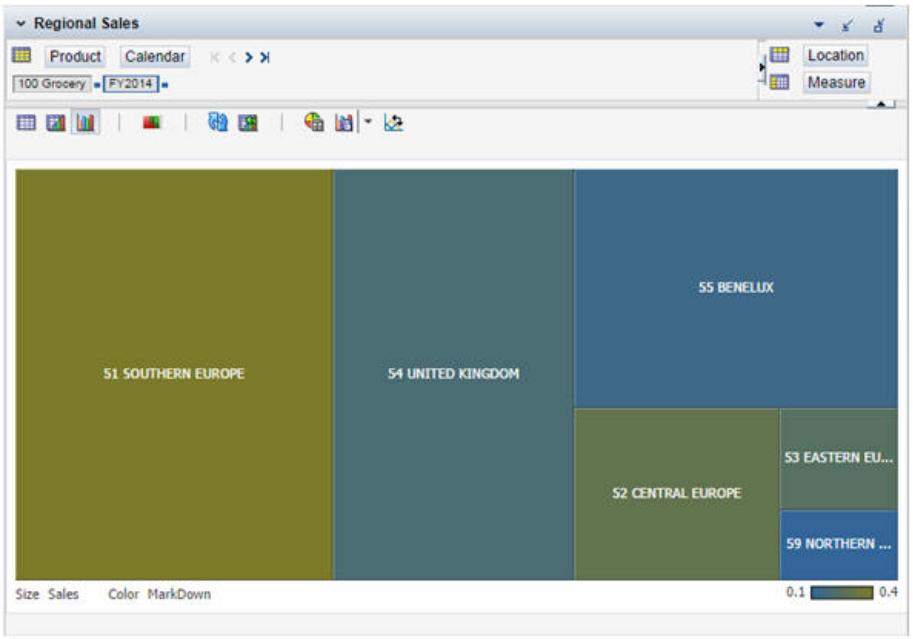
For example, a Treemap chart can be used to show the correlation between yearly sales vs. average percent markdown for different regions. The sales data for each region determines the node size, and the average percent markdown determines its color. See Figure 12–51.

Treemap charts are available in the following types:

- Treemap chart with continuous colors. The node colors in this Treemap chart transition between a range of shades between two colors. The color shade is determined based on the node data value that determines color.

  You can pick the two colors on the chart formatting dialog. See Understanding the Treemap Chart Formatting Window.

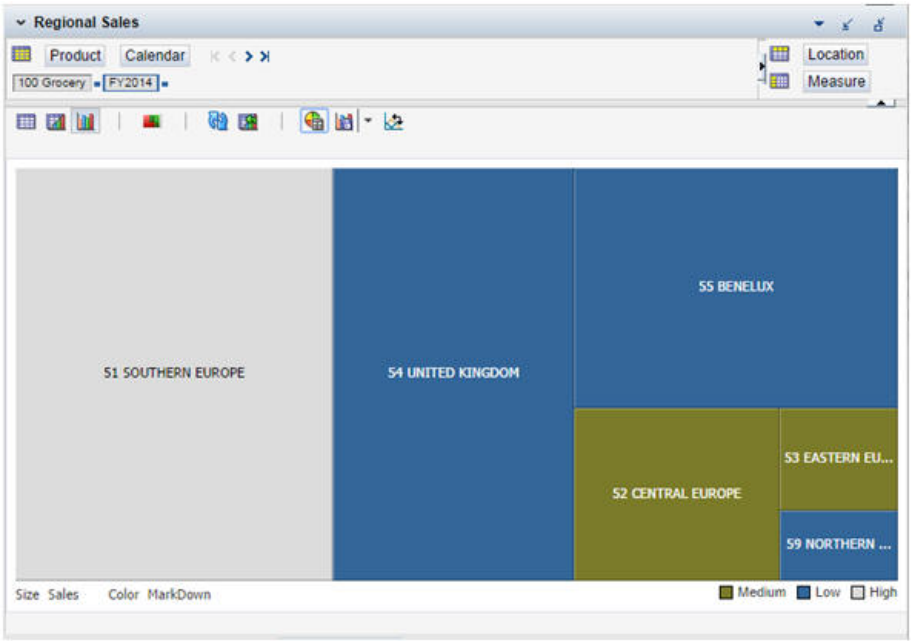
Figure 12–51 Treemap Chart with Continuous Colors



- Treemap chart with grouped colors. The nodes in this Treemap chart use discrete colors based on the pre-defined range that the node data value falls into. Each range is associated with a group label and a color.

  You can define the groups with a start value and a cutoff value with the chart formatting dialog. See Grouped Subtype.

Figure 12–52 Treemap Chart with Grouped Colors



Drilling Down

You can double click on any node with visible children in order to drill down in a Treemap Chart. It is recommended that you do not select the On drill option when

drilling down in cases where the data is aggregated (for example, mean, median, percent). Minimum and maximum color values are adjust to reflect new data when you select Auto fill and On drill prior to drilling down. You can de-select the Auto fill option after you have drilled down if you decide you want to use the original parent values instead of the adjusted values.

Showing Images

Show images functionality is supported with Treemap Charts. If the pivot table you make your data selection from displays images, then the Treemap Chart you render will display those images as well. (Note that if there are multiple images associated with a position, only one image will be shown. The image shown will be the one that is the closest on the screen to the measure data.) While the user is viewing the Treemap chart, images can be hidden (if shown) or shown (if hidden) from a context menu. For more information about showing images, see Chapter 13, "Images".

To display images, you must have a visible media attribute on the pivot table. If the pivot table displays images during the initial rendering of the treemap, then the images will also be shown on the treemap. When more than one media attribute is visible on a pivot table, the innermost media attribute will be shown on the treemap.

The treemap uses the same image.id and size.id that has been configured for the pivot table. That is, they are chosen from pivottable.default.header.image.id and pivottable.default.header.size.id. The height and width of the treemap images can be configured using the following two properties in rpasConfig.properties, which both default to a value of 50.

- chart.default.image.width=50
- chart.default.image.height=50

Note that if either the configured aspect ratio does not match the image aspect ratio or the actual image is smaller that the configured sizes, then the image may not display clearly because of stretching.

In order to hide an image, you must select the Hide Images context menu option. This menu option is only enabled when there are visible attributes on the pivot-table.

Charting and Drilling

This section describes how to drill into graphs to get more detail.

Note: With Treemap Charts, unlike other charts, you must double-click in order to drill down.

Introduction

When taking decisions or reviewing data, you may find it useful to see the information presented graphically. RPAS lets you drill down into the child positions in the graph to see a greater level of detail. You can also return to the original graph. In the example below, the first pie chart shows data at quarterly level.

Figure 12–53 Drill Down Example Before

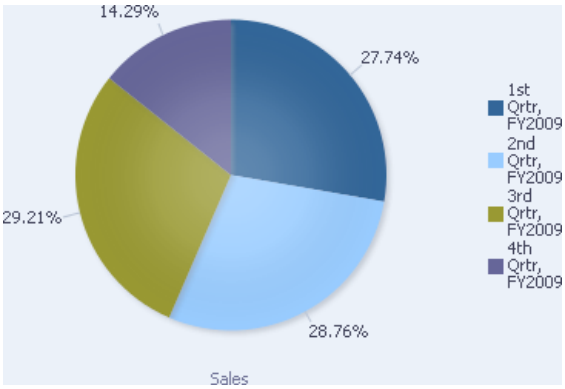
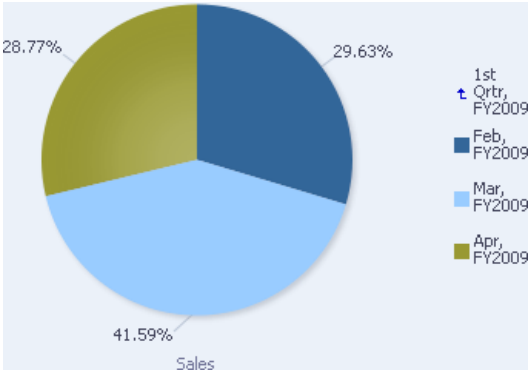


Figure 12–53 shows the data for the 1st Quarter segment of the pie chart at a monthly level.

Figure 12–54 Drill Down Example After



You can return to the previous level in the drill down by clicking on the provided link in the legend. If you drill down more than one level, you can select any prior level from a drop-down list. [Not shown in above screen shot].

You can drill down to the lowest level in the hierarchy and then drill back (go back) to the original chart. To see data at a higher level than that originally selected for the chart, you must make a fresh selection in the pivot table view.

Unless you make a fresh selection, the data selected in the pivot table remains unaffected by the drilling operation.

Restrictions on Drilling

The drilling functionality has some restrictions:

Types of Chart

The following chart types cannot be drilled into:

- Pareto Chart
- Radar Chart

Drilling into Groups is not supported for the following types of charts:

- Bubble Chart
- Scatter Chart

Disabling Chart Legend

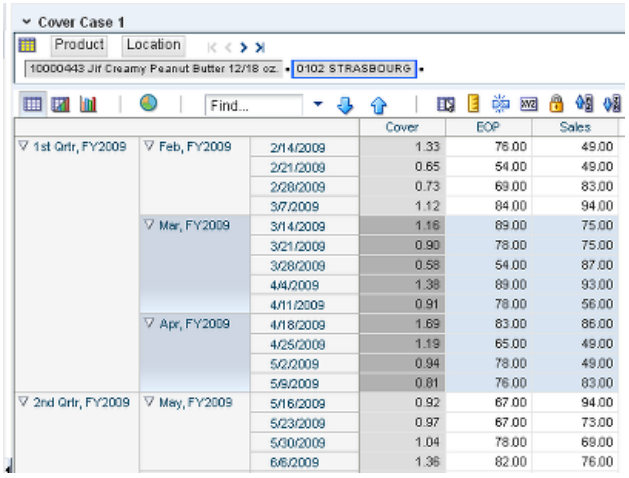
When configuring charts, you can hide the legend. If the legend is not visible, you cannot use it for drilling down nor for returning to the previous level. You can still drill down by clicking any chart segment or return by selecting previous levels in the drop-down list.

Dimensions

You can drill into any dimension other than measures. This is because a measure consists of a fact (numerical value of some item of information) plus a formula used to manipulate that information. Since this formula may vary at different points along a dimension, drilling down into a measure is not meaningful.

When you select data for the pivot table, you can select a subset of dimensions from those available. Only dimensions selected for the pivot table can be drilled into. In the example below, data has been selected for March and April.

Figure 12–55 Selecting Dimensions



			Cover	EOP	Sales
1st Qrtr, FY2009	Feb, FY2009	2/14/2009	1.33	76.00	49.00
		2/21/2009	0.65	54.00	49.00
		2/28/2009	0.73	69.00	83.00
		3/7/2009	1.12	84.00	94.00
	Mar, FY2009	3/14/2009	1.16	89.00	75.00
		3/21/2009	0.90	78.00	75.00
		3/28/2009	0.58	54.00	87.00
		4/4/2009	1.38	89.00	93.00
		4/11/2009	0.91	78.00	56.00
	Apr, FY2009	4/18/2009	1.69	83.00	86.00
		4/25/2009	1.19	65.00	49.00
		5/2/2009	0.94	78.00	49.00
		5/9/2009	0.81	76.00	83.00
2nd Qrtr, FY2009	May, FY2009	5/16/2009	0.92	67.00	94.00
		5/23/2009	0.97	67.00	73.00
		5/30/2009	1.04	78.00	69.00
		6/6/2009	1.36	82.00	76.00

To drill into Y axis positions (Row edge in the pivot table), you can either click on chart area or the legend. To drill into the X axis (Column edge in pivot table) positions, click on labels displayed on the X axis of chart.

Saving and Reopening

If you save the workbook and reopen it while a chart is open and drilled into, the state of the chart will not be saved. Instead, when you reopen the workbook, the chart that is displayed will be based on the data that was selected in the pivot table view.

Drilling Down

Drilling down lets you see more detail associated with a specific part of a chart. Drilling down is only possible if the selected dimension has one or more levels selected below the level at which data has been selected for the chart. For example, if you starts to drill into the product dimension at Class level, you must have previously selected other dimensions like Sub-Class and SKU to drill into.

Plotting the Chart

You create charts by selecting the required data in the pivot view window and then selecting **Select Chart Type** from the View toolbar. Once you select the chart type,you

can display it by choosing the **Switch to Chart View** or **Switch to Split View** options. Once the chart is available, you can drill down into the chart.

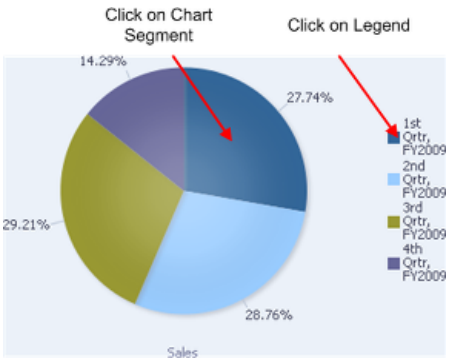
> **Note:** Some restrictions exist on the drill-down functionality. For example, you cannot drill into specific chart types. Nor can you drill into specific levels of a particular dimension if those levels have not been selected when creating the pivot table view.

Methods for Drilling Down

One way to drill down is to click on the required part of the legend. Another is to click in the appropriate section of the chart. If no further levels are available, the chart legend is no longer clickable.

To drill into Y axis positions (row edge in the pivot table), you can either click on chart area or the legend. To drill into the X axis (Column edge in pivot table) positions, you must click on labels displayed on the X axis of chart.

Figure 12–56 Drill-Down Methods



Once you click the legend or chart section, the chart is redrawn to show the information at the lower level.

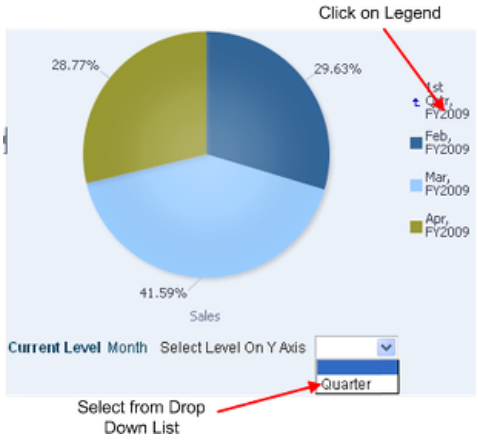
Reaching Lowest Level

When you reach the lowest available level for drilling down, clicking on the legend or chart area will have no further effect.

Drilling Back (Reversing Drilling Operation)

Once you drill down at least one level into the chart, you can revert to previous levels. Two options are available:

Figure 12–57 Drilling Back Methods



- **Clicking on the link in the legend**

  The link you use to drill down is highlighted in the legend. This link shows the immediate parent position level. Click this to go back one level. If you have drilled through multiple levels, each click on the legend will take you back one level.

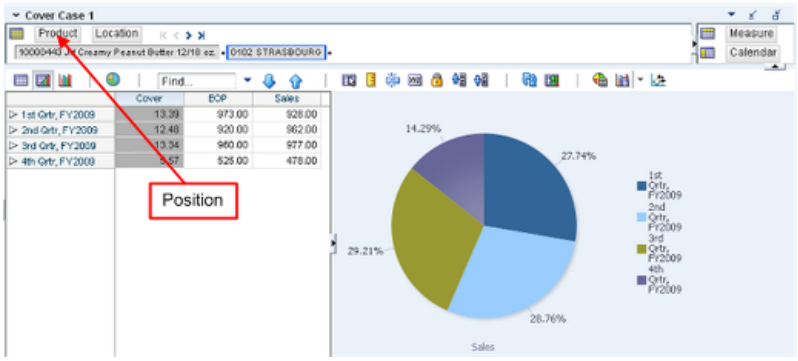
- **Using the drop-down list**

  You can also got back to previous levels using the drop-down list. If you have drilled down through multiple levels, you can select any previous level.

Page Edge Navigation

You can select alternative positions on the page edge.

Figure 12–58 Page Edge Position



If you select another position, for example, another product or another location, the chart will be refreshed with the information at the currently selected level. For example, if you select another store and you have drilled down two levels from the information selected in the pivot table, the chart will refresh and show information for the new store two levels down from the one you selected in the pivot table.

Formatting Options

The standard chart formatting options work in the drilled state:

- **Refreshing Chart**

  The chart can be refreshed with pivot table selections while in the drilled state.

- **Changing Chart Type**

  Chart types can be changed while in the drilled state. The new chart type is drawn with the same positions and data values as the one it is replacing.

- **Toggling Between Views**

  Toggling between pivot table view to graph view or toggling between graph view to pivot table view retains the same positions and data values as the current drilled state.

- **Copying Views**

  Using the **Copy View** option when the chart is in the drilled state also copies the state of the drilled graph.

- **Drilling into Split Levels**

  If you have drilled into split levels:

  – The drilled state of the charts is preserved when the workbook is recalculated.

  – The drilled state of the chart is preserved when the workbook is saved and refreshed. However, the drilled state will be lost if you close and reopen the workbook.

- **Flipping Charts**

  If the axes of the chart are reversed, the drilled state of the chart will be preserved and it will remain at the current drilled level.

- **Pivot Swap from Row or Column to Axis**

  If a pivot swap from row to column axis (or vice versa) is carried out, either by using tiles or directly in the pivot table, the chart will revert to its original, un-drilled state. This initial state is determined by the selected data in the pivot table.

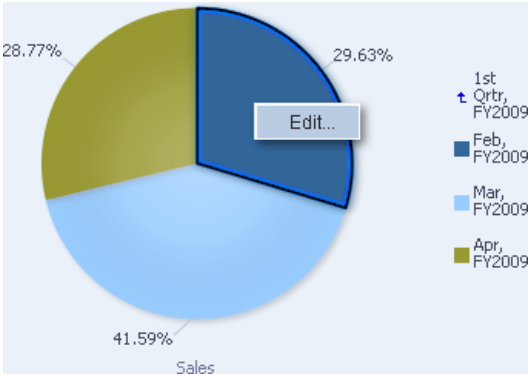
- **Pivot Swap between Page Edge to Column or Row**

  If a pivot swap occurs between column edge to column or row (or vice versa), then the chart revert back to its original state.

Editing Data Values

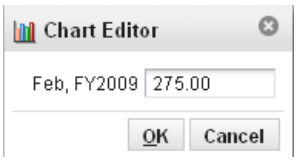
In both normal and drilled chart view, data can be edited by right clicking in the chart area and opening the **Right Click** menu.

Figure 12–59 Editing Data - Right-Click Menu



If you select the **Edit** option, a pop-up window opens that you can use to edit the data.

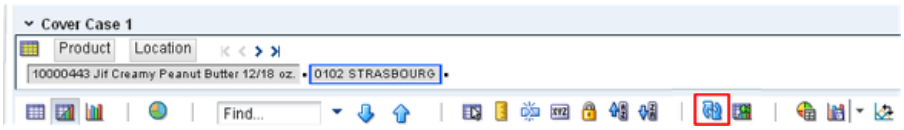
Figure 12–60 Pop-Up Menu for Editing Data



Refreshing the Chart

Use the refresh button to update the chart with the current data in pivot view.

Figure 12–61 Toolbar - Refresh Option



- If the data selected in the pivot table is unchanged, the chart will be restored to its undrilled state.
- If the data selected in the pivot table changes, the chart will be redrawn to an undrilled state and display the new data.

Zooming

If you are having difficulty examining the data points in a chart because they are clustered together, you can use the zoom functionality to increase the distance between the data points. This is illustrated in Figure 12–62 and Figure 12–63.

This can be done in two ways.

- Reducing the size of the scroll bar
- Zooming in or out using the zoom menu located in the left bottom corner of the chart panel

Figure 12–62 Before Zooming

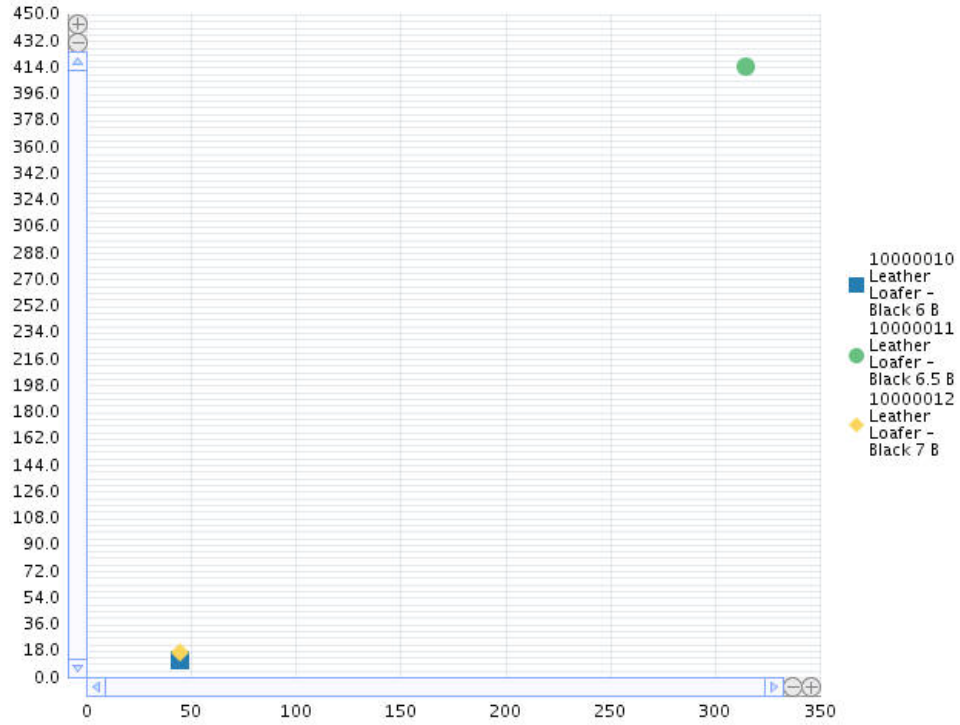
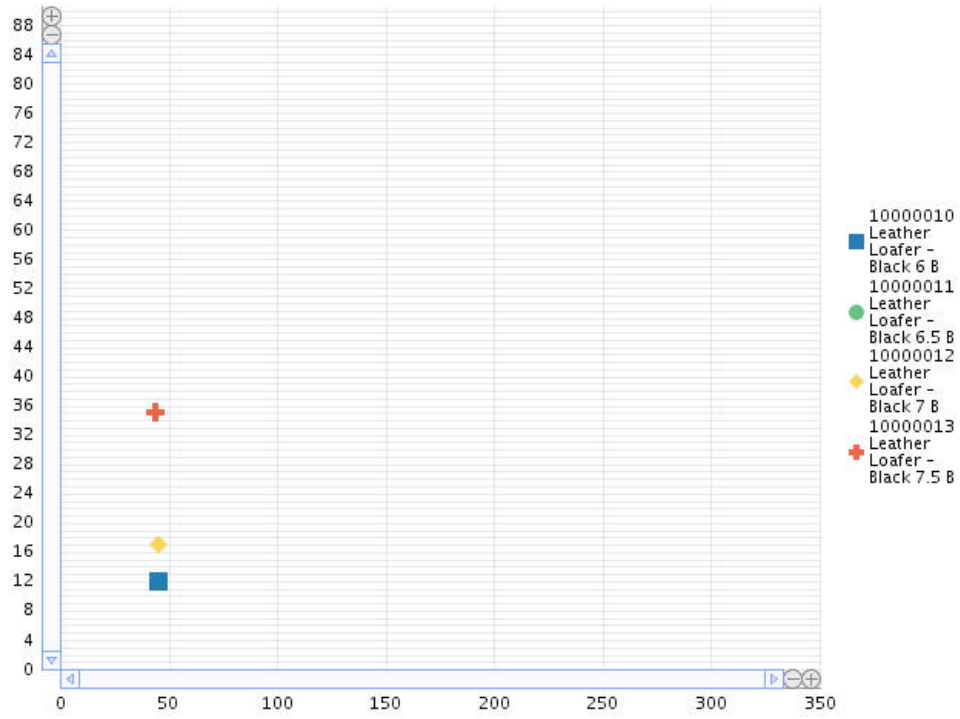


Figure 12–63 After Zooming



13

Images

The ability to view images associated with positions on a dimension is useful in many aspects of the retail world such as assortment planning, item planning, and story boarding.

> **Note:** See Chapter 14, "View Details", for information about additional functionality for displaying images in the UI.

For example, you can associate an item with a image of what it should look like displayed on the shelf. You can associate stores with images of the store front or interior. You can use images to storyboard themes by creating a collection of looks and colors for a particular buying period, floor set, or flow. Some retailers choose to associate multiple types images with multiple levels of the Product dimension. For instance, you could associate images for the following Product levels:

- **Department**: Image of a generic sweater
- **Class**: Image of a wool sweater
- **Subclass**: Image of a L/S V-Neck Solid sweater
- **Style**: Image of Chunky Shrunken Style, Washable Wool, L/S V-Neck Solid sweater
- **Style/Color**: Image of Chunky Shrunken Style, Color Pumpkin, Washable Wool, L/S V-Neck Solid sweater

With the Fusion Client, you can associate an image for any dimension with a configured media attribute, including calendar levels. These images can be stored on a website or in a repository located in the same network as the application server.

After images are associated with a position, you can view and compare them within the Fusion Client.

Overview

Images can be included in a domain by configuring media dimension attributes and measures, loading them with media bundle values referring to images, and making them visible in worksheets. A number of images may be included in each bundle value; one of those is designated as the primary image that can be seen in the pivot table. All the images, not just the primary, can be seen via the detail pop-up.

Pivot table headers display images for visible media dimension attributes. Attributes can be made visible by selecting them for display in the worksheet view, as discussed in Select Attributes for Display, or as configured for the worksheet in Config Tools.

Pivot table cells display images for visible media measures. Measures can be made visible in the view using measure lists or measure profiles in the worksheet definitions.

In addition, these attribute and measure values can be viewed in a detail pop-up, as described in Chapter 14, "View Details", provided they have been configured appropriately using Config Tools.

A detail pop-up is a pop-up that has been configured to display a group of images and associated information. A detail pop-up differs from view image in that former is used to browse all the images associated with a position or cell and the latter is used to browse positions using images. A detail pop-up can also show non-media attribute and measure values for the position or cell.

Worksheet formats applied via the Format dialog box are also applied to format the styles for the content that appears in the Information section of the detail pop-up. See Chapter 5, "Formatting" for details.

Media measures and media attributes do not display as images outside of the detail pop-up and the pivot table. The use of media items in other contexts within the Fusion Client is subject to the following constraints:

Table 13–1 Measure and Dimension Behavior in the UI

UI Element	Behavior
Show/Hide	The position label for the image is displayed in lieu of the media image.
Level Split	Media attributes are not available.
Quick Fill	Media values can be copied to other media cells in one or more measures but cannot be copied into string, text, or other non-media types.
Fill	For media measures, the fill dialog expects a media bundle value in it XML fragment string representation. This value is parsed and validated. Parsing errors or validation errors are reported and logged.
Chart Legends	Position labels are displayed if only media attributes are visible.
Copy/Paste	Media measure behave in the same way as other measures. Type checking occurs, so media cannot be pasted into a float or integer cell. Media can be pasted into a string measure cell. If a string measure contains a media XML fragment, it can be pasted into a media measure and the image will be displayed.
Cut	Removes media data from media measure.
Copy External/Paste External	Same as Fill behavior.
Workbook Wizard Dimension Options	Media measures are not available for selection.
Print/Export	The display of images is not supported. The export settings As Seen and Formatted display different content than the export setting Raw Data. In all cases, some fragment of text such as the label, the media url, or the media xml will be displayed.

Viewing Image from a View

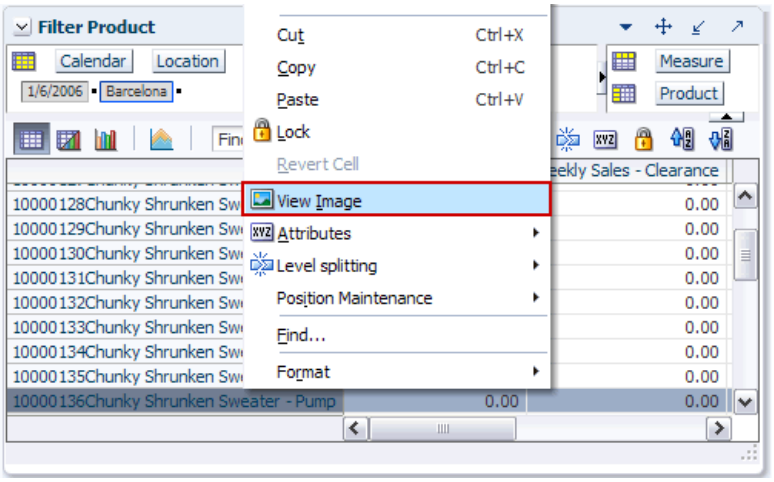
To view the image associated with a position, use one of the following methods. Note that the image you see is the primary image of the image attributes available for a given level. It is either the innermost visible image attribute (if present) or the first

image attribute. If no image attributes are available but old-style single images are, then those images are used (via the Config Tools Enable Images check box on a Level).

Viewing Images – Method 1

1. Right-click the position within the view or page edge.
2. The right-click context menu appears. Select **View Image**.

Figure 13–1 View Image Option in the Right-Click Context Menu



The View/Manage Images dialog box appears. The image for the position you selected is shown in the center of the image carousel.

Viewing Images – Method 2

1. Click the **Manage Images** icon in the toolbar or select **Manage Images** from the View menu.
2. The View/Manage Images dialog box appears. Use the **Find image for** drop-down box or the image carousel to locate and view the image.

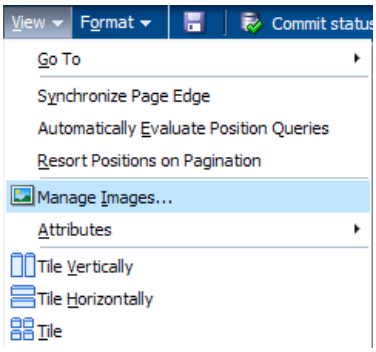
Associating Images with a Position

To associate an image with a position, complete the following steps. Note that this is for associating a single image to a position on an ad-hoc basis. Populating multiple images for a position is a back-end process.

1. Click the **Manage Images** icon in the toolbar or select **Manage Images** from the View menu.

Figure 13–2 Manage Images Icon

Figure 13–3 Manage Images Option



2. The View/Manage Images dialog box appears. Enter the following information:

   - **Dimension** and **Level**: Select the dimension and level into which you want to load the image. In Figure 13–4, the Product dimension and Item level have been chosen.
   - **Find image for**: Select the position for which you want to load the image. You can select the position from the drop-down list, or you can scroll through the positions in the carousel view.
   - **Show Children**: This option appears when you have selected a dimension level other than the lowest dimension level. Select this option to display images of the children instead of the parent.

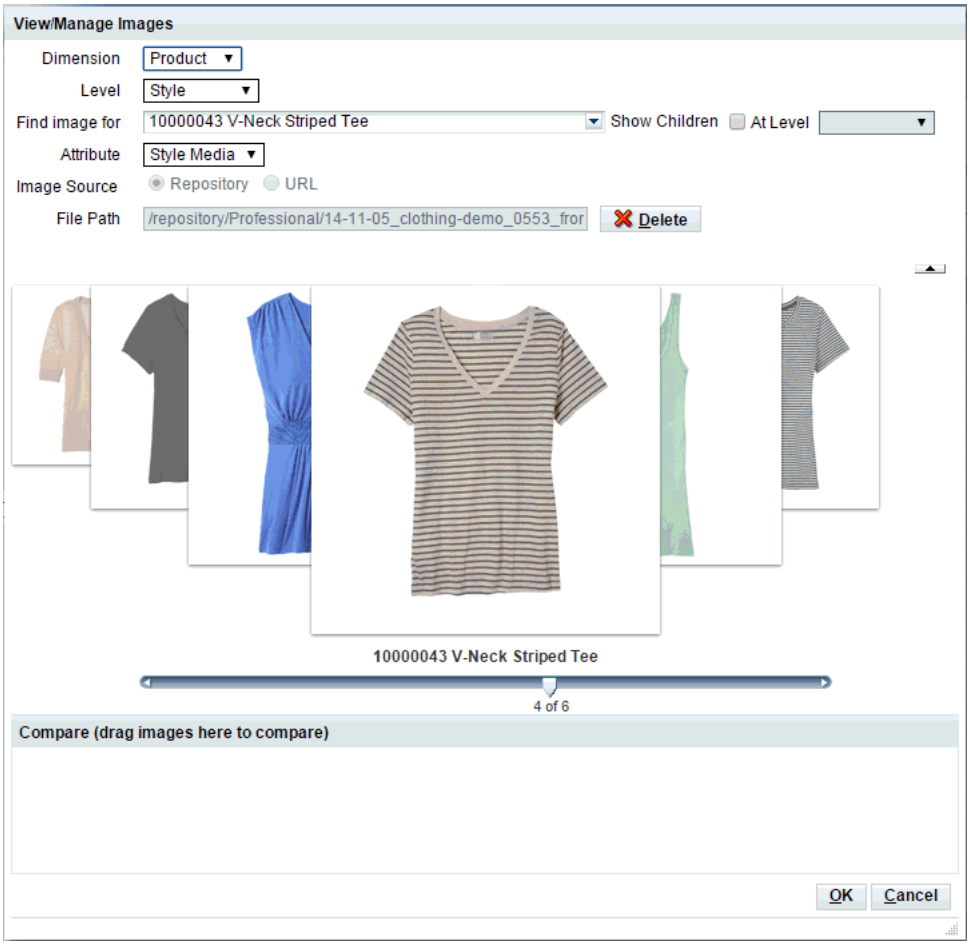
     If Show Children is not set, then Find Image for and the carousel both navigate to the same positions and stay in synch. If Show Children is set, then Find Image for navigates to the parent position and the carousel navigates to the child positions. Because of this, if you change the parent position, you will see a new set of child positions; however, if you use the carousel, the position does not change.
   - **At Level**: This option is enabled when the Show Children option is selected. Use this field to select which child level to display images for.
   - **Attribute:** Select the attribute that contains the images that you want to display or manage. If the selected level is not configured for media attributes, then this control is disabled.

     The Attribute list is disabled when no media attributes are configured for the selected level. However, the level is still displayed because old-style Enable Images is set (via the Config Tools Enable Images check box on a Level). You can view and manage these images here for compatibility with configurations that do not use media attributes.
   - **Image Source**: Select either **URL** or **Repository** as the location of the image. Select **URL** if the image is located on the internet. Select **Repository** if the image has already been loaded into the repository on a shared network location.

     Note: The repository is configured during the installation process. The levels having attributes that represent images are also configured. In addition, rules must be configured if the image attribute changes are to be committed to the domain. Contact your administrator for assistance. See the *Oracle Retail Predictive Application Server Installation Guide* for more information.

- **File path:** Enter the file path for the image. You can type or paste the file path for either a Repository or URL image source. For Repository images, you can also use **Browse** to locate the file within the repository. After you have entered the file path, click **Go**.

Figure 13–4 Loading Images



The image appears in the image carousel and is now associated with the position.

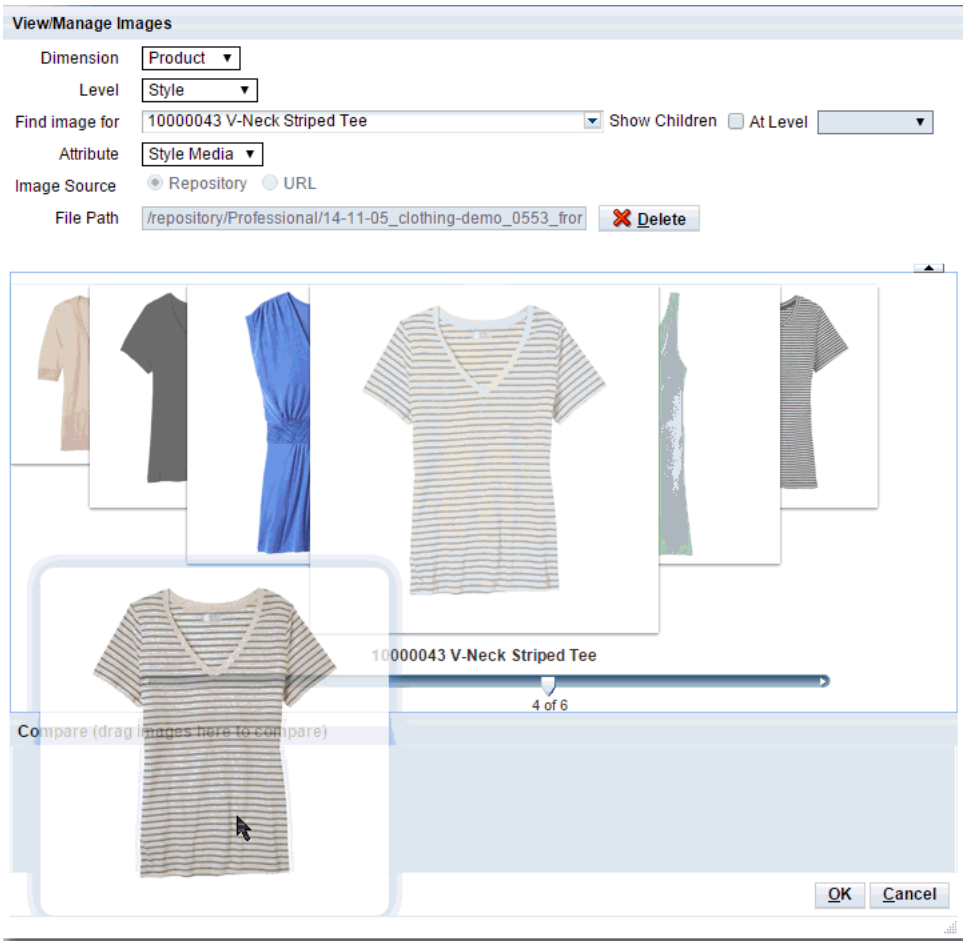
Comparing Images

You can drag images from the images carousel to the Compare area of the View/Manage Images dialog box in order to compare images side by side.

To compare images, complete the following steps:

1. Click and drag an image from the image carousel to the Compare area. When the background of the Compare area changes to blue, release the image. The image appears in the Compare area.

Figure 13–5 Dragging an Image to the Compare Area



2. Click and drag other images to the Compare area. The images appear as thumbnails.

Figure 13–6 Images as Thumbnails in the Compare Area

3. To expand the Compare area in order to view the selected items as larger images, click the **Expand** icon in the top, right corner of the Compare area. To collapse the Compare area after expanded, click the **Collapse** icon in the top, right corner.

Deleting Images

You can disassociate an image with a position by using **Delete** in the View/Manage Images dialog box. This clears out the images from the value for a position.

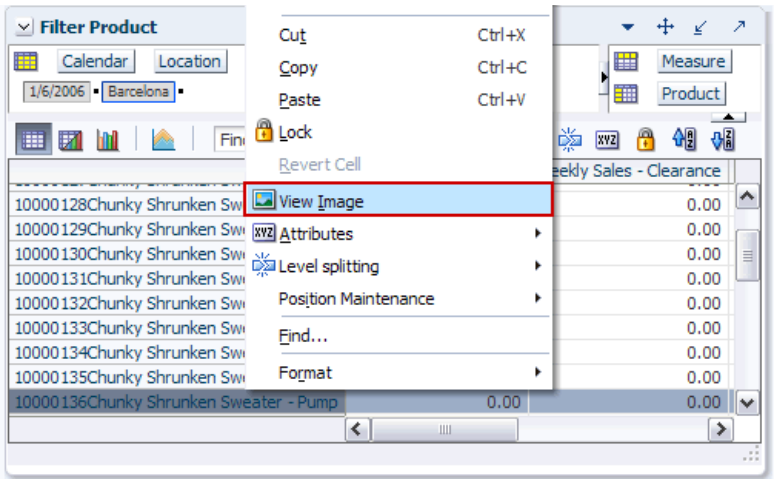
> **Note:** Using the **Delete** function does not delete an image from the repository. It only disassociates the image with the position.

To delete an image, complete the following steps:

1. Click the **Manage Images** icon in the toolbar or select **Manage Images** from the View menu.

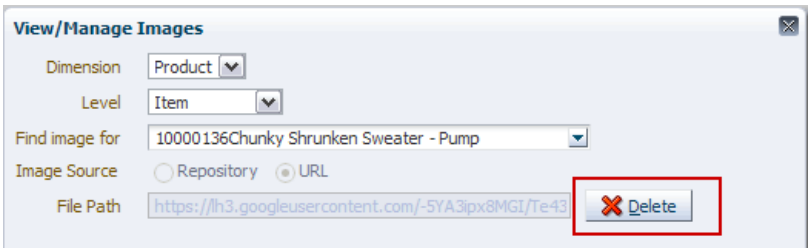
   Or, right-click the position within the view and select **View Image** from the right-click context menu.

Figure 13–7 View Image Option in the Right-Click Context Menu



2. The View/Manage Images dialog box appears. Select the position for which you want to delete the image. You can select the position from the **Find image for** drop-down box or from the image carousel.
3. After you have selected the position, click **Delete** located to the right of the **File Path** field.

Figure 13–8 Delete Button



The image disappears from the image carousel.

14

View Details

You can view visual data in the form of images that are displayed in pivot table position headers as attribute values, pivot tables cells for measure cell values, or as detailed pop-ups for specific positions or cells. The availability of these images for a particular worksheet depends on both the configuration of the worksheet and what you select within the UI.

> **Note:** This functionality is distinct from the view images functionality that is described in Chapter 13, "Images." The view images functionality described there is used to display primary images in positions, and can be changed or updated.

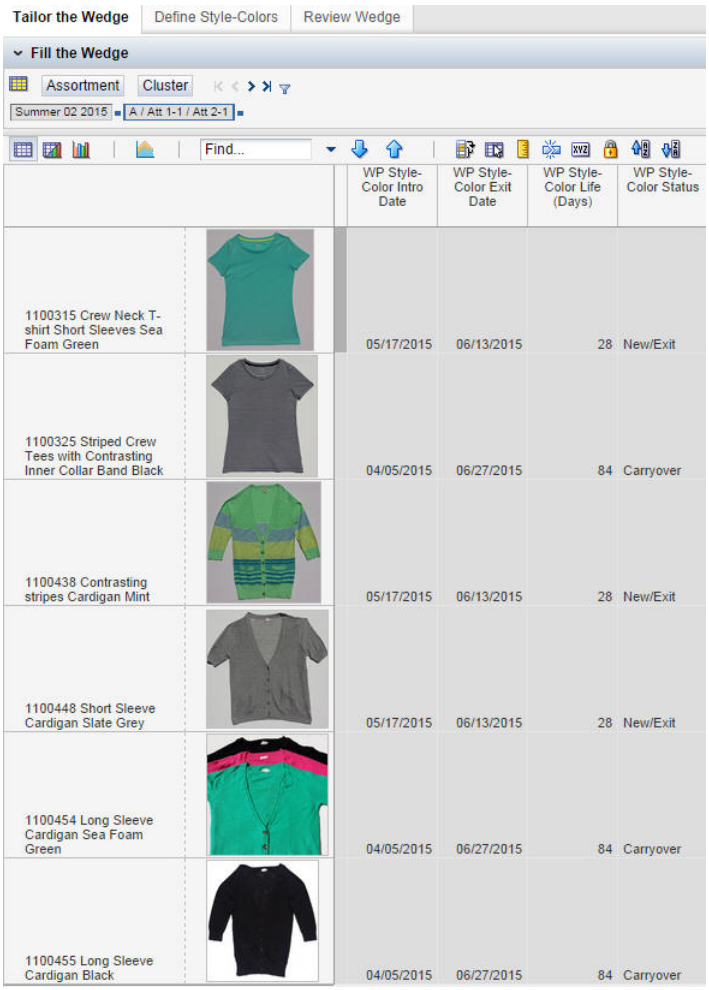
This chapter contains the following sections:

- Pivot Table Headers
- Pivot Table Cells
- The Detail Pop-Up
- Accessing a Detail Pop-Up
- Detail Pop-Up Features

Pivot Table Headers

Images can appear as pivot table headers for positions. This functionality can be configured in Config Tools or can be specified in the Fusion Client, as described in Select Attributes for Display. Only a single thumbnail image can appear as an attribute value in a pivot table header cell. This attribute functions as do all attributes within the Fusion Client (for example, whether or not the attribute is shown or not).

Figure 14–1 Image as Pivot Table Header



The image may be displayed instead of the label or in addition to the label. You can hover over the image in order to see the label. You can also specify which attributes are displayed using the Dimension pop-up functionality.

Pivot Table Cells

Images can appear as pivot table cells for measure cell values. This functionality can be configured in Config Tools. Only a single thumbnail image can appear as a cell value.

Such measures can be included in the measure profile for the worksheet definition during configuration. You can also make changes using the Dimension pop-up functionality. These cells cannot be edited in-line. They can be configured to be read-only, but they are not automatically read-only. They are subject to the same display behavior as any other cells.

The Detail Pop-Up

A detail pop-up is a dialog box that provides additional information related to a specified position or cell. These details consist of attribute and measure values, including images, for a single position or cell. All information is read-only and must be available in the current workbook.

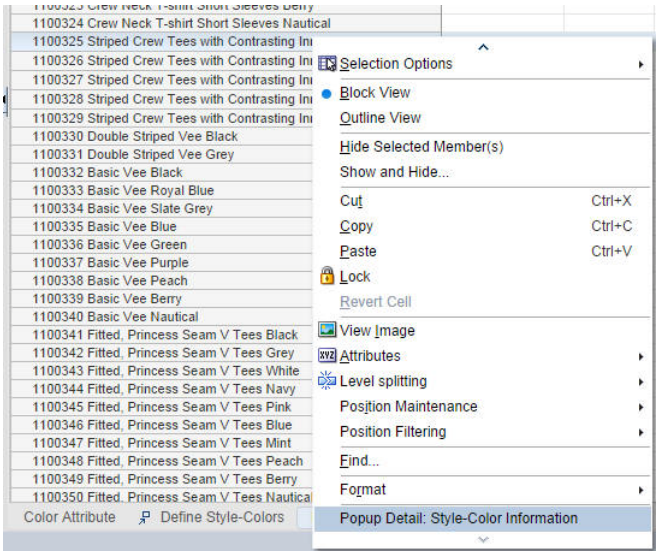
The Detail Pop-Up itself is configured as a worksheet. The pop-up can potentially be accessed from more than one position or cell, depending on the configuration. If no pop-up has been configured, then nothing appears in the menu.

In order to be available, the detail pop-up must first be configured using the Workbook Transition tab of Config Tools. This configuration creates the transition or link to the detail pop-up within the UI and determines what is displayed within the pop-up.

Accessing a Detail Pop-Up

You can access a detail pop-up by right-clicking on a position or cell that has been configured as a transition. If a detail pop-up has been configured for that position or cell, you will see a cascading menu that lists the pop-up or pop-ups that are available.

Figure 14–2 Detail Pop-up Menu



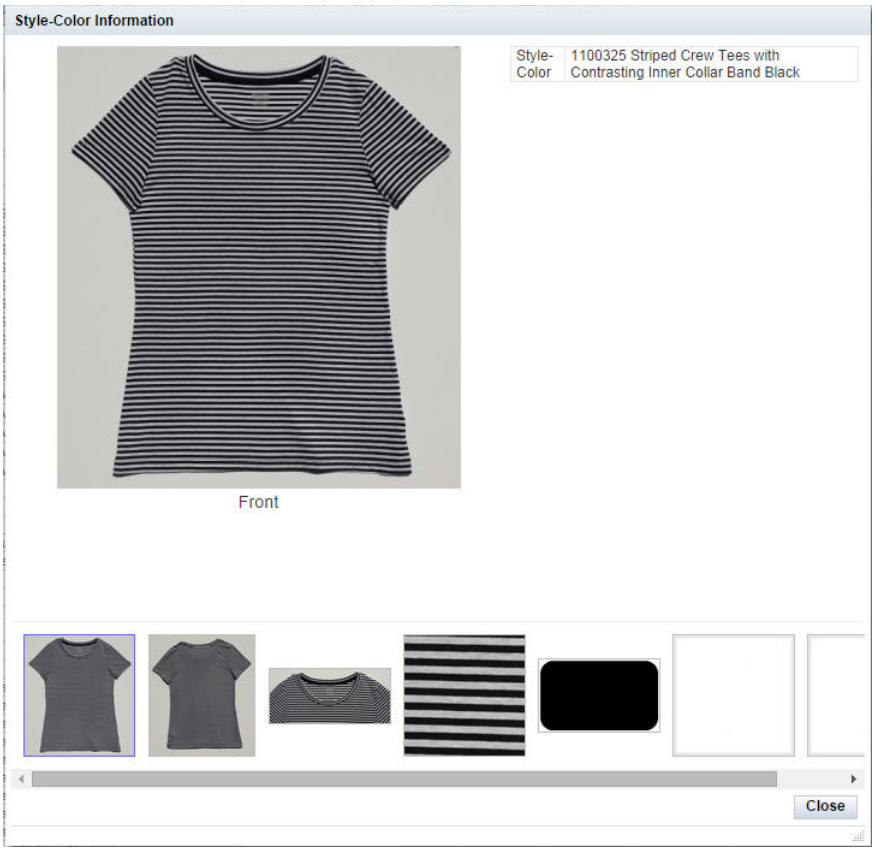
The transitions you can select include:

- Dimension level. A position at this level can provide access to the pop-up. This can only be accessed when a specific position at a specific level is selected.
- Worksheet. A worksheet cell selection can provide access to the pop-up. This can be accessed anywhere in the worksheet.
- Measure. A measure cell selection can provide access to the pop-up. This can be accessed anywhere in the measure.

Detail Pop-Up Features

The detail pop-up is divided into three sections, as shown in Figure 14–3. The title of the detail pop-up is taken from the worksheet label.

Figure 14–3 Detail Pop-Up Example



- Selected Media Item section. This section contains one full size image with a caption based on the image label. You can change the image that is displayed by clicking one of the thumbnails selected from the Media Browsing section.
- Media Browsing section. This section contains thumbnails of all the available images. Click one of the thumbnails in order to display it in the Selected Item section. You can hover over each image to see the label information for that image as well as the attribute or measure the image comes from.
- Information section. This section provides details about the cell or position selected in the worksheet. Labels include attributes, which are displayed in their configured order, and then measures in their configured order. Next to each label is either the attribute value or the data cell value. Since space is limited, you may need to hover in order to see a more complete value.

  The Information section is divided into three subsections: selection context of the cell selected on the source worksheet; attribute values from the selection; and measure values for the selection.

  Formatting from the underlying pivot table is mostly reflected in the data presented in the Information section. The following do not carry over directly: real-time alert filtering, read-only formatting, and formatting specified in the formatting dialog for either attribute labels or values.
- When an image has enough detail to allow a zoomed-in view, the information section is temporarily replaced with the zoom detail (see below).

Use the Close button to dismiss the dialog box.

Note: If no images have been configured for the pop-up, then only the information section is displayed.

Zooming In on an Image

The Fusion Client scales images to fit into the upper left hand side of the detail popup. The details of larger images can be viewed by rolling the mouse over the selected image. The zoomed-in details of that image will be displayed in the upper right side of the detail popup.

Figure 14–4 Example of a Image Zoom

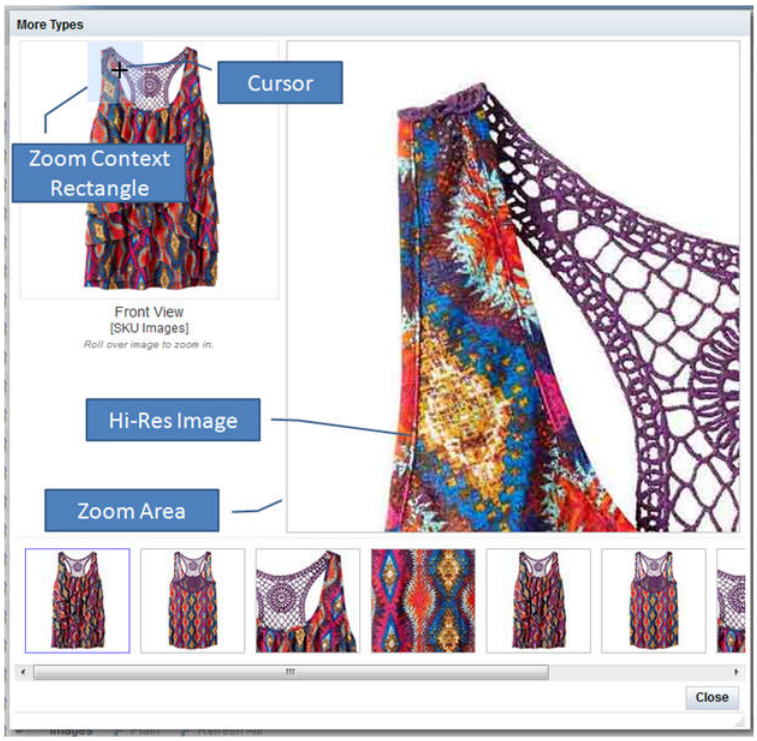


Figure 14–4 shows some of the features of the detail view related to zooming in on an image.

When an image is larger than the selected item display size, the following message appears under the selected image: "Roll over image to zoom in." If you move the mouse cursor over the selected image, the zoom feature is automatically triggered.

A Zoom Context Rectangle is shown in the selected image in the upper right. The portion of the image covered by the zoom context rectangle is what is displayed in the upper right of the Detail Pop-up. The mouse cursor automatically changes to the zoom context rectangle (with the cursor at the center of the rectangle) when you move the mouse over a zoomable image. It changes back when you move the mouse away from the image.

The high-resolution image shows a cropped, scrolling subset of the selected image. Moving the cursor around the selected image changes what portion of the high-resolution image is shown. When you move the cursor off of the selected image, the high-resolution image reverts back to the tabular Information section.

15

Tiled View with Drag and Drop

Drag and drop is enabled in workbook wizards, where it is used to add or remove products, time periods, and other entities from a workbook. It is used in the Show/Hide measure dialog box to add or remove measures from a worksheet or to re-order them. It is also enabled in the planning workspace via a worksheet type called a "tiled view."

The tiled view is ideal for adding or removing one or more styles or style-colors from a cluster's assortment, a promotion, and so on. More generally, it can be used in any situation where dragging a tile from one worksheet to another represents a business operation. This capability is fully configurable.

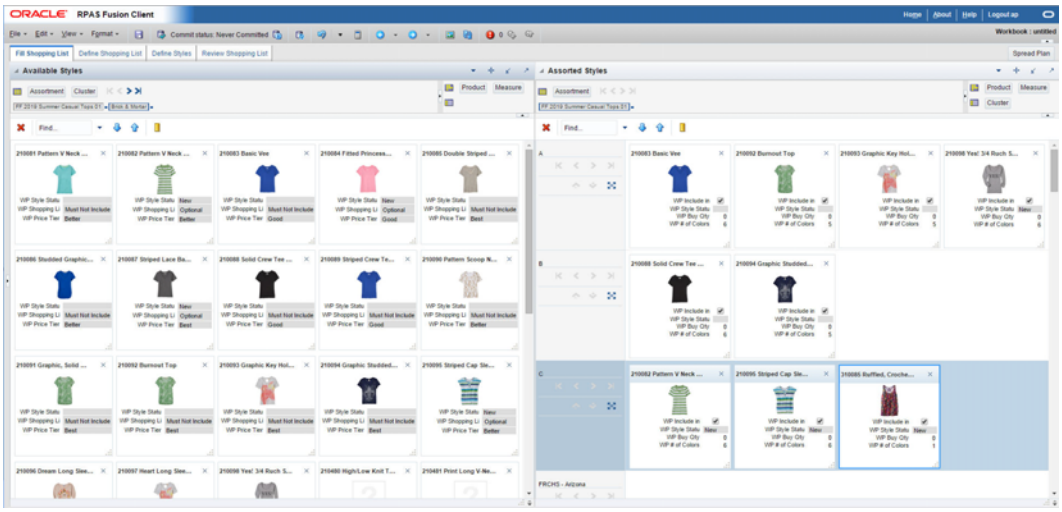
The results of the drag and drop action are stored by RPAS, and these results can be used to filter which tiles are visible in the tiled view.

Overview

Figure 15–1 illustrates how the tiled view can be used. The business operation in the example shows how a planner can graphically build an assortment by dragging styles from a pool into the assortment.

The Available Styles view (left) contains the pool of all available styles. The Assorted Styles view (right) contains the assortment of styles that are to be offered in specific store clusters. In order to modify the assortment, the planner selects one or more styles from Available Styles, then drags and drops them onto Assorted Styles. The items are added to the appropriate row in the Assorted Styles, updating that assortment or cluster. Similarly, the planner can drag and drop a style from Assorted Styles back to the Available Styles in order to remove that style from that assortment. The results can be saved, committed, and further operated on as usual.

Figure 15–1 Tiled View



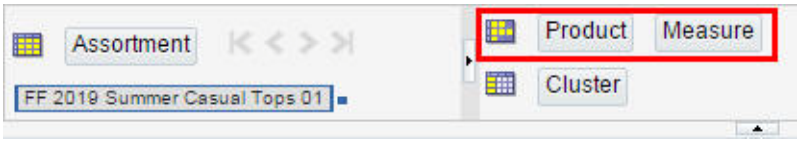
Tiled View

The tiled view is a worksheet type that can be configured in ConfigTools. The tiled view has both similarities and differences from the Pivot Table/Chart worksheet.

Like the Pivot Table/Chart worksheet, the tiled view can have multiple dimensions on the page or z-axis. The dimensions in the Page Edge can be used for the driving positions in a Position Query Definition (PQD). The dimensions in the Page Edge can be synchronized as usual. The dimension tiles can be used to bring up the Dimension pop-up as usual, for access to that dimension's levels, Show Attributes and Sort, as well as the Show and Hide tabs.

Unlike the Pivot Table/Chart worksheet, the tiled view can have at most one dimension on the row or y-axis. Also, the column or x-axis is fixed and cannot be changed. In terms of the tiled view, this axis is also called the "tile axis." In Figure 15–2, the tile (column) axis is shown in the red box. No other dimension tile can be moved to or away from the tile axis.

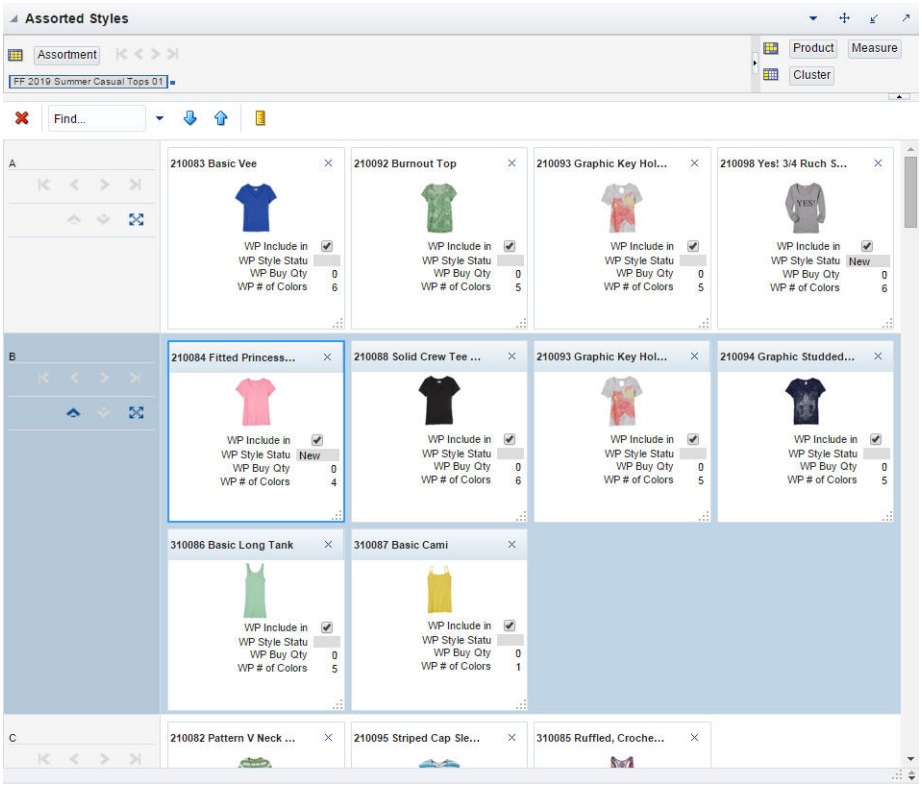
Figure 15–2 Tile Axis



The single dimension in the row axis of the tiled view is also called the "tiled dimension."

Each tile represents a tiled dimension position combined with the page and row positions. Each tile displays the values for visible attributes for the tiled dimension position. If measures are visible, each measure's label and value are shown in the tile. Figure 15–3 shows an example of a tiled view. The product and measure dimensions are in the tile axis, and each tile shows the product name as a tile title (for example, 210083 Basic Vee and 210092 Burnout Top). Several measures are displayed for each tile (WP Include in Shopping List, WP Style Status, WP Buy Qty, and WP # of Colors). The row dimension (Cluster) shows the clusters vertically along the page.

Figure 15–3 Tile View Example



Displaying, Filtering, and Ordering Tiles in a Row

On the tiled view, every row contains a number of tiles. If there are more tiles in a row than can fit on a single line, the extra tiles are wrapped onto lines below the first. This can be seen for the items in Cluster B in Figure 15–3. There is no set limit to how many tiles can be shown in a row.

Factors Affecting Which Tiles are Displayed in a Row

The actual tiles shown in a row are controlled by the following:

- The settings in the Show and Hide tab in the Dimension pop-up
- Any position filtering in effect
- A Position Query Definition (PQD) in effect for that worksheet
- The underlying Boolean measure that filters which tiles are shown on the tiled view. This Boolean measure is part of the definition of the tiled view and is what is updated when tiles are dragged and dropped from one worksheet onto another.

Dragging and dropping a tile updates the underlying Boolean measure directly, and changes are reflected immediately on the tiled view.

In addition, there are a number of ways to affect which tiles are shown via edits to the underlying Boolean measure (either directly or indirectly), including:

- Removing a tile (by clicking the x in the tile's upper right hand corner)
- Changing a value using a check box in a tile
- Changing a value using an edit in a pivot table or chart

- Fill, clear, cut, and paste
- Refreshing the workbook

These edits also cause the tiled view to be updated immediately. This occurs regardless of the user operation causing the edit or the view that was edited.

The effects of each of the above factors are cumulative. For example, a tile hidden via position filtering will not show up even if it is visible per the Show and Hide tab in the Dimension pop-up. In addition, because some of the filtering listed above can apply to individual rows on the worksheet, the filtering can vary between rows.

The Ordering of Tiles in a Row

The order in which the tiles are displayed is controlled by two factors. The first factor is the underlying ordering of the dimension itself. This does not change from row to row in a tiled view, and if the tiled view is represented as a pivot table, this ordering will be the same as the order of the items in the column. This ordering is the same for all rows in a tiled view. As with the pivot table, this ordering can be modified by using the Show Attributes and Sort tab of the Dimension pop-up.

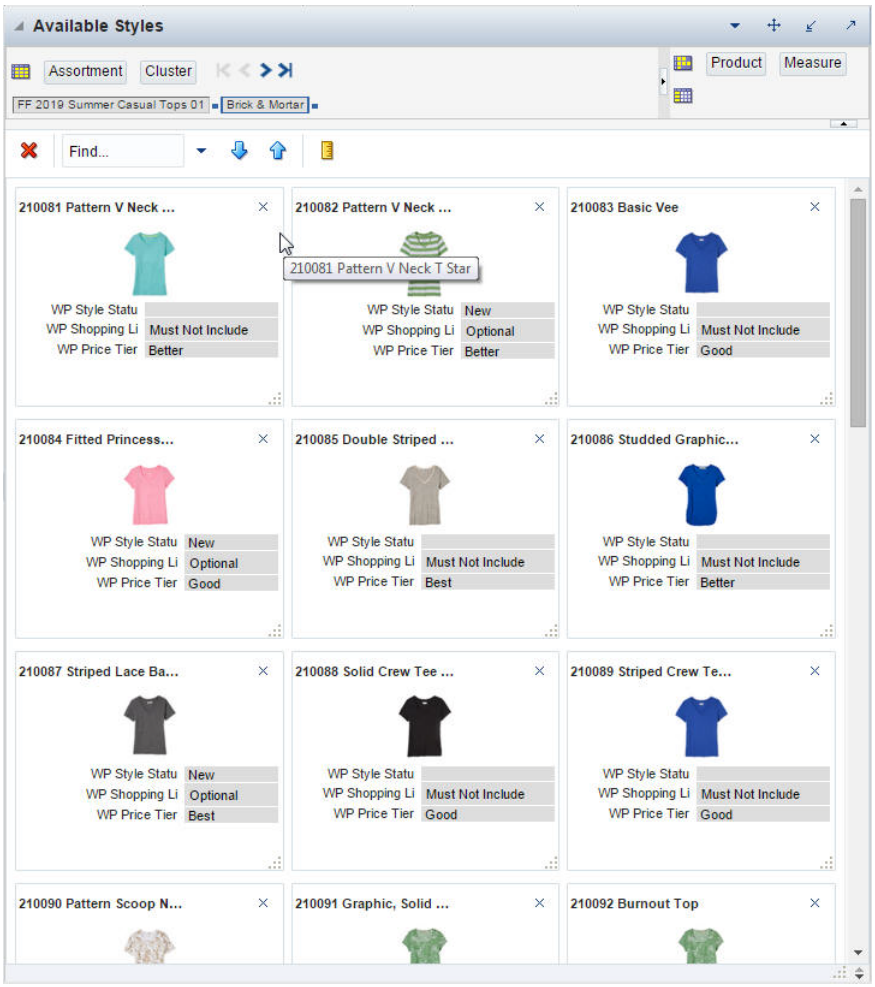
However, the ordering of the tiles can be temporarily changed by just dragging and dropping. A dropped tile appears in the row of tiles where it is dropped. This is temporary. The dropped tiles are sorted into their regular place whenever the worksheet is calculated, saved, or the row is scrolled off screen by a new fetch.

How Rows are Arranged

The rows shown in the tiled view are determined by the dimension in the row edge. The rows can be scrolled vertically as usual. The dimension can also be formatted as usual. Multiple levels of this dimension can be displayed in either block or outline mode. When multiple levels are shown, the page and row positions for the aggregated levels will use aggregated values for both filtering and displaying measure values within the tile.

If no dimension is shown in the row edge, then all positions are displayed in a single large row, as shown in the Available Styles worksheet in Figure 15–1. Figure 15–4 shows this situation in detail.

Figure 15–4 Available Styles Worksheet



Scrolling and Viewing Tiles in Each Worksheet Row

In general, there are more tiles (positions) in a row than space available for display. This is addressed in several ways in the tiled view.

The first way is that each row can be adjusted to show more than one row of tiles.This can be seen in Figure 15–3, where the Cluster B position shows two rows of tiles within a single row of the worksheet.

Figure 15–5 shows the View Port Controls that can be used to control the number of tile rows.This mini-toolbar is displayed for each row on the worksheet.

Figure 15–5 View Port Controls

- **Remove Row:** Removes a display row. Disabled if only one display row is visible.
- **Add Row:** Displays another display row for a given logical row. If the screen width is such that it displays five tiles in a single row, clicking this button will display another row, creating a worksheet row that now displays two rows of five tiles. The number of rows that can be added is limited by the Maximum Display

Rows setting (for example, 10). This button is disabled if the last tile in the row is already visible.

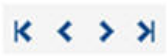
- **Expand Row:** Displays all rows in a vertically scrolling View Port. Other rows in the view are not visible when a row is expanded in this way.
- **Back to Multi-Row View:** This control is only accessible when a row has been expanded.

In conjunction with the number of tile rows that are displayed per worksheet row, each worksheet row can be scrolled individually. If the worksheet row is in multi-row mode, then a horizontal scrollbar is used. Otherwise, a vertical scrollbar is used.

Scrolling and Paging Within a Worksheet Row

The ordering and filtering of tiles within a tile row need not be the same from one row to the next. Each worksheet row has its own scrolling and paging controls that apply only to that individual row. Figure 15–6 shows the scrolling and paging controls.

Figure 15–6 Scrolling and Paging Controls

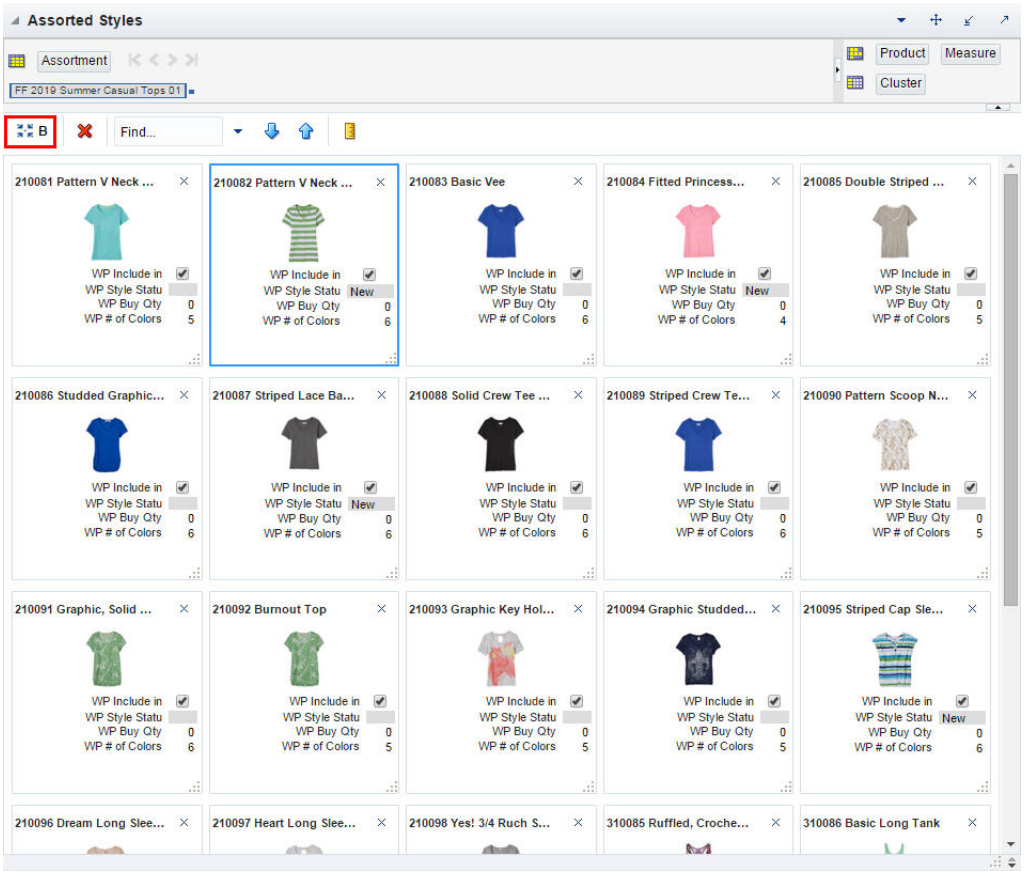


- **Show First:** Displays the first chunk of tiles and puts the first tile in the first position of the first display row. Disabled if the first tile is currently visible.
- **Show Previous:** Displays the previous chunk of tiles x display rows. Disabled if the first tile is currently visible.
- **Show Next:** Displays the next chunk of tiles x display rows. Disabled if the last tile is currently visible.
- **Show Last:** Displays last chunk of tiles and puts the last tile in the last position of the last display row. Disabled if the last tile is currently visible.
- **Select Row:** The user can select the row where tiles must be placed using this button placed in the row's toolbox. This is enabled only when tile accessibility mode is enabled, and is disabled otherwise. This button is not visible when a row has been expanded. In this scenario, the row is selected by default in the current window.

If the worksheet row contains more than about two dozen tiles, or if there are more than a half dozen rows displayed, seeing all of the contents of a row or the contents of adjacent rows becomes difficult. In either case, the per-row scrolling and paging controls are less useful.

In this case, there is another option. A special Expanded Row user interface allows users to focus on a single worksheet row that is laid out in tile rows. A more typical vertical scrollbar is available for continuous scrolling of tile rows. Figure 15–7 shows this feature. In this example, the row Cluster B has been expanded. The other rows are no longer visible.

Figure 15–7 Expanded Row



The Collapse Expanded Row button (boxed in red) restores the original multi-row view.

Tiles

The content of each tile is based on the visible attributes followed by the visible measures. There is no requirement that images be displayed. Figure 15–8 and Figure 15–9 provides some examples of tiles.

Figure 15–8 Tile Example

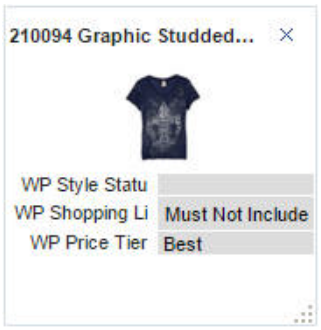


Figure 15–9 Additional Tile Example

Attributes

A tile displays the values of the visible attributes for the level of the tile dimension position, one per line, in order.

The visible attributes and their order may be specified in ConfigTools via the Window Formatting tab in the Worksheet tool, and they may be altered by the Show Attributes tab of the Dimension pop-up. At least one attribute is included here. If all attributes are hidden, the label is shown. There is no requirement that images be included.

If the label attribute is shown, it is displayed in the header of the tile. Attribute labels are not displayed in the tile (but may be available via hover). The attribute values are formatted and styled as they would be in a pivot table header.

Measures

The tile displays the label and value of each visible measure, one per line, in order below the attributes. There is no requirement that any measures be displayed.

Visible measures are configured via Measure Profiles in the ConfigTools Worksheet tool, just like they are for pivot tables. The user may use the Dimension pop-up on the Measure dimension to switch between measure profiles, show or hide individual measures, create new measure profiles, and so on.

The measure labels are styled as they are in pivot table headers (Measure Styles/Headers). The measure cells are formatted and styled as they are in pivot table cells. This includes Measure Styles/Cells, Number, Date/Time, Exception Format, and Real Time Alerts.

If the cell is read-only or locked, that will be indicated here. If the cell is editable in a pivot table, it will be editable here as well.

Practical Limitations

Tiles are meant to be compact, summary objects that can be dragged and dropped. A tile has limited space, and the physical size of the screen and its resolution set a practical limit on how large a given tile can be. The attribute and measure display tries to make effective use of the available space, but compromises are made and the end user cannot control the sizing of individual cells. In some cases, values or labels may be clipped or all the attributes and measures in a tile of reasonable size may not be visible.

Resizing a Tile

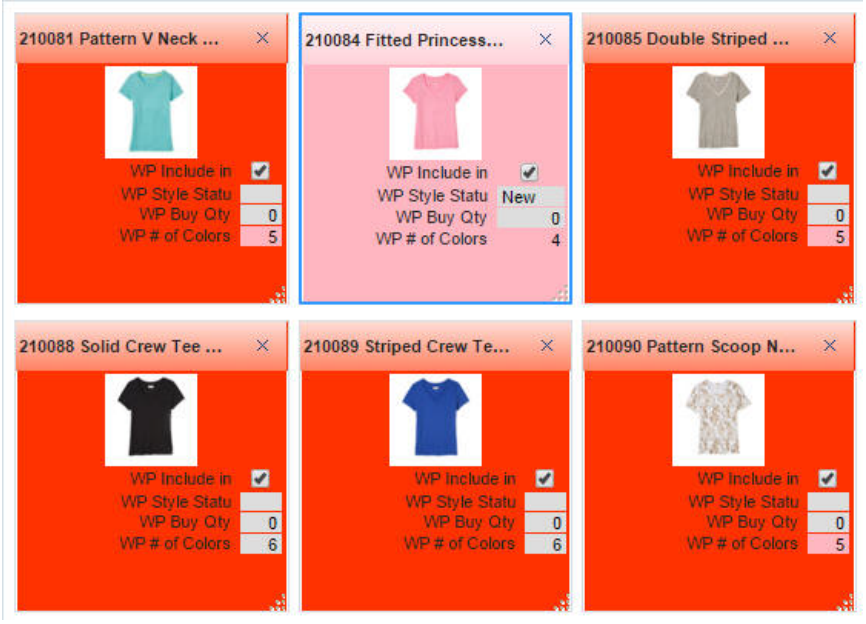
A tile can be resized by dragging the lower right hand corner of the tile. This changes the size of all tiles for this level of a worksheet row. There is a limit to how large you can make a tile; this can be controlled by the administrator. Figure 15–10 shows the location of the resize control boxed in red.

Figure 15–10 Resizing a Tile

Tile Formatting

In addition to formatting the attribute and measure content of the tile, formatting can be applied to the tile itself. This is done by using the formatting of the tile measure's cell as styles for the tile. The tile's background color is taken from the cell's background color. If possible, the tile's border color is taken from the cell's text color. As an example, Figure 15–11 shows formatting applied to a specific tile and a specific measure. The tile formatting is based on the WP Style Status measure being New, and the measure is when WP # of Colors is less than 6.

Figure 15–11 Formatting a Tile

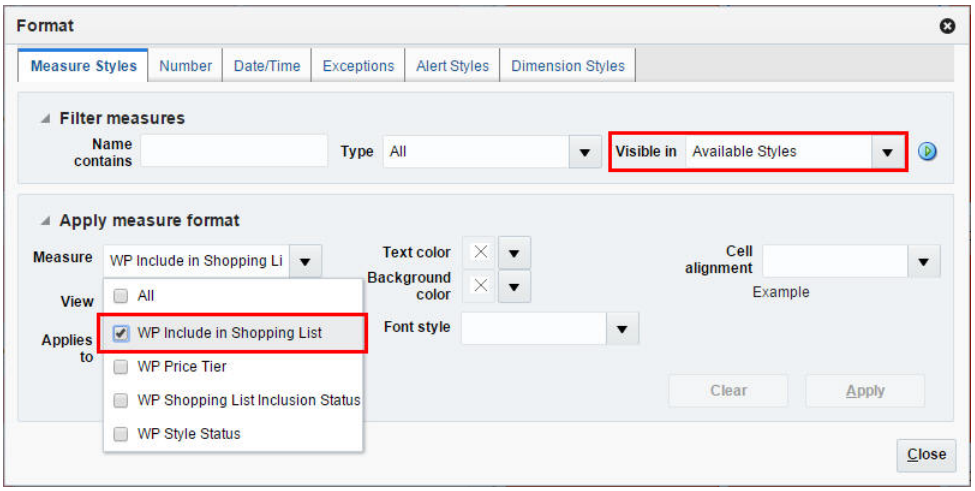


The tile measure does not have to be one of the visible measures shown in the tile content for this to work. It just has to be designated as the tile measure in a tiled view. If the tile measure is the target measure of a Real Time Alert, the alert measure is evaluated and used to determine the styles and hover information.

Format Dialog Change

The Format Dialog filters measures by what is visible in the selected view(s). For this purposes the tile measure for the tiled view must always be included so that the formatting can be set. Figure 15–12 shows the Format Dialog.

Figure 15–12 Format Dialog Box



In the above example, the WP Include in Shopping List measure is available for the Available Styles even though it is not a visible measure in that view. It is included because it is the tile measure for that worksheet.

Editing Measures in a Tile

Editing a measure cell in a tile is much the same as editing a measure cell in a pivot table. The changes can be reverted, undone, and so on.

Dragging and Dropping

In order to drag an item, you just click at the top of a tile and start dragging. You can make a multi-tile selection by clicking on the first tile, then ctrl-clicking to add others. Once you have a multi-tile selection, you can drag the whole selection.

Dragged items can be dropped onto a tile row or on a row on the row edge. Fusion Client adds the dropped tiles to the worksheet rows, provided it makes sense. That is, the ability to drag and drop must be enabled in the configuration. The initial setup includes specifying a source worksheet and a destination worksheet, as well as what information moves from the source to the destination as part of the drag and drop action. Dropped items are not automatically added. Fusion Client checks to make sure that the information dragged from the source makes sense in the context of the destination, that protection processing and locks are respected, base and aggregated states are editable, and so on.

If the drop is permitted, several things can occur. The underlying Boolean measure gets updated. This has the usual effect of an edited cell value. The new value is shown in any views in which it is visible, it can trigger an exception format formatting change, have protection processing effects, and so on. If the destination tile is already present, the drop will have no effect.

Note that it is possible that some dropped tiles may be hidden due to Show/Hide, Position Filtering, or PQD filtering. The dropped tile may also not be visible because of

the layout of the screen and the limited number of tiles that can be shown at one time. This does not cause the drop to be rejected. If the drop is rejected, an error message will be displayed.

In a tiled view, you can drag items in the destination worksheet at will. All this does is temporarily adjust the ordering of the tiles (see The Ordering of Tiles in a Row).

Miscellaneous Features Supported by the Tiled View

The Pivot Table/Chart worksheet supports a wide variety of operations on both the view and the workbook. In many cases, the tiled view supports the same operations, adjusted for the different selection model. Some features do not translate well to the tiled view, and are not included. Table 15–1 lists support for various features found in the Pivot Table/Chart worksheet.

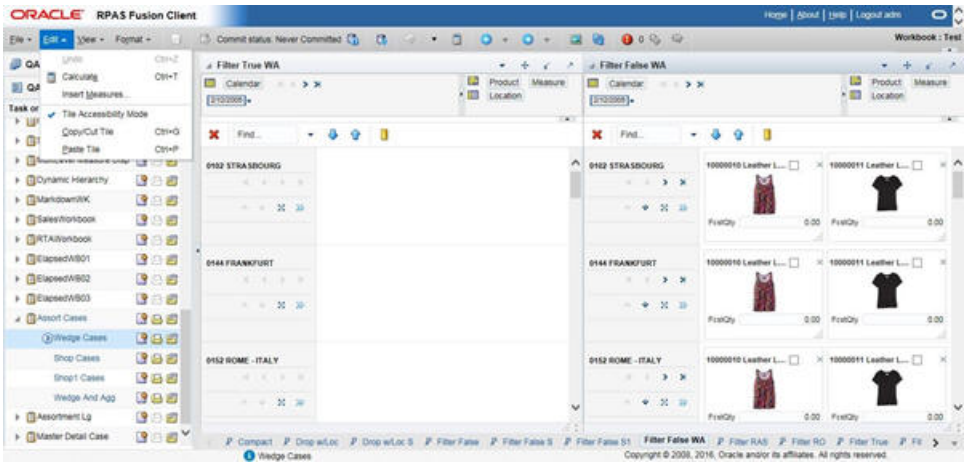
Table 15–1 Features Supported by the Tiled View

Feature	Supported	Comments
Copy/Rename View	Yes	
Insert Measures	Yes	
Page Edge Synchronization	Yes	
PQDs and Auto PQDs	Yes	
View/Manage Images	Yes	
Clear and Fill	Partial	Selected items must be visible. No Quick Fill.
Cut, Copy, and Paste	Partial	Selected items must be visible.
Detail Pop-ups	Partial	The context menu for launching a detail pop-up is available on either a position or a cell (only).
Lock Cell and Lock Measure	Partial	The measure or cell to be locked must be visible on one of the tiles.
Position Filtering	Partial	Filtering using a selection of tiles represents only the positions used in any of the intersections of the underlying selected tiles.
Simple Sort	Partial	
Workbook Transitions	Partial	Tiled views are supported as a target for Master/Detail transitions. They are supported as a source for Master Detail transitions if the tiles are visible and selected. They are supported as a source for Detail Pop-up transitions via the context menu.
Batch Alerts	No	
Level Splitting	No	
Print & Export	No	
Real Time Alerts	No	Tiles and tile content may be formatted by Real Time Alerts, including hover information. Filtering and Alert Navigation are not supported.

Copy/Cut and Paste Tiles

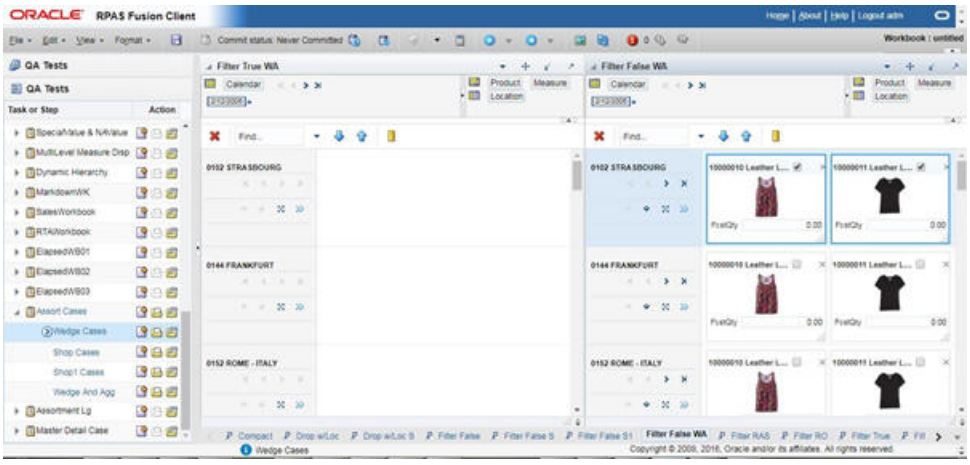
For accessibility compliance, an alternative way to move tiles between worksheet views is to use the Copy/Cut Tile and Paste Tile operations. The three Edit menu options: Tile Accessibility Mode, Copy/Cut Tile, and Paste Tile, are available only on desktop mode.

Figure 15–13 Tile Accessibility Mode Enabled



This operation can be completed using the keyboard alone as per accessibility compliance. It is recommended to use the keyboard shortcuts Ctrl+G and Ctrl+P for Copy/Cut Tile and Paste Tile, respectively. Navigation to the source and destination windows can be done using either the keyboard or the mouse, or a keyboard-mouse combination. Clicking any tile or any row's Select Row button using the mouse automatically makes the current window as the selected window.

Figure 15–14 Tile Selection Using Check Boxes



The user must perform the following actions in sequence to perform the tile copy/cut-paste operation.

- Tile the windows in the same way one would for drag-drop operation.
- Enable Tile Accessibility Mode from the Edit menu, which places a check box besides the tile name in the tile header section.

- Select the tiles to copy using the check boxes and use the keyboard shortcut Ctrl+G to copy the tiles.
- Navigate to the destination window where the tile must be placed and select the destination row using the Select Row button in the toolbox.
- Use the keyboard shortcut Ctrl+P to paste the tiles in the selected row. If tiles have been copied previously, but no row has been selected on the destination window, and Ctrl+P is pressed, then, a warning message will be displayed to the user.

The end result of Tile Copy/Cut-Paste operation is the same as that of Drag-Drop operation. The user will always end up with the same set of tiles in each window after both set of operations individually.

16

Print and Export

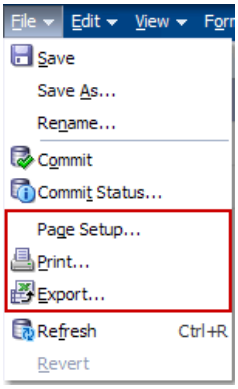
You can use the print and export functionality to export data in the current slice of a view to Microsoft Excel or a delimited file and print it.

Additionally, you can adjust the page setup options before printing and exporting the data. These print settings are persisted in the Fusion Client for the selected view.

> **Note:** The exact way the print and export functions operate may depend on the browser being used for the Fusion Client. The description below is based on the behavior in Internet Explorer. You may need to change the configuration settings in other browsers (such as Firefox or Google Chrome) before files can be printed or exported.

The page setup, print, and export options are located in the File menu.

Figure 16–1 Page Setup, Print, and Export Options



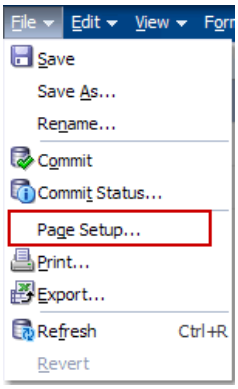
In addition, print and export icons are located in the toolbar. In both, an Excel spreadsheet is produced for output.

Figure 16–2 Print and Export Icons

Page Setup

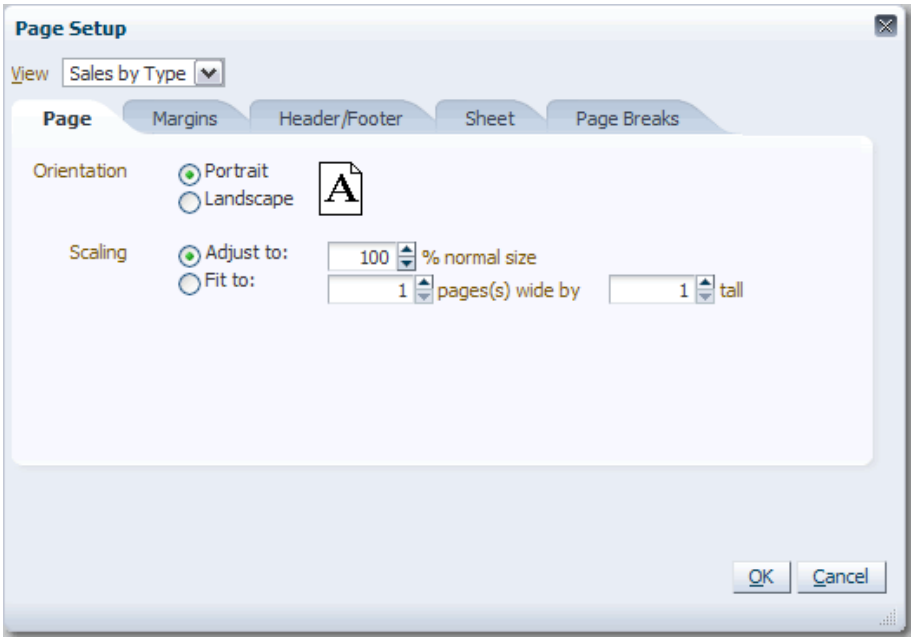
The page setup option is available in the File menu, as shown in Figure 16–3.

Figure 16–3 Page Setup Option in the File Menu



The Page Setup dialog box (Figure 16–4) contains five tabs: Page, Margins, Header/Footer, Sheet, and Page Breaks.

Figure 16–4 Page Setup Dialog Box



Page settings are applied per view. The View drop-down list contains a list of views of the current workbook. By default, the displayed view is selected. Selecting the view in the View drop-down sets the view in all tabs of this dialog box.

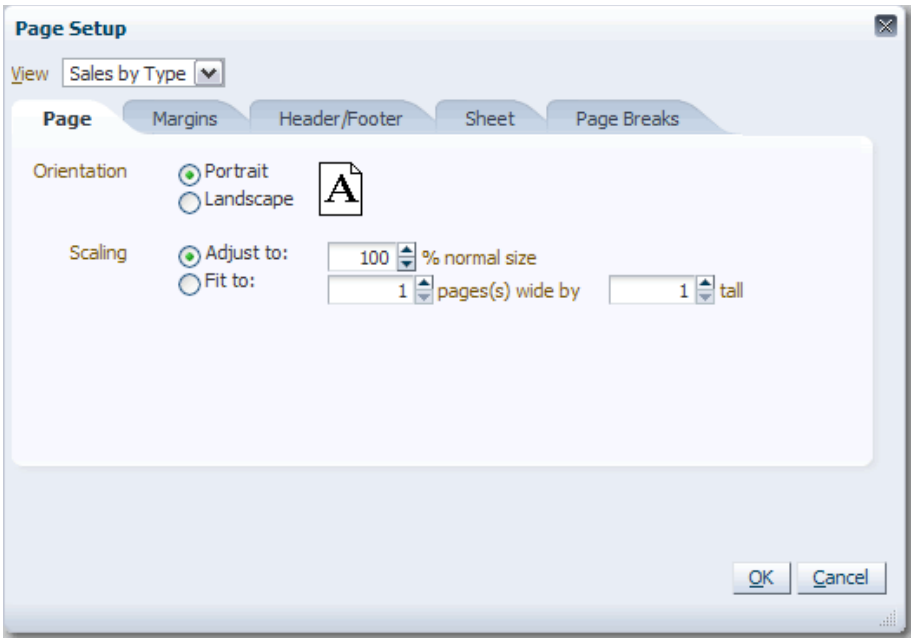
The settings created in the Page Setup dialog box are passed to Microsoft Excel and used when printing the data.

The five Page Setup tabs are described in the next sections.

Page Tab

Use the Page tab to specify the page orientation and scaling.

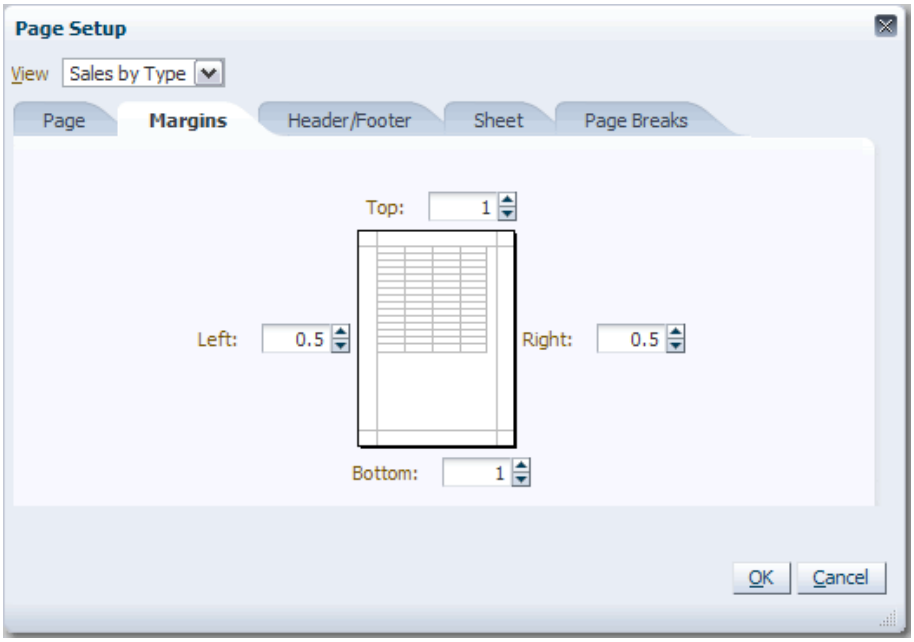
Figure 16–5 Page Setup Dialog Box: Page Tab



Margin Tab

Use the Margin tab to specify the page margins.

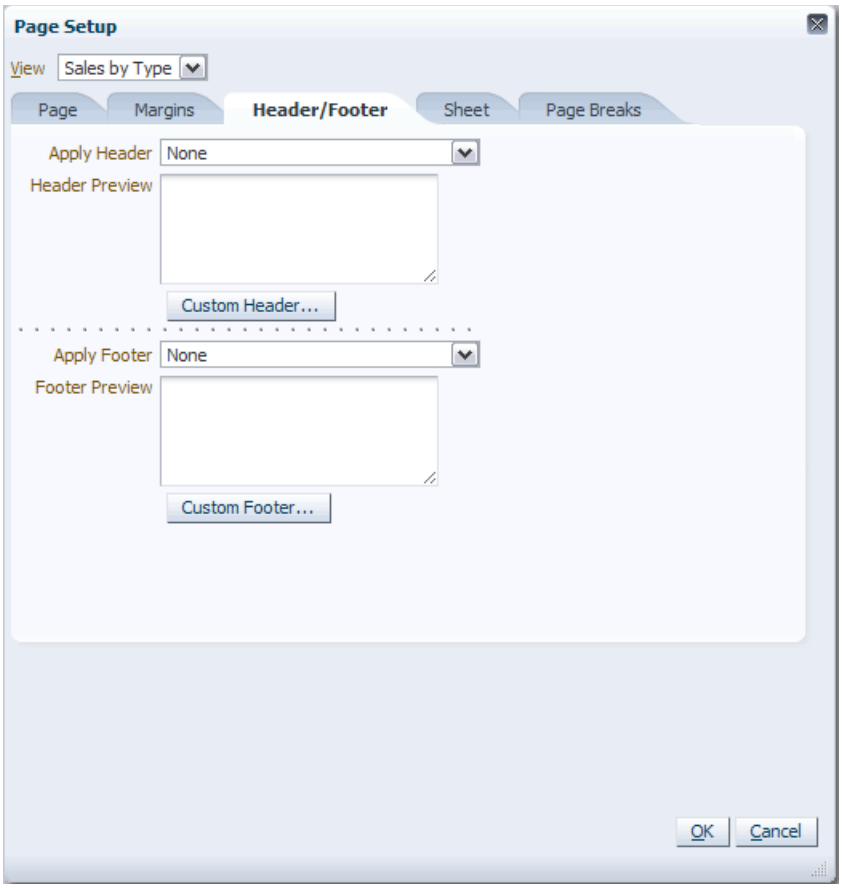
Figure 16–6 Page Setup Dialog Box: Margin Tab



Header/Footer

Use the Header/Footer tab to apply headers and footers.

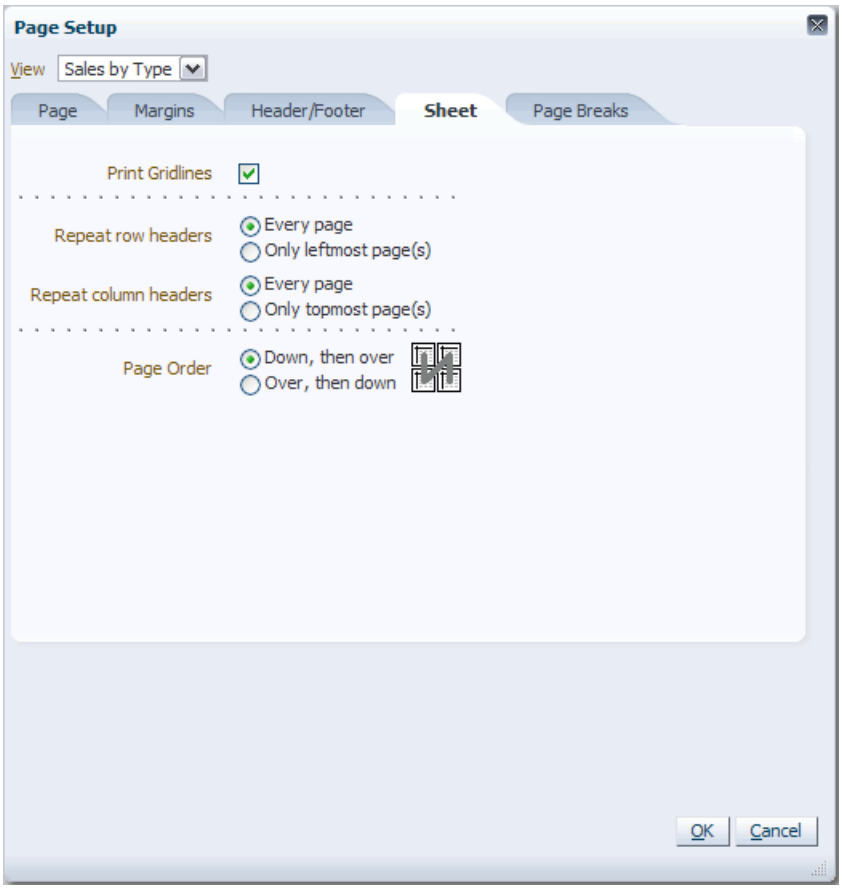
Figure 16–7 Page Setup Dialog Box: Header/Footer Tab



Sheet

Use the Sheet tab to define row and column headers, print gridlines, and page order.

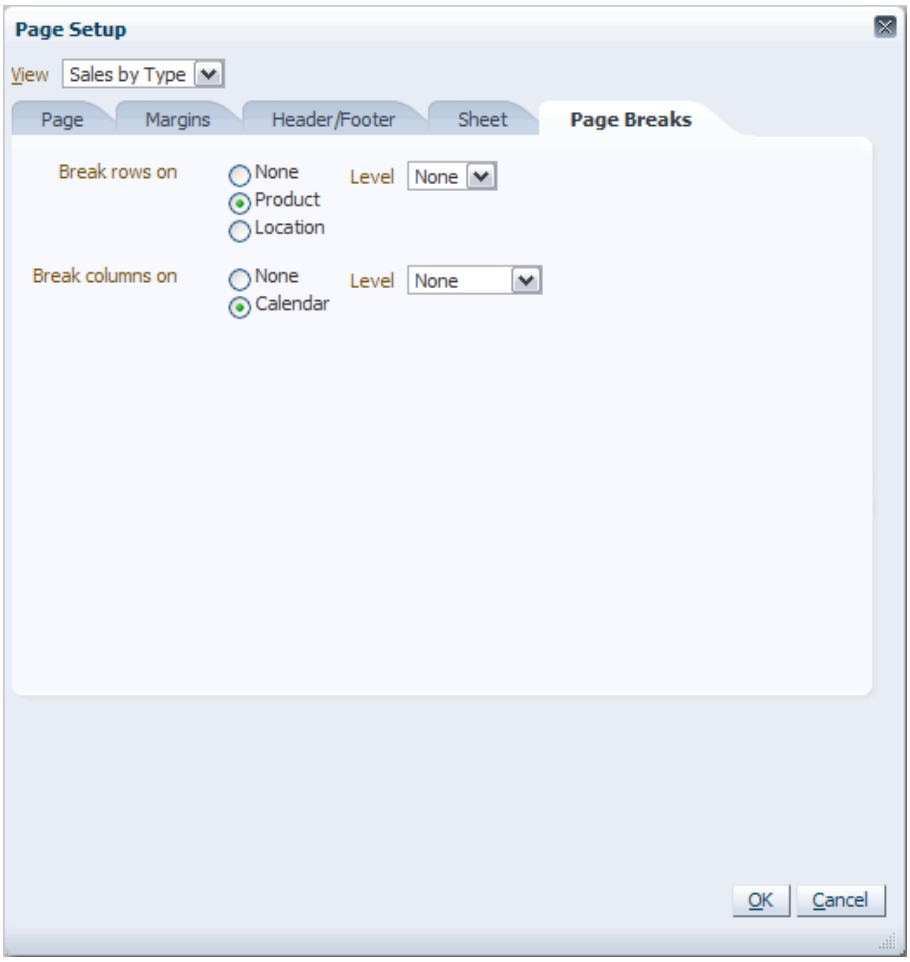
Figure 16–8 Page Setup Dialog Box: Sheet Tab



Page Breaks

Use the Page Breaks tab to specify how the rows and columns break across pages.

Figure 16–9 Page Setup Dialog Box: Page Breaks Tab



After you have used the Page Setup dialog box to define how the view appears on a page, you can print or export the page.

Export

You can use the Export functionality to export a slice to a text file or to Microsoft Excel. These options are described in the following sections.

Note: Before exporting a view, ensure that the Internet Explorer **automatic prompting for file downloads** security setting for downloads is set to **Disable**.

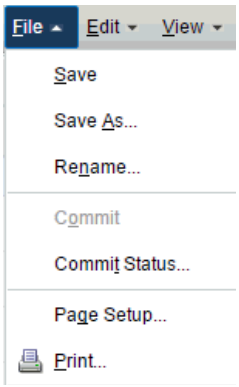
If you are using other browsers, you may need to adjust specific settings in those browsers in order to get the Save dialog box to appear during the export process for text or Excel files.

Export to a Text File

When a slice is exported to a text file, the data is exported row by row, with each item of data separated by a specified delimiter. This means the page setup options are not required.

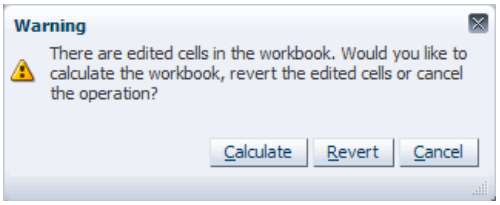
1. Select the **Export** option from the File menu.

Figure 16–10 Export Option



If you have edited the view, a warning message appears, asking if you want to calculate the workbook, revert the cells, or cancel the export.

Figure 16–11 Edited Cells Warning Message



- Click **Calculate** to calculate the workbook and open the File Download dialog box.
- Click **Revert** to revert the edited cells and open the File Download dialog box.
- Click **Cancel** to cancel the operation.

2. The Export dialog box appears.

Figure 16–12 Export Dialog Box: Text

Set the **Export To** radio button to **Text**. This specifies that the output is to be in text format. It also ensures that options such as **Separator** and **Descriptions** are available for selection and not grayed out. The lower part of the dialog box (used for exporting to Excel spreadsheets) is grayed out and unavailable).

Select the following options:

- **View**: Choose the view that you want to export.
- **Export Format Type**: Choose **As Seen** or **Raw Data**. (The **Formatted** option is not available when you are exporting to a text file.)
  - Choose **As Seen** if you want the data to be exported as it appears in the Fusion Client.
  - Choose **Raw Data** if you want the exported data in the text file to appear with no number formatting.

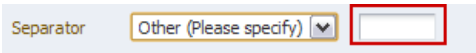
  For instance, if you have entered **12588.687** and the number formatting is configured to have a scale of 1, a precision of 2, the separator turned on, and a prefix of $, the number appears as **$12,588.69** in the pivot table. This number appears in the text file in the following ways, depending on the exported format type:
  - **As Seen**: $12588.69
  - **Raw**: 12588.687

Note: Data types other than integer and float are not supported. If a view contains columns with data types other than integer and float, the data is exported as it appears in the Fusion Client. If a worksheet contains a mix of columns with integer or float data types with other data types, the exported file contains the appropriate formatting for the supported data types based on the options selected during the export. Data in the columns of the unsupported data types appears as it is seen in the Fusion Client.

Date or any type of picklists are exported as a string.

- **Separator**: Choose **Comma**, **Tab**, **Space**, or **Other (Please specify)**. The default separator is **Comma**.
  - If you choose **Other (Please Specify)**, you must enter a character in the text box. This character will act as the separator.

Figure 16–13 Separator: Others Option

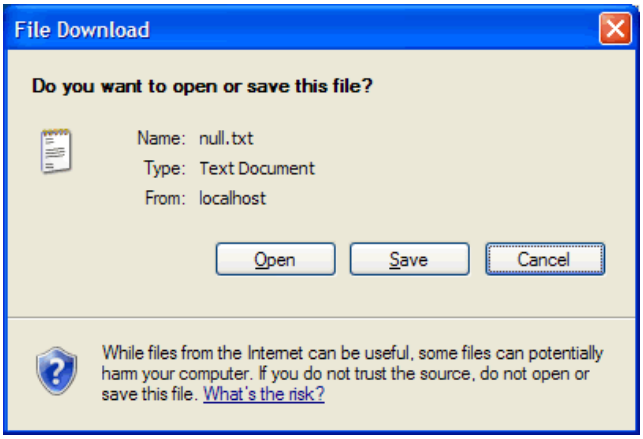


- **Descriptions**: Choose either **Labels** or **Names** to be displayed as a header in the exported data. The default is Labels.

Note: The **Apply Page Setup Options** and **Read-only** options are not applicable to text file exports.

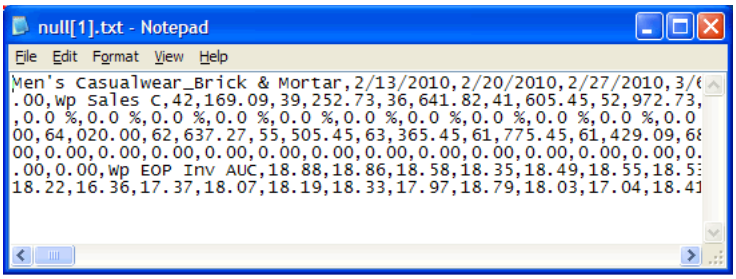
3. Click **OK**.
4. The File Download dialog box appears. You can choose to either **Open** the text file or **Save** it to a location on your computer.

Figure 16–14 File Download Dialog Box



5. If you chose **Open**, the text file opens. If you chose **Save**, you can open the file from the location you saved it.

Figure 16–15 Data in Text File



Export to Excel

You can export data to Microsoft Excel using two options. You can use the **Export** option in the File menu to set export options before exporting. Or, you can use the **Export** icon in the toolbar to bypass the export options and export the slice directly to Excel.

Note: The export functionality is certified with Microsoft Excel 2003 and 2007.

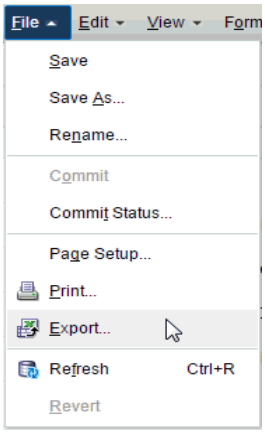
Note: After exporting a worksheet to Excel, the Export to Excel dialog may not automatically dismiss. You can click **Cancel** to dismiss the dialog and continue with your work.

Option 1: Export Option in the File Menu

To export the slice to Microsoft Excel with the **Export** option in the File menu, complete the following steps:

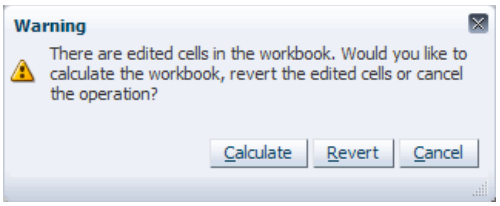
1. Select the view that you want to export.
2. Select the **Export** option from the File menu.

Figure 16–16 Export Option



If you have edited the view, a warning message appears, asking if you want to calculate the workbook, revert the cells, or cancel the operation.

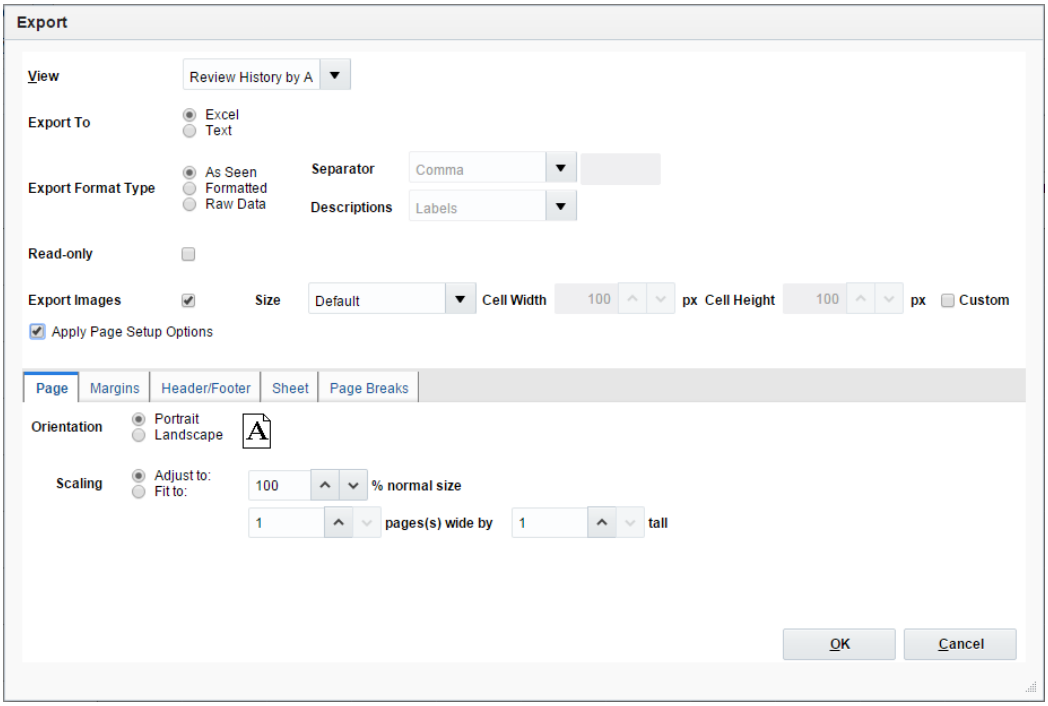
Figure 16–17 Edited Cells Warning



- Clicking **Calculate** calculates the workbook and opens the File Download dialog box.
- Clicking **Revert** reverts the edited cells and opens the File Download dialog.
- Clicking **Cancel** cancels the operation.

3. The Export dialog box appears.

Figure 16–18 Export Dialog Box: Excel



Set the **Export To** radio button to **Excel**. This grays out some options associated with exporting to a text file. It also enables the **Apply Page Setup Options** check box.

Select the following options:

- **View**: Choose the view that you want to export.
- **Export Format Type**: Choose **As Seen**, **Formatted**, or **Raw Data**.
  - Choose **As Seen** if you want the data to be exported as it appears in the Fusion Client.
  - Choose **Formatted** if you want the data to be exported to Excel in raw format (meaning that the Fusion Client formatting has been removed) and then have the Excel-based formatting automatically applied within Excel.

Only the formatting selected in the Fusion Client is applied in Excel. After the data is exported, you can apply more formatting within Excel.

– Choose **Raw Data** if you want the exported data in Excel to appear with no number formatting.

For example, if you have entered **12588.687** and the number formatting is configured to have a scale of 1, a precision of 2, the separator turned on, and a prefix of $, the number appears as **$12,588.69** in the pivot table. This number appears in Excel in the following ways, depending on the exported format type:

– **As Seen**: $12588.69

– **Formatted**: $12,588.69 (the raw number, 12588.687, is formatted in Excel to display as $12588.69)

– **Raw**: 12588.687

Note: Data types other than integer and float are not supported. If a view contains columns with data types other than integer and float, the data is exported as it appears in the Fusion Client. If a worksheet contains a mix of columns with integer or float data types with other data types, the exported file contains the appropriate formatting for the supported data types based on the options selected during the export. Data in the columns of the unsupported data types appears as it is seen in the Fusion Client.

Date or any type of picklists are exported as a string.

Boolean data types are exported with formatting compatible with Excel.

When you use the formatted option and use a scale factor of anything besides 1000, the value in Excel is displayed as the raw formatted value, not the scaled formatted value. For percentages, a scale factor of .01 displays as a percent in Excel.

Note: The Separator and Descriptions options are not applicable to Microsoft Excel exports.

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4. By default, the Export Images check box is checked. This allows any images that are included in the pivot table to be exported, along with other data.

   a. Select the desired size of the exported images from the Size drop-down menu. The two available values are Default, which exports a thumbnail image, and Large, which exports a full-sized image. The image size associated with the Default option and the Large option can be changed by the administrator.

   b. The default values are set for both the cell width and the cell height. If you check the Custom check box, you can specify a custom size within the bounds set by the administrator for the image cells in Excel.

   c. When you uncheck the Export Images check box, Fusion will export the label associated with a specific image rather than the image itself.

   d. Image export is not available when you select the Text option from the Export To radio buttons.

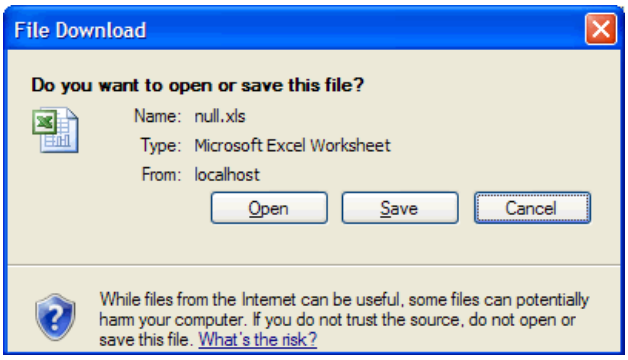
5. If the Apply Page Setup Options check box has been selected, the tabs concerning page setup will be enabled. Options include **Page**, **Margins**, **Header/Footer**, **Sheet** and **Page Breaks**. These options function in an identical manner to those accessed by the **Page Setup** option on the **File** menu. For more information, see Page Setup.

   Read-only: Select this check box if you want the exported data to be read-only. This prevents the data from being updated when opened in Microsoft Excel.

6. Click **OK**.

7. The File Download dialog box appears. You can choose to either **Open** the Microsoft Excel file or **Save** it to a location on your computer.

Figure 16–19 Export Dialog Box



8. If you chose **Open**, Microsoft Excel opens and the slice appears in a spreadsheet. If you chose **Save**, you can open the file from the location you saved it.

Figure 16–20 Slice in Microsoft Excel

Note: Exporting images to Excel requires Microsoft Excel 2007 or later (.xlsx instead of .xls).

Also note that, while common image formats are supported with the export to Excel functionality, only a single frame of an animated .gif file is exported. (That is, the file is no longer animated.)

Option 2: Export Icon in the Toolbar

The global toolbar icon for Export, shown in Figure 16–21, bypasses the Export dialog box and exports the data to Excel using the default export options. By default, the images are exported to Excel.

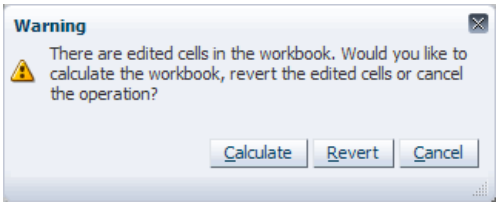
To export the slice to Microsoft Excel with the Export icon in the toolbar, complete the following steps:

1. Select the view that you want to export.
2. Click the **Export** icon in the toolbar.

Figure 16–21 Export Icon

If you have edited the view, a warning message appears, asking if you want to calculate the workbook, revert the cells, or cancel the operation.

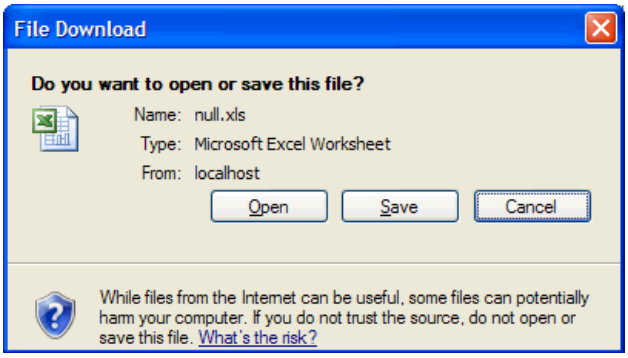
Figure 16–22 Edited Cells Warning



- Clicking **Calculate** calculates the workbook and opens the File Download dialog box.
- Clicking **Revert** reverts the edited cells and opens the File Download dialog box.
- Clicking **Cancel** cancels the operation.

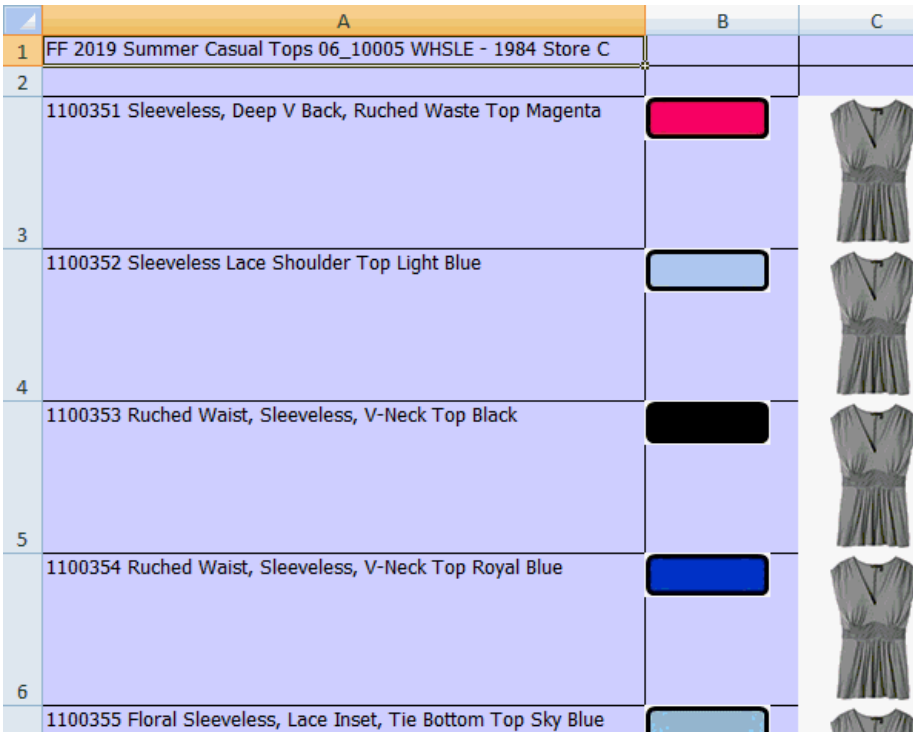
3. The File Download dialog box appears. You can choose to either **Open** the Microsoft Excel file or **Save** it to a location on your computer.

Figure 16–23 File Download Dialog Box



4. If you choose **Open**, Microsoft Excel opens and the slice appears in a spreadsheet. If you choose **Save**, you can open the file from the location where you saved it.

Figure 16–24 Slice in Microsoft Excel



Print

You can print data to an Excel spreadsheet by use the **Print** option in the File menu or on the toolbar.

The print functionality is similar to the export functionality, except that the print functionality always applies the page setup options before exporting to Microsoft Excel.

Print also differs from export because the exported data is always read-only and as a result the cells in the spreadsheet are protected against changes. If required, cell protection can be removed using Excel functionality to enable the spreadsheet to be edited.

Note: This example is based on using Internet Explorer.

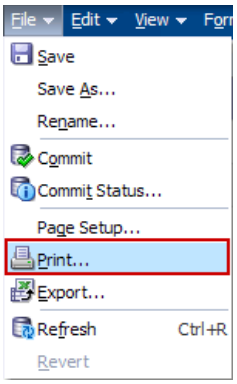
If you are using other browsers, you may need to adjust specific settings in those browsers so that the Print functionality operates as specified below.

Option 1: Print Option in the File Menu

To print the slice with the **Print** option in the File menu, complete the following steps:

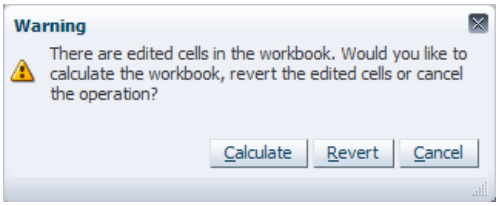
1. Select the view that you want to print.
2. Select the **Print** option from the File menu.

Figure 16–25 Print Option



If you have edited the view, a warning message appears, asking if you want to calculate the workbook, revert the cells, or cancel the operation.

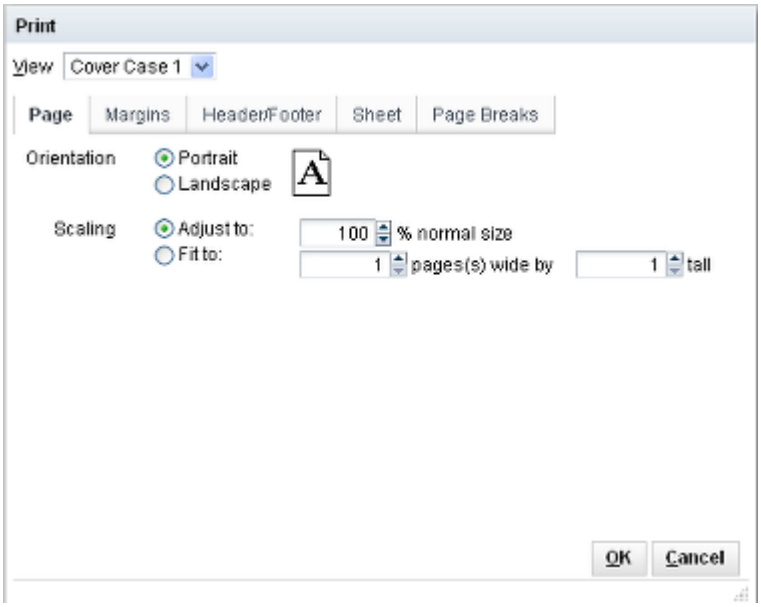
Figure 16–26 Edited Cells Warning



- Click **Calculate** to calculate the workbook and open the File Download dialog box.
- Click **Revert** to revert the edited cells and open the File Download dialog box.
- Click **Cancel** to cancel the operation.

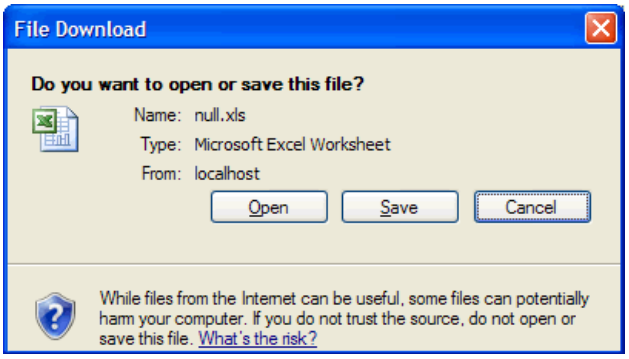
3. The Print dialog box appears. Select the view you want to print.

Figure 16–27 Print Dialog Box



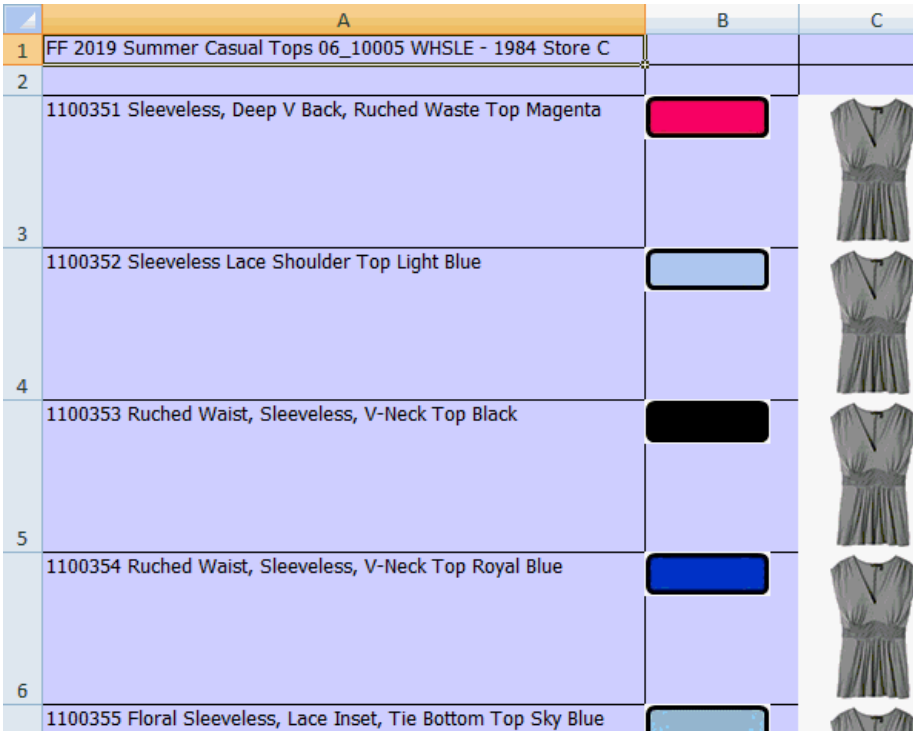
4. It is possible to make changes to the page set-up options using the Page, Margins, Header/Footer, Sheet or Page Breaks tabs. For more information, see Page Setup.
5. Click **OK**.
6. The File Download dialog box appears. You can choose to either **Open** the Microsoft Excel file or **Save** it to a location on your computer.

Figure 16–28 File Download Dialog Box



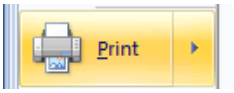
7. If you chose **Open**, Microsoft Excel opens and the slice appears in a spreadsheet. If you chose **Save**, you can open the file from the location where you saved it.

Figure 16–29 Slice in Microsoft Excel



From Microsoft Excel, click the **Print** option in the main menu.

Figure 16–30 Print Icon in Microsoft Excel



Option 2: Print Icon in the Toolbar

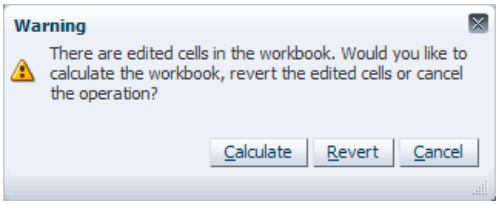
To print the slice with the **Print** icon in the toolbar, complete the following steps:

1. Select the view that you want to export.
2. Click the **Print** icon in the toolbar.

Figure 16–31 Print Icon

If you have edited the view, a warning message appears, asking if you want to calculate the workbook, revert the cells, or cancel the operation.

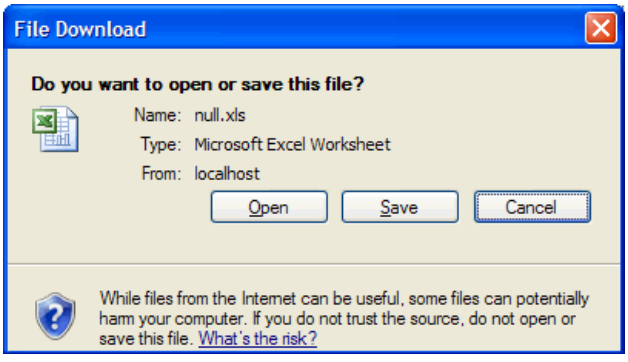
Figure 16–32 Edited Cells Warning



- Clicking **Calculate** calculates the workbook and opens the File Download dialog box.
- Clicking **Revert** reverts the edited cells and opens the File Download dialog box.
- Clicking **Cancel** cancels the operation.

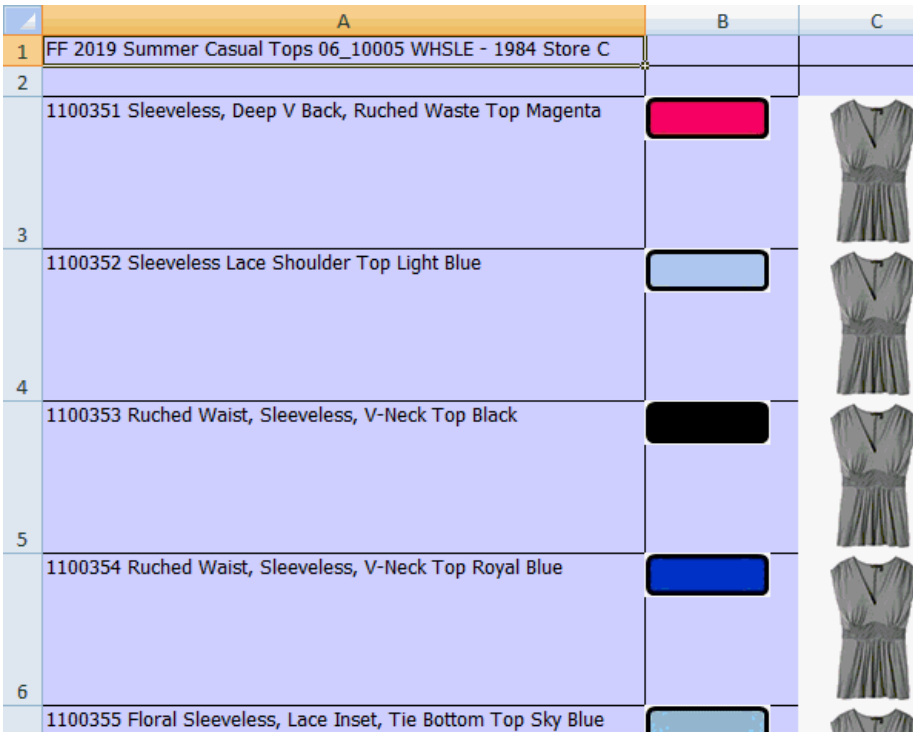
3. The File Download dialog box appears. You can choose to either **Open** the Microsoft Excel file or **Save** it to a location on your computer.

Figure 16–33 Export Dialog Box



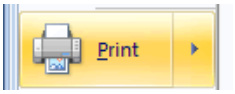
4. If you chose **Open**, Microsoft Excel opens and the slice appears in a spreadsheet. If you chose **Save**, you can open the file from the location you saved it.

Figure 16–34 Slice in Microsoft Excel



From Microsoft Excel, click the **Print** icon.

Figure 16–35 Print Icon in Microsoft Excel



17

Special RPAS Fusion Client Features

This chapter describes special RPAS Fusion Client features that you can use. The following sections are included:

- Batch Alerts
- Real Time Alerts
- Extended Measures
- Replicate Selections
- Creating a Consumer Decision Tree

Overview of Alerts

Retailers routinely deal with very large volumes of data. To help you to manage the inevitable problems that occur, two forms of alerts are provided. These can help you to focus directly on the areas of the plan that need corrective action.

Batch Alerts

Batch alerts are run at a regular time interval by a scheduling tool (for example on a daily basis). They provide a method for a retailer to set up a systematic framework to identify data that falls outside of specific parameters.

Real Time Alerts

Real time alerts are calculated and updated when the workbook is opened. They can then be manually updated by users. Data outside of specified parameters is highlighted. After you have modified the data to a suitable value, click **Calculate** to clear the alert. This lets you systematically work through and clear a particular set of problems.

Configuring Batch and Real Time Alerts

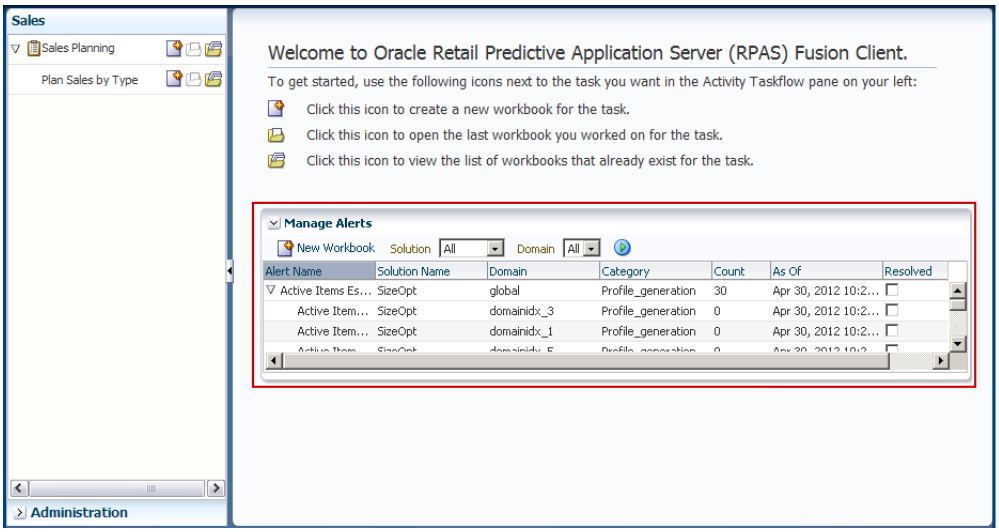
The defaults for both batch and real time alerts are configured in the RPAS Configuration Module. This configuration can be done by users with access to the configuration tools and the alertmgr utility. They are not accessible by standard users. Standard users can only modify the visual appearance and priorities of real time alerts for workbooks or workbook templates to suit their personal preferences.

Batch Alerts

Batch alerts are based on business rules that notify users about retail events such as open to buy opportunities, stock outages, sales performance against plan, margin

opportunities, and many others. The home page includes a Batch Manager Alert option, allowing users to create new workbooks to deal with the batch alerts.

Figure 17–1 Batch Alert Manager on the Home Page



With a combined taskflow, batch alerts can be displayed from multiple solutions. Only a global domain environment is required to show the tree-based master/locals breakdown. The results can be filtered by Solution or Solution and Domain.

A batch alert for a global domain environment has a master line that can be expanded to show lines for each accessible local domain. The master line shows the -sumAlerts count, and each local domain its respective -findAlerts count. For simple domains, or for a global domain in which the user only has access to a single local domain, a single line per batch alert appears with the -findAlerts count.

Batch alerts are set up by identifying a business measure as the foundation and then creating the alert by using a mathematical rule. A facility behind the scene finds the areas of a plan that fall outside the thresholds that is declared within the batch alert rules. This creates an alert that is flagged to the user through the Batch Alert Manager feature.

You can configure batch alerts to automatically run on a defined schedule using the alertmgr utility. Each time that Batch Alert Manager is run, it shows you all the alert conditions that were identified during the last execution. For more information about alertmgr, see the *Oracle Retail Predictive Application Server Administration Guide for the Fusion Client*.

In the RPAS Fusion Client, Batch Alert Manager provides two methods for viewing the measures associated with identified alerts, loading batch alerts in a new workbook and inserting batch alerts in an existing one. For more information, see "Building a Workbook Using Batch Alerts" and Inserting a Batch Alert in an Existing Workbook.

The following scenario describes how the batch alert manager displays records:

1. The batch alert manager table shows the master record at the top and local domain records as the children in a tree structure. However, if a user runs findAlert in the local domain, but forgets to run findAlert or sumAlert on the master domain, the Fusion Client only receives records for local domains and will not be able to build a master and child type structure since there is no master record. In this case, the UI shows local domain records that are not grouped under the master domain (no tree structure).

2. A user may have already run findAlert or sumAlert over the master domain, but there is still a chance that the total of the local domains is not the value shown for the master domain, because a later run may have been for just a single local domain.
3. Hit counts may include hits from positions the user does not have position level security access to; those hits are not visible in any workbook user builds.
4. The hit count on the master record may not add up to the sum of the local domain records if the user does not have access to one or more local domains.

You can also use the Batch Alert Manager window to keep track of alerts that have been resolved. See Resolving Batch Alerts for more information.

Show Members with Batch Alert

When you use the active batch alert, the positions of the dimensions that are contained in the base intersection of the alert measure can be filtered to display only the positions that have alerts.

You can right-click a dimension on which an alert is based and select the **Show members with batch alert** option to display only the positions for which an alert condition is triggered.

Note: The Fusion Client displays this option on all dimensions when the workbook has alert hits. When you select the **Show members with batch alert** option for a dimension that is not part of the alert measure, the view does not change.

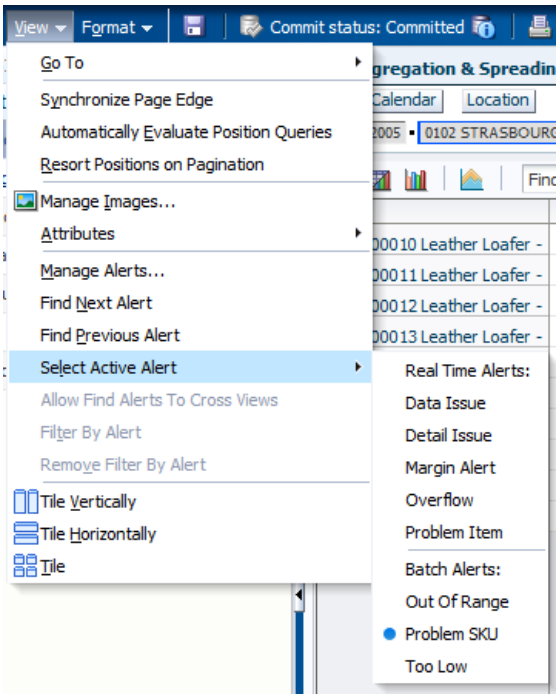
For example, if you have an batch alert that is based at SKU/store/week, you can right-click the Product, Location, or Calendar dimension when they are on the X, Y, or Z axis and select the **Show members with batch alert** option. This displays all positions that have alerts for that dimension. This option is also available on the Page Edge tool.

Show/Open the Alert Manager Window

You can access the Alert Manager from the Home page (Figure 17–1) or from the View menu (Figure 17–2).

Note: If there are no alerts of either type in the workbook, the Alert Manager window and the alert options in the View menu will not appear.

Figure 17–2 Alert Options - View Menu



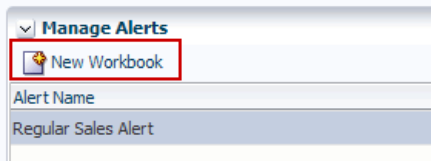
Building a Workbook Using Batch Alerts

If no workbooks are currently open, you may pick a batch alert from the Alert Manager list to load and have the system automatically construct a workbook that contains that alert's measure and any other measures that you want to display. Use this workbook to examine the actual measure values involved in the generation of the batch alert, so that you can make decisions about what needs to be done next.

To build an alert manager workbook using batch alerts, complete the following steps:

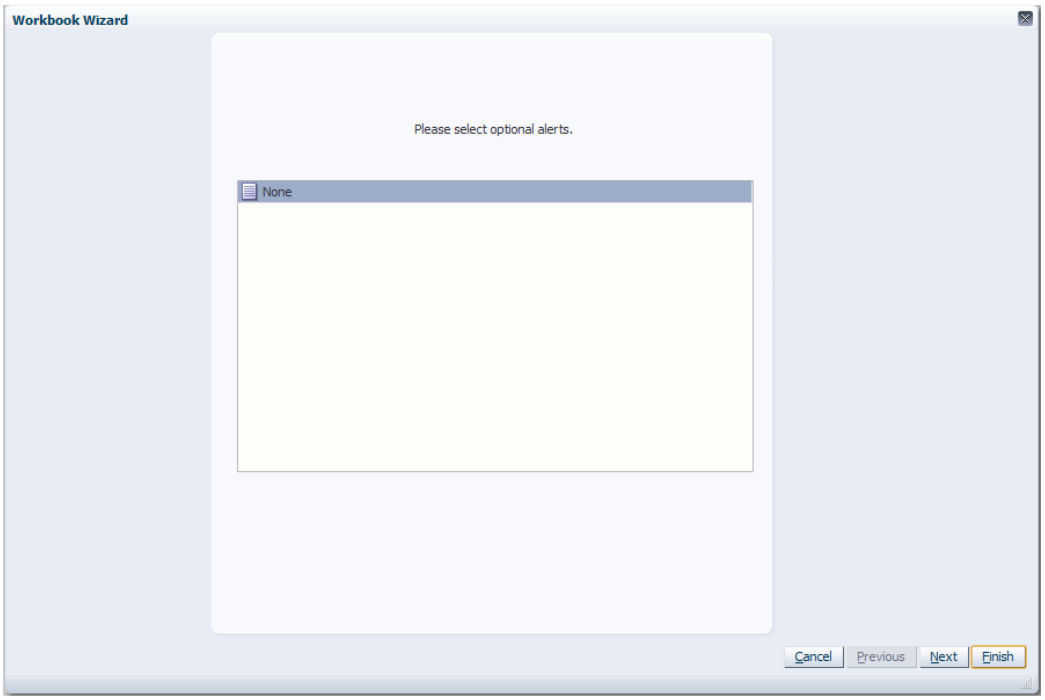
1. In the Alert Manager dialog box, select the alert that you want to see. Selecting a batch alert enables the New Workbook option.
2. Click **New Workbook**.

Figure 17–3 Alert Manager, New Workbook Icon



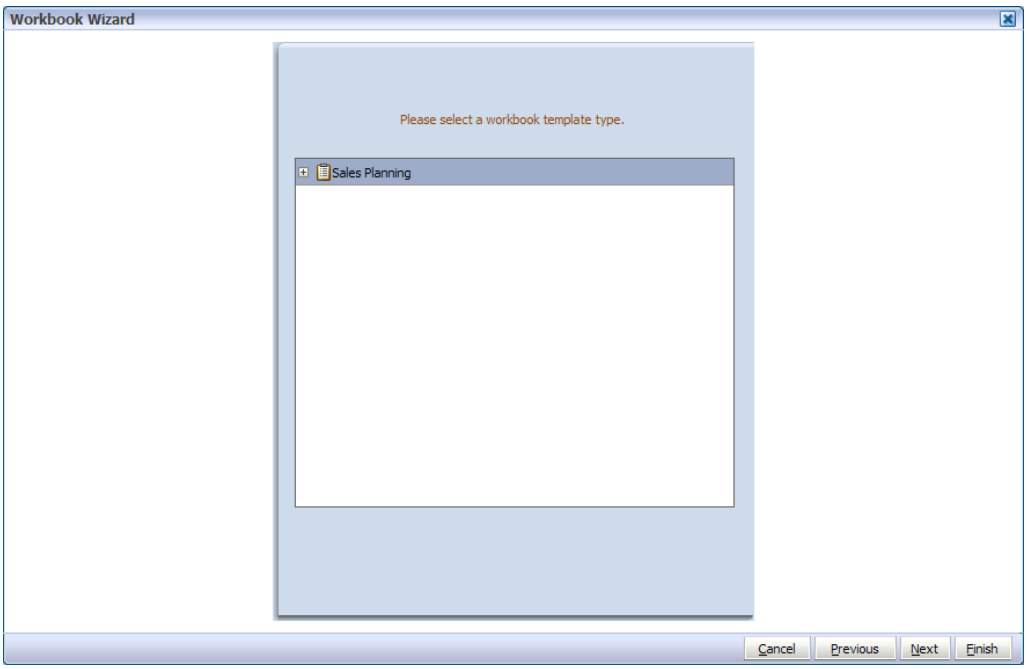
3. The Workbook Wizard dialog box opens. Select any optional alerts you want to include in the workbook and click **Next**.

Figure 17–4 Alert Manager Workbook Wizard: Additional Alerts



4. Select the workbook template type and click **Next**.

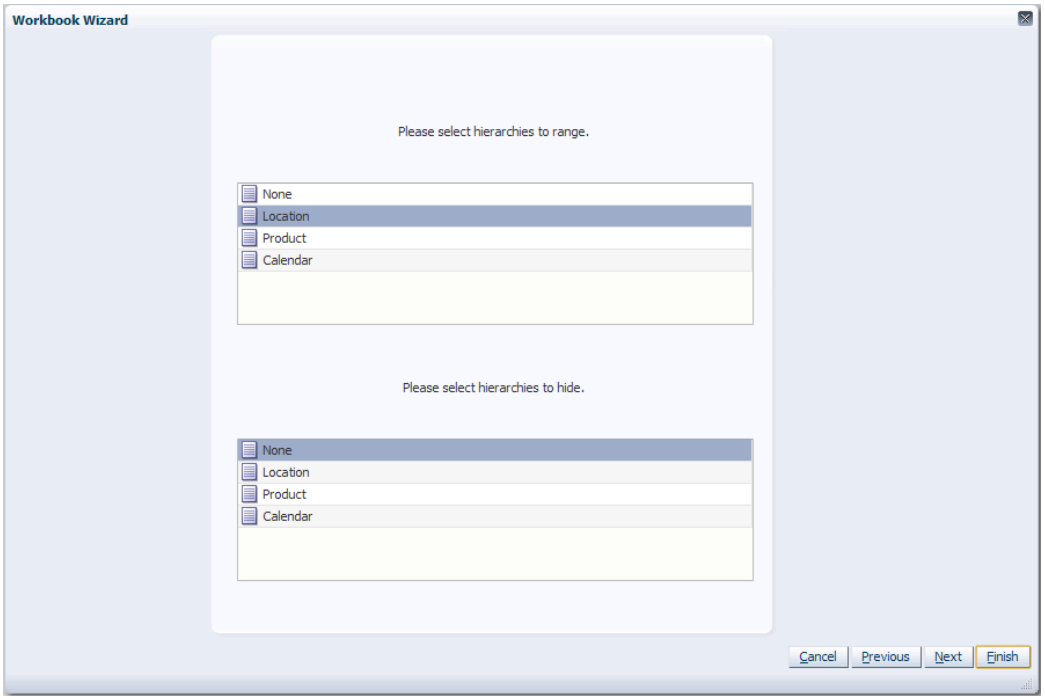
Figure 17–5 Alert Manager Workbook Wizard: Workbook Template



Note: If the workbook template for the workbook the user is building contains real time alerts, the real time alerts will be incorporated into the new workbook. This lets the user to see complementary batch and real time alerts.

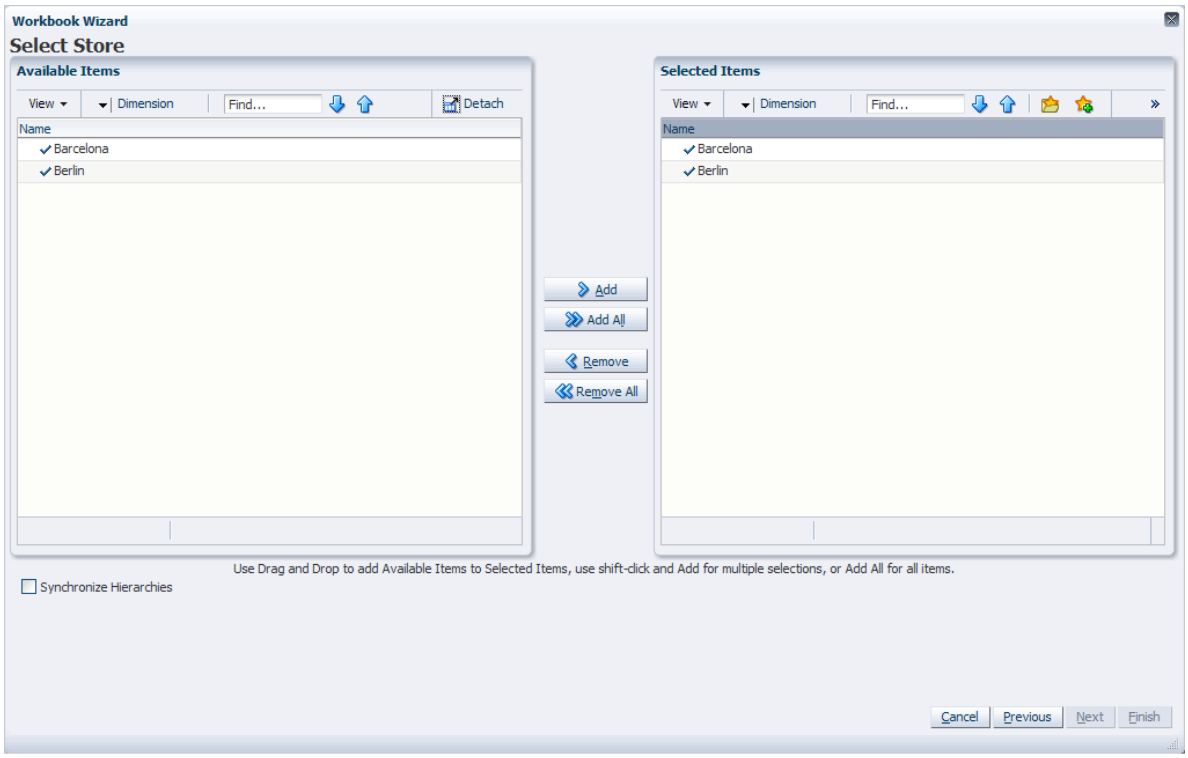
5. The hierarchies shown in this step are related to the workbook you select. In the top section, select the hierarchies you want to range. This means that only the positions in this hierarchy that trigger the alert are available for selection in the workbook wizard. In the bottom section, select the hierarchies that you do not want to see in the workbook. Click **Next**.

Figure 17–6 Alert Manager Workbook Wizard: Range and Hide



6. The workbook wizard steps from this point on depend on the workbook you selected. For each step, select the positions you want to see in each dimension. At the last step, click **Finish**.

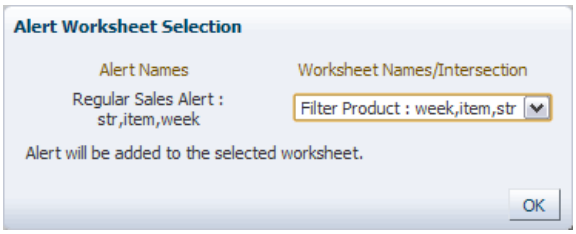
Figure 17–7 Batch Alert Manager Workbook Wizard: Position Selection



7. The Alert Worksheet Selection dialog box opens. Select the view (worksheet) you want the alert to appear in. If you do not select a view, Alert Manager automatically selects one with the appropriate base intersection.

> **Note:** The Alert Manager Selection dialog box does not have a cancel button. Once you click the **Finish** button on the Alert Manager Workbook Wizard, you can no longer change the selected positions and can only select the worksheet from the list provided and click **OK**.

Figure 17–8 Alert Worksheet Selection



If you select a view that has a base intersection below the base intersection of the alert, a message appears that states the base intersections do not match and an additional view is created.

The workbook opens.

Inserting a Batch Alert in an Existing Workbook

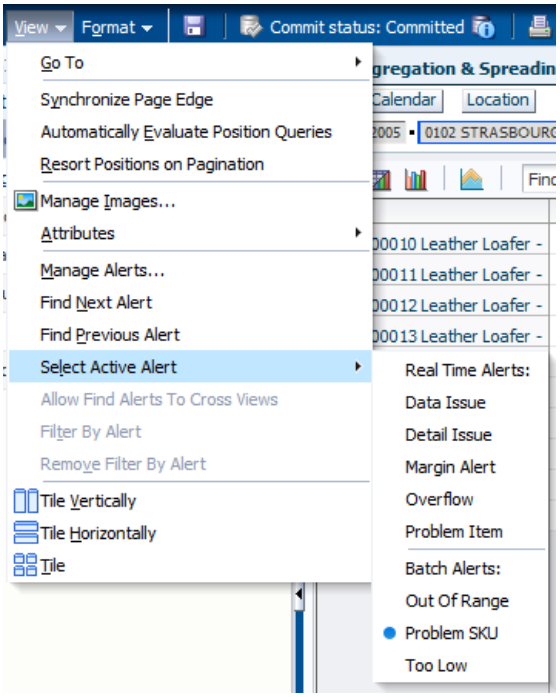
If you have an open workbook already displayed, you can use the Alert Manager to insert a batch alert measure into that workbook. This lets you view multiple alert

measures simultaneously and address alert-related issues without building a new workbook for each.

To insert a batch alert in an existing workbook, complete the following steps:

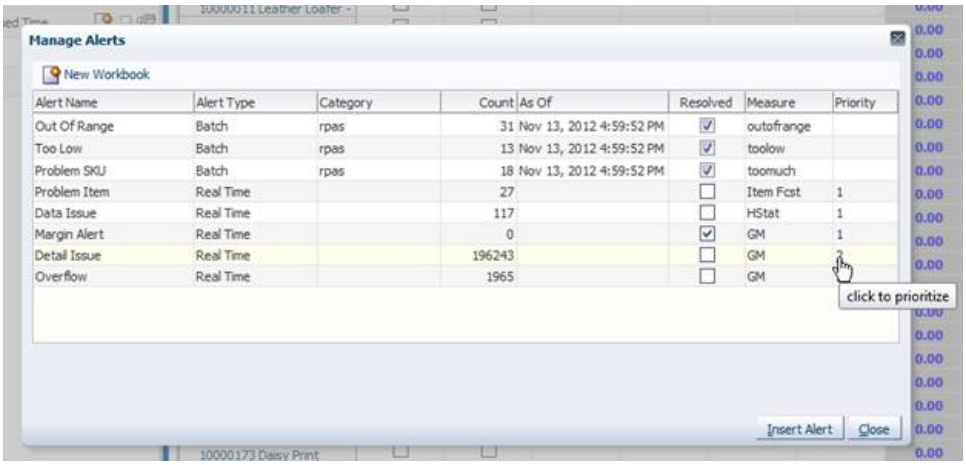
1. In the open workbook, select the **Manage Alerts** option in the View menu.

Figure 17–9 Alert Options - View Menu



2. The Alert Manager dialog box for batch alerts opens. Select the batch alert you want to insert in the open workbook and click **Insert Alert.** (Insert Alert is grayed out until a batch alert is selected.)

Figure 17–10 Alert Manager Dialog Box for Batch Alerts



The workbook refreshes and the alert measure is inserted.

3. Close the dialog box using the **Close** icon or **Cancel**.

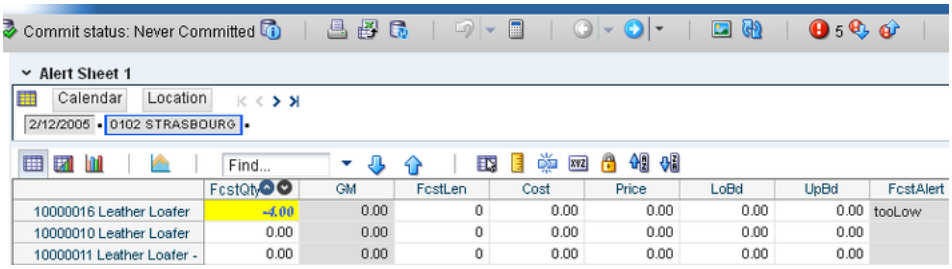
The Alert Manager dialog box closes, and the alert measure is visible in the workbook.

Finding Batch Alerts

In the view, the batch alert appears and behaves like a read-only Boolean measure. Positions that have triggered the alert have selected check boxes.

If you have more than one batch alert (or a combination of batch and real time alerts) in the workbook, use the **Select Alert** icon to choose the alert type that you want to work with. Use the **Find Next** and **Find Previous** alert icons (Figure 17–11) to scroll through all instances of that alert in the workbook. If the next or previous alert is not visible in the view, the view refreshes or scrolls to make it visible.

Figure 17–11 Select Batch Alert and Find Next and Previous Batch Alerts Icons



Note: You can use the alert controls to determine whether to work with batch alerts or real time alerts. If you opt to work with batch alerts, you can use the controls to step forward or back through those alerts. If you opt to work with real time alerts, you can use the controls on those.

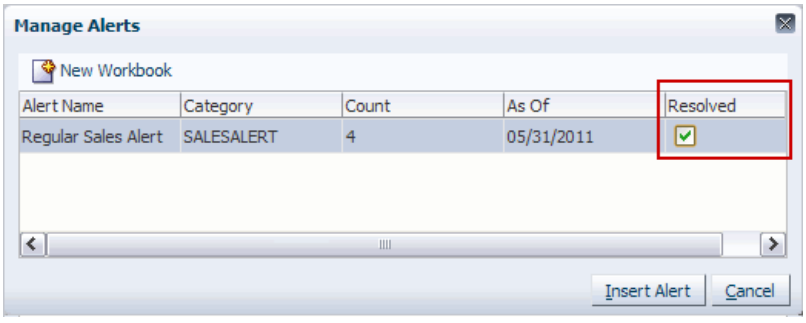
Resolving Batch Alerts

After you have reviewed the alert instances and made any necessary changes to the data, you can mark the batch alert as resolved in the Alert Manager dialog box.

To resolve a batch alert, check the Resolved check box for that alert (Figure 17–12). Checking the resolved check box does not change the data in the workbook or clear the instances of that alert. It serves only as a visual cue that you have addressed the alert.

Real time alerts can be considered resolved when their hit count falls to zero in the workbook.

Figure 17–12 Resolving a Batch Alert



Real Time Alerts

Real time alerts are interactive alerts that are displayed when you open a workbook or view. The alerts are then updated each time you edit data and click **Calculate**.

Configuring Real Time Alerts

Note: For a detailed explanation of how to configure Real Time Alerts, see the *RPAS Configuration Tools User Guide*.

Real Time Alerts are configured in the RPAS Configuration Module, which is normally only accessible by Administrators. This section gives a brief overview of how these alerts are configured. It is intended to give some background information for users with access to the Fusion Client only.

Alert Definition

Real Time Alerts are configured on workbook templates and appear in workbooks built using those templates. An alert definition specifies a number of conditions, each with styles and a message, that the alert can detect and display. Alerts hits are determined by a designated alert measure, which uses a rule to calculate a condition identifier representing each hit at a designated alert intersection. These hits are then displayed on the cells of a designated target measure at that same intersection. The alert definition also contains a priority that is used when multiple alerts are raised on the same target measure cells.

Alert Measure

The alert measure is calculated by a rule that detects the conditions for the alert. For example, an alert measure FcstAlert may be computed by the following rule:

```
FcstAlert = if(FcstQty <300, "tooLow", if(FcstQty >600, "tooHigh",""))
```

In this example, tooLow and tooHigh are condition identifiers, which the alert definition would associate with a style and a message. The alert measure does not have to be visible in any views.

Target Measure

The alert definition specifies a target measure on which the hits appear. This may be a measure used in the alert measure's rule, for example FcstQty above, but does not have to be. When an alert measure computes a condition for a cell, the corresponding target measure cell represents the alert hit and is formatted (and navigated to) accordingly.

The target measure cells must be visible at the alert intersection for hits to be shown. The target measure can be the same as the alert measure, if desired. The same measure may be used as the target for a number of different alerts. In the case of colliding hits, the alert's priority is used to determine which alert formats the cell, but the cell will be navigated to for any of the alerts present.

Condition Definitions

For each condition that can be produced by the alert measure's rule, a style, label, and message is defined. You can modify the styles via Format/Alert Styles. The styles are used to format target measure cells with the condition, and the message is displayed as part of the tooltip information that appears when you mouse over hit cells.

Working with Real Time Alerts

When you open a worksheet, the real time alert hits are calculated and displayed. They are refreshed every time you click **Calculate** or invoke operations such as **Save** and **Custom Menu Executions** or as part of the **Commit** process.

Alerts on the Toolbar

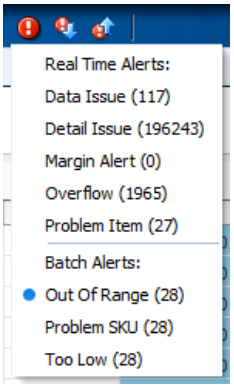
The toolbar contains an alerts icon. The number beside the icon shows the number of hits for the currently active real time alert for the entire workbook.

Figure 17–13 Toolbar - Current Alerts

Click on the up or down arrows to move to the next or previous real time alert hit relative to the currently selected cell in the pivot table.

Click on the exclamation mark to bring up a detailed list for both forms of alert.

Figure 17–14 Toolbar - Outstanding Alerts



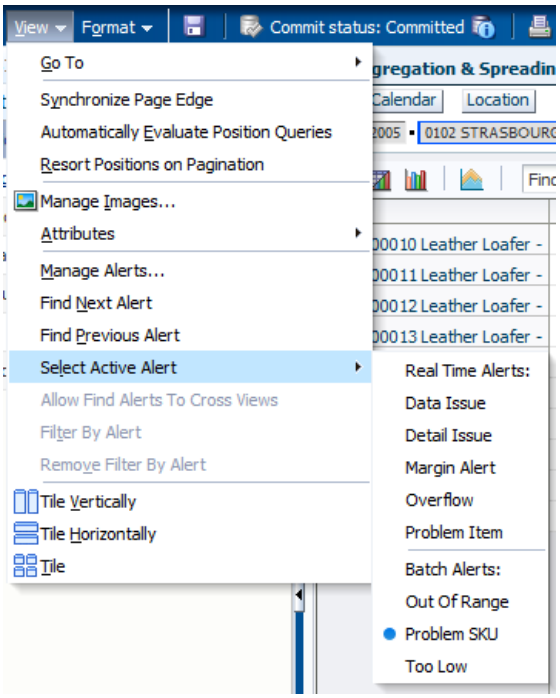
If only one form of alert has active alerts, only that form of alert is displayed. For example, if there are no current batch alerts, this list only displays real time alert hits.

Select a specific type of alert to select that type of alert hit in the worksheet. You can then step through those alerts using the **Find Next Alert** or **Find Previous Alert** options on the toolbar.

Navigating to Alerts Using the View Menu

The **View** menu has **Find Next**, **Find Previous**, and **Select Active Alert** controls:

Figure 17–15 View Menu - Select Alert Options



Find Next and Find Previous Alert

These options work in the same way as the options on the toolbar. Select them to move to the next or to the previous alert. These controls are disabled when navigation is not possible, given the count or layout of the view(s).

Select Active Alert

This option works in the same way as the option on the toolbar. Select a specific type of alert to select that type of alert in the work sheet. You can then step through those alerts using the **Find Next Alert** or **Find Previous Alert** options.

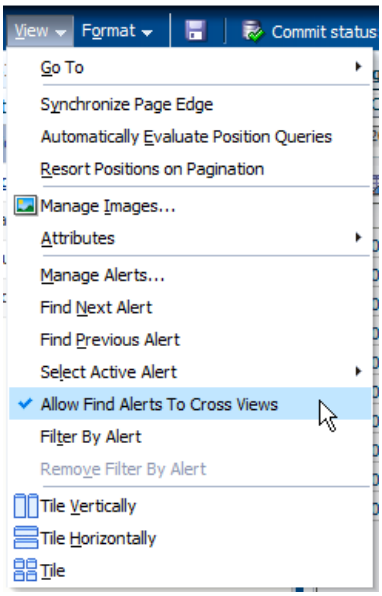
Other Alert Options on the View Menu

Several other options are available on the View menu.

Allow Users to Find Alerts to Cross Views

This option is only active when a real time alert is selected. You can toggled it on or off by clicking it. If it is active, it will display a check mark.

Figure 17–16 View Menu - Cross View Alerts Option

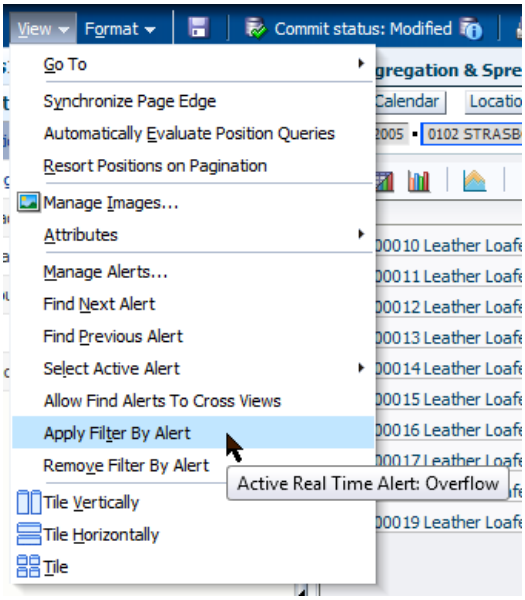


This options affects the behavior of the navigation controls. If you select it, real time alert navigation will move to the next or previous worksheet view in the current task when all real time alert hits have been exhausted in the current view. Otherwise, navigation is restricted to the current worksheet view.

Filter by Alert

This option is only available for real time alerts. If **Filter by Alert** is selected, the current view will be filtered to only display the active real time alerts of the current type. Select it from the View menu.

Figure 17–17 View Menu - Apply by Alert



When applied, the rows, columns and pages in the worksheet view are restricted to those with the currently selected real time alert. These rows are not dynamically

updated. The same rows, columns and pages remain visible after a calculation changes the data.

Figure 17–18 Worksheet View Before Applying Filters

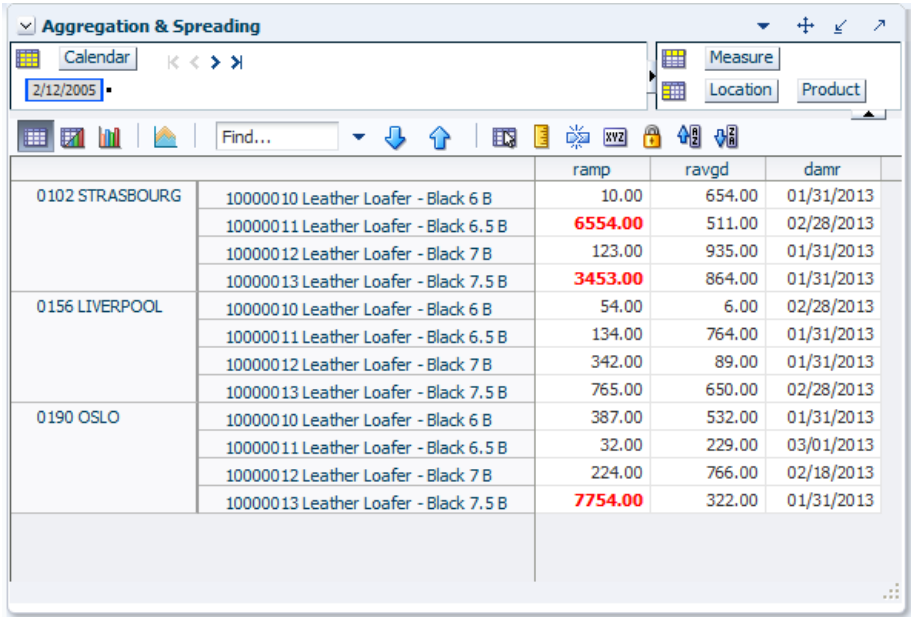
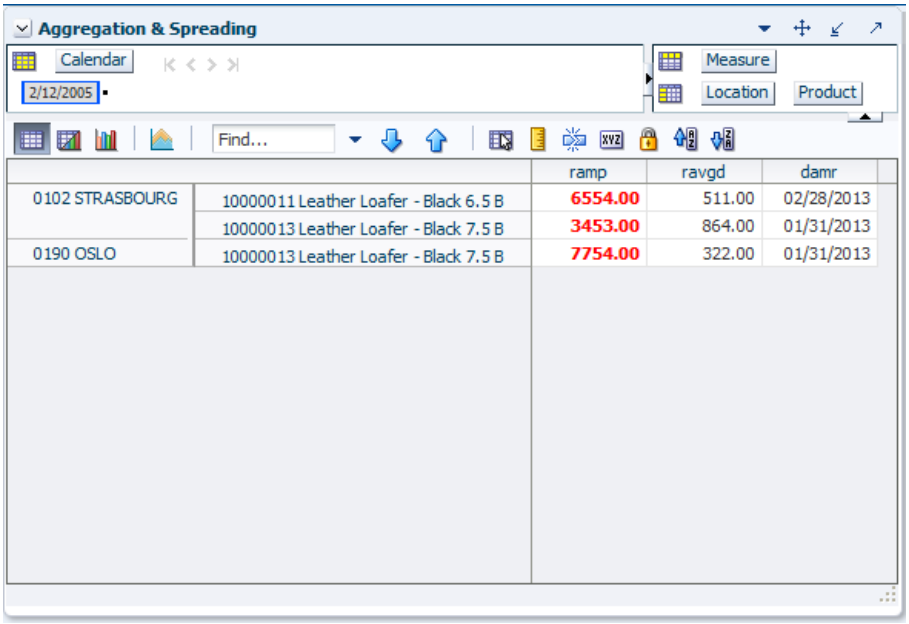


Figure 17–19 Worksheet View After Applying Filters



Remove the filter by selecting the **Remove Filter by Alert** option on the View menu.

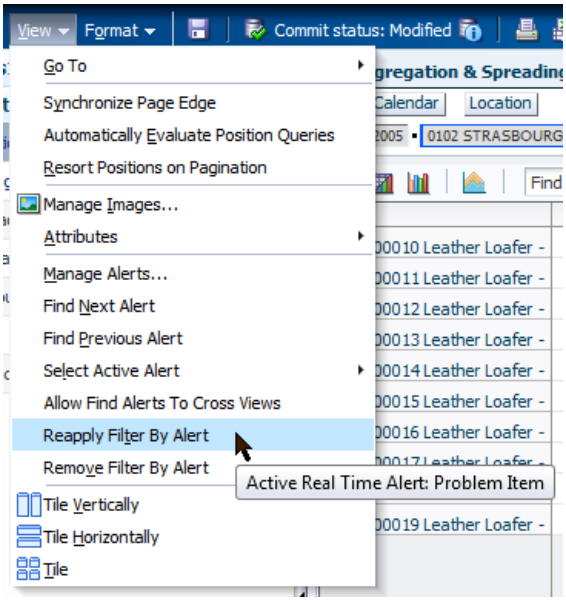
Reapplying an Alert Filter

After editing the data to address problems associated with a number of alerts, you can use the Calculate option. Once the results are recalculated, some real time alerts will being cleared. In addition, other real time alerts may be generated.

Since the number, type, and position of the alerts may be changed by the calculation, you can remove the filter to see all rows in the worksheet. All rows become visible, including alerts of different types.

Reapply Filter By Alert is available in the View menu. If you select it, the same alert that was used previously will be reapplied. Alternatively, you can select a different type of alert from the global toolbar. In this case, you will see the **Apply Filter By Alert** option.

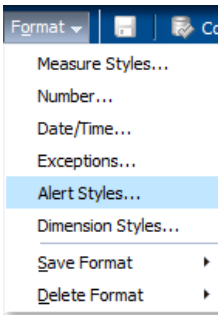
Figure 17–20 View Menu - Reapply Filter by Alert Option



Customizing Alert Appearance

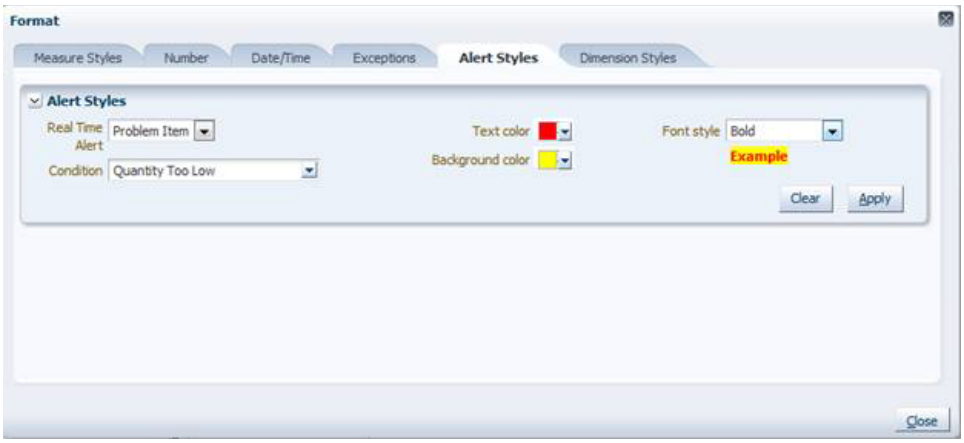
Each real time alert is preconfigured with a specific appearance. These styles are set up in the Configuration Module. You can modify them using the **Alert Styles** option in the **Format** menu.The settings are saved with the current workbook.Use **Save Format** so that the modified styles can be used in other workbooks or by other users.

Figure 17–21 Format Menu - Alert Styles Option



This brings up the **Format** dialog box opened to the **Alert Styles** tab.

Figure 17–22 Format Dialog Box - Alert Styles Tab



You can customize the appearance of the alerts.

- **Real Time Alert** automatically sets the options visible in the Condition drop-down list.
- **Condition** customizes the appearance of the Condition drop-down list. All conditions can be set to the same appearance, or individual conditions may be set to different appearances.
- The **visual appearance** can be specified from a combination of **text color**, **background color,** and **font style**. The result is shown as an example.

Three buttons are available:

- **Apply** saves the current settings.
- **Clear** removes the settings so the real time alert reverts to an unformatted style.
- **Close** closes the dialog box.

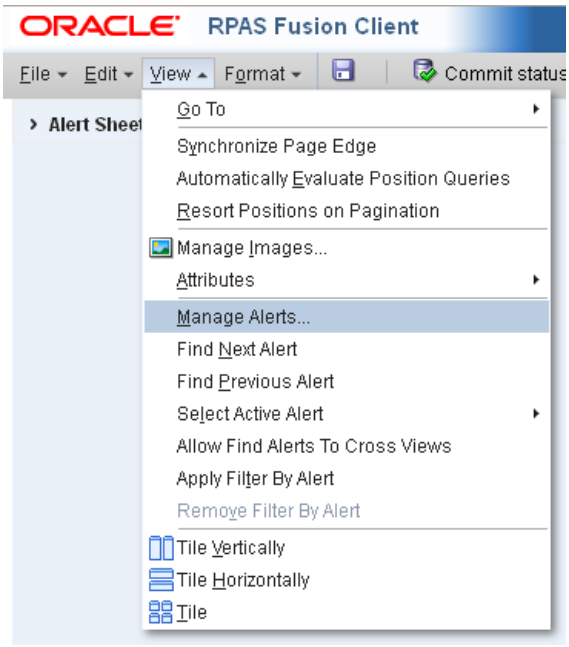
Saving the Alert Styles

You can save the modified real time alert appearances in three forms: **For Just Me**, **For My Group,** or **For Everyone**. Specify the save option using the **Save Format** option on the **Format** menu. These take effect the next time you create a new workbook from the workbook template that the modified real time alert appearances have been saved back to.

Setting the Alert Priorities

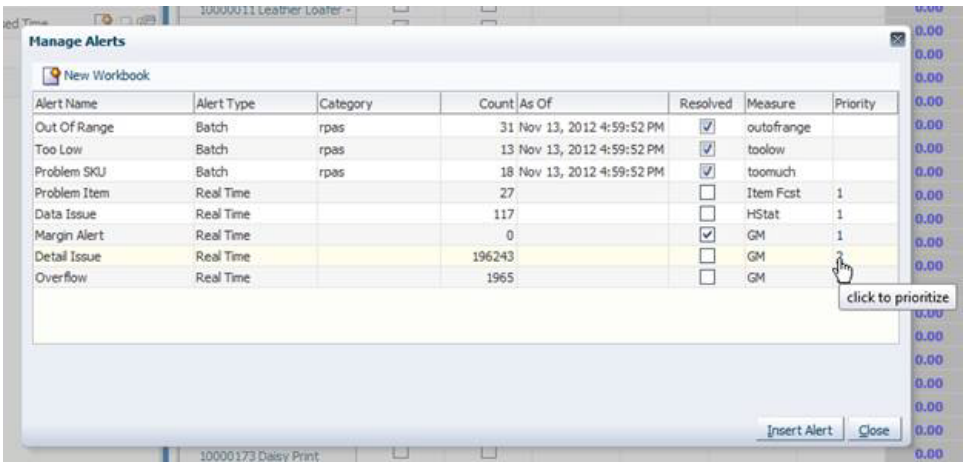
A specific measure (such as Gross Margins or Forecast Quantities) may be the subject of more than one real time alert. The order of precedence can be set for cases where multiple alerts occur. Do this by selecting the **Manage Alerts** option from the **View** menu.

Figure 17–23 View Menu - Manage Alerts Option



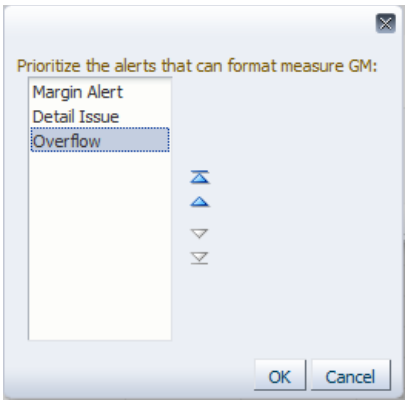
This brings up the **Manage Alerts** dialog box.

Figure 17–24 Manage Alerts Dialog Box



Click on any figure in the Priorities column to bring up the **Prioritize** dialog box.

Figure 17–25 Prioritize Dialog Box



This shows all real time alerts for a specific measure. Change the priority by highlighting an alert and using the up or down arrows. Click **OK** to close the dialog box and return to the Manage Alerts dialog box. Click the **Close** button to close this dialog box.

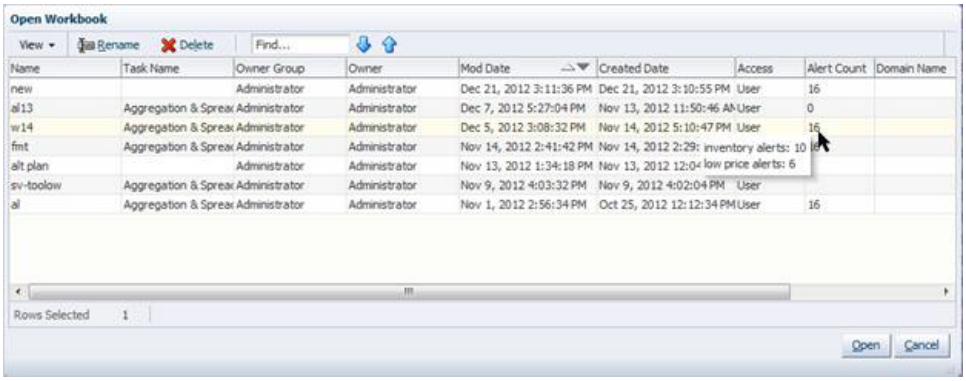
Working with Real Time Alerts

This section explains how to work with real time alerts.

Saved Real Time Alert Counts

The Open Workbook dialog box lists the number of real time alerts for each available workbook. Mouse over the number to bring up a tool tip that contains further details.

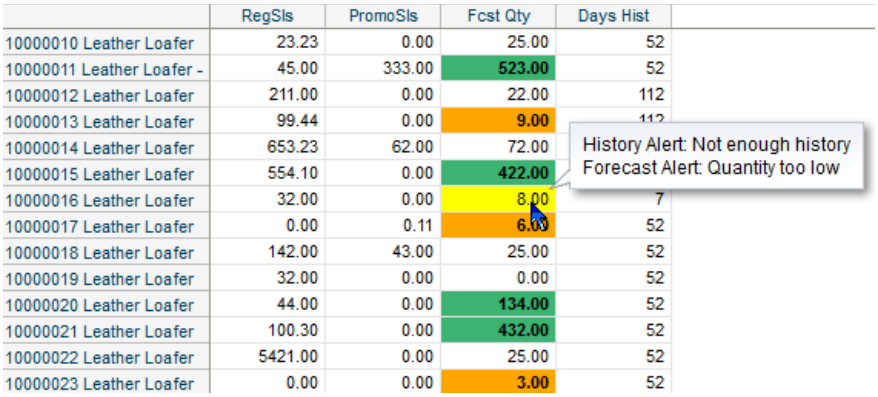
Figure 17–26 Open Workbook Dialog Box



Real Time Alerts in the Workbook

Real time alerts in the workbook are shown by highlighted cells. The highlighting consists of a combination of text color, background color, and font style. Mouse over a specific cell to bring up a tooltip specifying the nature of the alert.

Figure 17–27 Example of Color-Coded Cells and Tooltip



The appearance of the cells are set to default values in the configuration module, but you can customize the appearance using Customizing Alert Appearance. If a cell has multiple real time alerts, the order in which they appear is set in the configuration Module. Only the first alert is visible. You can customize the order using Setting the Alert Priorities.

Where a view has large numbers of rows, you can filter the view so that only rows, columns, and pages with alerts show, using Other Alert Options on the View Menu.

You can then systematically work to clear the real time alerts in the view by:

- Navigating to a specific real time alert and identifying its nature from its appearance or from the tool tip.
- Editing the value of any cell referenced by the rule to calculate the alert.
- Clicking Calculate to update the view.
- When you click calculate, if an appropriate value has been entered into the cell, the alert should clear.

You can then periodically commit the changes to save them back to the multidimensional database.

Extended Measures

You can use an extended measure to define, view, and edit a measure as a proportion or percentage of another measure for a parent that is up one or more levels. These measure relationships are also referred to as participation measures. These measures can be defined in the RPAS Fusion Client in a view or preconfigured in the RPAS Configuration Tools. For more information about preconfigured measures, see the *Oracle Retail Predictive Application Server Configuration Tools User Guide*.

This functionality is commonly used to define measures that are percentage participations of sales measures. Typically, these measures are defined as:

- **Absolute Percent of Parent**: A percentage of a fixed level (such as class) so that the participation of each item to the class can be viewed and manipulated.
- **Relative Percent of Parent**: A percentage to the next level shown in any dimension (such as Product).
- **Ranking**: A value that indicates the relative order of positions in either ascending or descending order.

- **Cumulative Sum**: A sequence of partial sums of a given sequence, based on an ascending or descending rank.
- **Cumulative Percent**: A sequence of partial sums of a given sequence, based on an ascending or descending rank expressed as a percentage to the total.

Note: Extended measures can be defined only on measures that have Total as their default aggregate method.

When the percentage of the extended measure is changed, values of the underlying measure change to reflect the newly set percentage.

Multiple extended measures can be defined for the same underlying measure; however, only one extended measure or the underlying measure can be edited before calculation. All other versions are protected.

Smart editing is not allowed in the extended measure.

Extended measures cannot be based on split dimensions.

The value of an extended measure is a fraction between zero and one. If desired, you must format the measure to be displayed as a percentage.

For extended measures contributions in instances with very small values (such as 0.000001) in the cell, those values are considered to be 0.0 when the extended measurescontribution is determined.

For Ranking, Cumulative Sum, and Cumulative Percent, the extended measures are read only.

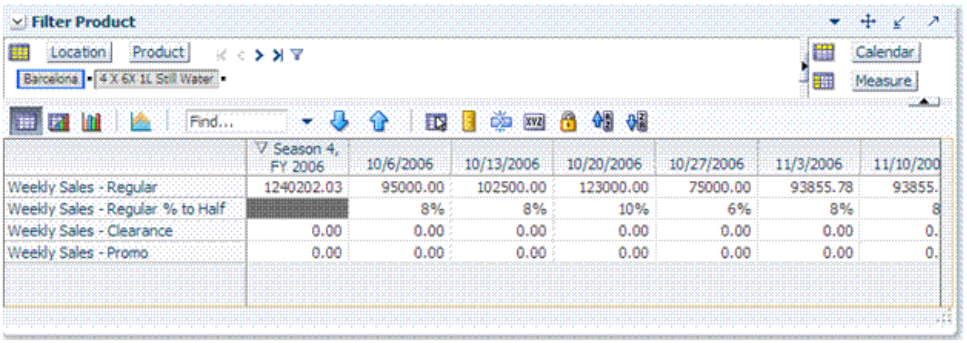
The following sections describe the extended measures features.

Absolute Percent of Parent

The absolute percent of parent type of absolute percent of parent measures allows you to explicitly define the parent levels that are used to calculate the percentage at all child levels.

As shown in Figure 17–28, an absolute percent of parent measure has been created for the Weekly Sales - Regular measure with a defined parent at the Fiscal Half level of the Calendar dimension. Therefore, this measure shows what percentage of the Season 4 half that each week is.

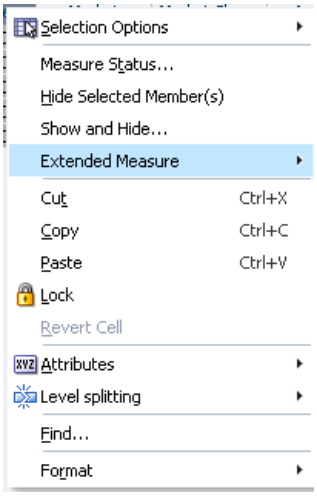
Figure 17–28 Absolute Extended Measure



To create an absolute extended measure, complete the following steps:

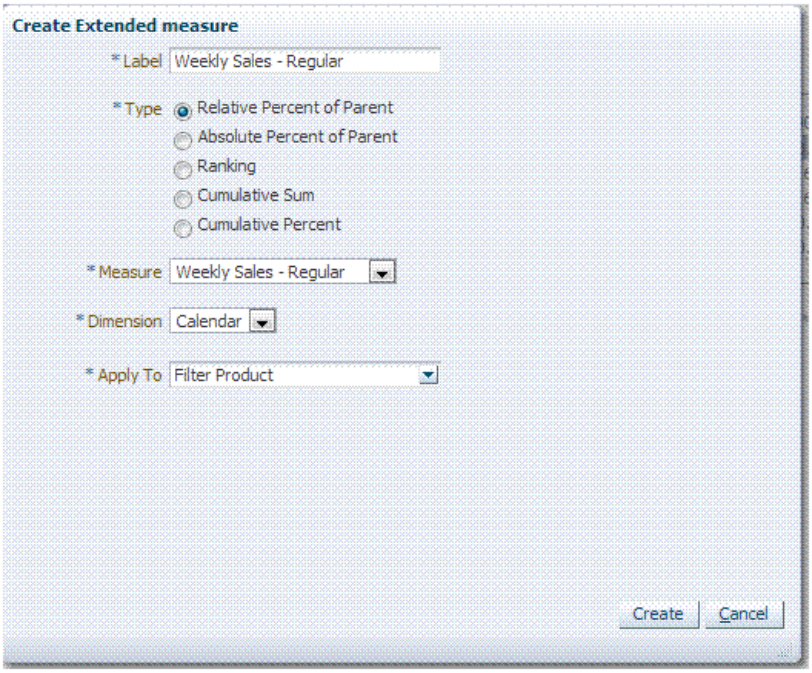
1. Right-click the measure for which you want to create an extended measure.
2. The right-click context menu opens. Select the **Extended measure...** as shown in Figure 17–29.

Figure 17–29 Create Extended Measure Option



3. Click **Create**.
4. The Create Extended Measure dialog box opens (Figure 17–30). If you right-clicked a valid measure (one that has Total as its aggregation) in Step 1, then that measure appears in the **Measure** list. If not, then you must select a valid measure from the list.

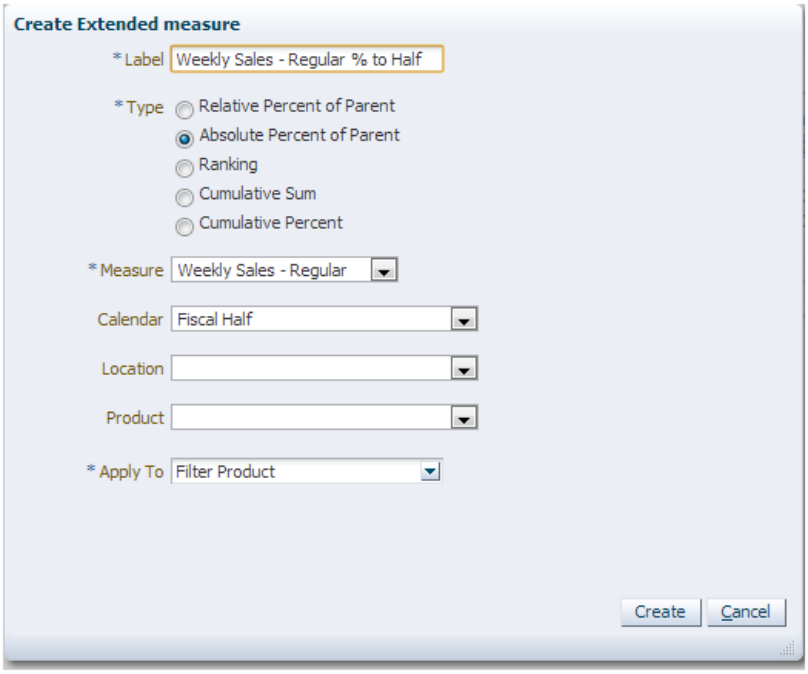
Figure 17–30 Create Extended Measure Dialog Box



5. In the Create Percent-of-Extended Measure dialog box, change the Type to **Absolute Percent of Parent**. The dialog box refreshes and displays drop-down lists for all the dimensions (Figure 17–31). These lists contain the levels that are available for that dimension. These levels are defined by the intersection of the measure.

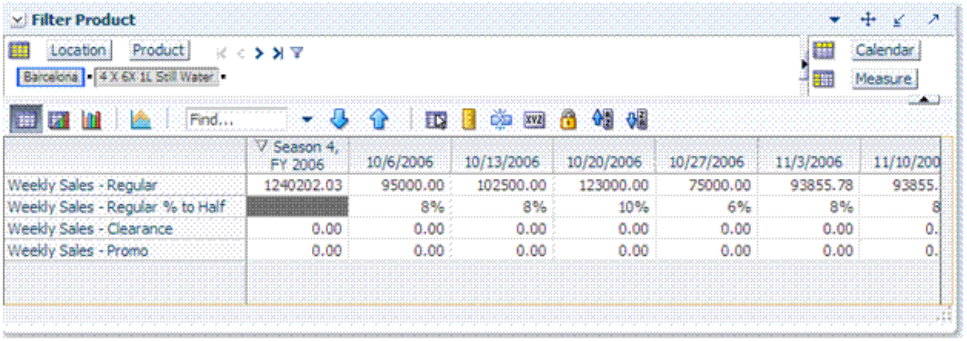
   Select the level at which you want to compare the child levels.

Figure 17–31 Create Extended Measure - Absolute



6. When finished defining the parent levels, click **Create**. The view refreshes and the new extended measure appears (Figure 17–32).

Figure 17–32 Absolute Extended Measure



As shown in Figure 17–32, a new extended measure has been created for the Weekly Sales - Regular measure with a defined parent at the Fiscal Half level of the Calendar dimension.

The measure shows what percentage of the Season 4 half that each week is. For example, the Weekly Sales - Regular for week 10/6/2006 are 8 percent of the entire Season 4 half of the 2006 fiscal year.

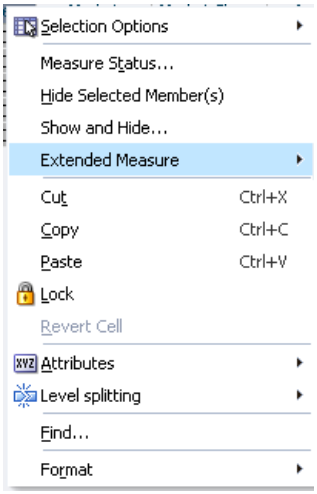
Relative

The relative percent of parent type of extended measure calculates the value for a given level, which is the percentage that level is of the immediate parent level displayed in the view. This type can only be set for a single dimension.

To create a relative percent of parent measure, complete the following steps:

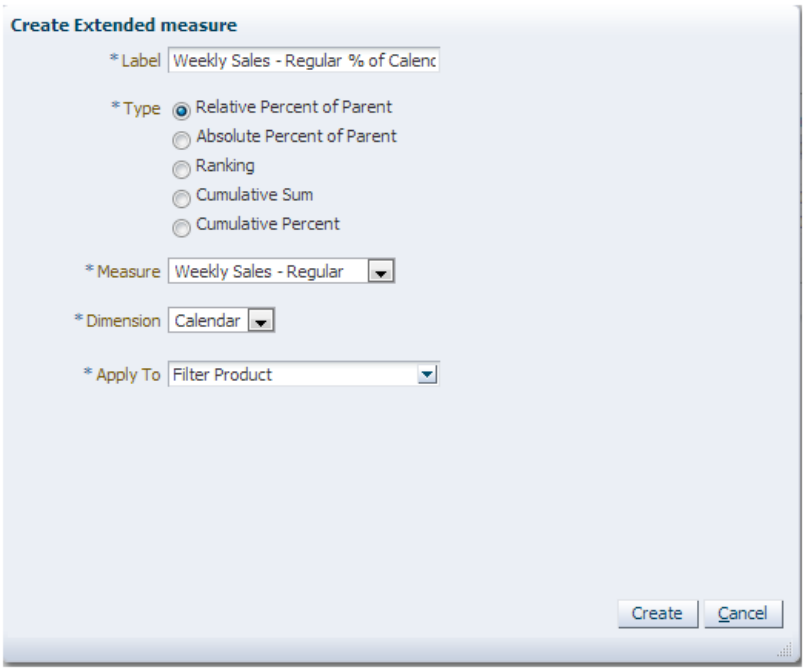
1. Right-click the measure for which you want to create an extended measure.
2. The right-click context menu opens. Select the **Extended measure...** as shown in Figure 17–33.

Figure 17–33 Create Extended Measure Option



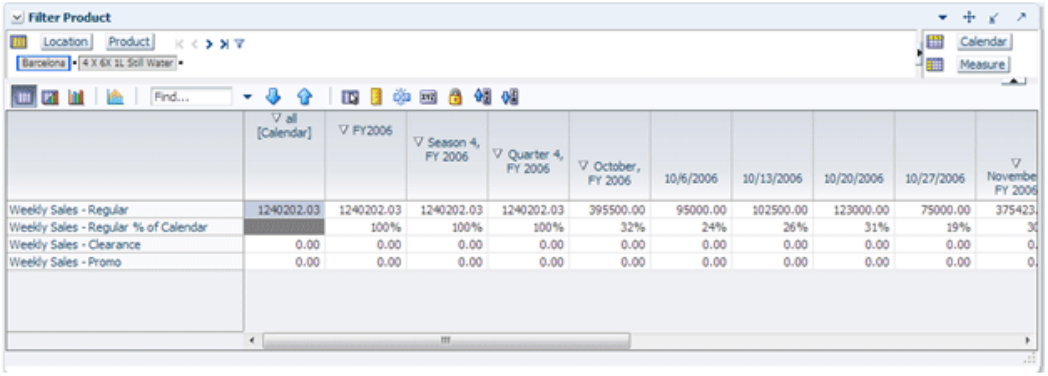
3. Click **Create**.
4. The Create Extended Measure dialog box opens (Figure 17–34). If you right-clicked a valid measure (one that has Total as its aggregation) in Step 1, then that measure appears in the **Measure** list. If not, then you must select a valid measure from the list.

Figure 17–34 Create Extended Measure Dialog Box



5. In the Create Extended Measure dialog box, select the dimension for which you want to set the parent level.
6. Click **Create**. The view refreshes and the new extended measure appears.

Figure 17–35 Relative Extended Measure



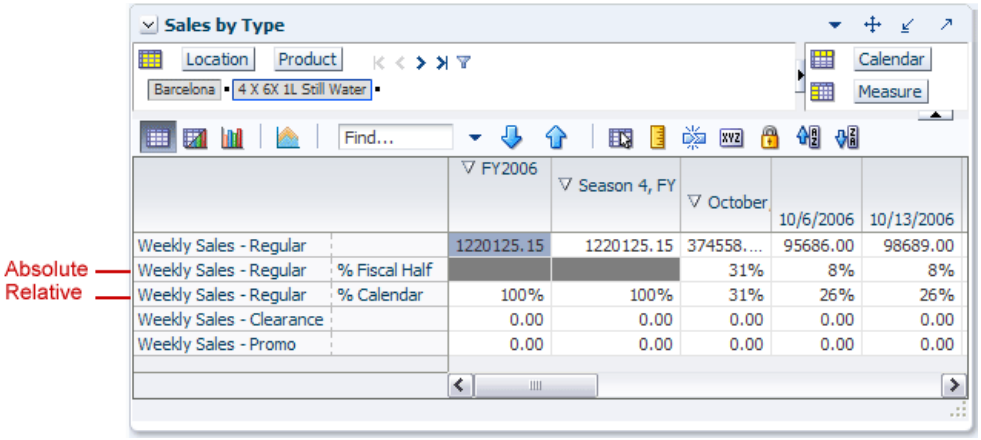
As shown in Figure 17–35, a new extended measure has been created for the Weekly Sales - Regular measure with a defined dimension of Calendar. Because a dimension is defined and not a specific level of a dimension, the extended measure data shown is relative. This means that the percentage shown is compared to the next level shown in the view.

For example, the Weekly Sales - Regular % of Calendar measure for week 10/6/2006 makes up 24 percent of the next level shown, which is October, FY 2006. Accordingly, October makes up 32 percent of all [Quarter 4, FY 2006]. No percentage is shown for all [Calendar] because it is the highest level in the workbook.

Comparing Absolute and Relative Percent of Parent Measures

The difference between an absolute percent of parent measure and a relative one is that the parent level for absolute is specified by the user. The parent level for relative is not specified. It is the next parent level shown in the view.

Figure 17–36 Comparing Absolute and Relative Percent of Parent Measures



As shown in Figure 17–36, there is an Absolute and Relative Percent of Parent measure created on the source measure of Weekly Sales - Regular. The absolute measure (Weekly Sales - Regular % to Half) compares the children levels to the static level of Fiscal Half.

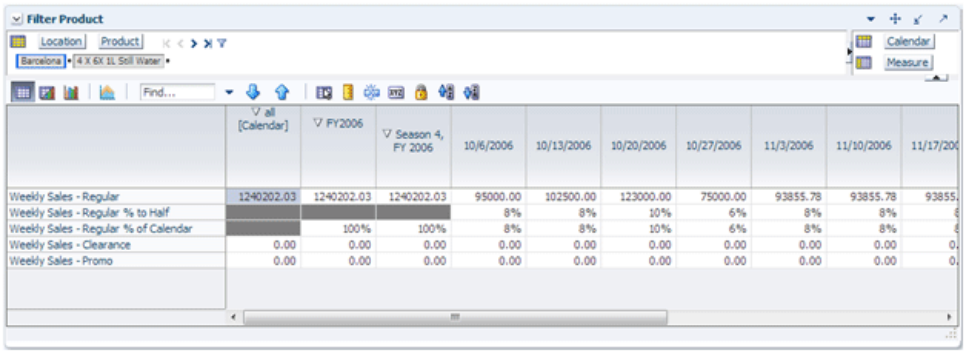
The relative extended measure (Weekly Sales - Regular % of Calendar) displays the percent of the children position to the next higher position displayed in the view.

Since the absolute extended measure specifies Fiscal Half as the parent level, the other level shown in the view, Month, is compared to Half. For instance, week 10/6/2006 is 8 percent of the Season 4. October is 32 percent of the Season 4. Because Fiscal Half is the specified parent, it does not show what percentage of FY2006 it is.

However, the relative extended measure only specifies the Calendar dimension as the parent. This means that any parent level shown in the view can act as the parent. Therefore, week 10/6/2006 is 24 percent of its immediate parent level, which is month October. October is 32 percent of its immediately displayed parent level, which is Season 4. Finally, Season 4 is 100 percent of its immediately displayed parent level, FY2006. The relationship of month to quarter (the configured parent of the month level) is not displayed since quarter is not displayed in the view.

If the month level of the Calendar dimension were hidden in this view, then the relative extended measure would look more like the absolute one since the immediately displayed parent level for week would be Fiscal Half, which is the specified absolute parent. This is illustrated in Figure 17–37.

Figure 17–37 Comparing Absolute and Relative Extended Measures at Half



Creating a Ranking Measure

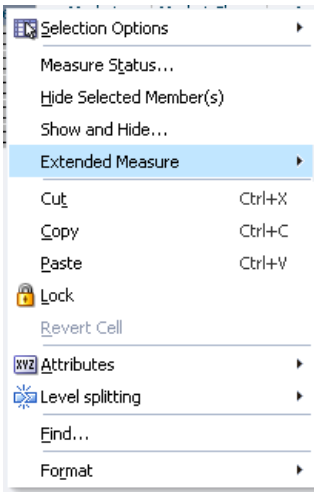
A ranking extended measure is used to create a measure that indicates the relative order of positions in either ascending (Low to High) or descending order (High to Low). You can also display rankings at only the base level or at all visible levels.

> **Note:** These ranking measures are read-only measures and cannot be edited.

To create a ranking measure, complete the following steps:

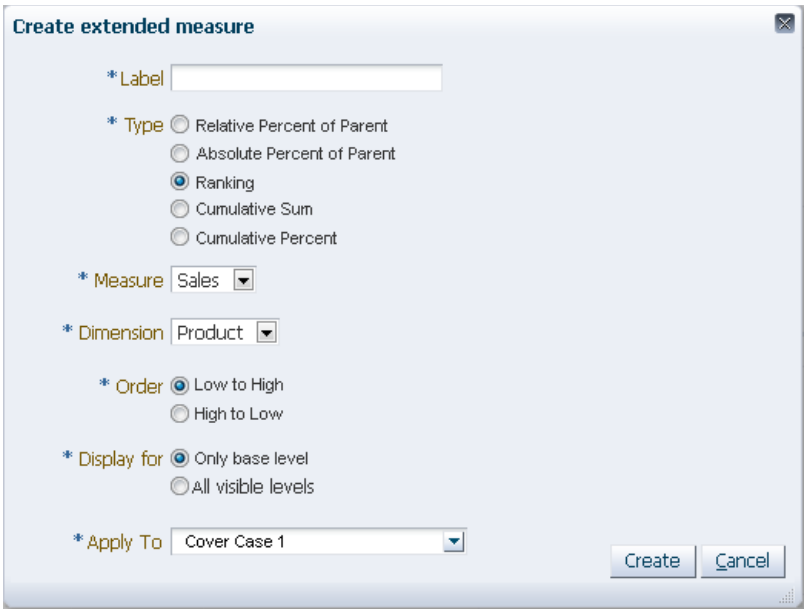
1. Right-click the measure for which you want to create an extended measure.
2. The right-click context menu opens. Select the **Extended measure...** as shown in Figure 17–38.

Figure 17–38 Create Extended Measure Option



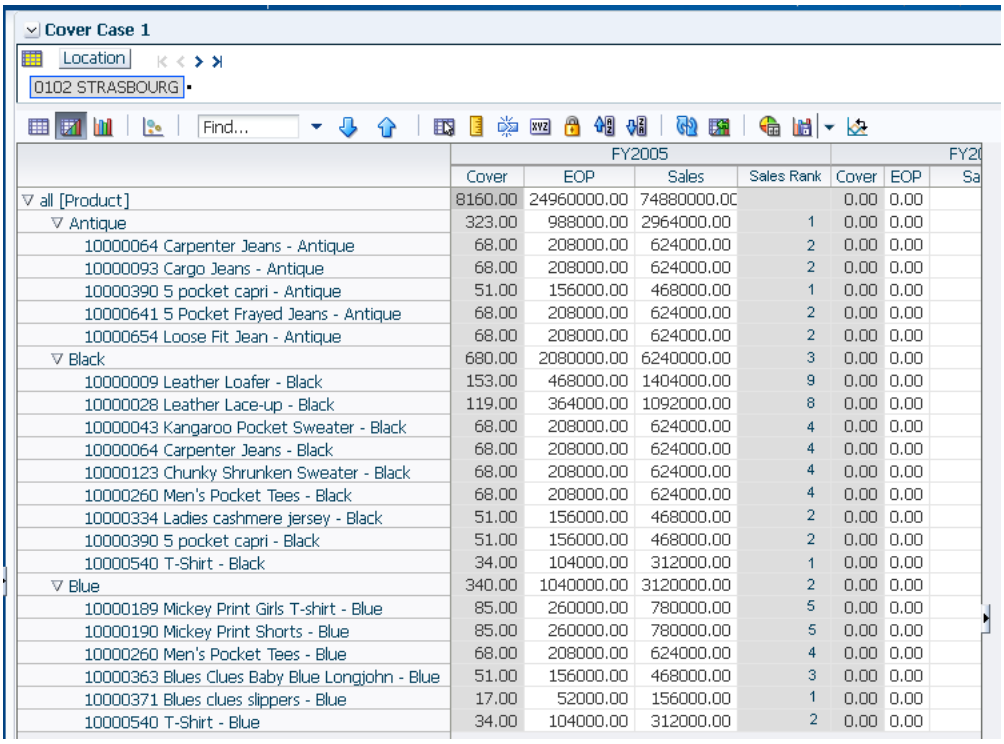
3. Click **Create**.
4. The Create Extended Measure dialog box opens (Figure 17–39). If you right-clicked a valid measure (one that has Total as its aggregation) in Step 1, then that measure appears in the **Measure** list. If not, then you must select a valid measure from the list.

Figure 17–39 Create Extended Measure Dialog Box



5. In the Create Extended Measure dialog box, select Ranking as the type of extended measure.
6. Enter a label for the new ranking extended measure. The Measure selection changes to the list only numerical (real or integer) source measures. It defaults to the measure selected in the right-click operation.
7. Select the dimension in which to rank the source measure.
8. Select the rank from Low to High or High to Low.
9. Select the position ranking display, either Only base level or All visible levels.
   - When Only base level is selected, the ranks are displayed for positions at base level only. The rank values for positions at higher levels would be empty. This is the default.
   - When All visible levels is selected, the rank is displayed for positions at all visible levels except the All level.
10. Select views to display the extended measure. Only worksheet views that have the selected measure are listed. By default, the current worksheet view is selected.
11. Click **Create**. The view refreshes and the new extended measure appears next to the source measure when the source measure is visible. If it is not visible, the ranking measure is hidden as well.

Figure 17–40 Ranking Extended Measure



	FY2005						FY2
	Cover	EOP	Sales	Sales Rank	Cover	EOP	Sa
all [Product]	8160.00	24960000.00	74880000.00		0.00	0.00	
Antique	323.00	988000.00	2964000.00	1	0.00	0.00	
10000064 Carpenter Jeans - Antique	68.00	208000.00	624000.00	2	0.00	0.00	
10000093 Cargo Jeans - Antique	68.00	208000.00	624000.00	2	0.00	0.00	
10000390 5 pocket capri - Antique	51.00	156000.00	468000.00	1	0.00	0.00	
10000641 5 Pocket Frayed Jeans - Antique	68.00	208000.00	624000.00	2	0.00	0.00	
10000654 Loose Fit Jean - Antique	68.00	208000.00	624000.00	2	0.00	0.00	
Black	680.00	2080000.00	6240000.00	3	0.00	0.00	
10000009 Leather Loafer - Black	153.00	468000.00	1404000.00	9	0.00	0.00	
10000028 Leather Lace-up - Black	119.00	364000.00	1092000.00	8	0.00	0.00	
10000043 Kangaroo Pocket Sweater - Black	68.00	208000.00	624000.00	4	0.00	0.00	
10000064 Carpenter Jeans - Black	68.00	208000.00	624000.00	4	0.00	0.00	
10000123 Chunky Shrunken Sweater - Black	68.00	208000.00	624000.00	4	0.00	0.00	
10000260 Men's Pocket Tees - Black	68.00	208000.00	624000.00	4	0.00	0.00	
10000334 Ladies cashmere jersey - Black	51.00	156000.00	468000.00	2	0.00	0.00	
10000390 5 pocket capri - Black	51.00	156000.00	468000.00	2	0.00	0.00	
10000540 T-Shirt - Black	34.00	104000.00	312000.00	1	0.00	0.00	
Blue	340.00	1040000.00	3120000.00	2	0.00	0.00	
10000189 Mickey Print Girls T-shirt - Blue	85.00	260000.00	780000.00	5	0.00	0.00	
10000190 Mickey Print Shorts - Blue	85.00	260000.00	780000.00	5	0.00	0.00	
10000260 Men's Pocket Tees - Blue	68.00	208000.00	624000.00	4	0.00	0.00	
10000363 Blues Clues Baby Blue Longjohn - Blue	51.00	156000.00	468000.00	3	0.00	0.00	
10000371 Blues clues slippers - Blue	17.00	52000.00	156000.00	1	0.00	0.00	
10000540 T-Shirt - Blue	34.00	104000.00	312000.00	2	0.00	0.00	

Creating a Cumulative Sum

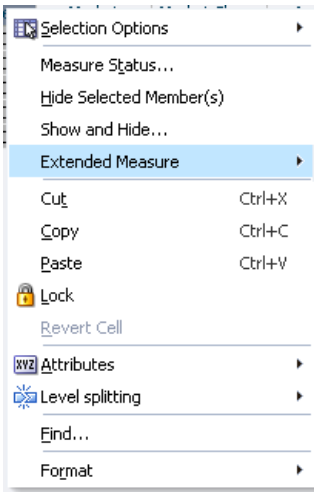
A cumulative sum extended measure is used to create a measure that indicates the source measure in ascending or descending order.

> **Note:** These cumulative sum measures are read-only measures and cannot be edited.

To create a cumulative sum measure, complete the following steps:

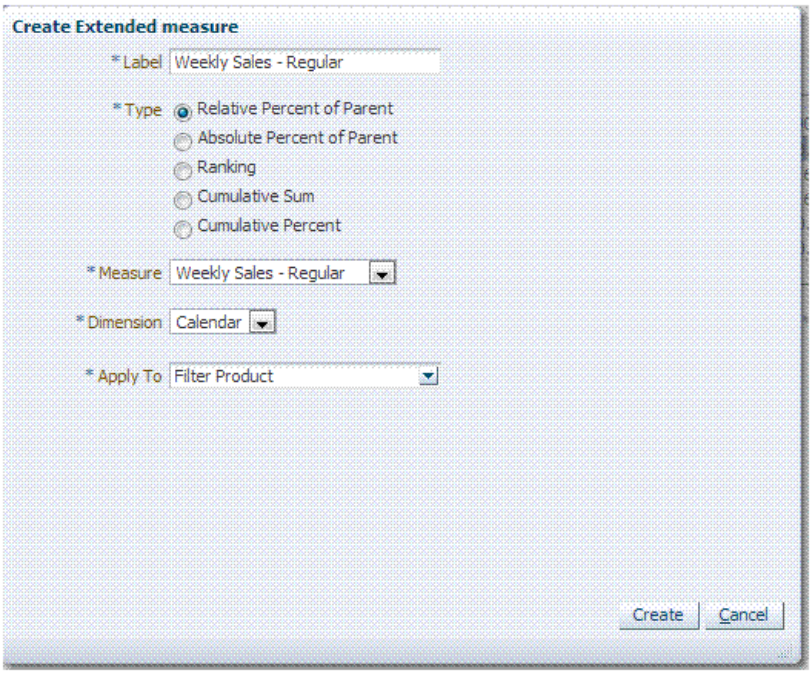
1. Right-click the measure for which you want to create an extended measure.
2. The right-click context menu opens. Select the **Extended measure...** as shown in Figure 17–41.

Figure 17–41 Create Extended Measure Option



3. Click **Create**.
4. The Create Extended Measure dialog box opens (Figure 17–42). If you right-clicked a valid measure (one that has Total as its aggregation) in Step 1, then that measure appears in the **Measure** list. If not, then you must select a valid measure from the list.

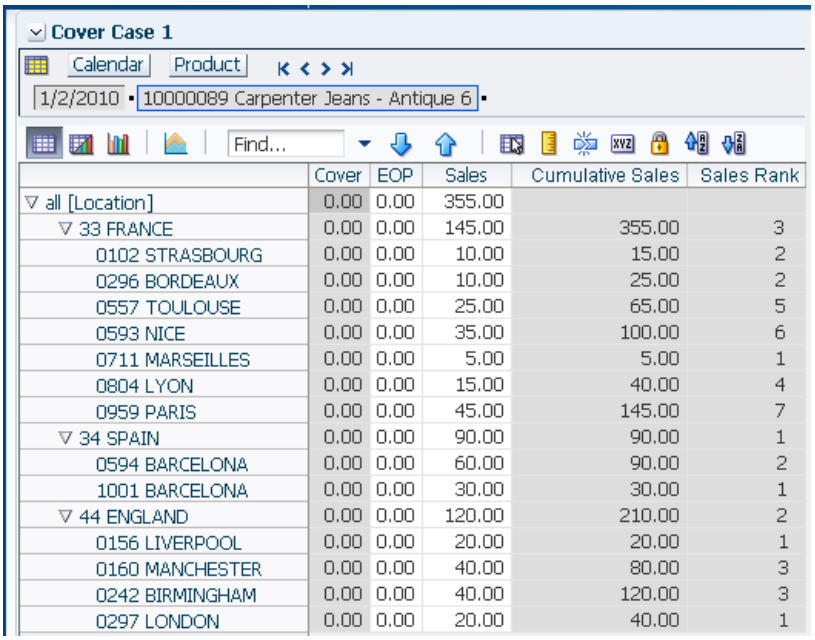
Figure 17–42 Create Extended Measure Dialog Box



5. In the Create Extended Measure dialog box, select Cumulative Sum as the type of extended measure.
6. Enter a label for the new cumulative sum extended measure. The Measure selection changes to the list only numerical (real or integer) source measures. It defaults to the measure selected in the right-click operation.

7. Click **Create**. The view refreshes and the new extended measure appears next to the source measure when the source measure is visible.

Figure 17–43 Cumulative Sum Extended Measure



	Cover	EOP	Sales	Cumulative Sales	Sales Rank
▽ all [Location]	0.00	0.00	355.00		
▽ 33 FRANCE	0.00	0.00	145.00	355.00	3
0102 STRASBOURG	0.00	0.00	10.00	15.00	2
0296 BORDEAUX	0.00	0.00	10.00	25.00	2
0557 TOULOUSE	0.00	0.00	25.00	65.00	5
0593 NICE	0.00	0.00	35.00	100.00	6
0711 MARSEILLES	0.00	0.00	5.00	5.00	1
0804 LYON	0.00	0.00	15.00	40.00	4
0959 PARIS	0.00	0.00	45.00	145.00	7
▽ 34 SPAIN	0.00	0.00	90.00	90.00	1
0594 BARCELONA	0.00	0.00	60.00	90.00	2
1001 BARCELONA	0.00	0.00	30.00	30.00	1
▽ 44 ENGLAND	0.00	0.00	120.00	210.00	2
0156 LIVERPOOL	0.00	0.00	20.00	20.00	1
0160 MANCHESTER	0.00	0.00	40.00	80.00	3
0242 BIRMINGHAM	0.00	0.00	40.00	120.00	3
0297 LONDON	0.00	0.00	20.00	40.00	1

Creating a Cumulative Percent

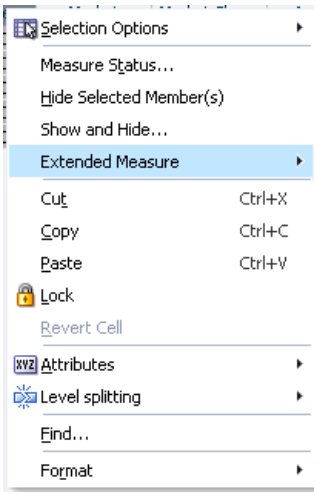
A cumulative percent extended measure is used to create a sequence of partial sums of a given sequence based on an ascending or descending rank expressed as a percentage to the total.

> **Note:** These cumulative percent measures are read-only measures and cannot be edited.

To create a cumulative percent measure, complete the following steps:

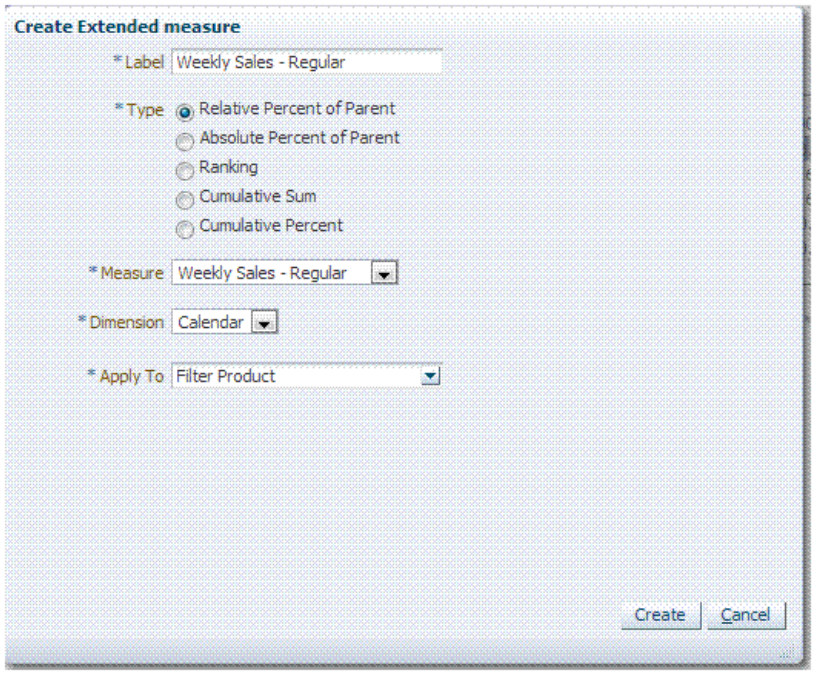
1. Right-click the measure for which you want to create an extended measure.
2. The right-click context menu opens. Select the **Extended measure...** as shown in Figure 17–44.

Figure 17–44 Create Extended Measure Option



3. Click **Create**.
4. The Create Extended Measure dialog box opens (Figure 17–34). If you right-clicked a valid measure (one that has Total as its aggregation) in Step 1, then that measure appears in the **Measure** list. If not, then you must select a valid measure from the list.

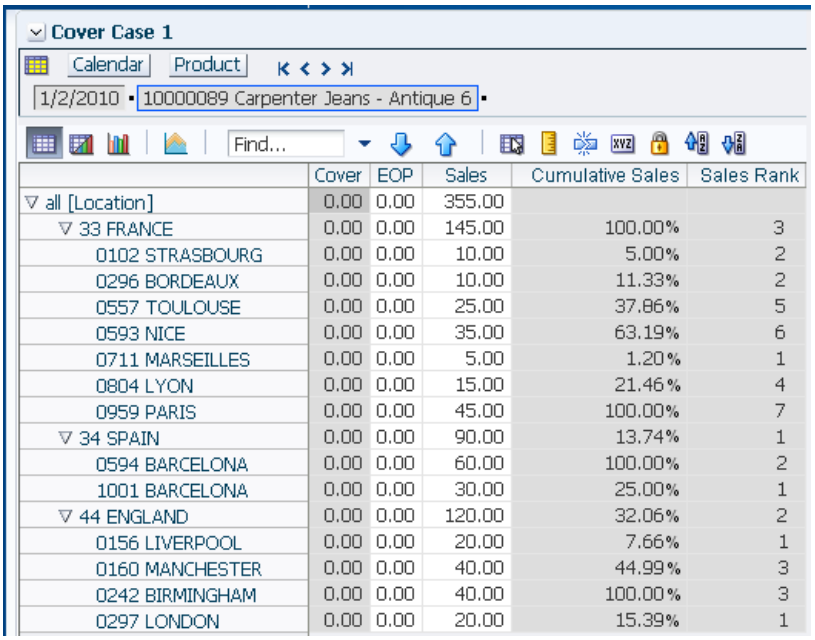
Figure 17–45 Create Extended Measure Dialog Box



5. In the Create Extended Measure dialog box, select Cumulative Percent as the type of extended measure.
6. Enter a label for the new cumulative percent extended measure. The Measure selection changes to the list only numerical (real or integer) source measures. It defaults to the measure selected in the right-click operation.

7. Click **Create**. The view refreshes and the new extended measure appears next to the source measure when the source measure is visible.

Figure 17–46 Cumulative Percent Extended Measure



	Cover	EOP	Sales	Cumulative Sales	Sales Rank
▽ all [Location]	0.00	0.00	355.00		
▽ 33 FRANCE	0.00	0.00	145.00	100.00%	3
0102 STRASBOURG	0.00	0.00	10.00	5.00%	2
0296 BORDEAUX	0.00	0.00	10.00	11.33%	2
0557 TOULOUSE	0.00	0.00	25.00	37.86%	5
0593 NICE	0.00	0.00	35.00	63.19%	6
0711 MARSEILLES	0.00	0.00	5.00	1.20%	1
0804 LYON	0.00	0.00	15.00	21.46%	4
0959 PARIS	0.00	0.00	45.00	100.00%	7
▽ 34 SPAIN	0.00	0.00	90.00	13.74%	1
0594 BARCELONA	0.00	0.00	60.00	100.00%	2
1001 BARCELONA	0.00	0.00	30.00	25.00%	1
▽ 44 ENGLAND	0.00	0.00	120.00	32.06%	2
0156 LIVERPOOL	0.00	0.00	20.00	7.66%	1
0160 MANCHESTER	0.00	0.00	40.00	44.99%	3
0242 BIRMINGHAM	0.00	0.00	40.00	100.00%	3
0297 LONDON	0.00	0.00	20.00	15.39%	1

Select All

You can select all cells in the current slice by using the Select All option. This is useful if you need to select all instances within a large view.

The Select All option is located in the toolbar as well as in the right-click context menu.

Figure 17–47 Select All Option in Toolbar

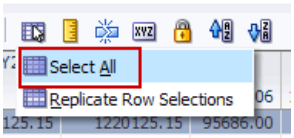
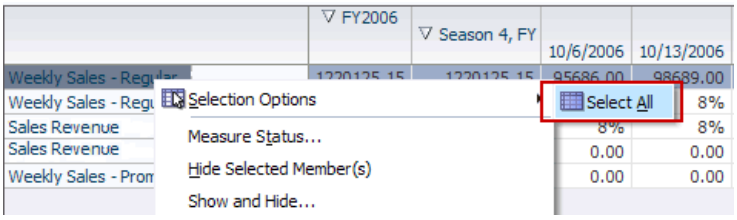


Figure 17–48 Select All Option in Right-Click Context Menu



To select all cells in the current slice, use one of the following methods:

Select All: Method 1

1. Click the **Selection Options** icon in the toolbar.

2. From the drop-down list, click **Select All**.

All the cells in the current slice are selected.

Select All: Method 2

1. Right-click a cell in the view.
2. The right-click context menu opens. Click **Selection Options**.
3. From the drop-down list, click **Select All**.

All the cells in the current slice are selected.

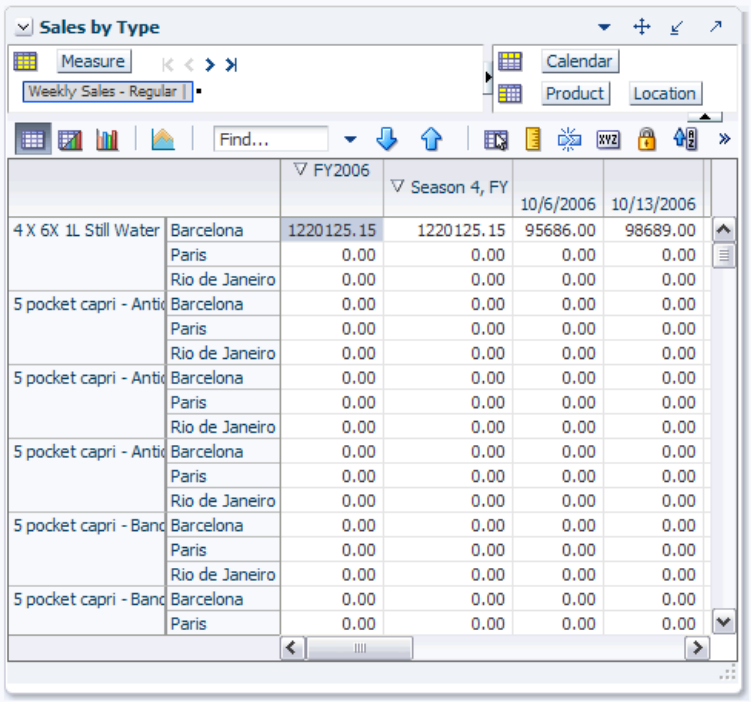
Replicate Selections

In the RPAS Fusion Client, you can select all instances of a particular level at once with the Replicate Selections feature. This is useful if you need to select all instances within a large view.

To select instances using the Replicate Selections feature, complete the following steps:

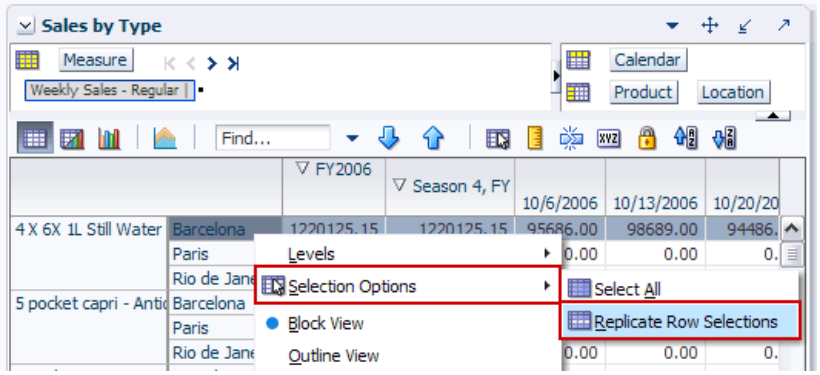
1. Select an instance of the particular level for which you want to select all instances. You can select a single cell or an entire row or column.

Figure 17–49 Replicating Selections



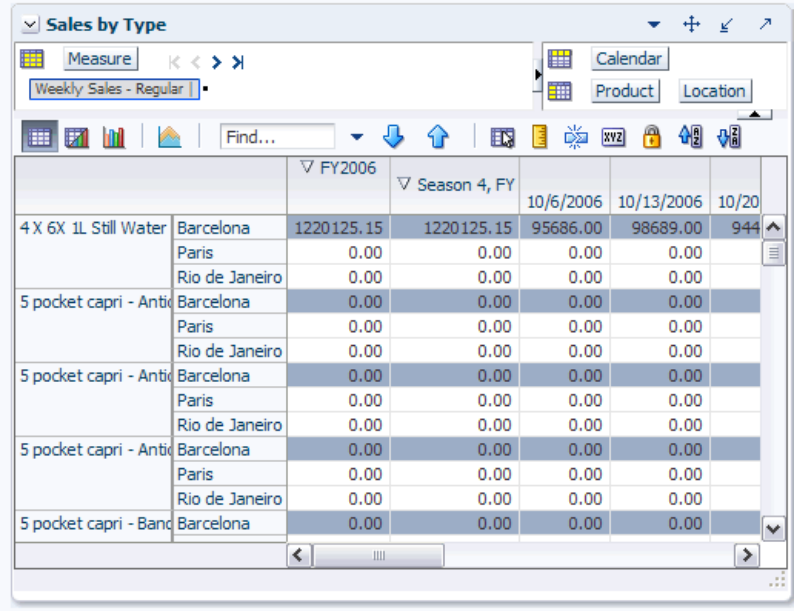
2. Click the **Selection Options** icon in the toolbar. Or, right-click the measure and from the right-click context menu select **Selection Options**. Then, click **Replicate [Row/Column] Selections**.

Figure 17–50 Replicate Selections Option



3. The view refreshes and all instances of the chosen level are selected.

Figure 17–51 Replicated Selections in the View

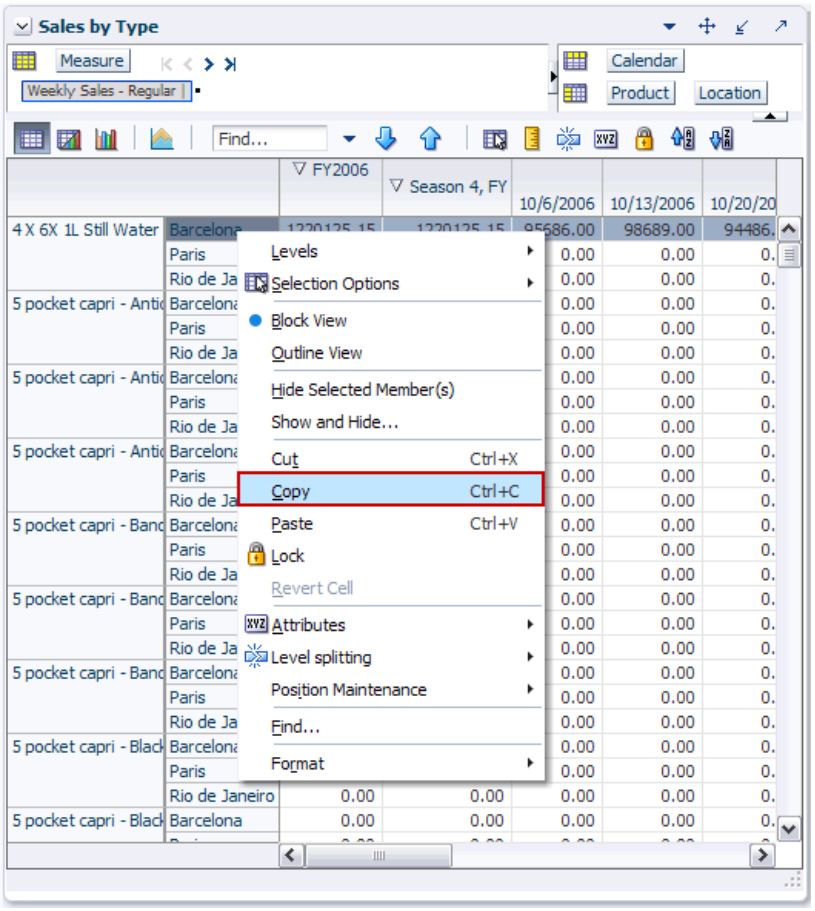


Using Replicate Selections to Copy and Paste

Complete the following steps to copy an instance of a particular level and paste it to all other instances of that level:

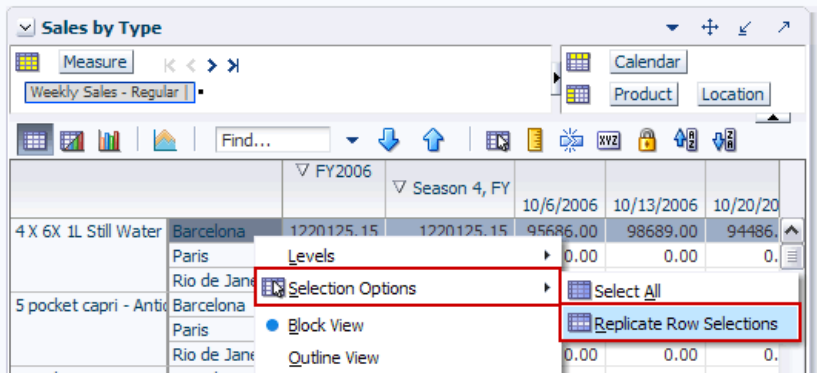
1. Right-click an instance of the particular level for which you want to copy and paste to all other instances.You can select a single cell or an entire row or column.
2. The right-click context menu opens. Select the **Copy** option.

Figure 17–52 Using Replicate Selections to Copy and Paste



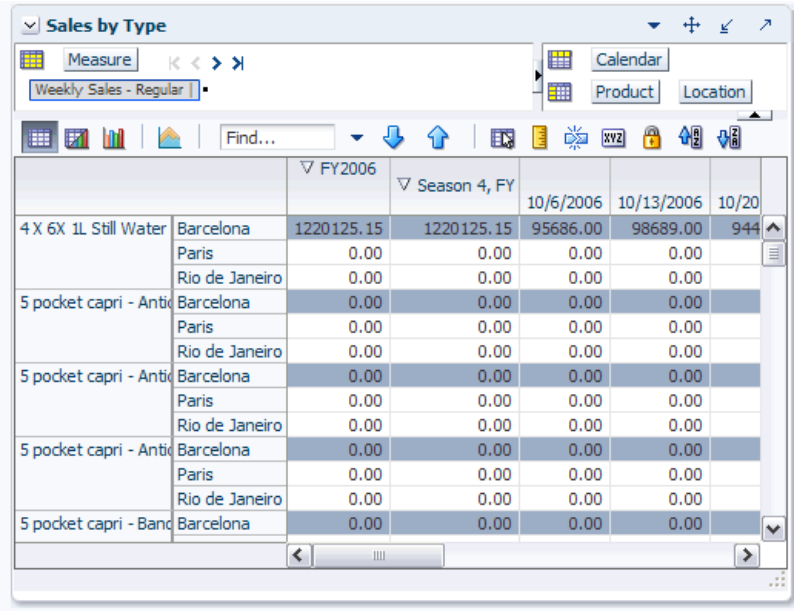
3. Select the same instance again. Either click the **Selection Options** icon in the toolbar, or right-click and select **Selection Options** from the right-click context menu. Then, click **Replicate [Row/Column] Selections**.

Figure 17–53 Replicate Selections Option



4. The view refreshes and all instances of the chosen level are selected.

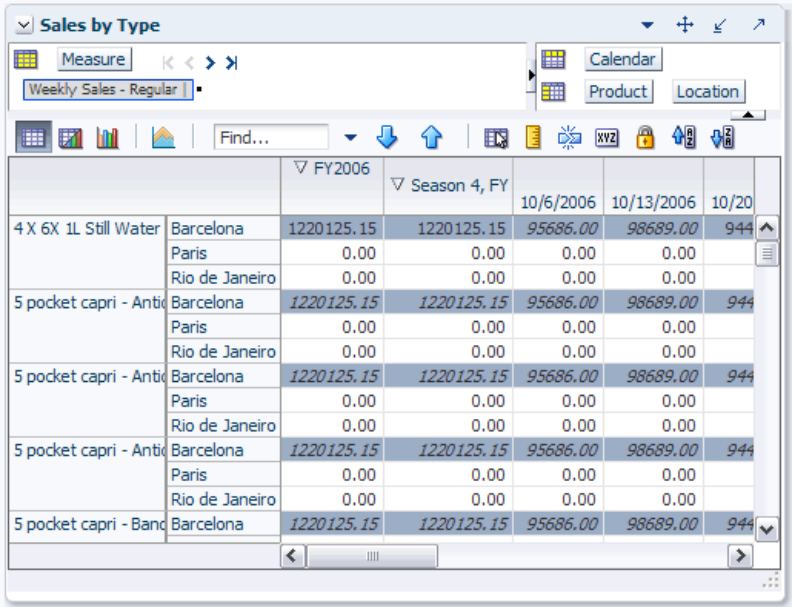
Figure 17–54 Replicated Selections in the View



5. With all the instances of that particular level highlighted, select the **Paste** option in the Edit menu.

   The view refreshes, and all the selected instances contain the copied information.

Figure 17–55 Replicated Selections



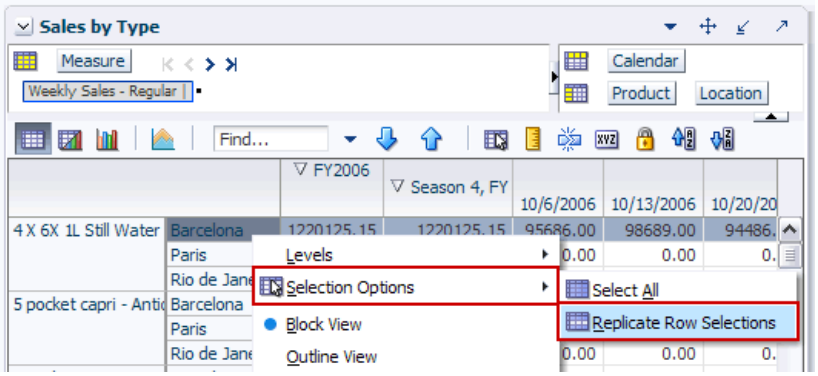
Using Replicate Selections for the Chart View

Complete the following steps to use the replicate selection function to create a particular chart view.

1. Select an instance of the particular level for which you want to select all instances to show in a chart view. You can select a single cell or an entire row or column.

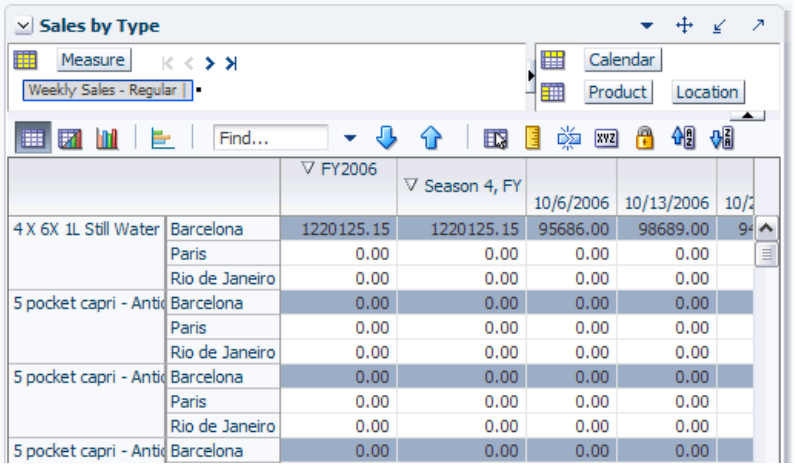
2. Click the Selection Options icon from the toolbar. Or, right-click and select **Selection Options** from the right-click context menu. Then click **Replicate [Row/Column] Selections**.

Figure 17–56 Replicate Selections Option



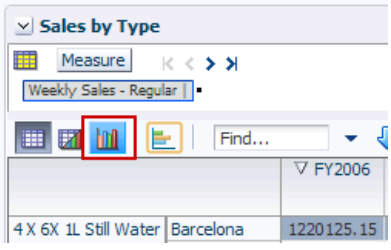
3. The view refreshes and all instances of the chosen level are selected.

Figure 17–57 Replicated Selections in the View



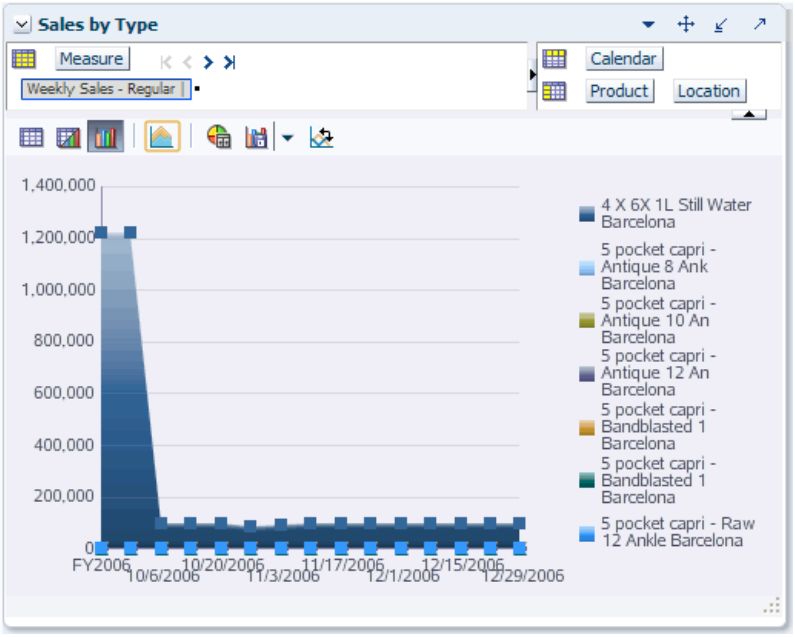
4. With all the instances of that particular level highlighted, click the **Switch to Chart View** icon.

Figure 17–58 Switch to Chart View Icon



The chart view opens. Only the selected instances are shown in the chart. In Figure 17–59, the chart only shows data for the Brick & Mortar because those were the selected instances.

Figure 17–59 Replicated Selections in Chart View



Creating a Consumer Decision Tree

The RPAS Fusion Client includes functionality to create Consumer Decision Trees. Instead of viewing data within a pivot table, you access a hierarchy viewer, also called a Consumer Decision Tree Editor, in which you can create positions in a tree structure of an hierarchy.

The Consumer Decision Tree represents an ordered decision flow for a consumer of a certain category of product made prior to buying the product. The Consumer Decision Tree is an unbalanced tree where each decision point represents an attribute value. Consumer Decision Trees are used to aggregate data in the product dimension and are displayed as an alternate hierarchy in the product dimension within the pivot table.

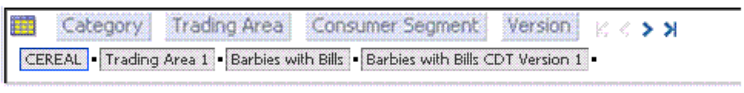
Accessing the Consumer Decision Tree Editor Workbook

To access the Consumer Decision Tree Editor, you must be logged into a solution that has a task configured as a Consumer Decision Tree editor. To access the editor, the process is the same as it is to build or open any workbook. The only difference is in using the editor.

Navigating Page Edge

The Page Edge component displays in the Consumer Decision Tree Editor and shows the dimensions that make up a Consumer Decision Tree. Keeping the page edge lets you access the Consumer Decision Tree in a sequential and ordered way by paging through the various Consumer Decision Tree positions.

Figure 17–60 Page Edge in Consumer Decision Tree Editor Workbook Window



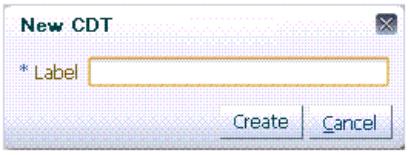
Creating a New Consumer Decision Tree

After accessing a task that is configured to be a Consumer Decision Tree Editor task, you can create a new Consumer Decision Tree.

To create Consumer Decision Tree:

1. Select New CDT from the context menu while on a File Node. The New CDT window displays.
2. Enter a label for the new version.

Figure 17–61 New CDT window



3. Click **Create**.
4. Continue to edit and build the Consumer Decision Tree.

Consumer Decision Tree Editor View

The Consumer Decision Tree editor is within the framework of the Fusion Client workbook page, but many of the workbook functions do not apply to the Consumer Decision Tree. The available commands from the Consumer Decision Tree editor view are shown in Figure 17–62 and Table 17–1:

Figure 17–62 Consumer Decision Tree Editor Layout Window

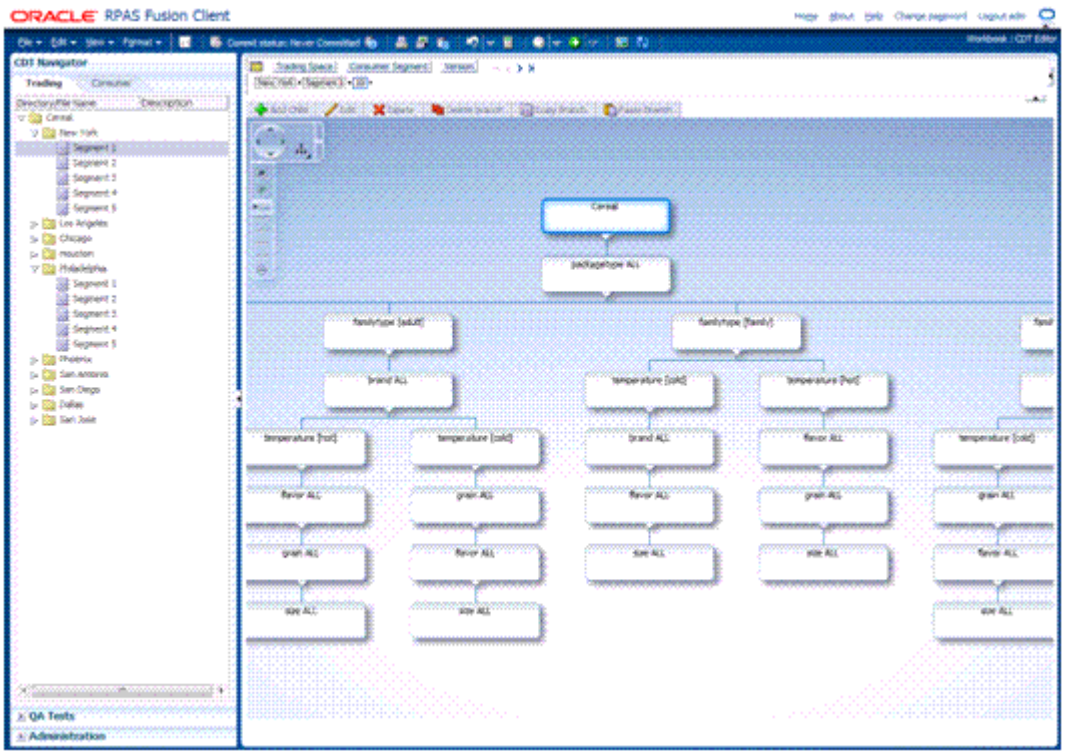


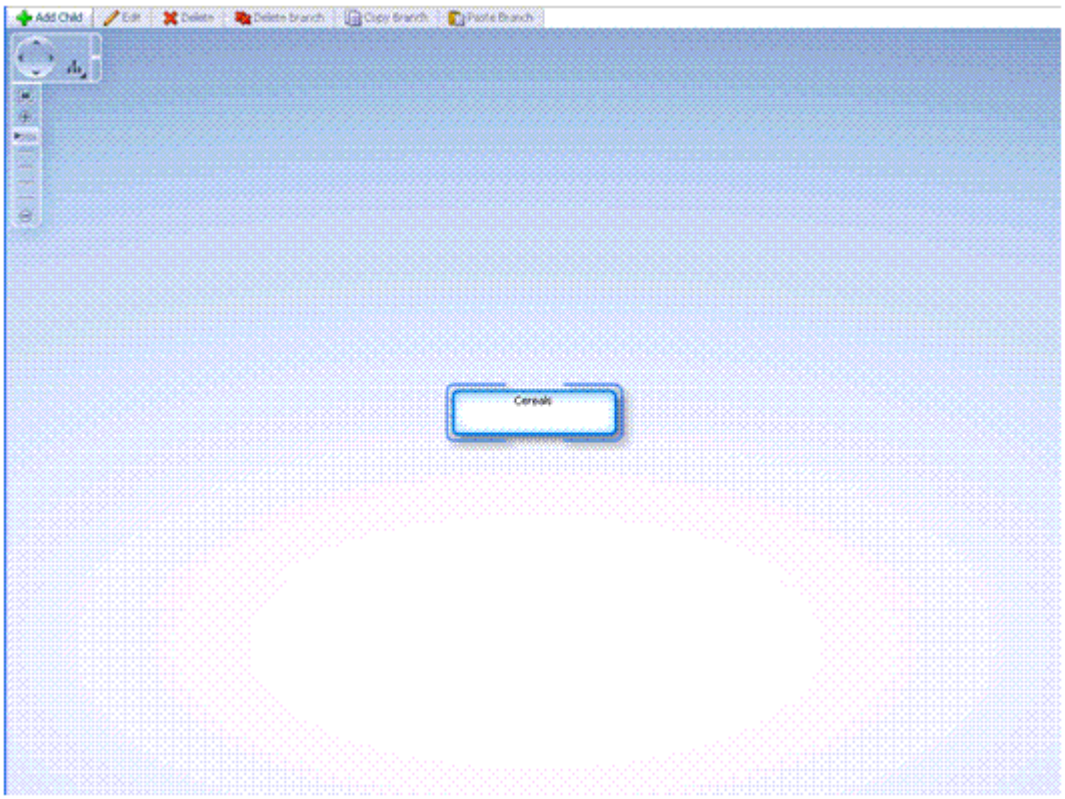
Table 17–1 Consumer Decision Tree Commands

File Menu	Edit Menu	View Menu	Global Toolbar
Save	Add Child	Go To	Save
Save As	Edit		Commit
Rename	Copy Branch		Commit Status
Commit	Paste Branch		Taskflow Navigation-Previous and Next Step
Revert	Delete		
	Delete Branch		

Adding Nodes to the Tree

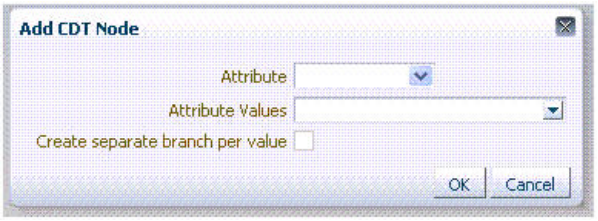
The Consumer Decision Tree tree displays the root node representing the pre-selected highest node of the Consumer Decision Tree.

Figure 17–63 New Consumer Decision Tree Editor Category Window



1. Click **Add Child** to add a child node to the branch. A pop-up is displayed.

Figure 17–64 Add CDT Node Window



2. Select an attribute from the **Attribute** drop-down list.
3. Select a value from the **Attribute Value** drop-down list.
4. Select the Create separate branch per value, if applicable. When you select more than one of the attribute values, this field create a separate node for every attribute value selected.

> **Note:** A node can be created by selecting one or more attribute values. If multiple attribute values are chosen, and the check box to create a separate branch is not selected, one node that represents multiple attribute values is created.
>
> If one branch is created for all values of an attribute, select all attribute values and only one node will appear with the attribute value of ALL.
>
> If all the attribute values for an attribute are used, either by creating one node or separate nodes, a child cannot be added to the node, and the **Add Child** is disabled. Creating a node with ALL does not associate the specific attribute values with the node. Instead, it encompasses any attribute value.

5. Click **OK**.

Editing Nodes

Editing is allowed on all nodes as long as there are additional attribute values available. The selections from the node being edited are preselected in the dialog. The attribute cannot be changed, so the attribute drop-down is disabled. Any attribute values that are in use by other siblings are not displayed in the list.

Deleting Nodes

Nodes can be deleted from the tree. There are two options for deleting: Delete and Delete Branch.

Selecting Delete deletes the selected node. Delete is available for any leaf node (a node without any children). It is also available for a non-leaf node that represents all the attributes for an attribute value: the children under this node move under the parent.

Selecting Delete Branch deletes the entire branch of nodes under the selected node, but not the selected node itself.

Copying and Pasting in Consumer Decision Tree Editor

Copy and Paste functionality is provided to copy nodes from one branch to another. Copy Branch is enabled when a node is selected that has children. The Copy Branch function copies the full branch of children of the selected node, but not the selected

node itself. **Paste Branch** is enabled when a branch has been copied and the selected node is a leaf node.

Viewing a Consumer Decision Tree

The Consumer Decision Trees have the potential to become large and occupy more space than the screen real estate allows for. The hierarchy viewer component used to display the Consumer Decision Tree provides several features to assist in viewing the Consumer Decision Tree effectively.

Expanding and Collapsing the Nodes or Branches

One way to limit the amount of space taken up by the Consumer Decision Tree is to collapse branches of the tree. For any node that has children, a small triangle appears at the bottom of the box for that node. Mouse over the triangle to enlarge it and display an option to collapse that node if it is expanded and expand the node if it is collapsed.

Moving the Tree

If the entire Consumer Decision Tree is not visible on one screen, the Consumer Decision Tree can be moved to make other parts of the tree visible. The view can be moved by either clicking and dragging or by using the panning controls in the control bar for the hierarchy viewer.

Figure 17–65 Pan Control Tool

Zooming the Tree

The hierarchy viewer provides some controls for zooming in and out to allow more or less of the tree to be in view at a time. Zooming out shrinks the size of the nodes that may make them difficult to read.

Figure 17–66 Zoom Control Tool

Copying and Pasting Consumer Decision Trees in the Consumer Decision Tree Explorer

The easiest way to copy Consumer Decision Trees as a whole is to use the Consumer Decision Tree explorer as it provides quick access to any Consumer Decision Tree. Quick copying is aided by the Consumer Decision Tree explorer's right-click menu and selecting Copy, which copies the selected node.

To paste, select one more node to copy to, again using either the right-click menu or the menu item under Edit.

Group Pasting

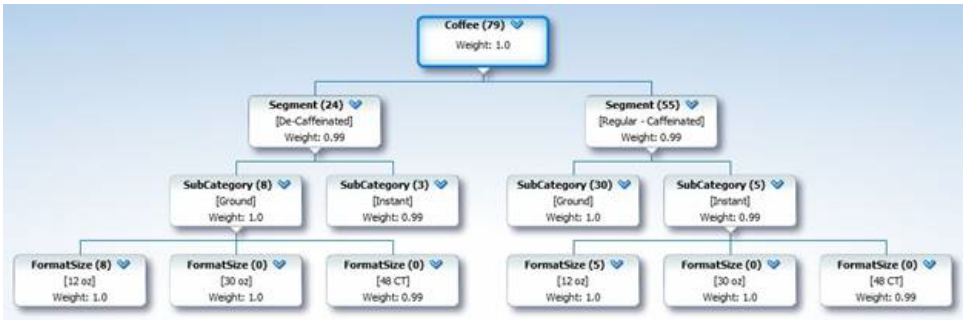
The Consumer Decision Tree Explorer offers group pasting functionality. Select a directory node as the target of a paste, and all children of that directory node are pasted with a copy of the stored Consumer Decision Tree.

Multi-Select Pasting The Consumer Decision Tree explorer lets you select multiple nodes in order to paste with a single Consumer Decision Tree copy.

SKU Counts and Weights in the Consumer Decision Tree

The nodes in the Consumer Decision Tree contain two items of information that give the user information. These are SKU Count and Weight.

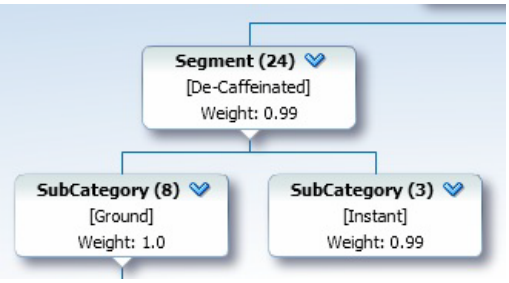
Figure 17–67 Example CDT with SKU Counts and Weights



SKU Counts

For each node, the SKU count is the number of SKUs that match the attribute common to that node and its parent.

Figure 17–68 Example of SKU Counts



In the above example, the Segment has an attribute of Decaffeinated and 24 SKUs match that attribute. The SubCategory levels have attributes of Ground and Instant, which are matched by 8 and 3 SKUs, respectively. Other attributes may be possible at the SubCategory level, such as Whole Bean and Flavored. If these attributes are not included in the CDT, the total number of SKUs at the SubCategory level will be less than that of their parent Segment node.

The SKU count for a a parent node is always greater than or equal to the SKU counts of its children.

SKU Weights

SKU weights measure the relative importance of each node. They are normally calculated in another application and imported into the CDT. A typical way of calculating the weight is as the total sales of items represented in the node as a percentage of the total sales of items in the category. This value may change, depending on the time period, trade area, and customer segment for which the CDT has been defined.

For example, if a specific node had 10,247 sales from a total of 93,284 sales in the category, it would be assigned a weight of 0.11.

The XML Button

The XML button enables a CDT to be imported in the form of an XML file. The XML file has an attribute that enables the imported CDT to be set to Read Only. This can be used to ensure that externally generated CDTs are not edited after import.

However, copying from one CDT to another is allowed in some circumstances. In that case, imported values are cleared.

Effect of Editing on CDT

If the CDT is edited, for example by deleting or cutting and pasting nodes, the SKU count for each node will be recalculated and re-displayed. However, cutting and pasting a note invalidates any calculations of the weights associated with each node. As these calculations cannot be carried out by the CDT editor, the weights are removed from the entire tree.

Saving a Consumer Decision Tree

Save and Save As functions are available for any Consumer Decision Tree Editor Workbook. Overall, the Consumer Decision Tree workbook save process behaves exactly the same way as any other workbook save does, despite the difference in appearance.

Committing a Consumer Decision Tree

Editing and saving a Consumer Decision Tree can occur before it is committed. When a Consumer Decision Tree is finalized and ready to publish, click **Commit**.

Printing a Consumer Decision Tree

Printing is not supported from the Consumer Decision Tree, but printing the tree does work in Internet Explorer 8, as long as the tree is visible in one page view, by using the browser's print function.

Dynamic Hierarchy

The dynamic roll-up of store to cluster in a workbook depends on the product dimension. The dynamic hierarchy functionality addresses this. Note that, for a particular product department, a store can change from a high volume store to a medium volume store cluster. This type of roll-up change must be refreshed in the workbook (instead of requiring the rebuilding of the workbook). This refresh can be triggered using a custom menu. The refreshing of the dynamic hierarchy does not require the refreshing of the entire workbook.

A

Available Menu Shortcuts

Some of the commonly used menu items can have shortcut keys assigned. The shortcuts will appear in the menu alongside the command they have been associated with. The user can then use those shortcut keys as an alternative to manually selecting items from the menu.

The list of menu items that have shortcuts is pre-configured. Additional shortcuts cannot be created for menu items outside of this list. Neither should entries be deleted as they are referenced by the software. The only thing that can be modified is the combination of keystrokes assigned to each menu item.

> **Note:** The browser also has shortcuts. Care must be taken that the key combinations used for the menu do not duplicate the key combinations used for the browser.

The default settings are defined in rpasBundle.properties as follows:

- **Copy**

  menu.edit.copy.accelerator=control C

- **Copy/Cut Tile**

  menu.edit.copy.tile.accelerator=control G

- **Cut**

  menu.edit.cut.accelerator=control X

- **Find**

  Setting = menu.edit.find.accelerator=control F

- **Paste**

  menu.edit.paste.accelerator=control V

- **Undo**

  Setting = menu.edit.undo.accelerator=control Z

- **New Tab???**

  menu.edit.calculate.accelerator=control T

- **Paste Tile**

  menu.edit.paste.tile.accelerator=control P

- **Search Backwards**???

menu.edit.refresh.accelerator=control R

B

Using RPAS with Mobile Devices

Fusion Client-based applications are supported for mobile devices using Apple ios 7 and above, Safari Mobile Browser 6+ with the Safari browser, and Android 5.0 with the Chrome browser. No Flash player is required in order to run features such as Dynamic Position Maintenance or Customer Decision Trees, as these are rendered in HTML5 on mobile devices.

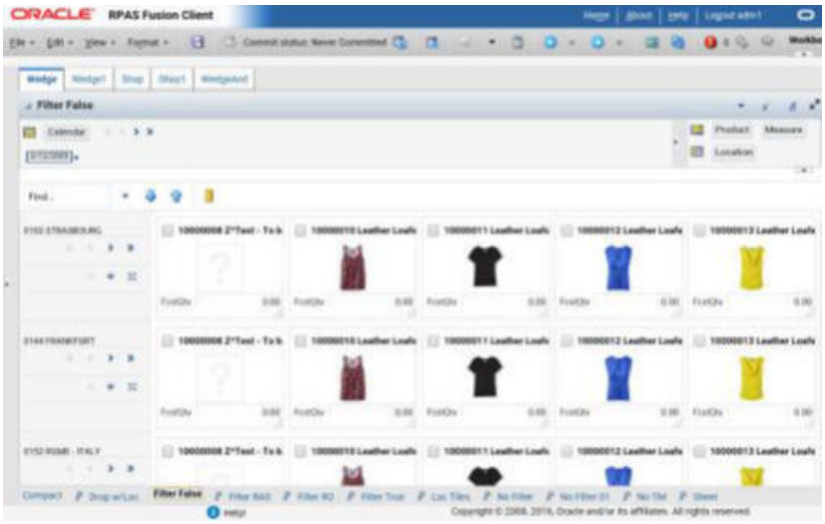
This appendix provides information on the similarities and the differences between accessing RPAS applications on a PC and accessing them a mobile device in terms of ease of use, performance, and security.

Use Cases

Here are representative use cases featuring mobile devices:

- Participate in line reviews and vendor meetings using sales, buy quantity, and inventory data that is available on your tablet for quick reference and editing.
- Engage in meetings with managers and in conferences with the power of RPAS at your fingertips.
- Review a collection during a store walk-through, reassessing, making updates, and take notes, all in real-time and on-site.
- Address business concerns in assortment planning meetings or collection reviews anytime, anywhere with the planning applications available on your mobile device.

Figure B–1 Use Cases



Using RPAS on a Mobile Device or on a PC

This section compares using RPAS on a mobile device and on a PC.

Fusion Client

The Fusion Client can be used on both tablets and PCs; however, most users will probably use each device for a different purpose. A PC facilitates detailed work with the pivot table UI, and a tablet is useful for reference and for quick updates, such as reviewing plans during a meeting and making minor adjustments.

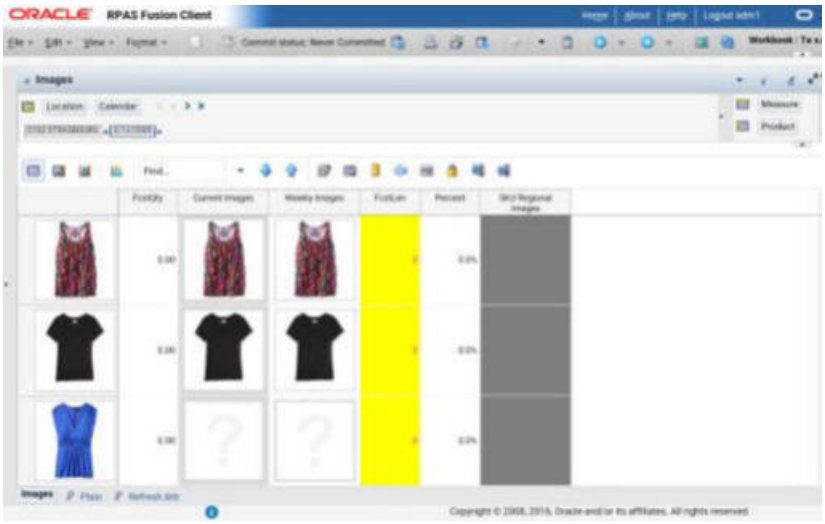
Performance

Applications are likely to perform more slowly on a tablet because of hardware limitations, such as browser cache, RAM, and processor speed. Unlike with laptops, RPAS applications perform markedly better with the tablet devices currently on the market than with those purchased over the last two years.

Views and Navigation

Because of screen size, not all the features and functions are visible by default in mobile devices. They can be viewed by scrolling or swiping the screen. Some toolbar actions may recede under the overflow icon. Clicking the icon opens a drop-down list of hidden options.

Figure B–2 Views and Navigation



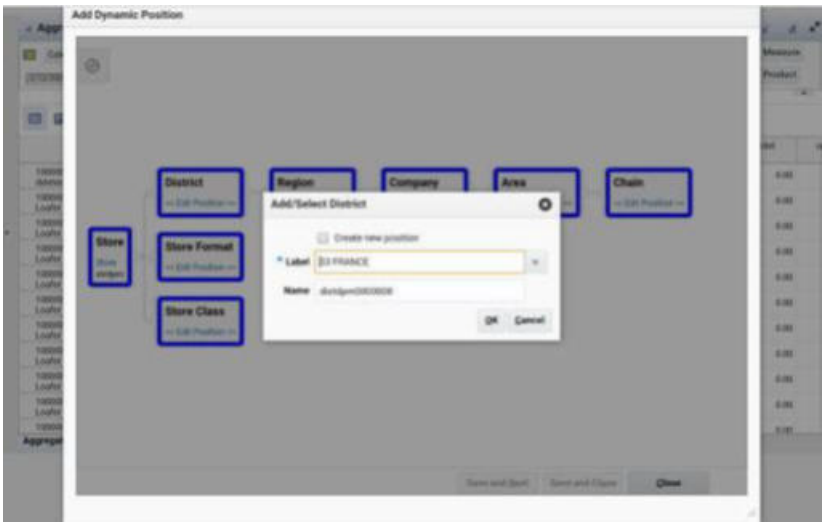
Landscape is the preferred mode for viewing data in charts and pivot tables. A user can zoom-in to view or enter the data by keeping a finger and thumb on the screen and then moving them away from each other, expanding the space between them.

The following tasks function in a different way on tablets:

- Resizing rows and columns. A finger must remain depressed on the row or column in order to display the context menu. The user can use the menu to change the row height and the column width.
- Multi-selection. To select a group of cells without using a pointing device, the user taps each cell to select it and then taps again in order to de-select it.

Certain pop-up windows may have too much information. The user must swipe to see the content since mobile devices do not have scroll bars.

Figure B–3 Pop-Up Window

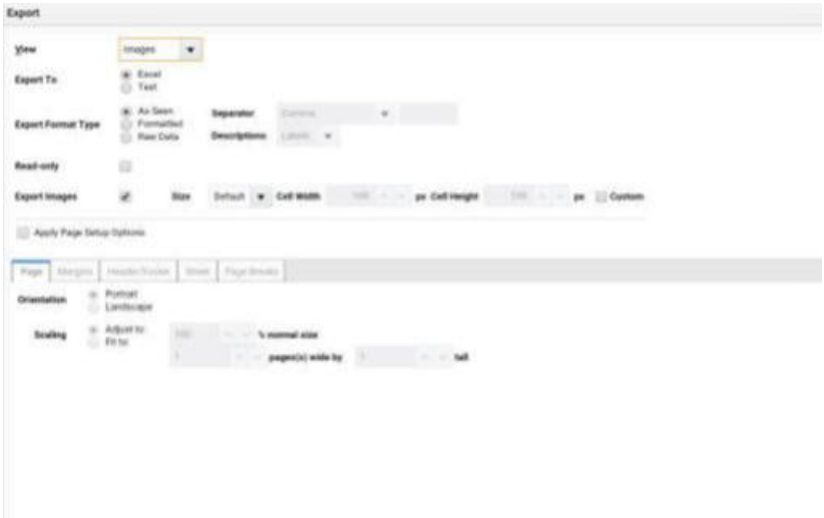


Exports

Users can export the worksheet to Excel as follows:

1. Click **Export to Excel** to download the worksheet in the format workbook_name.xlsx.
2. Use the **File > Export** option for additional customization.

Figure B–4 Export



Editing

Editing may be time consuming on a mobile device. Users need to acclimatize themselves to editing on a tablet using their fingers. A pointing device and keyboard may be handy. Some actions may require additional steps for selection and use, such as saving a chart to image and row and column resizing.

Navigation

Users may need to navigate within the Fusion Client using a finger if a mouse is not available. Note that the back navigation button takes the user to the previously accessed URL and not to the previous page. The browser navigation buttons work the same as they do in a desktop browser.

Usability Notes

The single hierarchy select drop-down control does not close automatically with scrolling. Users must tab out or click on a cell again to close the drop-down. Real estate is tight on mobile devices. To make the best use of space, use the Landscape view or collapse the Taskflow Navigation pane. Multiple views add clutter, so working with a single view is most effective.

To make a selection, the user must select the option where the menus do not overlap. To select multiple tiles in the Tiled view, the user must select the check box in the top left corner of the tile.

Implementation

Here are details about the implementation:

- No extra deployment steps or setup are necessary. The application does not need to be downloaded. The browser provides access. Just navigate your browser to the same link that you use on your laptop or desktop.
- No extra software is required.
- The RPAS application is the same.
- Apple Safari and Google Chrome are supported.
- Apple iOS 7 and Android 5.0 and above are supported.
- The use of an external keyboard is recommended for more detailed plans.

Security

Once the user connects to the corporate VPN, proper authorization and authentication must be ensured at the network level. VPN servers must have good security measures since they act as a firewall against intrusions. It is advisable to use the native Safari browser, since it comes with a known level of security.

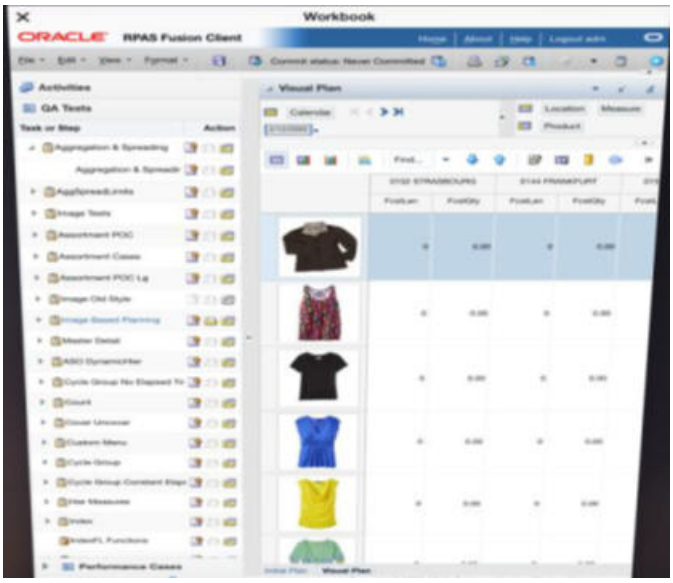
If it is against company policy to track the usage of employee's personal devices, the security measures established within the VPN servers must be set up to track the usage at a network level. VPN access is the secure way to access RPAS via any mobile device; however, performance may be impacted.

Required iPad Settings

RPAS will not run if the Safari browser is set to **Private** under **Settings**, so you must update the settings as follows:

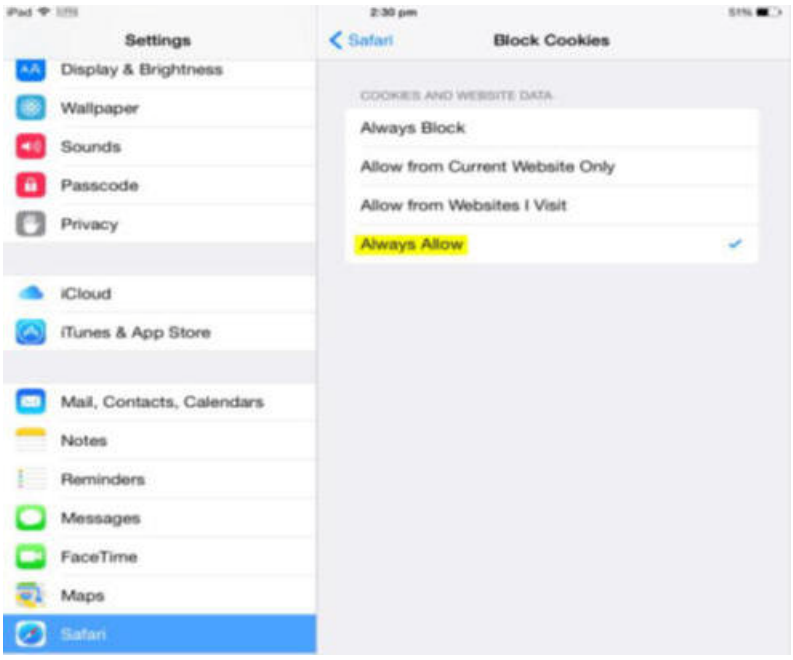
1. On the iPad, uncheck **Private browsing**.

Figure B–5 Uncheck Private Browsing



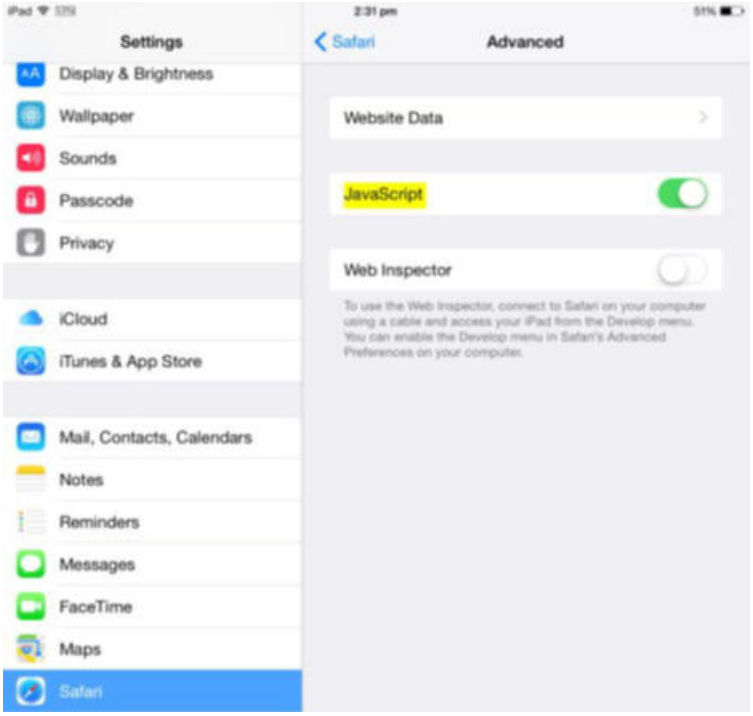
2. Select **Always Allow** in the **Block Cookies** setting

Figure B–6 Always Allow



3. In the Advanced tab, enable **JavaScript**.

Figure B–7 Enable JavaScript



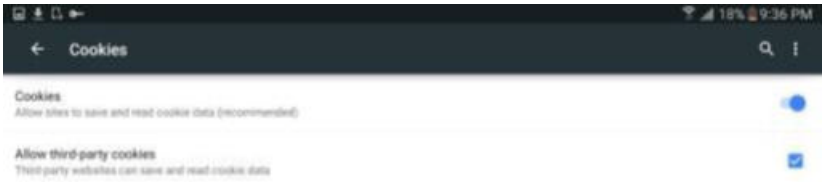
4. After you have set the options, clear **History** and **Website Data**.

Required Android Tablet Settings

Here are the required Android tablet settings.

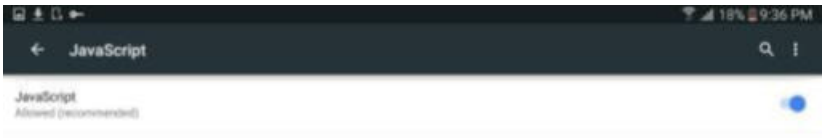
1. RPAS does not retain a session if it is started in incognito status.
2. In Site Settings > Cookies, set **Allow Sites** to **Save** and **read cookie data** to **On**.

Figure B–8 Cookie Settings



3. In Site Settings > Javascript, set **JavaScript** to **On**.

Figure B–9 JavaScript Setting



4. After setting all the above options, **Clear and Reset** stored data in Site Setting > All Site > select your URL.

Figure B–10 Clear and Reset Data