Oracle® Retail Merchandising Cloud Services

Implementation Guide

Release 16.0.024

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Oracle® Retail Merchandising Cloud Services Implementation Guide, Release 16.0.024

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Value-Added Reseller (VAR) Language

Oracle Retail VAR Applications

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Preface

This Oracle Retail Merchandising Implementation Guide provides a high-level view of how the Merchandising Operations Management applications integrate with each other. The guide includes the following:

- Chapters on Oracle Retail applications

  These chapters provide an overview of the Merchandising Operations Management applications. They provide a detailed look at how each application integrates with the other Merchandising Operations Management applications, as well as the information passed back and forth between those applications (that is, the information RMS (Retail Merchandising System) provides to other applications and the information other applications provide to RMS). These chapters also describe the users that must be created for each application as well as the security settings that these applications can employ.

Audience

The implementation guide is intended for the Oracle Retail Merchandising Operations Management applications integrators and implementation staff, as well as the retailer's IT personnel.

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- 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, additional patch, and bundled hot fix releases, read the documentation for all releases that have occurred since the base release before you begin installation. Documentation for patch and bundled hot fix releases can contain critical information related to the base release, as well as information about code changes since the base release.

Improved Process for Oracle Retail Documentation Corrections

To more quickly address critical corrections to Oracle Retail documentation content, Oracle Retail documentation may be republished whenever a critical correction is needed. For critical corrections, the republication of an Oracle Retail document may at times not be attached to a numbered software release; instead, the Oracle Retail document will simply be replaced on the Oracle Technology Network Web site, or, in the case of Data Models, to the applicable My Oracle Support Documentation container where they reside.

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 a document with part number E123456-01.

If a more recent version of a document is available, that version supersedes all previous versions.

Oracle Retail Documentation on the Oracle Technology Network

Oracle Retail product documentation is available on the following web site:

http://www.oracle.com/technology/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

Merchandising Operations Management Applications

This chapter briefly describes each of the Merchandising Operations Management applications. See the chapters that follow for more detailed descriptions.

Oracle Retail Merchandising System

RMS is the foundation system that records and controls virtually all data in the retail enterprise and ensures data integrity across all integrated systems. RMS includes key functions such as item maintenance, inventory management, and replenishment. This functionality provides easy access to the information that is crucial to the day-to-day merchandising activities within a retail organization, providing the ability to focus on key decisions that help achieve sales and profit targets.

RMS streamlines business practices and unifies business systems across retail channels to better serve customers. Because RMS has been developed as a Web-based, scalable product, it fully supports the large volumes found in retail, leaving more time for retailers to concentrate on the bottom line.

Oracle Retail Trade Management

Oracle Retail Trade Management (RTM) is an import management system designed to integrate and streamline the international trade transaction process. RTM links multiple departments together for all import functions. RTM provides immediate online visibility to the status, location, and disposition of products as they move through the import cycle.

RTM links partners in the supply chain-suppliers, agents, bank, transportation providers, freight consolidators, customs brokers-to share a constant flow of information needed to manage the movement of goods from the source to destination across international borders.

Because RTM is coupled with RMS, the import purchase order process also ties in with regular purchase order features such as open-to-buy, updating stock ledger, and inventory. RTM provides the facility to track and capture expenses incurred in the import process, and to apportion the expenses to the actual landed cost of the inventory. The application also provides letter of credit payment processing, which is typically used in import purchase orders.

Oracle Retail Sales Audit

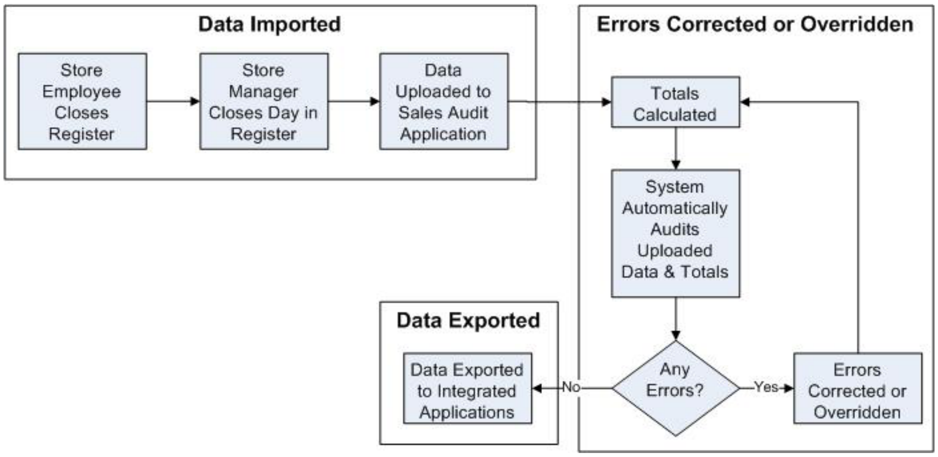
ReSA is an auditing system that provides a simplified sales audit process that accepts raw point of sale data and provides clean data to downstream applications, while ensuring integrity of audited data. The application supports automatic and interactive auditing of the Sales Data. The application is designed to focus on the exception conditions, while allowing clean data to flow through thus increasing productivity.

Flexibility is provided in the creation of user-defined rules and totals to configure exceptional conditions. User-defined audit rules fine-tune the system to focus validation on potential problem areas, and custom totals are created online for validation of calculations such as data entry or over/short.

Interactive audit functionality allows auditors to focus on exceptions and the audit to navigate through resolution to ensure a clean data load to the integrated applications. The application validates and balances the transactions and tender data, and detects and corrects the errors according to the predefined rules. The application allows sales balancing at store/register or cashier levels. The application helps identify, review, and resolve errors and irregularities in a timely manner.

The following diagram illustrates the audit process.

Figure 1–1 Information Maintained by Oracle Retail Sales Audit


Data Imported
Store Employee Closes Register
Store Manager Closes Day in Register
Data Uploaded to Sales Audit Application
Errors Corrected or Overridden
Totals Calculated
System Automatically Audits Uploaded Data & Totals
Any Errors?
Yes
Errors Corrected or Overridden
No
Data Exported
Data Exported to Integrated Applications

Operational Insights Dashboard and ReSA

Operational Insights offers a rich operational business intelligence solution to retail industry users. Operational Insights dashboards and reports are built on top of the latest Oracle technology stack and utilizes ADF DVT for reporting and analysis needs.The Merchandising suite of products is a proven, integrated solution with a rich data set. ADF DVT reports utilize this data to provide insights into the retailer 's operations.

Operational Insights have the following salient features:

- Rich underlying data as the base for the reports
- Proven, integrated solution that supports best practices
- A modern user interface using ADF DVT
- Actionable BI information which enables the user to act on information gathered from reports without leaving the application or having to record the action in another interface
- Pervasive BI to reduce lag or latency between events and the subsequent action hence driving the workforce efficiency in business

From 16.0 release Operational Insights provides integration of ADF DVT reports into the Oracle Retail Sales Audit (ReSA) user interface. ReSA provides the tools to evaluate point-of-sale data, to ensure the accuracy and completeness of information exported to downstream systems used in optimization processes, financial reporting, and analysis. Oracle

Retail Sales Audit (ReSA) Operational Insights dashboards and reports provide pervasive business intelligence and are designed to be embedded within the ReSA ADF application.

Oracle Retail Allocation

A retailer's most important asset is its inventory. Oracle Retail Allocation helps retailers determine the inventory requirements at the item, store/warehouse, and week level using real time inventory information. The system calculates individual store or warehouse need based on parameters you set - whether it's the characteristics of the product, the location, or the category. The result is an allocation tailored to each destination location’s unique need.

Oracle Retail Allocation allows you to allocate either in advance of the order's arrival or at the last minute to leverage real-time sales and inventory information. And when you do allocate, the system provides you the flexibility of basing your allocation on many different methods such as: merchandise sales plans, receipt plans, forecast demand and sales history.

Oracle Retail Invoice Matching

Invoice matching is a control procedure designed to ensure that the retailer pays the negotiated cost for actual quantities received.

ReIM supports the invoice verification process with accuracy and efficiency, focusing resources on exception management. ReIM accepts electronic invoice data uploads through Electronic Data Interchange (EDI) and provides rapid online summary entry of invoices. ReIM supports automated and online processes that allow one or more invoices to be matched against one or more receipts. When the cost and quantities of an invoice are matched within tolerance, the invoice is ready for payment and staged to a table to be extracted to the accounts payable application.

If a cost or quantity difference between the invoice and receipts is outside tolerance, a discrepancy is recognized and must be resolved. A flexible resolution process allows cost and quantity discrepancies to be resolved together, and also supports mass resolution of items on an invoice, or even across multiple invoices for different suppliers. Reviewers can assign one or more reason codes that they are authorized to use to resolve the discrepancy.

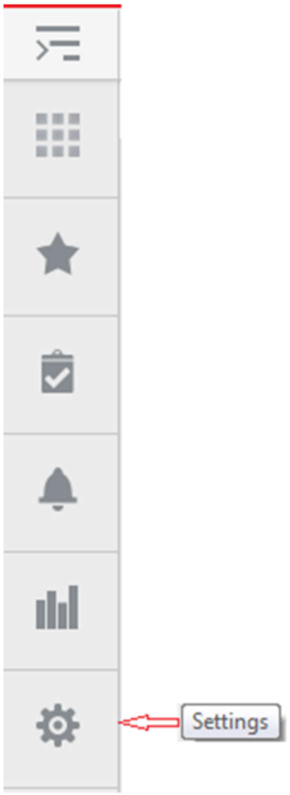
Each reason code is associated with a type of action (for example, create chargeback or receiver cost adjustment). Many reason codes can be associated with a particular action type, allowing more granular reporting. Actions drive document creation and EDI downloads to suppliers, inventory adjustments, and accounting activities. Actions also allow an invoice to be extracted by a retailer and posted for payment.

2

Oracle Retail Application Administration

The Oracle Retail Application provides different administrative options. These include customizing the Tasks, Reports and Sidebar models, configuring the dashboards, contextual area and application properties and managing Duty Roles, Roles Mappings, Policy Patching, Policy Backups, Application Navigator, Notifications, Resource Text, Asynchronous Task Status and Manage Lookups. The administrative options can be accessed using the Settings menu in the navigation toolbar. The Settings icon is available only to the administrator users.

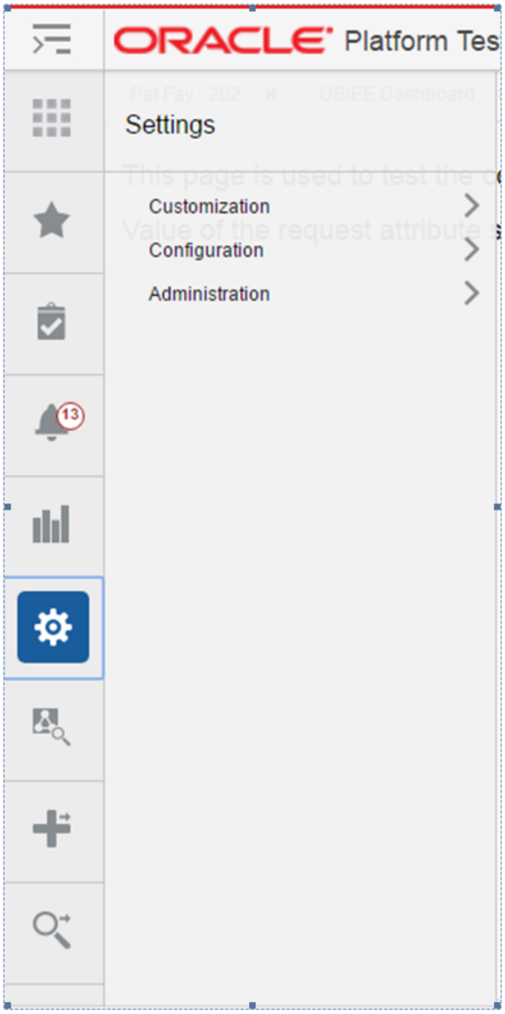
Figure 2–1 Settings Icon



Following are the options in the Settings menu:

- Customization
- Configuration
- Administration

Figure 2–2 Settings Menu

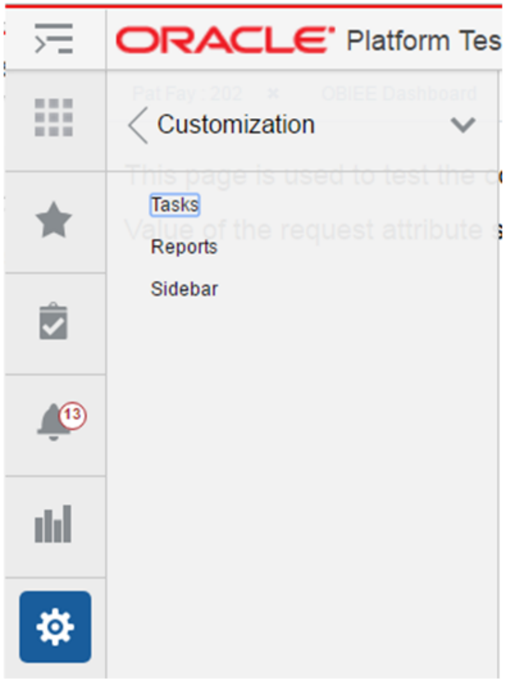


Oracle Retail Application Customization Overview

Oracle Retail Application Customization is an option in the settings menu that can be used by an administrator to customize the different menus in the application. The administrator can customize the task menu, reports menu and the sidebar menu using the customization option.

- Tasks
- Reports
- Sidebar

Figure 2–3 Customization Menu



The Tasks link opens an application tab showing the tasks XML file. An administrator can edit the XML file to add, modify or remove the tasks available in the tasks menu.

The Reports link opens an application tab showing the reports XML file. An administrator can edit the XML file to add, modify or remove the reports available in the reports menu.

The Sidebar link opens an application tab showing the side bar XML. An administrator can edit the XML file to add, modify or remove the sidebar icons.

Each tab displays buttons to save, restore or cancel the changes. The Save button saves the changes to the tasks, reports and sidebar XML files. The changes are immediately reflected in the tasks, reports and sidebar menu. The Cancel button closes the tab without saving the changes. The Restore button replaces the customized XML file with the original XML file shipped with the Retail Application.

Task Menu Customization

The task menu model xml file uses the xml schema definition called NavigationModel.xsd for xml validation. The Navigation Model schema definition file is used to validate any changes done by the administrator on the task menu xml file. The Task Menu model file consists of a hierarchy of Item elements. Each element represents a menu item in the task menu. The Item element can either be a folder or has a URL, list of attributes and parameters that identify the task menu item.

Task Menu Model XML Items

An Item in the task menu model renders as either a launchable link or a submenu in the Tasks menu of the Retail Application. A new Item can be added to add a new link or submenu. An existing Item can be modified to change an existing link or submenu. Below is the example of a task menu model Item.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<NavigationDefinition … >
```

```
    <Items>
       <Item id="myFolder" title="My Folder"  type="folder">
           <Items>

                <Item id="myContent" type="taskflow"
                      title="My Content">
                    <url>

/WEB-INF/mycompany/CustomDashboardTaskFlow.xml#CustomDashboardTaskFlow
                    </url>
                    <Parameters>
                        <Parameter id="productName">"Acme"</Parameter>
                    </Parameters>
                </Item>
           </Items>
       </Item>
    </Items>
</NavigationDefinition>
```

Task Menu Model Item Attributes

The following attributes apply to an Item element in the task menu model xml file.

Table 2–1 Task Menu Model Item Attributes

Attribute	Description
visible	Indicates if the item should be rendered (visible) or not. It can be an EL Expression that evaluates to true or false. Or it can be a plain string value equal to "true" or "false". Defaults to "true".
type	Indicates the type of the item. The main values are "folder","taskflow","link". The type "folder" indicates that the item contains additional sub-navigation items. The type "taskflow" indicates it is a task flow, and the type "link" is used for URLs.
title	The attribute title is used to provide the title of the sidebar item. This attribute is a required attribute.
targetTitle	The attribute targetTitle is used to provide the title of the tab in the content area. This attribute is an optional attribute. If not provided, the value of the title attribute will be used as the title of the tab in the content area.
accessKey	The attribute accessKey is used to specify the keyboard keystroke or a group of keystrokes that are used to access the navigation item using the keyboard.
shortDesc	The attribute shortDesc is used to provide the description of the navigation item which will be displayed when the user hovers over a menu item.
showCloseIcon	Mainly used when the content is being rendered in a popup, and indicates if the 'x' icon should show or not on the top right corner of the popup to facilitate manual closing of the popup. Takes the values "true" or "false". Defaults to "false".
defaultContent	Indicates whether the corresponding items from the model show up by default in tabs in the content area when the page template loads. Takes values "true" or "false", or may even take an EL Expression evaluating to "true" or "false".

Table 2–1 (Cont.) Task Menu Model Item Attributes

Attribute	Description
reuseInstance	The attribute reuseInstance is used to specify whether the navigation items with the same title and url will use the same tab or not. When this attribute is set to false, the request to open the content for that navigation item will always use a new tab. When the attribute is true, the navigation items with the same title and url will share the same tab in the content area. It defaults to true.
keysList	Takes name value pairs separated by a semicolon. The attribute keysList provides a way to differentiate two navigation items with the same title and url. If keysList is not provided, then the two navigation items with the same title and url will always use the same tab. When the keysList is provided, it provides uniqueness to the navigation items with the same title and url enabling them to use different tabs. Example keysList="key1=value1;key2=value2"
urlRendererHeight, urlRendererWidth	Example values are shown below. These used in the case of a popup and indicate the height and width of the popup. urlRendererHeight="200px" urlRender-erWidth="200px"
reloadTab	When this attribute is set to true, an already opened tab will be reloaded with the new input parameters for the taskflow. When it is set to false, a previously opened tab will only be re-focused, but not reloaded with new input parameters for the taskflow.
refreshOnDisclosure	When the navigation item has refreshOnDisclosure attribute set to true then the tab displaying that item in the Content Area will be refreshed every time it's disclosed. The attribute can take either of the two values true or false. Default is false. The attribute is useful in the scenarios where we want to display to the user the latest information from the database every time he/she comes back to the tab. The attribute should be used with caution because if the data in that tab is not committed before leaving the tab then the uncommitted data will be lost upon coming back to the tab.
dynamicTabFocus	When a navigation item is invoked, the tab displaying that item will have its text focused. To override this behavior, set dynamicTabFocus to "false". This attribute defaults to "true".
popupId	Applicable only when target="_popup". Must be a number between 1 and 15. This attribute allows consuming applications to target a specific popup within the UI Shell. The framework provides 15 popups that consuming applications can take advantage of. In case this attribute has not been specified, a default popup will be used by the framework. This default popup will not store its dimensions in MDS.
popupContentHeight	Applicable only when target="_popup". This attribute is used to provide the height in pixels of the resulting popup dialog window.
popupContentWidth	Applicable only when target="_popup". This attribute is used to provide the width in pixels for the resulting popup dialog window.

Table 2–1 (Cont.) Task Menu Model Item Attributes

Attribute	Description
popupStretchChildren	Applicable only when target="_popup". This attribute is used to indicate the stretching behavior for the contents of the resulting popup window. The contents are referred to as child components. Valid values are: ▪ none - does not attempt to stretch any children (the default value and value you need to use if you have more than a single child; also the value you need to use if the child does not support being stretched). ▪ first - stretches the first child (not to be used if you have multiple children as such usage will produce unreliable results; also not to be used if the child does not support being stretched).
popupResize	Applicable only when target="_popup". This attribute is used to indicate the resulting popup window's resizing behavior. Valid values are: ▪ on - user can resize the dialog with their mouse by dragging any of the dialog edges. ▪ off - the dialog automatically sizes its contents if popupStretchChildren is set to "none"
popupHelpTopicId	Applicable only when target="_popup". This attribute is used to look up a topic in a help-Provider for the resulting popup window.
popupShortDesc	Applicable only when target="_popup". This attribute is used to provide short description of the resulting popup window.
contentListener	Specifies the fully qualified name of the class im-plementing the ContentListener interface. This allows applications to have the ability to inject any session or request values before opening tabs.
tabShortDesc	Specifies the text to be shown when the user hovers over the application tab. Using this attribute application team can keep the title short and the tabShortDesc as fully qualified tab name which can be shown as the tooltip of the tab. This attribute will be displayed as tab title in screen reader mode.

Task Menu Model Item Sub-elements

The following are the sub-elements of the Item element in the task menu model.

Table 2–2 Task Menu Model Item Sub-elements

Element	Description
url	The location of the item being launched. If the type is "taskflow" - then the URL element must contain the path to the task flow XML. If the type is "link" - then the URL of the external system must be indicated in this subelement. The entire URL must be marked as character data (e.g. enclosed in CDATA).

Table 2–2 (Cont.) Task Menu Model Item Sub-elements

Element	Description
Parameter	The <Parameters> sub-element within <Item> should list all the parameters to the dashboard page if there are any. Each parameter is represented as a <Parameter> element inside <Parameters>. The <Parameter> id should be the actual parameter reference name recognized by the dashboard URL. The value of each <Parameter> is a string value. This is the only supported data type.

Securing Access to Items

To restrict access to menu items to specific security roles, set the visible property on the <Item> element for the URL to an Expression Language (EL) expression that calls ADF's securityContext API's isUserInRole method. Example:

```
<Item id="myDashboard1"
      type="link"
      title="Profitability Dashboard"
      visible="#{securityContext.isUserInRole['BUYER_JOB']} ">
```

The parameter to the securiytContext.isUserInRole method is a logical security role that is configured for the Retail Application. The API returns true if the user is included in the specified security role. If the user is not authenticated or is not found in the role, the API returns false.

Reports Menu Customization

The reports menu uses the same NavigationModel.xsd file used by the task menu. The attributes defined for the task menu apply to the reports menu as well. Please refer to the Task Menu Customization section above for the details on how to customize the reports menu.

Sidebar Menu Customization

The sidebar menu uses a schema called sidebarSchema.xsd for the validation of the sidebar items. The sidebar xml model file consists of Item elements similar to the Item element in the task menu. The Item element in the sidebar xml model has a different set of attributes.

Sidebar Menu Model XML Items

An Item element in the sidebar model xml file renders as a launchable icon in the sidebar. The sidebar has a fixed set of icons and a variable set of icons. Only the variable icons can be customized using the sidebar model xml file. The fixed set of icons cannot be customized. A new sidebar Item can be added to add a new icon on the sidebar. Below is the example of a sidebar menu model Item.

```
<?xml version="1.0" encoding="UTF-8" ?>
<SidebarModel id="raf_sidebar_items_root"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="urn:www.oracle.com:oracle.retail.apps.framework.sidebar
classpath:oracle/retail/apps/framework/uishell/common/sidebar/sidebarSchema.xsd"
              xmlns="urn:www.oracle.com:oracle.retail.apps.framework.sidebar">
    <Items>
        <Item id="quickCreateSidebarItem" title="Quick Create"
              iconUrl="/raf/retail-core/images/quick-create-gray.png"
              selectedIconUrl="/raf/retail-core/images/quick-create.png">

<taskFlow>/WEB-INF/oracle/retail/apps/framework/uishell/navigation/contentarea/flo
```

```
w/TestQuickCreateFlow.xml#TestQuickCreateFlow</taskFlow>
        </Item>
    </Items>
</SidebarModel>
```

Sidebar Menu Model Item Attributes

The following attributes apply to an Item element in the sidebar menu model xml file.

Table 2–3 Sidebar Menu Model Item Attributes

Attribute	Description
id	The id of the sidebar item.
title	The title of the sidebar icon.
visible	The visible attribute controls the visibility of the sidebar item.
iconUrl	The icon that is displayed for the sidebar item.
selectedIconUrl	The icon that is displayed when the sidebar item is selected.
disabledIconUrl	The icon that is displayed when the sidebar item is disabled.
hoverIconUrl	The icon that is displayed when the sidebar item is hovered on.
depressedIconUrl	The icon that is displayed when the sidebar item is depressed.

Sidebar Model Item Sub-elements

The following are the sub-elements of the Item element in the sidebar model.

Table 2–4 Sidebar Model Item Sub-elements

Element	Description
taskFlow	The URL of the taskflow being launched.
Parameter	The <Parameters> sub-element within <Item> should list all the parameters to the sidebar taskflow if there are any. Each parameter is represented as a <Parameter> element inside <Parameters>. The <Parameter> id should be the actual parameter reference name recognized by the taskflow URL. The value of each <Parameter> is a string value. This is the only supported data type.

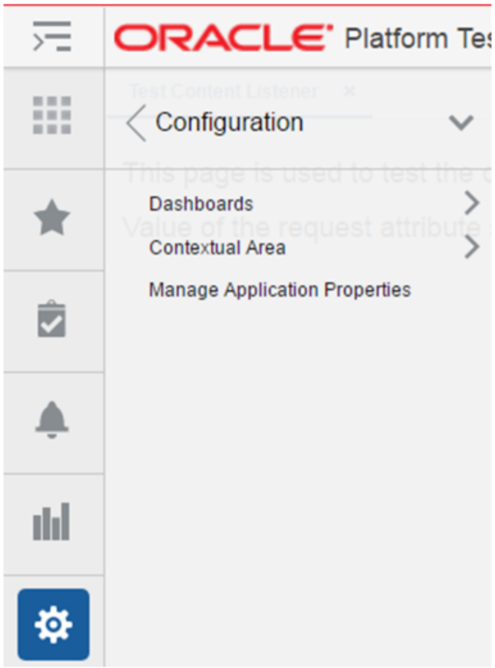
Oracle Retail Application Configuration Overview

Oracle Retail Application Configuration is an option in the settings menu that can be used by an administrator to configure the dashboards and contextual reports and manage application properties. The administrator can add or replace reports, change the dashboard and report layout using the configuration option.

Following are the options available in the Configuration menu.

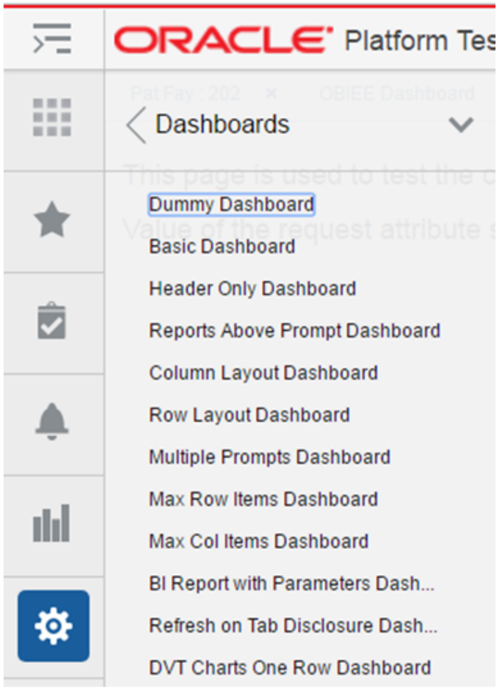
- Dashboards
- Contextual Area
- Manage Application Properties

Figure 2–4 Configuration Menu



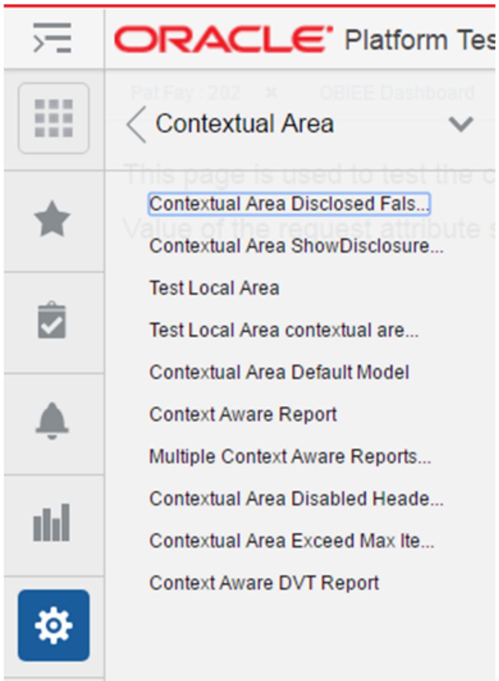
The Dashboard link displays the list of dashboards available in the application. When a dashboard name is clicked, it opens the dashboard xml file in an application tab. The dashboard reports can be added, modified or removed from the dashboard by changing the dashboard xml file. The dashboard layout can also be changed using the dashboard xml file.

Figure 2–5 Dashboards Menu



The Contextual Area link displays the list of contextual reports in the application. When a contextual report name is clicked, it opens the contextual report xml file in an application tab. The contextual reports can be added, modified or removed from the contextual area by changing the contextual reports xml file. The contextual reports layout can also be changed using the contextual reports xml file.

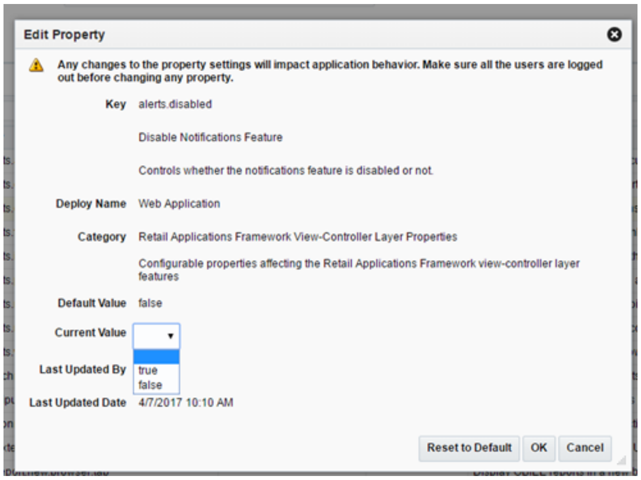
Figure 2–6 Contextual Area Menu


ORACLE Platform Tes
Pat Fay : 202
OBIEE Dashboard
Contextual Area
This page is used to test the c
Value of the request attribute s
Contextual Area Disclosed Fals...
Contextual Area ShowDisclosure...
Test Local Area
Test Local Area contextual are...
Contextual Area Default Model
Context Aware Report
Multiple Context Aware Reports...
Contextual Area Disabled Heade...
Contextual Area Exceed Max Ite...
Context Aware DVT Report

Each tab displays buttons to save, restore or cancel the changes. The Save button saves the changes to the dashboard and contextual area XML files. The tab showing the dashboard and the contextual area tab should be closed and reopened for the changes to be reflected. The Cancel button closes the tab without saving the changes. The Restore button replaces the customized XML file with the original XML file shipped with the Retail Application.

The Manage Application Properties link launches the Manage Application Properties Settings flow. This flow allows users to view and edit configuration properties for a Retail Application.

Figure 2–7 Manage Application Properties Flow



Edit Property

Any changes to the property settings will impact application behavior. Make sure all the users are logged out before changing any property.

Key alerts.disabled

Disable Notifications Feature

Controls whether the notifications feature is disabled or not.

Deploy Name Web Application

Category Retail Applications Framework View-Controller Layer Properties

Configurable properties affecting the Retail Applications Framework view-controller layer features

Default Value false

Current Value

Last Updated By

Last Updated Date 4/7/2017 10:10 AM

Dashboard Customization

Retail Dashboards display the status of metrics and key performance indicators relevant to the Retail Application. They are typically tailored for specific roles and they allow users to easily monitor the status of the current data within the application.

Users can access the dashboards from the application's Reports menu.

Understanding Design Pattern of Included Dashboards

Depicted below is an example of a dashboard that might appear in a Retail Application:

Figure 2–8 Dashboard Example

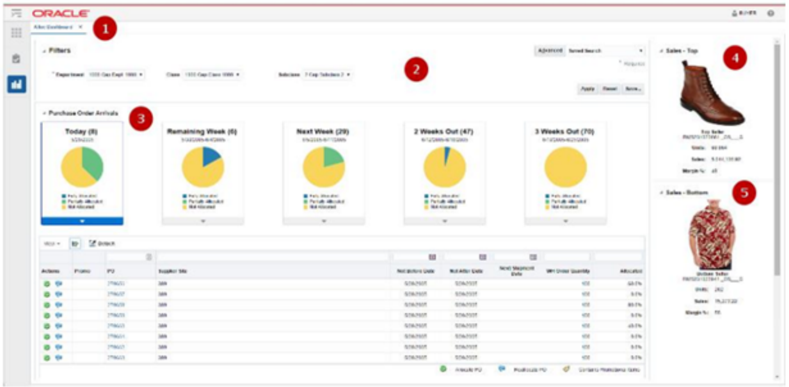


Table 2–5 Dashboard Region Descriptions

Number	Region	Description
1	Dashboard Page	A page rendering a dashboard. A dashboard is composed of 1 or more reports. The dashboard page is launched as a tab within the Retail Application

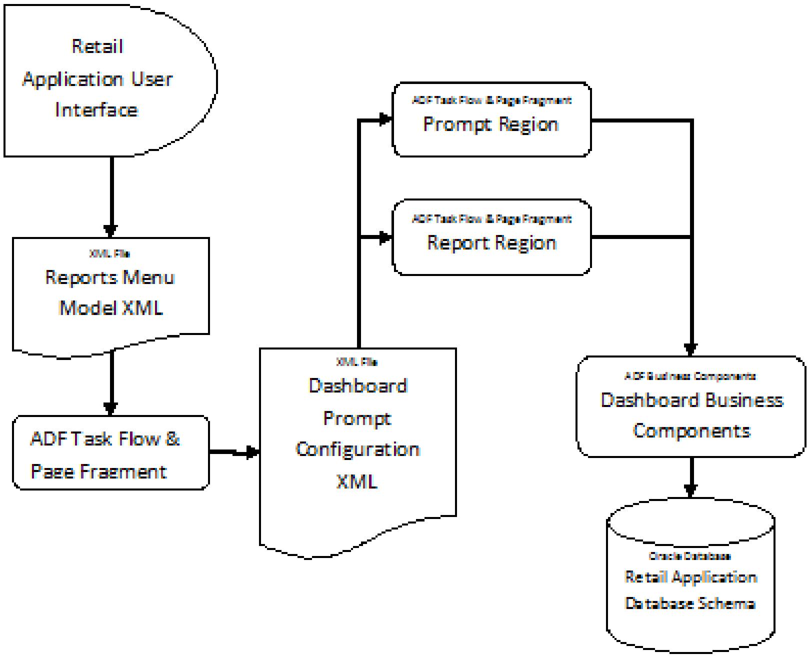
Table 2–5 (Cont.) Dashboard Region Descriptions

Number	Region	Description
2	Prompt Region	The prompt region contains a set of editable input components that allow users to modify the parameters of the various reports in the dashboard. This allows users to see different sets of data for the same set of reports.
3	Report Region	A report region shows a graphical view of the application's business data.

The dashboard page, prompts and reports are implemented as ADF bounded task Flows and page fragments. The prompts and regions are configured in an XML file called a Dashboard Prompt Configuration XML.   The dashboard prompt XML arranges visually the prompts and regions on the dashboard page.

The representation of the dashboards is depicted in the diagram below:

Figure 2–9 Representation of a Dashboard

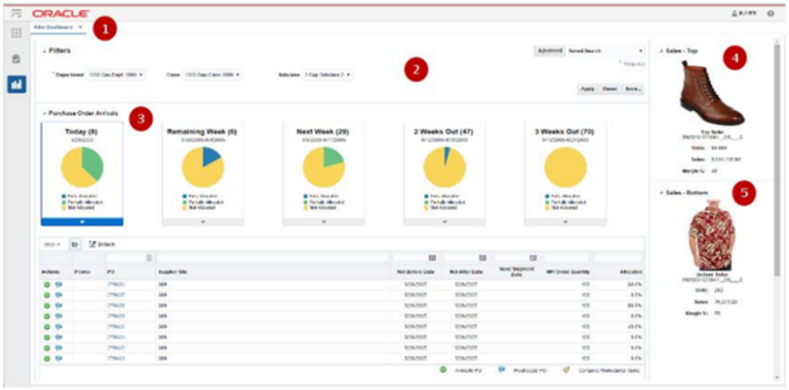

Retail Application User Interface
XML File
Reports Menu Model XML
ADF Task Flow & Paee Fraement
XML File
Dashboard Prompt Configuration XML
ADF Task Flow & Page Fragment
Prompt Region
ADF Task Flow & Page Fragment
Report Region
ADF Business Components
Dashboard Business Components
Oracle Database
Retail Application Database Schema

The dashboard task flow is launchable from the Retail Application User Interface's Reports Menu.   In order to make the report launchable, the dashboard task flow is registered in the application's reports menu model XML.

A set of ADF business components enable data from the Retail Application schema to be rendered in the report regions.

The figure below shows a rendering of a dashboard (called Allocations Dashboard) in a Retail Application:

Figure 2–10 Example Allocations Dashboard



The different parts of this example dashboard are described below:

Table 2–6 Allocation Dashboard Region Descriptions

Number	Region	Description
1	Dashboard Page	The Allocations Dashboard example contains 1 prompt and 3 reports. It is implemented as an ADF bounded task flow called AllocDashboardFlow.
2	Prompt Region	This is the prompt region that users modify to change the view of the various reports in this dashboard. It is implemented as an ADF bounded task flow called DashboardFilterFlow.
3	Order Status Report	A report region showing a row of information tiles and a detail table. It is implemented as an ADF bounded task flow called OrderStatusFlow.
4	Top Seller Report	A report region showing the top selling item. It is implemented as an ADF bounded task flow called TopSellerFlow.
5	Bottom Seller Report	A report region showing the bottom sell-ing item. It is implemented as an ADF bounded task flow called BottomSellerFlow.

The reports menu model XML file (as shown below) contains an item called allocDashboard registering the task flow, AllocDashboardFlow, into the reports menu. Note that the dashboard task flow includes a parameter called dashboardConfigXML which references the location of the Dashboard Prompt Configuration XML file.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<NavigationDefinition id="Folder_1"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns="urn:www.oracle.com:oracle.retail.apps.framework.navigation"
    xsi:schemaLocation="urn:www.oracle.com:oracle.retail.apps.framework.navigation
classpath:oracle/retail/apps/framework/uishell/navigation/model/schema/NavigationM
odel.xsd">
    <Items>
        <Item id="allocDashboard" title="Alloc Dashboard"
```

```
              shortDesc="Alloc Dashboard"
              type="taskflow">
            <url>/WEB-INF/AllocDashboardFlow.xml#AllocDashboardFlow</url>
            <Parameters>
                <Parameter
id="dashboardConfigXML">/oracle/AllocDashboardPrompt.xml</Parameter>
            <Parameters>
        </Item>
    </Items>
</NavigationDefinition>
```

The Dashboard Prompt Configuration XML file for this example is called the AllocDashboardPrompt.xml and it contains the following entries:

```
<?xml version="1.0" encoding="UTF-8" ?>
<Dashboard layout="column"
xmlns="urn:www.oracle.com:oracle.retail.apps.framework.dashboard"
           xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="urn:www.oracle.com:oracle.retail.apps.framework.dashboard
classpath:oracle/retail/apps/framework/dashboard/model/schema/dashboardSchema.xsd"
>
    <Vectors>
        <Vector>
            <Items>
                <Item id="filter" type="prompt">

<url>/WEB-INF/DashboardFilterFlow.xml#DashboardFilterFlow</url>
                </Item>
                <Item id="orderStatus" type="report">

<url>/WEB-INF/oracle/retail/apps/framework/dvtcontextawarereport/publicui/flow/DVT
ContextAwareReportFlow.xml#DVTContextAwareReportFlow</url>
                    <Parameters>
                        <Parameter
id="taskflowURL">/WEB-INF/OrderStatusFlow.xml#OrderStatusFlow</Parameter>
                        <Parameter id="parameterName1">departmentIds</Parameter>
                        <Parameter id="payloadKeyName1">DepartmentId</Parameter>
                        <Parameter id="parameterName2">classIds</Parameter>
                        <Parameter id="payloadKeyName2">ClassId</Parameter>
                        <Parameter id="parameterName3">subclassIds</Parameter>
                        <Parameter id="payloadKeyName3">SubclassId</Parameter>
                    </Parameters>
                </Item>
            </Items>
        </Vector>
        <Vector width="300px">
            <Items>
                <Item id="topSeller" type="report">

<url>/WEB-INF/oracle/retail/apps/framework/dvtcontextawarereport/publicui/flow/DVT
ContextAwareReportFlow.xml#DVTContextAwareReportFlow</url>
                    <Parameters>
                        <Parameter
id="taskflowURL">/WEB-INF/oracle/retail/apps/flow/TopSellerFlow.xml#TopSellerFlow<
/Parameter>
                        <Parameter id="parameterName1">departmentIds</Parameter>
                        <Parameter id="payloadKeyName1">DepartmentId</Parameter>
                        <Parameter id="parameterName2">classIds</Parameter>
                        <Parameter id="payloadKeyName2">ClassId</Parameter>
                        <Parameter id="parameterName3">subclassIds</Parameter>
                        <Parameter id="payloadKeyName3">SubclassId</Parameter>
                    </Parameters>
                </Item>
                <Item id="bottomSeller" type="report">

<url>/WEB-INF/oracle/retail/apps/framework/dvtcontextawarereport/publicui/flow/DVT
ContextAwareReportFlow.xml#DVTContextAwareReportFlow</url>
                    <Parameters>
                        <Parameter
id="taskflowURL">/WEB-INF/oracle/retail/apps/flow/BottomSellerFlow.xml#BottomSelle
rFlow</Parameter>
                        <Parameter id="parameterName1">departmentIds</Parameter>
                        <Parameter id="payloadKeyName1">DepartmentId</Parameter>
                        <Parameter id="parameterName2">classIds</Parameter>
                        <Parameter id="payloadKeyName2">ClassId</Parameter>
                        <Parameter id="parameterName3">subclassIds</Parameter>
                        <Parameter id="payloadKeyName3">SubclassId</Parameter>
                    </Parameters>
                </Item>
            </Items>
        </Vector>
    </Vectors>
</Dashboard>
```

The file registers the prompts and regions into a hierarchy of vectors and items. The structure of the dashboard prompt configuration XML file is explained in the following section.

The Dashboard Prompt Configuration XML File

The Dashboard Prompt Configuration XML file can be modified to change the dashboard layout or add or remove reports from the Dashboard. The root element of the model file is the "Dashboard" element. Other than schema and namespace information, the "Dashboard" element has a "layout" attribute that must be provided, and must contain a value of either "row" or "column". This attribute arranges the regions of the dashboard in rows or columns.

Inside the "Dashboard" element is a "Vectors" element, which contains a list of "Vector" elements. If the dashboard layout="row", then each "Vector" corresponds to a single row in the dashboard. Conversely, if layout="column", then each "Vector" corresponds to a column. To add a new row or column, simply add another "Vector" element inside the "Vectors" element.

Up to 12 rows and 6 columns can be displayed in a dashboard, not including separate header and footer regions. Any items beyond 12 rows or 6 columns will not appear on the dashboard.

Rows in the dashboard display from top to bottom. If layout="row", the first "Vector" will appear toward the top of the page. Columns appear from left to right, so if layout="column", the first "Vector" will appear toward the left of the page.

Each "Vector" element contains an "Items" element, which contains a list of "Item" elements. The xml structure for "Item" elements is very similar to the tasks or reports sidebar menu models.

The following attributes are supported on dashboard items:

Table 2–7 Supported Attributes

Name	Description	Required
id	A unique id for this region	Yes
type	The type of content contained in this region. Valid values: prompt, report	Yes
width	The width of this region. See below for more details.	No

Table 2–7 (Cont.) Supported Attributes

Name	Description	Required
height	The height of a region. See below for more details.	No
url	The task flow url to open in this region	Yes
Parameters	Parameters to be sent to the URL	No

In addition to the items arranged in rows or columns, you can add a header and footer region to the dashboard. Both horizontally span the full width of the dashboard, with the header appearing at the top and the footer appearing at the bottom. These can be added in the model by specifying a "HeaderItem" or "FooterItem" child of the root "Dashboard" element. These regions support all the same properties as other items in the dashboard.

Vectors and items expose width and height attributes to enable applications to resize elements to best fit on the dashboard. Certain rules and best practices apply when using these attributes.

First, if the dashboard is in row layout, then all items in a row must have the same height. The height attribute from the vector is used to specify the height of every item in that row. Since rows are assumed to span the full width, the vector width is ignored in this layout.

In the same way, when the dashboard is arranged in column layout, all items in a column must have the same width. The vector width is used to specify the width of every item in that column. Columns should expand vertically to accommodate all content, allowing a scrollbar if necessary. Therefore, vector height is ignored in this layout.

In addition to the width and height attributes, a vector also provides a dimensionsFrom attribute. The valid values of the dimensionsFrom attribute can be auto, child or parent. The dimensionsFrom attribute is used to specify whether the Items in the vector inherit their dimensions from the parent decorative box or not. When the dimensionsFrom attribute is parent, the Items in the vector will be stretched to fill any available space in the vector. When the dimensionsFrom attribute is child, the Items in the vector won't stretch but will display scroll bars if they cannot be accommodated in the available space in the decorative box. The default value of the dimensionsFrom attribute is 'auto' which gives preference to the child dimensions.

The following table indicates which attributes are used, based on which dashboard layout has been selected.

Table 2–8 Supported Attributes

	Row layout	Column layout
Vector width	ignored	valid
Vector height	valid	ignored
Item height	ignored	valid
Item width	valid	ignored

In column In column layout, either every vector width should be provided, or every width should be omitted. If all widths are omitted, columns default to divide the total width evenly. When the widths are omitted, the dimensionsFrom attribute of the vector can be set to parent if stretching of the Items is desired. If widths are provided, they should be specified as a percentage, and the sum of all widths should equal 100%.

In row layout, heights may be specified or omitted as desired. If a row's height is omitted, it will default to get the dimension from the content inside the regions. When the row's height is omitted, the dimensionsFrom attribute of the vector can be set to parent if stretching of the

Items is desired. Heights should be specified using an exact unit such as px or em. Percentages should not be used.

If these rules and best practices are ignored, results may be inconsistent or undesirable. Items may not size as intended, and horizontal scrollbars or nested vertical scrollbars may appear.

In addition to resizing entire rows or columns, individual items inside the row or column can also be resized. As mentioned above, items in a row should all have the same height, so in row layout, item height is ignored and only item width is valid. And items in a column should have the same width, so item width is ignored and only item height is valid. See the table above for details.

The same rules and best practices that apply to vector height and width also apply to setting item height and width.

Refreshing Reports on Prompt Changes

When the user changes a value on the dashboard prompt, that value translates as a parameter change on the different reports on the dashboard.

This is accomplished through a feature in ADF called Contextual Events. To put simply, contextual events are signals that a page in a task flow can generate for which pages in other task flows can listen and react to. For the included dashboards, prompt regions generate a contextual event whenever the user changes a prompt field value. When a report "hears" an event, it will process the contextual event information (called a payload) to extract the changed prompt value, use that value as a parameter to the report query and refresh the report region.

In the example depicted in the previous section, the Dashboard Prompt Configuration XML file shows all three reports registered under a wrapper task flow called the DVTContextAwareReportFlow.

```
                <Item id="bottomSeller" type="report">

<url>/WEB-INF/oracle/retail/apps/framework/dvtcontextawarereport/publicui/flow/DVT
ContextAwareReportFlow.xml#DVTContextAwareReportFlow</url>
                    <Parameters>
                        <Parameter
id="taskflowURL">/WEB-INF/oracle/retail/apps/flow/BottomSellerFlow.xml#BottomSelle
rFlow</Parameter>
                        <Parameter id="parameterName1">departmentIds</Parameter>
                        <Parameter id="payloadKeyName1">DepartmentId</Parameter>
                        <Parameter id="parameterName2">classIds</Parameter>
                        <Parameter id="payloadKeyName2">ClassId</Parameter>
                        <Parameter id="parameterName3">subclassIds</Parameter>
                        <Parameter id="payloadKeyName3">SubclassId</Parameter>
                    </Parameters>
                </Item>
```

The DVTContextAwareReportFlow wrapper task flow enables a report to listen to contextual events generated by prompt regions.

Note the pairs of parameterNameN and payloadKeyNameN registered in the <Parameters> section for the report task flow BottomSellerFlow. A pair of parameter name and payload key name tells the framework what prompt value is mapped to a specific report parameter. From the example above, parameterName1 is specified as "departmentIds" and payloadKeyName1 as "departmentIds". This means the following:

- There is a task flow parameter for the BottomSellerFlow called "departmentIds"

- When the user changes the value of the department ID in the prompt region, the system will generate a contextual event with the new department value stored as reference "DepartmentId".
- The report is context aware (as indicated by the wrapper task flow - DVTContextAwareReportFlow). When the report detects the contextual event, the framework will get the new department ID value from the payload by using the key "DepartmentId", use it to update the BottomSellerFlow task flow's "departmentId" parameter, and refresh the report region.

Adding or Replacing a Report in an Included Dashboard

This section discusses the steps needed to add or replace a report on an included dashboard.

1. In the Settings Menu, click on the Dashboard folder and then click on the name of the Dashboard.
2. Note the new report's task flow URL and parameters.
3. Modify the Dashboard Prompt Configuration XML file to add an item or replace an existing item for the new report.
4. If the report has to refresh when a prompt on the dashboard is changed by the user, make sure that report task flow is wrapped in a DVTContextAwareTaskFlow for its item entry in the dashboard prompt configuration XML file.
5. Test the Dashboard.

Removing a Report from an Included Dashboard

This section discusses the steps needed to remove a report from an included dashboard.

1. In the Settings Menu, click on the Dashboard folder and then click on the name of the Dashboard.
2. Modify the dashboard prompt configuration XML file and remove the report. You may need to readjust the position of the other reports.
3. Test the Dashboard.

Change the Layout Of An Included Dashboard

This section discusses the steps needed to change the layout of the reports in included dashboards.

1. In the Settings Menu, click on the Dashboard folder and then click on the name of the Dashboard.
2. Modify the dashboard prompt configuration XML file and rearrange the position of the item entries. Save the dashboard configuration file.
3. Reopen and test the Dashboard.

Contextual Area Customization

Contextual Reports are reports that appear in a task flow's contextual area section. Contextual Area is a collapsible section to the right of the local area that provides a space to present information that can assist users in completing their tasks.

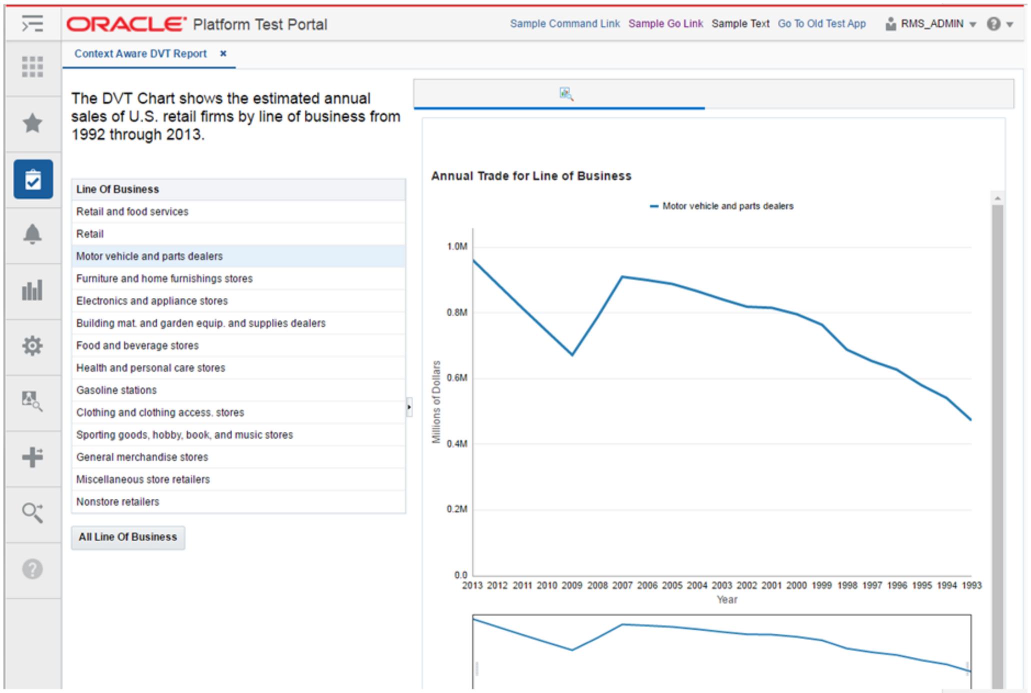
Since, the information presented in the contextual area is dependent on the task or workflow the user is on, contextual areas are associated to task flows and there can be only one contextual area per task flow.

Within a contextual area - multiple contextual reports can be configured.

Each contextual report can change its contents depending on the action being performed in the user's current workflow.

For example, in the screenshot below, as the user selects the line of business from the table, the line chart will show the annual trade for the selected line of business.

Figure 2–11 Contextual Area Example



The DVT Chart shows the estimated annual sales of U.S. retail firms by line of business from 1992 through 2013.

Line Of Business
Retail and food services
Retail
Motor vehicle and parts dealers
Furniture and home furnishings stores
Electronics and appliance stores
Building mat. and garden equip. and supplies dealers
Food and beverage stores
Health and personal care stores
Gasoline stations
Clothing and clothing access. stores
Sporting goods, hobby, book, and music stores
General merchandise stores
Miscellaneous store retailers
Nonstore retailers

Each task flow publishes contextual business events on key activities happening in the screen. Contextual reports can listen to those events and change its content depending on the payload information associated with the event.

Contextual reports can either be ADF based DVT reports or can be maintained in a separate BI reporting tool. The ADF based DVT reports are ADF taskflows, which are built using the ADF Data Visualization components. The reports maintained in an external reporting tool are URLs accessible in a web browser via a URL. Oracle Retail recommends using Oracle Business Intelligence Enterprise Edition (Oracle BI EE) for an external reporting tool.

The contextual reports are added into a Retail Application by modifying the task flow's contextual area model XML file.

Adding a URL based Contextual Report

Adding a contextual report to a task flow entails the modification of the task flow's Contextual Area Model XML file. Multiple reports can be added to the model.   Each report is rendered in a collapsible panel box.

Before adding a URL based contextual report, the retailer must have:

- Obtained information about the Retail Application's list of contextual business events that can be broadcast from various workflows. Please refer to the application operations guide for the list of business events.
- Created one or more contextual BI reports in the BI reporting tool (e.g. Oracle BI EE).
- The web URL for each report must be available in order to proceed with the steps in this section.
- Any parameters to configure the content of the report must be known and should be accessible as parameters to the dashboard's URL.

Once the above pre-requisites have been satisfied, proceed with the following steps:

1. In the Settings Menu, click on the Contextual Area folder and then click on the Contextual Area taskflow name.
2. This will open the taskflow's contextual area model xml file.
3. Add an <Item> element within the topmost <Items> element that references the task flow called ViewContextAwareReportFlow.   The ViewContextAwareReportFlow is a framework for rendering URL based reports that will be aware of contextual business events emanating from the Retail Application task flows.
4. Make sure that the <Item> id is unique. Make sure the <Item> type is "taskflow". Provide a meaningful title.
5. Populate the parameters to the ViewContextAwareReportFlow by adding the following <Parameter>/<Parameters> elements.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<NavigationDefinition … >
    <Items>

        <Item id="showCustomerMetric"
              type="taskflow"
              title="Customer Metric">
            <url>
/WEB-INF/oracle/retail/apps/framework/contextawarereport/publicui/flow/ViewCont
extAwareReportFlow.xml#ViewContextAwareReportFlow
            </url>

            <Parameters>
                <Parameter id="reportDescription">Item Metric</Parameter>
                <Parameter
id="actionType">AllocMaintItemSelectedEvent</Parameter>
                <Parameter id="primaryUrl">
<![CDATA[/faces/oracle/retail/apps/framework/contextawarereport/publicui/page/V
iewContextAwareReportTestPage.jspx?paramItemId=<selectedItemId>&paramItemType=<
selectedItemType:token01>&paramLanguage=<language>]]>
                </Parameter>
                <Parameter id="token01">regular</Parameter>
             </Parameters>

         </Item>

    </Items>
</NavigationDefinition>
```

Note:

- The <Parameter id="reportDescription"> element is the title of the contextual area report. Set this to a meaningful value.
- The <Parameter id="actionType"> element indicates the contextual business event name the report will listen to.
- The <Parameter id="primaryUrl"> element indicates the URL to the contextual area report in the BI server. The entire URL must be marked as character data (e.g. enclosed in CDATA). Note that the parameters to the URL are tokenized. The example above uses a test page called ViewContextAwareReportTestPage.jspx which can be replaced with the actual report URL.
- The "paramItemId=<selectedItemId>" portion of the URL instructs the system to pass the contextual business event payload value called selectedItemId into the URL parameter paramItemId when rendering the contextual report.
- The "paramItemType=<selectedItemType:token01>" portion of the URL instructs the system to pass the contextual business event payload value called selectedItemType into the URL parameter paramItemType when rendering the contextual report. If that payload value is empty or null at runtime, then a default value of regular is used as referenced in a <Parameter id="token01"> entry. The colon symbol separates the payload value from the default value if the payload value is null.
- The "paramLanguage=<language>" portion of the URL instructs the system about the current locale of the user. The "language" identifier is a reference to a value in the contextual event payload. This is a built-in value that all Retail Application contextual business event payloads will have.
- The <Parameter id="token01"> element holds the default value for the URL parameter selectedItemType. Token parameters hold default values and you can define up to 20 default value tokens.

6. Test the Retail Application. Go to the flow where the report was added and verify that the report is rendered correctly.

Adding a DVT Taskflow Based Contextual Report

Before adding a DVT taskflow based contextual report, the retailer must have:

- Obtained information about the Retail Application's list of contextual business events that can be broadcast from various workflows. Please refer to the application operations guide for the list of business events.
- Created one or more taskflows using the ADF DVT components. Any parameters to configure the content of the report must be known and should be accessible as taskflow parameters.

Once the above pre-requisites have been satisfied, proceed with the following steps:

1. In the Settings Menu, click on the Contextual Area folder and then click on the Contextual Area taskflow name.
2. This will open the taskflow's contextual area model xml file.

3. Add an <Item> element within the topmost <Items> element that references the task flow called DVTContextAwareReportFlow. The DVTContextAwareReportFlow is a framework for rendering ADF DVT based reports that will be aware of contextual business events emanating from the Retail Application task flows.

4. Make sure that the <Item> id is unique. Make sure the <Item> type is "taskflow". Provide a meaningful title.

5. Populate the parameters to the DVTContextAwareReportFlow by adding the following <Parameter>/<Parameters> elements.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<NavigationDefinition … >
    <Items>

        <Item id="showCustomerMetric"
              type="taskflow"
              title="Customer Metric">
            <url>
/WEB-INF/oracle/retail/apps/framework/dvtcontextawarereport/publicui/flow/DVTCo
ntextAwareReportFlow.xml#DVTContextAwareReportFlow
            </url>
            <Parameters>
                <Parameter
id="taskflowURL">/WEB-INF/oracle/retail/apps/framework/uishell/navigation/conte
xtualarea/flow/ItemMetricFlow.xml#ItemMetricFlow</Parameter>
                <Parameter id="parameterName1">itemId</Parameter>
                <Parameter id="payloadKeyName1">ItemId</Parameter>
                <Parameter
id="parameterValue1">#{payload.valueMap['ItemId']}</Parameter>
            <Parameter id="refreshOnDisclosure">#{true}</Parameter>
            </Parameters>
         </Item>

    </Items>
</NavigationDefinition>
```

Note:

- The <Parameter id="taskflowURL"> element is the URL of the DVT taskflow that will be displayed in the contextual area.
- The <Parameter id="parameterName1"> element indicates a parameter for the DVT taskflow. A maximum of 15 parameters can be specified.
- The <Parameter id="payloadKeyName1"> element indicates the name of the payload key that maps to the taskflow parameter parameterName1. A maximum of 15 payload keys can be specified. The value of the payload key in the event payload will be used for the parameter in the DVT taskflow.
- The <Parameter id="parameterValue1"> element holds the default value of the DVT taskflow. A maximum of 15 parameter values can be specified.
- The <Parameter id="refreshOnDisclosure"> element is used to refresh the DVT taskflow on the disclosure of the tab.
-
-

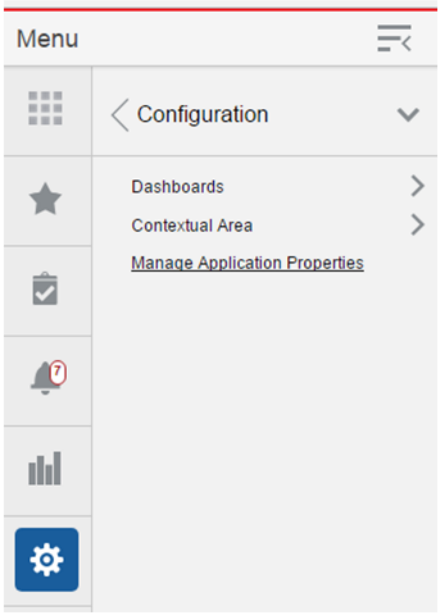
6. Test the Retail Application. Go to the flow where the report was added and verify that the report is rendered correctly.

Managing Application Configuration Properties

Configuration properties are key-value pairs recognized by Retail Applications during runtime to control application behavior. For instance, a property may exist to turn off certain features within the application.

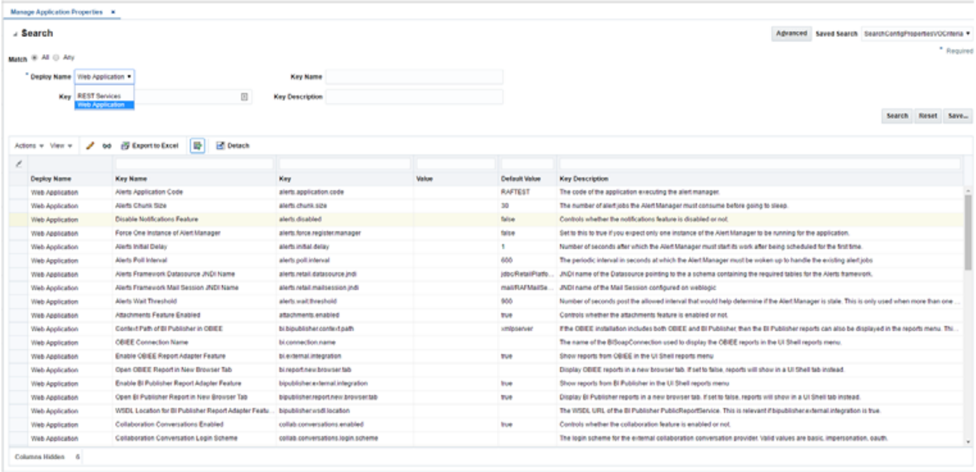
Administrators of Retail Applications can access the Manage Application Properties screen from the Settings/Configuration menu to view and edit configuration properties.

Figure 2–12   Manage Application Properties Settings Menu



The Manage Application Properties screen allows administrators to search for configuration properties by deployment (a required criteria). Properties can also be searched by keywords against key names and descriptions.

Figure 2–13   Manage Application Properties Query Panel



SearchConfigPropertiesVOCriteria ▾

* Required

Match ● All ○ Any

* Deploy Name: Web Application ▾ (REST Services, Web Application)

Key:

Key Name:

Key Description:

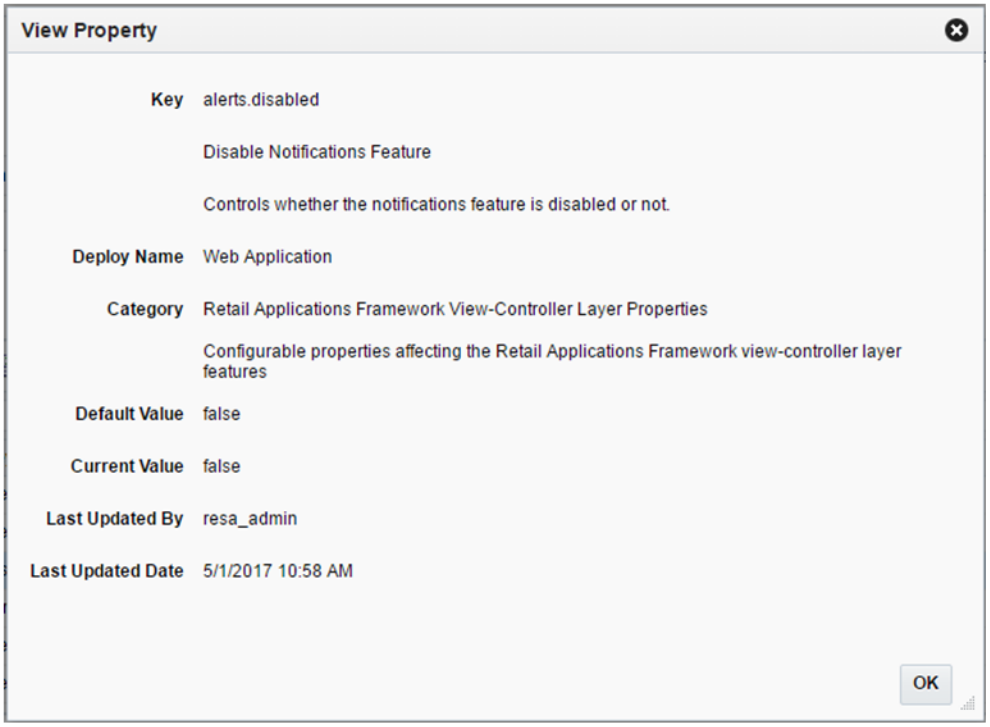
Deploy Name	Key Name	Key	Value	Default Value	Key Description
Web Application	Alerts Application Code	alerts.application.code		RAFTEST	The code of the application executing the alert manager.
Web Application	Alerts Chunk Size	alerts.chunk.size		30	The number of alert jobs the Alert Manager must consume before going to sleep.
Web Application	Disable Notifications Feature	alerts.disabled		false	Controls whether the notifications feature is disabled or not.
Web Application	Force One Instance of Alert Manager	alerts.force.registermanager		false	Set to this to true if you expect only one instance of the Alert Manager to be running for the application.
Web Application	Alerts Initial Delay	alerts.initial.delay		1	Number of seconds after which the Alert Manager must start its work after being scheduled for the first time.
Web Application	Alerts Poll Interval	alerts.poll.interval		600	The periodic interval in seconds at which the Alert Manager must be woken up to handle the existing alert jobs
Web Application	Alerts Framework Datasource JNDI Name	alerts.retail.datasource.jndi		jdbc/RetailPlatfo...	JNDI name of the Datasource pointing to the a schema containing the required tables for the Alerts framework.
Web Application	Alerts Framework Mail Session JNDI Name	alerts.retail.mailsession.jndi		mail/RAFMailSe...	JNDI name of the Mail Session configured on weblogic
Web Application	Alerts Wait Threshold	alerts.wait.threshold		900	Number of seconds post the allowed interval that would help determine if the Alert Manager is stale. This is only used when more than one ...
Web Application	Attachments Feature Enabled	attachments.enabled		true	Controls whether the attachments feature is enabled or not.
Web Application	Context Path of BI Publisher in OBIEE	bi.bipublisher.context.path		xmlpserver	If the OBIEE installation includes both OBIEE and BI Publisher, then the BI Publisher reports can also be displayed in the reports menu. Thi...
Web Application	OBIEE Connection Name	bi.connection.name			The name of the BISoapConnection used to display the OBIEE reports in the UI Shell reports menu.
Web Application	Enable OBIEE Report Adapter Feature	bi.external.integration		true	Show reports from OBIEE in the UI Shell reports menu
Web Application	Open OBIEE Report in New Browser Tab	bi.report.new.browser.tab			Display OBIEE reports in a new browser tab. If set to false, reports will show in a UI Shell tab instead.
Web Application	Enable BI Publisher Report Adapter Feature	bipublisher.external.integration		true	Show reports from BI Publisher in the UI Shell reports menu
Web Application	Open BI Publisher Report in New Browser Tab	bipublisher.report.new.browser.tab		true	Display BI Publisher reports in a new browser tab. If set to false, reports will show in a UI Shell tab instead.
Web Application	WSDL Location for BI Publisher Report Adapter Featu...	bipublisher.wsdl.location			The WSDL URL of the BI Publisher PublicReportService. This is relevant if bipublisher.external.integration is true.
Web Application	Collaboration Conversations Enabled	collab.conversations.enabled		true	Controls whether the collaboration feature is enabled or not.
Web Application	Collaboration Conversation Login Scheme	collab.conversations.login.scheme			The login scheme for the external collaboration conversation provider. Valid values are basic, impersonation, oauth.

Columns Hidden 6

Properties matching the search criteria are displayed in a table from which a user can perform the following actions:

- View details of a property
- Edit a property
- Export properties to CSV

Figure 2–14 Manage Application Properties View Dialog



View Property

Key alerts.disabled

Disable Notifications Feature

Controls whether the notifications feature is disabled or not.

Deploy Name Web Application

Category Retail Applications Framework View-Controller Layer Properties

Configurable properties affecting the Retail Applications Framework view-controller layer features

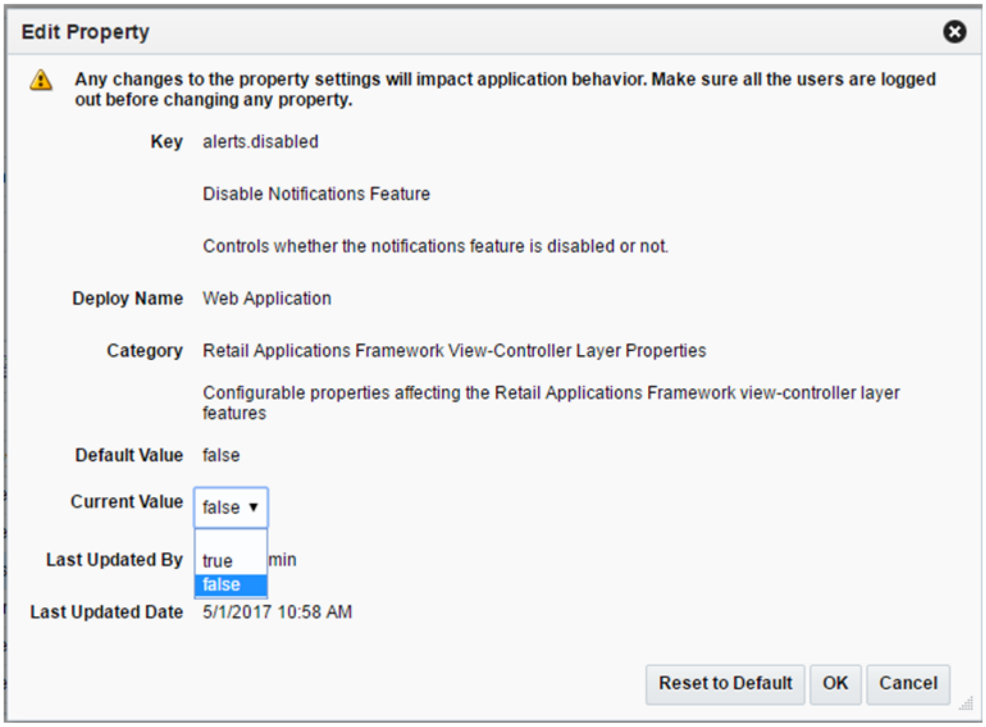
Default Value false

Current Value false

Last Updated By resa_admin

Last Updated Date 5/1/2017 10:58 AM

Figure 2–15 Manage Application Properties Edit Dialog



Edit Property

Any changes to the property settings will impact application behavior. Make sure all the users are logged out before changing any property.

Key alerts.disabled

Disable Notifications Feature

Controls whether the notifications feature is disabled or not.

Deploy Name Web Application

Category Retail Applications Framework View-Controller Layer Properties

Configurable properties affecting the Retail Applications Framework view-controller layer features

Default Value false

Current Value false ▾

Last Updated By min

Last Updated Date 5/1/2017 10:58 AM

Important Considerations Before Updating Configuration Properties

This section discusses important points administrators must consider before updating configuration properties.

Recommended Time to Update Configurations

Any changes to the configuration properties will impact application behavior. It is recommended that administrators perform configuration updates during downtimes when no users are in the system performing critical business workflows.

Effectivity of Updates

- Updates to configuration against the main Retail web application are effective immediately. However, users will need to be advised to log-out and log back into the system to see the effects of the configuration change.
- Updates to configuration against other deployments such as REST Services, calculation engines, etc are not effective immediately. It can take up to 1 hour before the updates are realized.
- A server restart will guarantee the effectivity of any property updates regardless of the type of deployment.

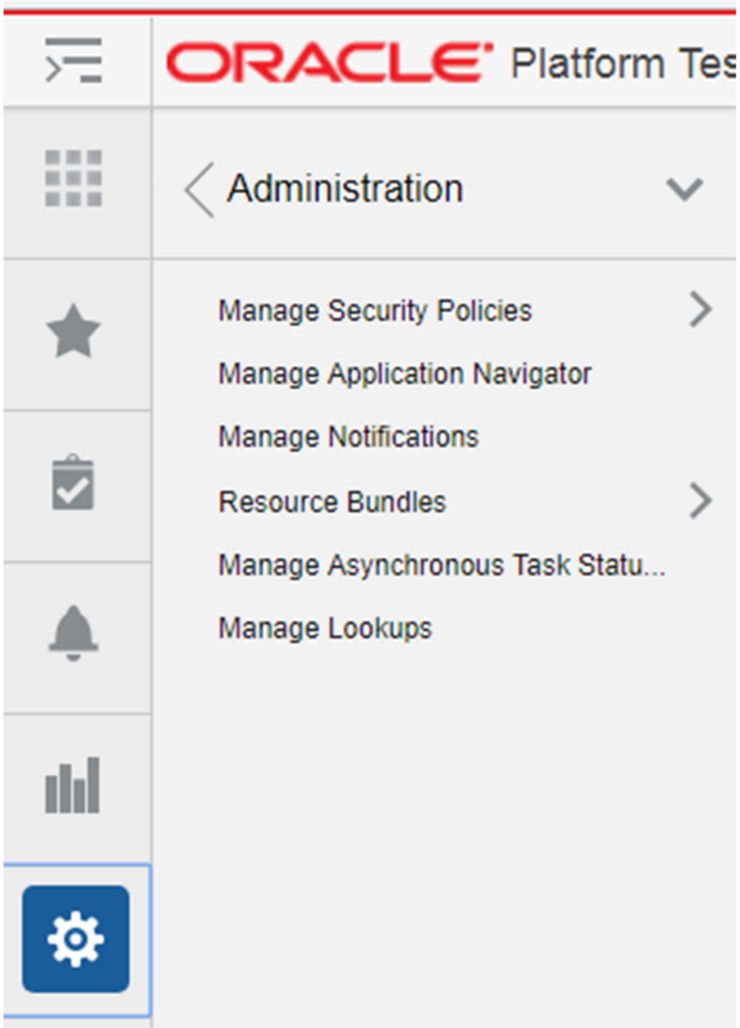
Oracle Retail Application Administration Overview

Oracle Retail Application Administration is an option in the Settings menu that can be used by an administrator to manage security policies, application navigator, notifications, resource text, Asynchronous Task Status and Manage Lookups. All the links in the administration menu except for the Manage Asynchronous Task Status and Manage Lookups links open the tasks in a new browser window using the Oracle Retail Application Administration Console (RAAC) application. The Manage Asynchronous Task Status and Manage Lookups functions exists within the application's realm and not the RAAC realm.

The following options are available in the Administration menu:

- Manage Security Policies
- Manage Application Navigator
- Manage Notifications
- Resource Bundles
- Manage Asynchronous Task Status
- Manage Lookups

Figure 2–16 Administration Menu



Manage Security Policies

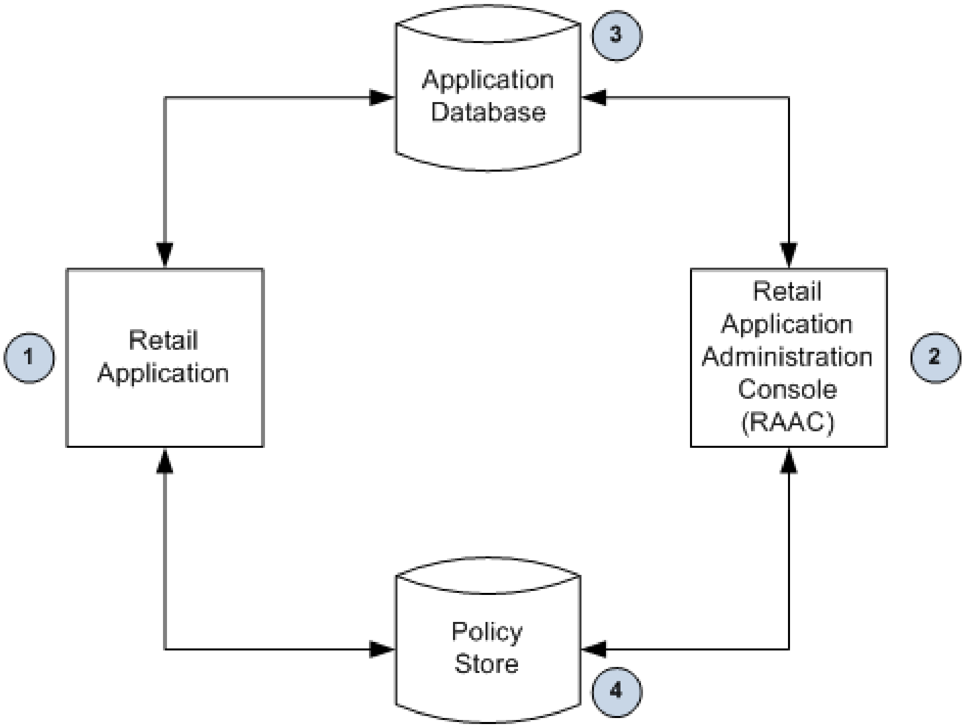
Most retailers have their security systems and groups defined and available for them to use. As part of the Oracle Retail application security set up, default enterprise roles/groups and their mappings to application roles are provided with every application. These enterprise roles/groups may not map one-to-one to retailers' security groups. Role Manager in RAAC provides a way for retailers to modify the default enterprise roles so they map to their security groups. It also provides a way for the retailers to change the mappings of the enterprise roles/groups to the application roles.

The Retail Application maintains various policy stripes in the OPSS schema. The policy stripes are maintained to ensure that the changes done by the retailer on the application security setup are preserved on the subsequent patch installs. RAAC provides a policy patching screen where the retailers can merge the changes introduced in a patch with the changes done in the application policy setup. RAAC also provide a way to manage backups of the application policy setup.

Technical Overview

The following diagram and descriptions present a high-level technical overview of the Role Management feature of RAAC.

Figure 2–17 RAAC Technical Overview Diagram



1. The RAF based applications have been designed to use RAAC. The Retail applications' installer installs RAAC as an application that can be invoked by a link in the host applications' user menu.
2. Retail Application Administration Console (RAAC) - This is the application that allows administrators to manage security policies, application navigator, notifications and resource text.
3. Application Navigator management, Notifications management and Resource Text management persist changes in the application database.
4. Manage Security Policies functionality persist changes in the Policy Store and the application database. The Policy Store uses a set of tables created under the OPSS Schema. The OPSS Schema gets created as part of the JRF addition to the WebLogic install. The policy store can hold one or more application policies and role mappings. The Policy store manages multiple application policies by keeping them in separate partitions identified by their policy stripe name.

   The Retail Application creates multiple policy stripes for the backup and patch management.

Integration

RAAC is accessed from the drop down menu displayed when clicking on the logged-in administrator user ID located on the Retail application's global menu (see Figure 2–18, "RAAC User Menu"). The link launches RAAC.

Navigation

RAAC is enabled within an application. Users can access this application from the user menu option in the Global area of the main application page and is available only for users with the following job roles:

Table 2–9 RAAC Security Privileges

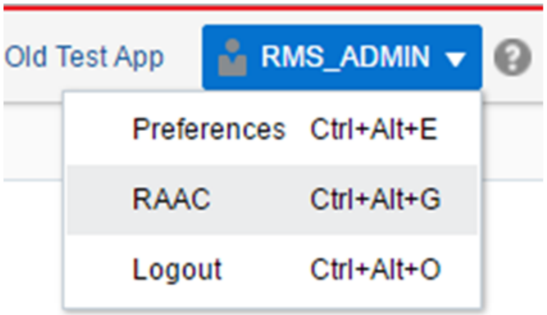
Role	Duty	Privilege
ReIM Application Administrator	Admin Duty	Application Navigator Privilege
		Role Manager Privilege
		Notification Manage Privilege
		Resource Customization Privilege
Allocation Application Administrator	Admin Duty	Application Navigator Privilege
		Role Manager Privilege
		Notification Manage Privilege
		Resource Customization Privilege
ReSA Application Administrator	Admin Duty	Role Manager Privilege
		Application Navigator Privilege
		Notification Manage Privilege
		Resource Customization Privilege
RMS Application Administrator	Admin Duty	Role Manager Privilege
		Application Navigator Privilege
		Notification Manage Privilege
		Resource Customization Privilege

Accessing RAAC

RAAC is accessed through either the links in the Administration menu of the Settings menu or through the RAAC link in the administrator's user menu on the Global (top) bar of the screen.

1. Click the RAAC application link in the user menu.

Figure 2–18 RAAC User Menu



A new tab window or browser window is launched (depending on your browser settings).

2. From the Retail applications' login screen (for non-single sign-on), enter your username and password.

Roles Explained

The following is an explanation of Enterprise (or Job) Roles and Application (or Duty and Privilege) roles:

Job Roles

Job roles are called as such because they closely map to the jobs commonly found in most retailer organizations.

Naming Convention: All retail Job role names end with' _JOB'.

Example: ALLOCATOR_JOB.

Duty Roles

Duties are tasks or responsibilities one must do on a job.

Duty roles are roles that are associated with a specific duty or a logical grouping of tasks. Generally, the list of duties for a job is a good indicator of what duty roles should be defined.

Duties that you create should be self-contained and pluggable into any existing or new job role.

Naming Convention: All retail duty role names end with' _DUTY'.

Example: ALC_ALLOC_POLICY_MAINTENANCE_MANAGEMENT_DUTY.

Privilege Roles

Privilege is the logical collection of permissions. A privilege can be associated with any number of UI components. Privileges are expressed as application roles.

Naming Convention: All retail privilege role names end with' _PRIV'.

Example: ALC_ALLOC_SEARCH_PRIV

Security

RAAC uses ADF security to implement functional security. The enforcement of functional security is delegated to the Fusion Middleware.

RAAC allows retailers to tailor Oracle Retail applications' default security models to their enterprise business model. This tool also helps retailers manage their Retail applications' security metadata. RAAC provides:

- The ability to create new Application Roles (DUTY) through the Manage Roles Mapping task.
- The ability for a retailer to change the default roles mapping based on its business needs.
- The ability for clients to backup the roles mapping to a file in their local file system.
- The ability for a retailer to preserve the changes done to the default application polices beyond patch installs and merge the policy changes introduced in a patch with the policy changes done by the retailer.
- The ability for a retailer to backup the roles mapping to a backup OPSS Stripe. The backup stripe can be used to download the backup policies at any time or to restore the application policies using the backup policies.

> **Note:** The Roles mapping changes in RAAC will only change the launching application's functional behavior and not the RAAC application itself.
>
> For additional information on changing the RAAC application Roles Mapping, see the Managing Policies with Fusion Middleware Control section in the *Securing Applications with Oracle Platform Security Services Guide*.

Task Flows

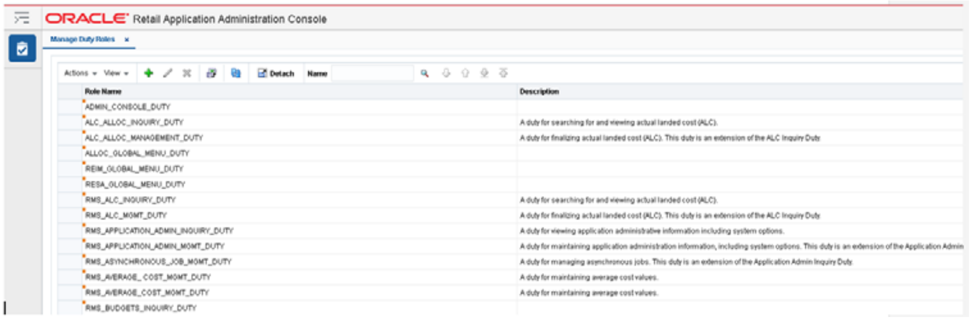
The Manage Security Policies area of RAAC consists of the following task flows to fulfill the above mentioned business requirements.

- Manage Duty Roles
- Manage Roles Mapping
- Manage Policy Patching
- Manage Backups

It is advisable that before starting to customize the Security Policies, the user should use the Manage Backups feature to make a backup of the current policies.

Manage Duty Roles

Figure 2–19 Manage Duty Roles Screen



Role Name	Description
ADMIN_CONSOLE_DUTY	
ALC_ALLOC_INQUIRY_DUTY	A duty for searching for and viewing actual landed cost (ALC).
ALC_ALLOC_MANAGEMENT_DUTY	A duty for finalizing actual landed cost (ALC). This duty is an extension of the ALC Inquiry Duty
ALLOC_GLOBAL_MENU_DUTY	
REIM_GLOBAL_MENU_DUTY	
RESA_GLOBAL_MENU_DUTY	
RMS_ALC_INQUIRY_DUTY	A duty for searching for and viewing actual landed cost (ALC).
RMS_ALC_MGMT_DUTY	A duty for finalizing actual landed cost (ALC). This duty is an extension of the ALC Inquiry Duty
RMS_APPLICATION_ADMIN_INQUIRY_DUTY	A duty for viewing application administrative information including system options.
RMS_APPLICATION_ADMIN_MGMT_DUTY	A duty for maintaining application administration information, including system options. This duty is an extension of the Application Admin
RMS_ASYNCHRONOUS_JOB_MGMT_DUTY	A duty for managing asynchronous jobs. This duty is an extension of the Application Admin Inquiry Duty
RMS_AVERAGE_ COST_MGMT_DUTY	A duty for maintaining average cost values.
RMS_AVERAGE_COST_MGMT_DUTY	A duty for maintaining average cost values.
RMS_BUDGETS_INQUIRY_DUTY	

The Manage Duty Role task flow allows users to create or delete duties. Users can create a new duty role to map according to the retailers enterprise business model.

When a user clicks the manage duty role task flow from the regional area, it opens a new tab in the local area. A table is displayed with all the duties associated with the application. The table toolbar has the following action menu:

- Add
- Edit
- Delete
- Export to Excel

A quick search component is provided on the table toolbar to quickly look up any desired record.

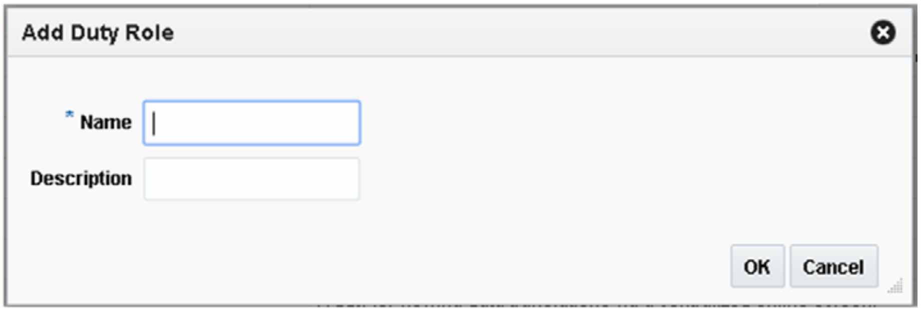
Add

The Add action is enabled at all times and allows you to add a new duty role.

Add a Duty Role

1. From the Actions menu, select Add. The Add Duty Role dialog is displayed.

Figure 2–20 Add Duty Role Dialog



Add Duty Role

2. Enter a duty name and (optionally) a description for the new duty role and click OK.

   Upon entering a name and moving to the Description field or when you click OK, RAAC performs a validation to prevent name duplication. If the name entered already exists, the following error message is displayed; A Duty with this name already exists. Enter a unique name. If the duty name is unique, the new duty is created.

   All newly created duties are reflected in the Policy Store, allowing them to be mapped to a role.

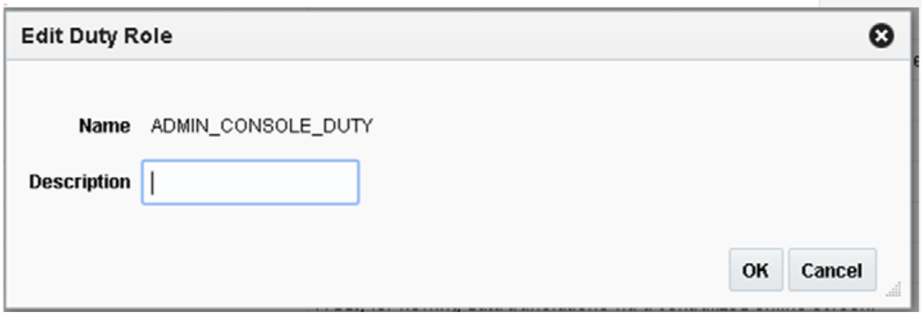
Edit

The Edit action is enabled when a duty role is selected. The Edit action is used to add or modify the description of an existing duty role.

Edit a Duty Role

1. Select the duty role you want to edit.
2. From the Actions menu, select Edit. The Edit Duty Role dialog is displayed.

Figure 2–21 Edit Duty Role Dialog



Edit Duty Role

Name ADMIN_CONSOLE_DUTY

Description

3. Add or modify the description of the duty role and click OK. Any updates to the description are updated to the mapping that the duty is mapped against.

Delete

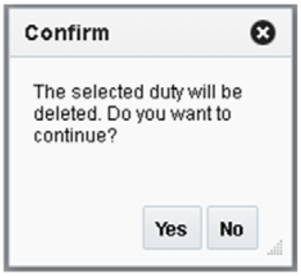
The Delete action is enabled when you select a level that can be deleted from the database.

Only empty duty roles that do not contain any child duty or child privilege roles can be deleted. This is because a child privilege is associated with application code. Therefore, to delete the duty role, you must first remove all mappings between the duty and the child duties and privileges. If you attempt to delete a duty role without first removing the mapping, the following error message is displayed; You cannot delete duty because it has duties or privileges associated with it. Remove these mappings using Manage Roles Mapping task.

Delete a Duty Role

1. Select the duty role you want to delete.
2. From the Actions menu, select Delete. The Confirm dialog is displayed.

Figure 2–22 Delete Duty Role Confirmation Dialog



Confirm

The selected duty will be deleted. Do you want to continue?

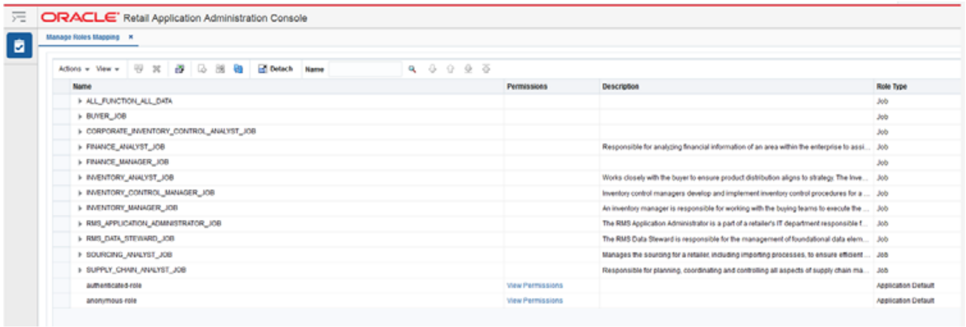
3. Click Yes to delete the selected duty role.

Export to Excel

The Export to Excel action is enabled whenever you have the Manage Duty Roles window open. This action allows you to export the Manage Duty Roles list to a Microsoft Excel spreadsheet.

Manage Roles Mapping

Figure 2–23 Manage Roles Mapping Screen



Name	Permissions	Description	Role Type
ALL_FUNCTION_ALL_DATA			Job
BUYER_JOB			Job
CORPORATE_INVENTORY_CONTROL_ANALYST_JOB			Job
FINANCE_ANALYST_JOB		Responsible for analyzing financial information of an area within the enterprise to assi...	Job
FINANCE_MANAGER_JOB			Job
INVENTORY_ANALYST_JOB		Works closely with the buyer to ensure product distribution aligns to strategy. The Inve...	Job
INVENTORY_CONTROL_MANAGER_JOB		Inventory control managers develop and implement inventory control procedures for a ...	Job
INVENTORY_MANAGER_JOB		An inventory manager is responsible for working with the buying teams to execute the ...	Job
RMS_APPLICATION_ADMINISTRATOR_JOB		The RMS Application Administrator is a part of a retailer's IT department responsible f...	Job
RMS_DATA_STEWARD_JOB		The RMS Data Steward is responsible for the management of foundational data elem...	Job
SOURCING_ANALYST_JOB		Manages the sourcing for a retailer, including importing processes, to ensure efficient ...	Job
SUPPLY_CHAIN_ANALYST_JOB		Responsible for planning, coordinating and controlling all aspects of supply chain ma...	Job
authenticated-role	View Permissions		Application Default
anonymous-role	View Permissions		Application Default

The Manage Roles Mapping task allows a user to add or remove duties or privileges associated with a job role.

When the user clicks on the Manage Roles Mapping link, a new tab is opened in the local area that displays a tree table with the already associated roles of the respective application (that is, the source application from which RAAC was launched). You can then choose to perform the following actions:

- Duplicate
- Delete
- Export to Excel
- Select and Add
- Remap

A quick search component is provided on the table toolbar to quickly look up any desired record.

Duplicate

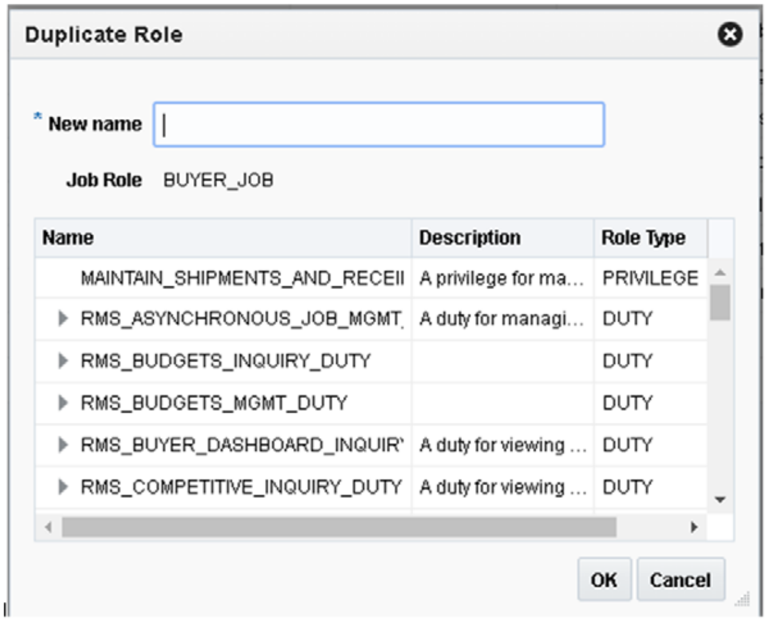
The Duplicate action allows you to copy and paste existing job roles to create a new role. For example:

Within a retailer enterprise security system there are two security groups called Allocator_xyz and Assistant_ Allocator_xyz. By default, only the Allocator role is provided. The Assistant Allocator role is a trimmed down version of the Allocator role with fewer privileges. You can use the Duplicate action to copy the Allocator role and then edit the privileges of the new role.

Duplicate a Job Role

1. Select the job role you want to duplicate.
2. From the Actions menu, select Duplicate. The Duplicate Role dialog is displayed.

Figure 2–24 Duplicate Role Dialog



Duplicate Role

* New name

Job Role BUYER_JOB

Name	Description	Role Type
MAINTAIN_SHIPMENTS_AND_RECEII	A privilege for ma...	PRIVILEGE
RMS_ASYNCHRONOUS_JOB_MGMT_	A duty for managi...	DUTY
RMS_BUDGETS_INQUIRY_DUTY		DUTY
RMS_BUDGETS_MGMT_DUTY		DUTY
RMS_BUYER_DASHBOARD_INQUIR'	A duty for viewing ...	DUTY
RMS_COMPETITIVE_INQUIRY_DUTY	A duty for viewing ...	DUTY

3. Enter a name for the duplicated role and click OK.

Upon clicking OK or tabbing out of the field, the New name is validated. The validation checks for a valid name in the enterprise security solution of the retailer. If it finds a match, then it allows the user to proceed. If the name is not valid, an error is displayed.

Delete

The Delete action is enabled when a duty or privilege role is selected.

Duty Role: When the user selects a duty and clicks Delete, the user is prompted with a warning message. Click 'Yes' and the selected duty role mapping will be removed from the corresponding Job role. All other Job roles mappings with that duty role will not be affected.

Privilege Role: When the user selects a privilege and clicks Delete, the user is prompted with a warning message. Click 'Yes' and the selected privilege role mapping will be removed from the corresponding duty role. All the Job roles having that duty role mapping will lose that privilege.

> **Note:** The Delete action does not delete the role from the application policies, it only removes the mapping.

Export to Excel

The Export to Excel action is enabled whenever you have the Manage Roles Mapping window open. This action allows you to export the Manage Roles Mapping list to a Microsoft Excel spreadsheet.

Select and Add

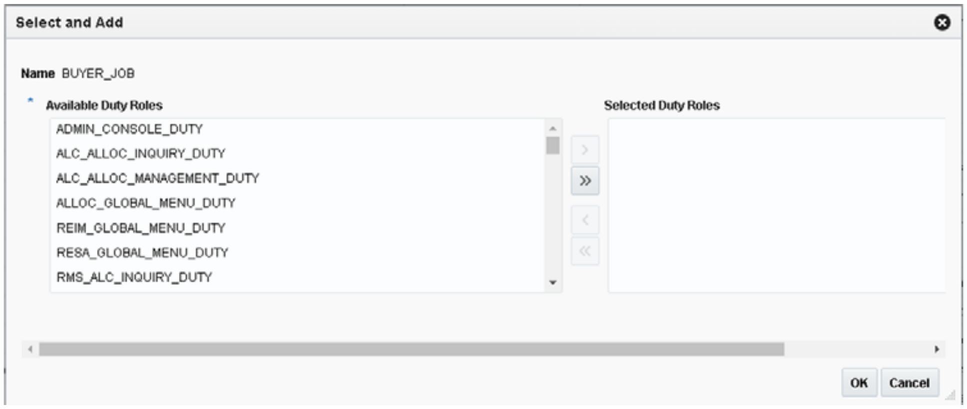
Select and Add is enabled when a job or a duty is selected. Select and Add allows you to do the following:

- Add duty roles to job roles
- Add duty and privilege roles to duty roles

Select and Add a Duty

1. Select the job role to which you want to add a duty role.
2. From the Actions menu, select Select and Add. The Select and Add dialog is displayed.

Figure 2–25 Select and Add Dialog



Select and Add

Name BUYER_JOB

* Available Duty Roles

ADMIN_CONSOLE_DUTY
ALC_ALLOC_INQUIRY_DUTY
ALC_ALLOC_MANAGEMENT_DUTY
ALLOC_GLOBAL_MENU_DUTY
REIM_GLOBAL_MENU_DUTY
RESA_GLOBAL_MENU_DUTY
RMS_ALC_INQUIRY_DUTY

Selected Duty Roles

The Select and Add dialog has selected job or duty name displayed and a shuttle component for the user to select from all the available duties or privileges for the applications.

3. Select one or multiple duties and privileges and click OK to select and add them to the job role.

   If you select a duty level then all the associated privileges with it are inherited to the job role. If a privilege is selected then only that privilege is added under the selected duty role.

> **Note:** To add a new job role, the user should use the Duplicate feature.

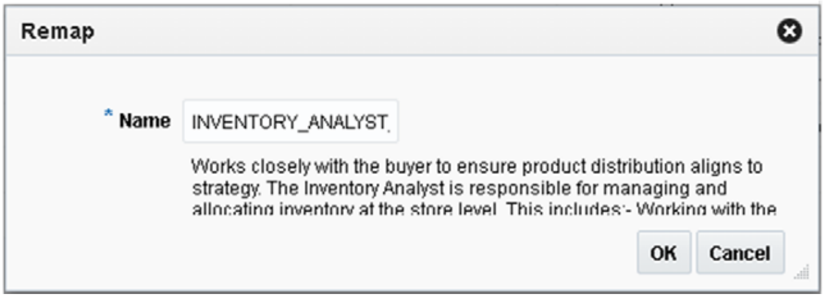
Remap

The Remap action is enabled when a job or duty is selected. The Remap action is used to move mapping from one role to another role. During this process, a new role is created and all the associated roles beneath the previous role are moved into the new role, leaving the old role as an orphan or with other roles associated with it.

Remap a Role

1. Select the role you want to remap.
2. From the Actions menu, select Remap. The Remap dialog is displayed.

Figure 2–26 Remap Dialog



Remap

* Name INVENTORY_ANALYST

Works closely with the buyer to ensure product distribution aligns to strategy. The Inventory Analyst is responsible for managing and allocating inventory at the store level. This includes:- Working with the

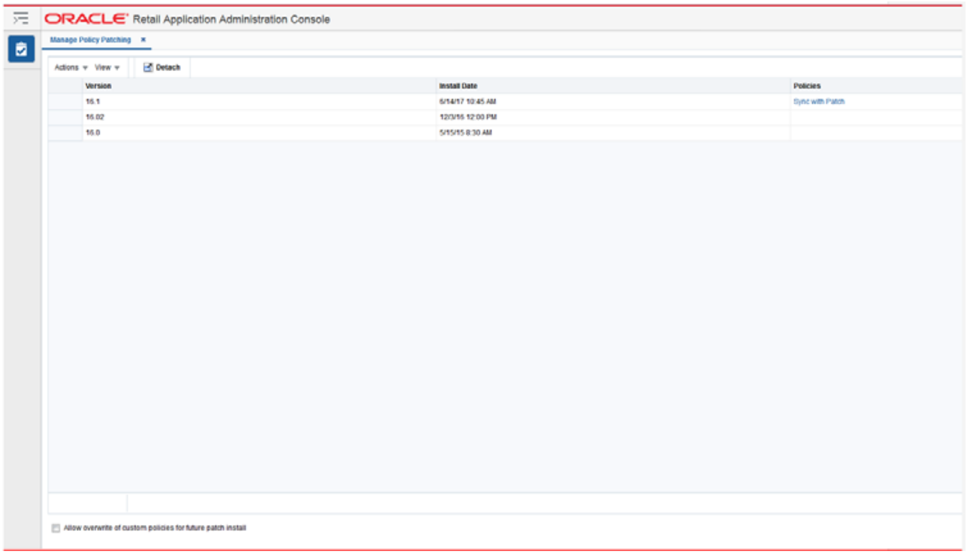
3. Enter a Name and (optionally) a Description for the remapped role.

   Upon clicking OK, the New name is validated. The validation checks for a valid name in the enterprise security solution of the retailer. If it finds a match, then it allows the user to proceed. If the name is not valid, an error is displayed.

   Job roles are handled in a different manner. When a job role is selected and remapped it will just change the current mapping to the new mapping without creating any new job role to be left as an orphan. This validation should be done once the user enters the new name and clicks OK. If there is no matching record found an error is displayed.

Manage Policy Patching

Figure 2–27 Manage Policy Patching Screen Patch History View

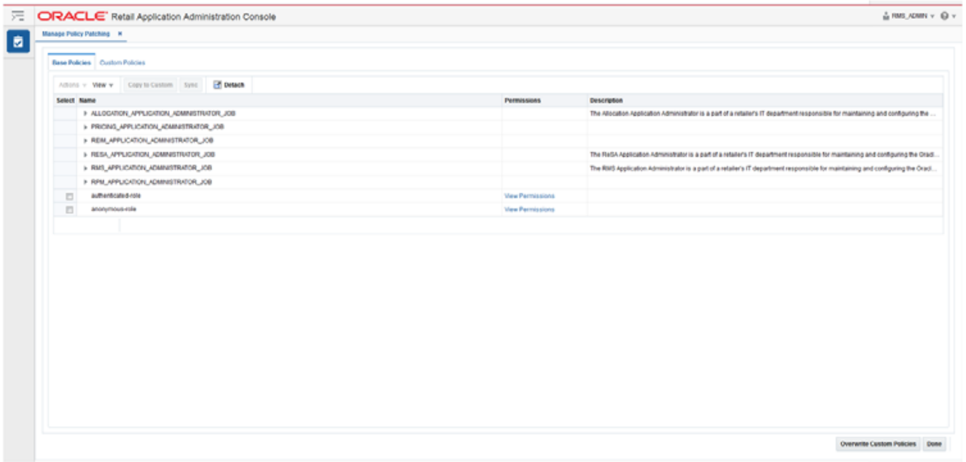


Version	Install Date	Policies
16.1	6/14/17 10:45 AM	Sync with Patch
16.02	12/3/16 12:00 PM	
16.0	5/15/15 8:30 AM	

□ Allow overwrite of custom policies for future patch install

The Manage Policy Patching screen displays two different views. The first view is called the Patch History view. The Patch History view displays the list of patches applied to the application. The latest patch provides a link to synchronize the changes introduced in the patch with the changes done by the retailer on the applications policies. The Patch History view also provides a check box to allow overwrite of the application policies for future patch installs. When this check box is unchecked, the application installer will not overwrite any changes done by the retailer on the application policies. The retailer should merge the changes introduced in the patch with the changes done on the application policies using the Sync with Patch view. When the checkbox is checked, the application installer will overwrite the application policies with the ones in the patch. The installer backs up the custom policies before overwriting application policies. The backups can be managed using the Manage Backups screen.

Figure 2–28 Manage Policy Patching Screen Sync With Patch View



Select	Name	Permissions	Description
	ALLOCATION_APPLICATION_ADMINISTRATOR_JOB		The Allocation Application Administrator is a part of a retailer's IT department responsible for maintaining and configuring the ...
	PRICING_APPLICATION_ADMINISTRATOR_JOB		
	REIM_APPLICATION_ADMINISTRATOR_JOB		
	RESA_APPLICATION_ADMINISTRATOR_JOB		The ReSA Application Administrator is a part of a retailer's IT department responsible for maintaining and configuring the Oracl...
	RMS_APPLICATION_ADMINISTRATOR_JOB		The RMS Application Administrator is a part of a retailer's IT department responsible for maintaining and configuring the Oracl...
	RPM_APPLICATION_ADMINISTRATOR_JOB		
□	authenticated-role	View Permissions	
□	anonymous-role	View Permissions	

The Manage Policy Patching Screen Sync with Patch view provides a way for the retailer to synchronize the changes introduced in a patch with the changes done on the application policy setup. The Sync with Patch view displays two different tabs. The first tab called Base Policies displays the application policies that came in the patched application. The second tab called Custom Policies displays the application policies that the retailer has changed as per its business needs. The retailer can merge the changes introduced in the patch with the custom policy change using this view. In the current version of RAAC, the retailer can make use of the patch documented policy changes to help guide what changes to look for and merge.

The Sync with Patch view in the Manage Policy Patching screen provides the following actions

- Copy to Custom
- Sync
- View Permissions
- Overwrite Custom Policies
- Done
- Refresh

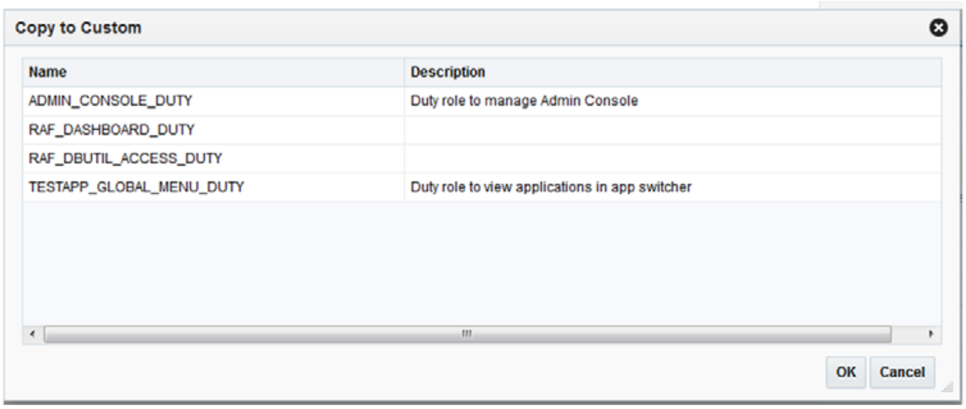
Copy to Custom

The Copy to Custom action is enabled when a privilege is selected and the privilege does not exist in the custom application policies. The Copy to Custom action copies the privilege to the selected duty in the custom application policy setup.

Copy Privilege to Duty

1. Select the privilege in the base policies.
2. If the privilege does not exist in the custom policies, the Copy to Custom action will be enabled.
3. Click on Copy to Custom action to display the Copy to Custom Dialog.

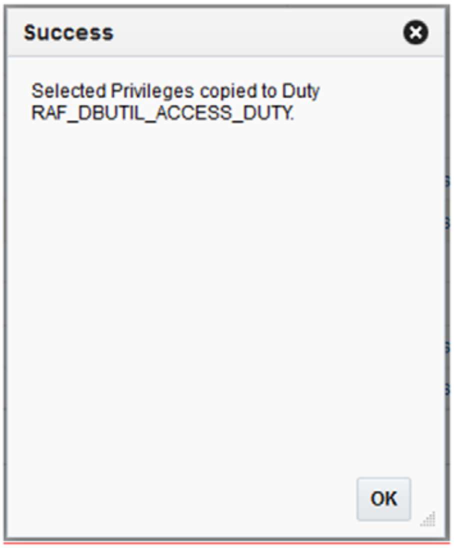
Figure 2–29 Copy to Custom Dialog



Name	Description
ADMIN_CONSOLE_DUTY	Duty role to manage Admin Console
RAF_DASHBOARD_DUTY	
RAF_DBUTIL_ACCESS_DUTY	
TESTAPP_GLOBAL_MENU_DUTY	Duty role to view applications in app switcher

4. Select the duty where the privilege should be copied.
5. Click OK to copy the privilege to selected duty.
6. Successful copy will display the success dialog.

Figure 2–30 Copy to Custom Success Dialog



Selected Privileges copied to Duty RAF_DBUTIL_ACCESS_DUTY.

Sync

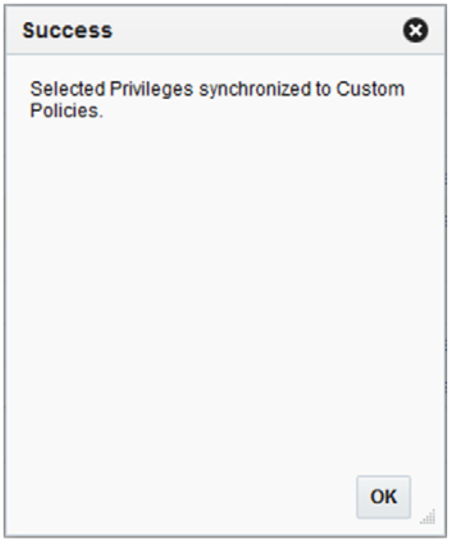
The Sync action is enabled when a privilege is selected and the privilege exists in the custom application policies. The Sync action synchronizes the permissions in the selected privilege with the same privilege in the custom application policy setup.

Synchronize Permissions in a Privilege

1. Select privilege in base policies.
2. If the privilege exists in the custom policies then the Sync action will be enabled.
3. Click on Sync to synchronize the permissions with the same privilege in the custom policy setup.

4. Successful sync will display the success dialog.

Figure 2–31 Sync Success Dialog

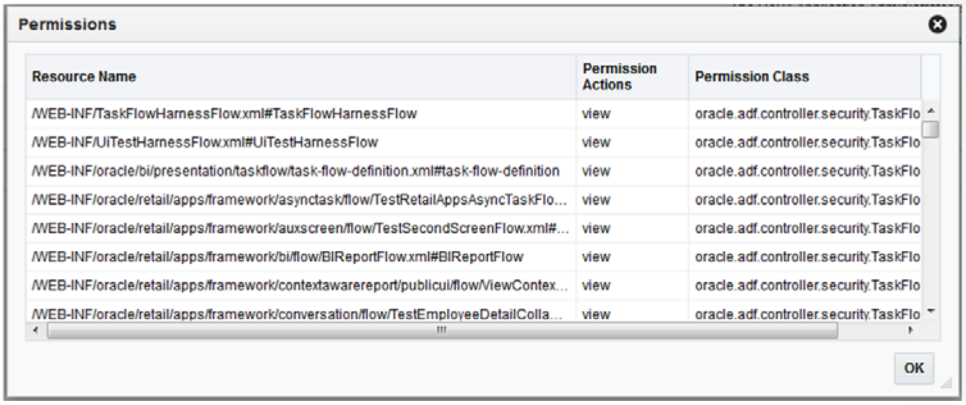


Selected Privileges synchronized to Custom Policies.

View Permissions

The View Permissions link is used to display the permissions associated with a privilege. This link opens up a popup that displays the Resource Name, Permission Actions and Permission Class for permissions.

Figure 2–32 View Permissions Dialog

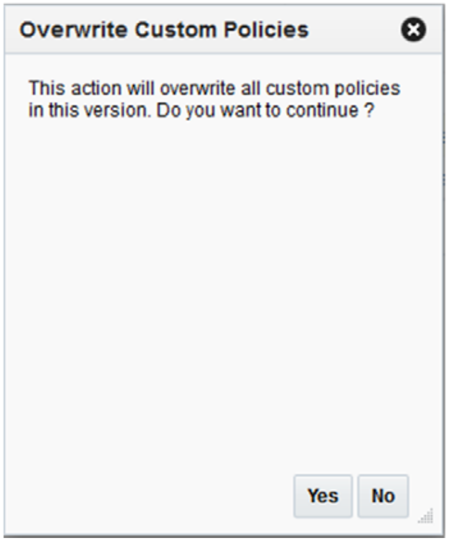


Resource Name	Permission Actions	Permission Class
/WEB-INF/TaskFlowHarnessFlow.xml#TaskFlowHarnessFlow	view	oracle.adf.controller.security.TaskFlo
/WEB-INF/UiTestHarnessFlow.xml#UiTestHarnessFlow	view	oracle.adf.controller.security.TaskFlo
/WEB-INF/oracle/bi/presentation/taskflow/task-flow-definition.xml#task-flow-definition	view	oracle.adf.controller.security.TaskFlo
/WEB-INF/oracle/retail/apps/framework/asynctask/flow/TestRetailAppsAsyncTaskFlo...	view	oracle.adf.controller.security.TaskFlo
/WEB-INF/oracle/retail/apps/framework/auxscreen/flow/TestSecondScreenFlow.xml#...	view	oracle.adf.controller.security.TaskFlo
/WEB-INF/oracle/retail/apps/framework/bi/flow/BIReportFlow.xml#BIReportFlow	view	oracle.adf.controller.security.TaskFlo
/WEB-INF/oracle/retail/apps/framework/contextawarereport/publicui/flow/ViewContex...	view	oracle.adf.controller.security.TaskFlo
/WEB-INF/oracle/retail/apps/framework/conversation/flow/TestEmployeeDetailColla...	view	oracle.adf.controller.security.TaskFlo

Overwrite Custom Policies

The Overwrite Custom Policies action overwrites the current application policy setup with the application policies available in the patched application. The action will cause the loss of any changes done by the retailer on the application policies. The action displays a warning popup before overwriting application policies with the patched policies. The action also backs up the application policies before overwriting and can be retrieved using the Manage Backups screen.

Figure 2–33 Overwrite Custom Policies Dialog



Overwrite Custom Policies

This action will overwrite all custom policies in this version. Do you want to continue ?

Done

The Done action takes the user back to the Patch History view of the Manage Policy Patching screen.

Refresh

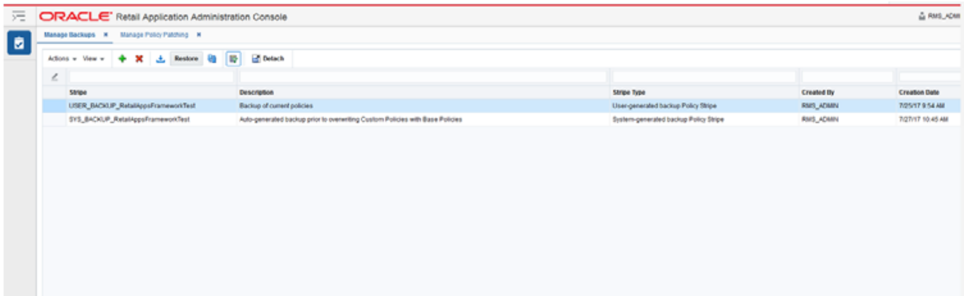
The Refresh action is only available in the Custom Policies tab of the Sync with Patch view of the Manage Policy Patching screen. The action is used to refresh the custom application policies. The action can be used to verify the changes in the custom policies after a successful Sync or Copy to Custom action from the base policies.

Note: Note

The Sync with Patch screen can be used for the synchronization of the privilege and its permissions from the patched application policies to the custom application policies. If a new duty role has been introduced in a patch then the Manage Duty Role screen should be used to create a duty role and Manage Role Mapping screen should be used to assign it to the appropriate job role. Once the new duty role has been created and assigned to a job role, the Copy to Custom action can be used to assign privileges to that duty.

Manage Backups

Figure 2–34 Manage Backups



Stripe	Description	Stripe Type	Created By	Creation Date
USER_BACKUP_RetailAppsFrameworkTest	Backup of current policies	User-generated backup Policy Stripe	RMS_ADMIN	7/25/17 9:54 AM
SYS_BACKUP_RetailAppsFrameworkTest	Auto-generated backup prior to overwriting Custom Policies with Base Policies	System-generated backup Policy Stripe	RMS_ADMIN	7/27/17 10:45 AM

The Manage Backups screen is used to maintain the application policy backups. The backups can be used to restore the application policies back to the original state if something goes wrong with the application policy setup. The backups can be created by the following actions

- Installer creates a backup before overwriting the application polices during a patch install. The installer created backup is prefixed with the name SYS_BACKUP. The installer overwrites the application policies and creates a backup only if the 'Allow Overwrite of Custom Policies' flag is checked in the Manage Policy Patching screen.
- A user can create a backup using the Create action on the Manage Backups screen. The user created backup is prefixed with the name USER_BACKUP.
- A user can initiate a backup using the 'Overwrite Custom Policies' action on the Manage Policy Patching screen. The Overwrite Custom Policies action creates a backup before overwriting the custom policies. The backup created by the Overwrite Custom Policies action is prefixed with the name SYS_BACKUP.

The Manage Backups screen provides the following actions:

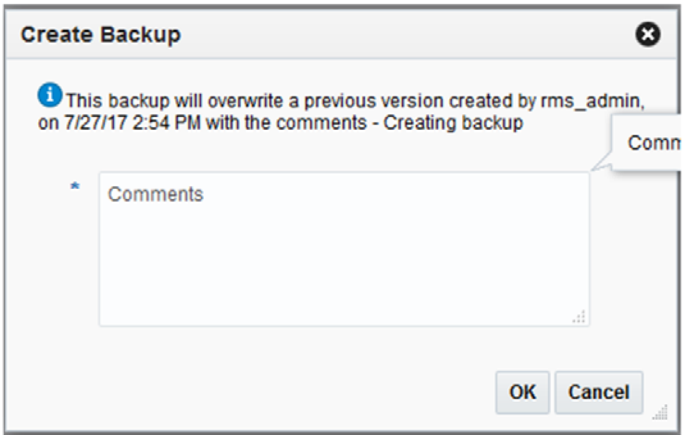
- Create
- Delete
- Download
- Restore
- Refresh

Create

The Create action is used to create a backup of the current application policies. The backup stripe name will be prefixed with the text USER_BACKUP. The create action opens up a popup where the user can enter the comments for the backup.

The RAAC application allows only one user initiated backup. If a backup was already created by an administrator for the current application policies, it will be overwritten.

Figure 2–35 Create Backup Dialog



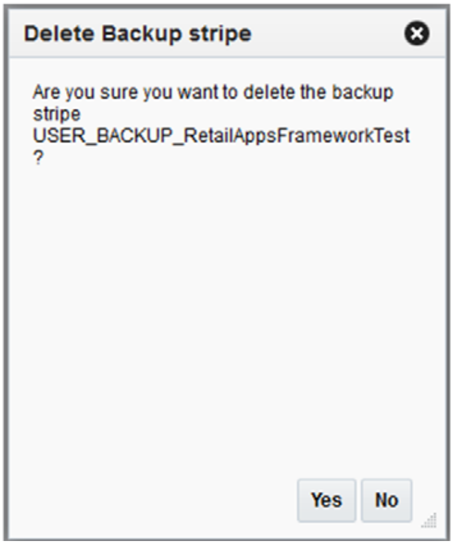
This backup will overwrite a previous version created by rms_admin, on 7/27/17 2:54 PM with the comments - Creating backup

* Comments

Delete

The delete action is used to delete the selected backup stripe. A confirmation dialog is displayed before deleting the backup.

Figure 2–36 Delete Backup Confirmation Dialog



Are you sure you want to delete the backup stripe USER_BACKUP_RetailAppsFrameworkTest ?

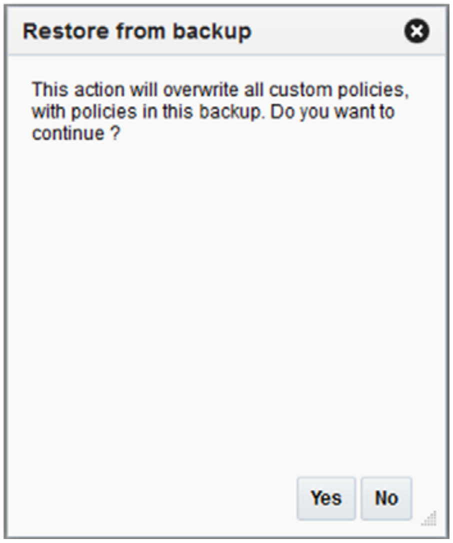
Download

The download action is used to download the selected backup stripe in an xml format. It will generate a file called backup.xml which can be stored on the device where the browser is running. The xml file can be opened in JDeveloper to look at the changes in the backup.

Restore

The Restore action will overwrite the current application policy setup with the application policies available in the backup. A confirmation dialog is displayed to the user before restoring.

Figure 2–37 Restore from Backup Dialog



Restore from backup

This action will overwrite all custom policies, with policies in this backup. Do you want to continue ?

Refresh

The Refresh action will refresh the backup table.

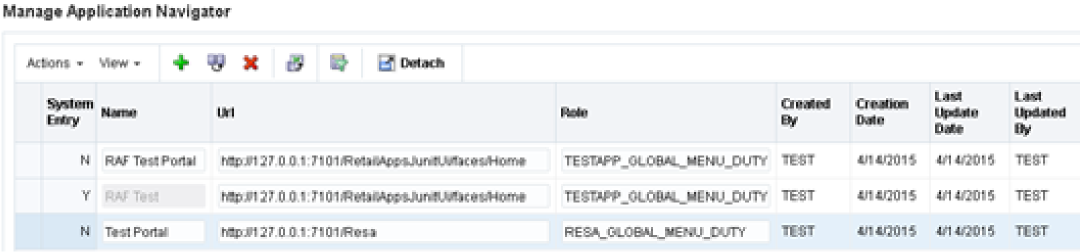
Manage Application Navigator

Application Navigator allows users to launch different applications from their current application. This lets users shuffle between multiple applications based on their privileges and avoid having to open a new tab and enter a new URL to launch an application. Users can instead click on the application, which will launch that application in a new tab or window based on the browser settings. If the application is a Single Sign-On (SSO) deployment then the user will be logged in by default and the default application page is displayed. If the deployment is non-SSO then the user is prompted to log in.

If a user has access to multiple applications (based on their defined role) they are able to see the list of available applications under the Application Navigator menu. If the user does not have access to any other applications, only the current application name will be displayed in the application navigator list.

Managing Application Links

Figure 2–38 Manage Application Navigator Screen



Manage Application Navigator

System Entry	Name	Url	Role	Created By	Creation Date	Last Update Date	Last Updated By
N	RAF Test Portal	http://127.0.0.1:7101/RetailAppsJunitUI/faces/Home	TESTAPP_GLOBAL_MENU_DUTY	TEST	4/14/2015	4/14/2015	TEST
Y	RAF Test	http://127.0.0.1:7101/RetailAppsJunitUI/faces/Home	TESTAPP_GLOBAL_MENU_DUTY	TEST	4/14/2015	4/14/2015	TEST
N	Test Portal	http://127.0.0.1:7101/Resa	RESA_GLOBAL_MENU_DUTY	TEST	4/14/2015	4/14/2015	TEST

In order for users to see an application in the Application Navigator menu, they need to belong to the role associated with that application on the Manage Application Navigator screen. Only an application administrator is aware of the links to the different installed applications. RAAC provides the ability to add, modify and remove the links so they appear or not appear in the Application Navigator menu. Application administrator can determine which application role has access to which application based on customer's security model. For example, suppose Allocation users belonging to Allocation role X are to see the Invoice Match application link in the Allocation's Application Navigator menu. The administrator would launch RAAC from Allocation, navigate to Manage Application Navigator, add an entry for Invoice Match and enter X for the role.

System Records

A system row in RAF_INSTALLED_APPS table is one with the SYSTEM_ENTRY column set to 'Y'. These rows are locked and only administrators will be allowed to change the description, role, and URL.

Each application has one system record inserted at installation time in the RAF_INSTALLED_APPS table. The system records cannot be added or deleted from RAAC. However, administrators are able to modify the role and URL associated with that system record's application using RAAC.

System records are not displayed in the Application Navigator list on the applications. Such records can be duplicated in RAAC (with SYSTEM_ENTRY='N') which then makes them available on the Application Navigator list.

Add

The Add action is enabled at all times and allows an administrator to add a new Application Navigator URL.

Add an Application Navigator URL

1. From the Actions menu, select Add. A new, empty Application Navigator entry is added to the Manage Application Navigator table.
2. Enter a name, the application URL, and the role to which the URL applies. The remaining columns are populated automatically.
3. System records cannot be inserted from the Manage Application Navigator screen. This will be created once per application by the installer at the application install time.

Modify

While all the columns on a row can be modified, only the ROLE and URL columns of a System Record can be modified by the administrators.

Duplicate

The Duplicate action adds a copy of each selected row below its originating row. The object name or unique identifier of the duplicate row is "Copy of Object Name" and appears in edit mode. Validation is performed so that a user is not presented with multiple applications with the same application name.

When a system record is duplicated, a copy of the record is created with the System_Entry column set to 'N' and thus made available on the Application Navigator list.

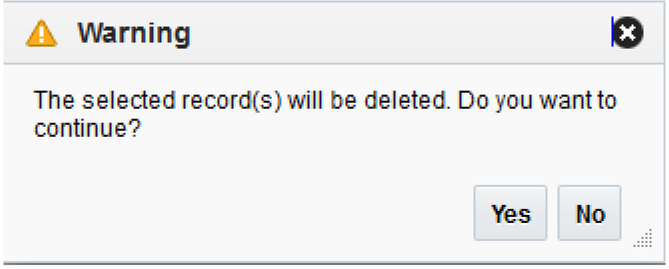
Delete

The Delete action is enabled when an entry is selected.

When the user selects an application navigator entry and clicks Delete, the user is prompted with a warning message. Click Yes and the selected entry is removed.

A system entry record cannot be deleted from RAAC.

Figure 2–39 Delete Application Navigator Confirmation Dialog



The selected record(s) will be deleted. Do you want to continue?

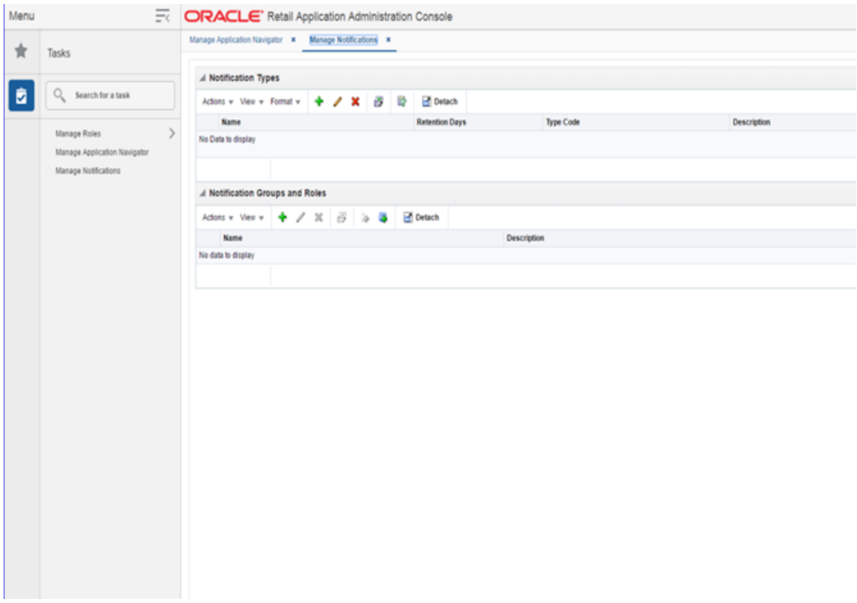
Export to Excel

The Export to Excel action is enabled whenever you have the Manage Application Navigator window open. This action allows you to export the Manage Application Navigator list to a Microsoft Excel spreadsheet.

Manage Notifications

From the RAAC left hand navigation menu, the user can access the Manage Notifications link. The Manage Notifications tab displays the Manage Notifications table. This table is laid out using a master table and a detail table. The master table consists of Notification Types and the detail table consists of Notification Groups and Roles associated with the notification types.

Figure 2–40 Manage Notifications Screen



Name	Retention Days	Type Code	Description
No Data to display			

Name	Description
No data to display	

Overview of Notifications in Retail Applications

Retail Applications provide the ability to notify authenticated users in the application when business events occur. An example of a business event is when a background asynchronous task such as an approval of an allocation or a validation of a price change has completed. Typically, the user is expected to take action on these notifications.

The notification icon on the Retail Application's navigation pane displays the count of unread notifications for the user. When a notification is generated, this count is incremented immediately and thereafter refreshed at regular configurable intervals.

The sliding sidebar menu expands when the user clicks on the notification icon. The expanded sidebar menu will show the latest notifications. Clicking on "See All" will show all the notifications in a new tab.

Clicking on the link for each launchable notification opens the specific UI flow that will allow the user to address any pending action for the notification.

Figure 2–41 Sliding Sidebar showing the Notification Count

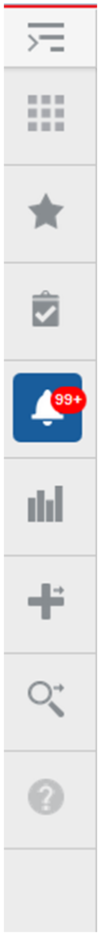
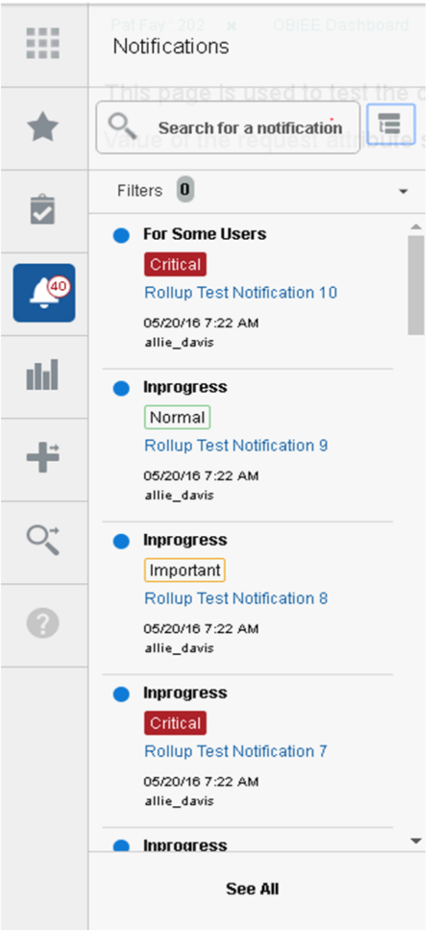


Figure 2–42 Notifications Sidebar Menu



Notifications

Search for a notification

Filters 0

For Some Users
Critical
Rollup Test Notification 10
05/20/16 7:22 AM
allie_davis

Inprogress
Normal
Rollup Test Notification 9
05/20/16 7:22 AM
allie_davis

Inprogress
Important
Rollup Test Notification 8
05/20/16 7:22 AM
allie_davis

Inprogress
Critical
Rollup Test Notification 7
05/20/16 7:22 AM
allie_davis

Inprogress

See All

Notification ReST Services

ReST Endpoints have been exposed by the Notifications framework to ease the integration concerns with disparate applications.

Notification Types

Notification Types drive how users are notified about the result of their action. This result can be communicated to one user or a group of users based on the job roles.

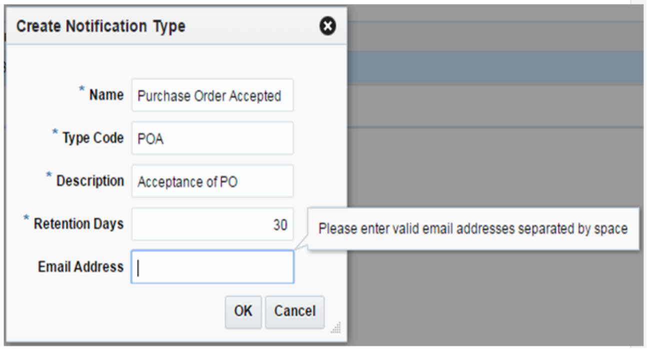
Add

The Add action is enabled at all times and allows you to add a new notification type.

Add a Notification Type

1. From the Actions menu, select Add. The Create Notification Type dialog is displayed.

Figure 2–43 Create Notification Type Dialog



Create Notification Type

* Name: Purchase Order Accepted

* Type Code: POA

* Description: Acceptance of PO

* Retention Days: 30

Email Address:

Please enter valid email addresses separated by space

2. Each notification type requires the following information:

   - Name – The name of the notification type
   - Type Code – A meaningful name to identify the notification type

     The type code provides applications a way to uniquely identify a notification type.
   - Description – The description of the notification type
   - Retention Days – The number of days a notification of this type should be retained

     The reason for capturing Retention Days information at Notification Type level itself, is that it gives users the flexibility to delete certain Types of notifications quickly without cluttering notification views. To retain records infinitely, this value should be set to -1.

     Note: Administrators are discouraged from using '-1' for Retention Days as associated notifications will never be purged automatically. Only a system administrator can delete those manually through a sql script or direct row deletes through a sql tool.

     Note: Retention Days cannot be set to zero.
   - Email Address - Email addresses that must be notified in case a notification of this type is created. Multiple email addresses may be provided here, separated by blank space. This is an optional field, and can be skipped.

     Note: To be able to send emails for notifications, the Retail Alert Manager application must be deployed.

3. Click OK to create the new notification type.

Edit

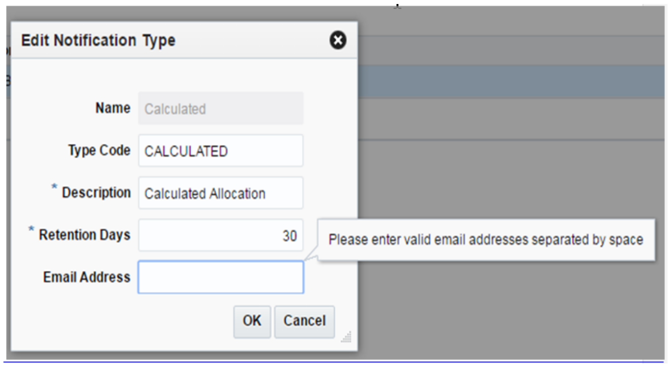
The Edit action is enabled when a notification type is selected. The Edit action is used to add or modify the description and retention days of an existing notification type.

Edit a Notification Type

1. Select the notification type you want to edit.

2. From the Actions menu, select Edit. The Edit Duty Role dialog is displayed.

Figure 2–44 Edit Notification Type Dialog



Edit Notification Type

Name: Calculated

Type Code: CALCULATED

* Description: Calculated Allocation

* Retention Days: 30

Email Address:

Please enter valid email addresses separated by space

3. Modify the type code, description, retention days or associated email addresses of the notification type and click OK.

Delete

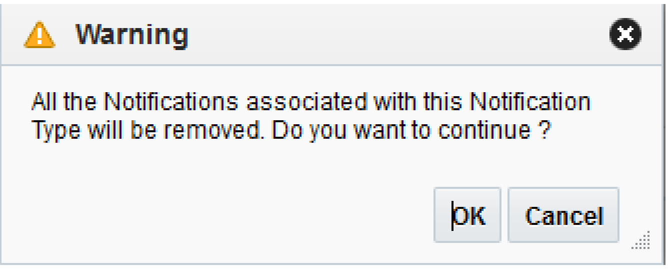
The Delete action is enabled when you select a notification type that can be deleted from the database.

Deleting a notification type removes the notification type and all of the notification type's associated roles and groups. Any past notifications are also removed in order to maintain data integrity.

Delete a Notification Type

1. Select the notification type you want to delete.
2. From the Actions menu, select Delete. The Confirm dialog is displayed.

Figure 2–45 Delete Notification Type Confirmation Dialog



Warning

All the Notifications associated with this Notification Type will be removed. Do you want to continue ?

3. Click OK to delete the selected notification type.

Export to Excel

The Export to Excel action is enabled whenever you have the Manage Notifications window open. This action allows you to export the Notification Types list to a Microsoft Excel spreadsheet.

Notification Groups and Roles

The Notification Groups and Roles table consists of all the roles associated with a notification type master record. If there are no records associated with the notification type then a "no data to display" message appears in the Notification Groups and Roles table when the notification type is selected in the Notification Types table.

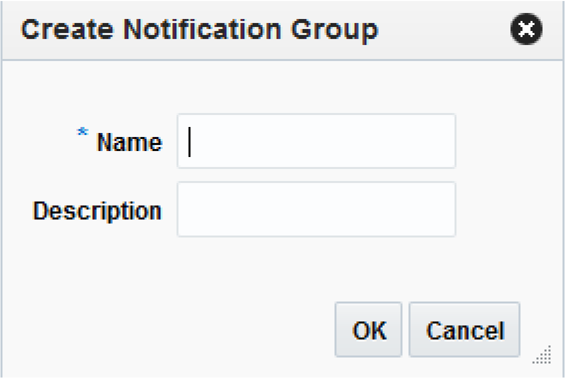
Create/Add Notification Group

The Create action is enabled at all times when a notification type is selected and allows you to create a new notification group associated with the selected notification type.

Create a Notification Group

1. From the Actions menu, select Create (or Add Notification Groups). The Create Notification Group dialog is displayed.

Figure 2–46 Create Notification Group Dialog



2. Enter a name and (optionally) a description of the group.
3. Click OK to create the new notification group.

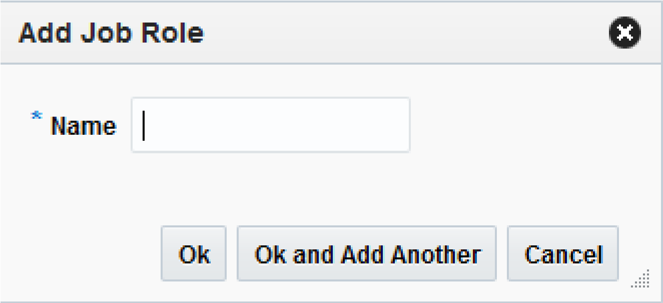
Add Job Role

Once a notification group is created, you can add job roles that apply to the selected group.

Add a Job Role

1. From the Actions menu, select Add job Role. The Add Job Role dialog is displayed.

Figure 2–47 Create Job Role Dialog



2. Enter a name for the job role.
3. Click OK to create the new job role or OK and Add Another to create additional job roles.

   Upon clicking OK or OK and Add Another, the New name is validated. The validation checks for a valid name in the enterprise security solution of the retailer. If it finds a match, then it allows the user to proceed. If the name is not valid, an error is displayed.

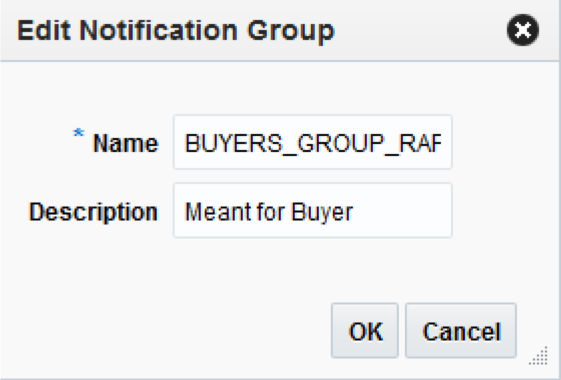
Edit

The Edit action is enabled when a notification group or job role is selected. The Edit action is used to modify the name and description of an existing notification group or job role.

Edit a Notification Group

1. Select the notification group or job role you want to edit.
2. From the Actions menu, select Edit. The Edit Notification Group (or Edit Job Role) dialog is displayed.

Figure 2–48 Edit Notification Group Dialog



Edit Notification Group

* Name: BUYERS_GROUP_RAF

Description: Meant for Buyer

3. Modify the notification group or job role attributes and click OK.

   Upon clicking OK, the New name is validated. The validation checks for a valid name in the enterprise security solution of the retailer. If it finds a match, then it allows the user to proceed. If the name is not valid, an error is displayed.

Delete

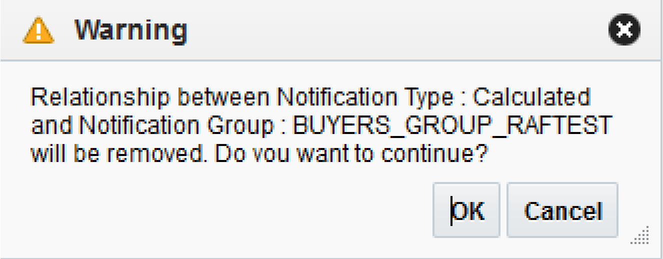
The Delete action is enabled when you select a notification group or job role that can be deleted from the database.

Deleting a notification type removes the notification type and all of the notification type's associated roles and groups. Any past notifications are also removed in order to maintain data integrity.

Delete a Notification Type

1. Select the notification type you want to delete.
2. From the Actions menu, select Delete. The Confirm dialog is displayed.

Figure 2–49 Delete Notification Group Confirmation Dialog



Warning

Relationship between Notification Type : Calculated and Notification Group : BUYERS_GROUP_RAFTEST will be removed. Do you want to continue?

3. Click OK to delete the selected notification group or job role.

Export to Excel

The Export to Excel action is enabled whenever you have the Manage Notifications window open. This action allows you to export the Notification Groups and Roles list to a Microsoft Excel spreadsheet.

Resource Bundles

All Oracle Retail applications come packaged with resource bundles, files that contain text resources. These text resources appear throughout the Oracle Retail application as instructions, messages, labels, errors, virtually any text that appears in the application comes from a resource bundle.

Many Oracle Retail applications support the ability for retailers to customize the text that appears in the Oracle Retail application to better match that retailer's business language. The capability to change the text for a resource is provided through the Resource Bundles area of RAAC. Retailers can customize text resources for any Oracle Retail supported language.

Resources and Customizations Explained

All text resources in the Oracle Retail application have the following values:

- **Base Application Code** – This value identifies the Oracle Retail application that owns this text resource.
- **Language** – This value identifies the language of the text resource.
- **Bundle** – This value identifies the bundle file where this text resource resides.
- **Resource** – This value is the unique name that can be used to get the text for this resource.
- **Base Text** – This value is the text provided by the Oracle Retail application. This is the text that will appear in the application by default.

Every text resource in Oracle Retail applications is uniquely identified by the combination of Application Code, Language, Bundle, and Resource.

A resource customization is a change that a retailer made to the text of a resource. In addition to the values above, customizations also have the following values:

- **Custom Text** – This is the custom text provided by the retailer for the resource.
- **Text** – This is the text that will actually appear in the Oracle Retail application. If a retailer has provided custom text for the resource, then this value will display the retailer's custom text. Otherwise, it will display the base text provided by the Oracle Retail application.

Task Flows

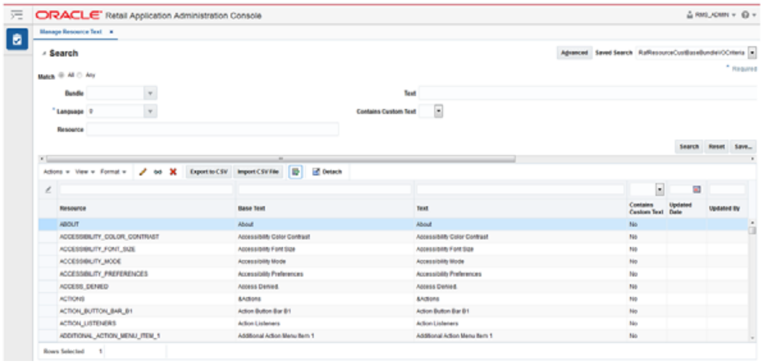
The Resource Bundles area of RAAC consists of the following task flows:

- Manage Resource Text
- Imports Hub

Manage Resource Text

From the RAAC left hand navigation menu, the user can access the Manage Resource Text link. The Manage Resource Text screen provides the capability to customize the resources present in the resource bundles in an application. The user can search the resources in the application using the Bundle, Language, Resource, Contains Custom Text, or Text fields.

Figure 2–50 Manage Resource Text Screen

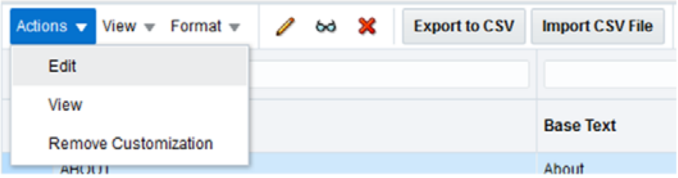


Resource	Base Text	Text	Contains Custom Text	Updated Date	Updated By
ABOUT	About	About	No		
ACCESSIBILITY_COLOR_CONTRAST	Accessibility Color Contrast	Accessibility Color Contrast	No		
ACCESSIBILITY_FONT_SIZE	Accessibility Font Size	Accessibility Font Size	No		
ACCESSIBILITY_MODE	Accessibility Mode	Accessibility Mode	No		
ACCESSIBILITY_PREFERENCES	Accessibility Preferences	Accessibility Preferences	No		
ACCESS_DENIED	Access Denied.	Access Denied.	No		
ACTIONS	&Actions	&Actions	No		
ACTION_BUTTON_BAR_B1	Action Button Bar B1	Action Button Bar B1	No		
ACTION_LISTENERS	Action Listeners	Action Listeners	No		
ADDITIONAL_ACTION_MENU_ITEM_1	Additional Action Menu Item 1	Additional Action Menu Item 1	No		

The results table in the Manage Resource Text screen will display the Resource, Base Text, Text, Contains Custom Text, Updated Date, and Updated By columns for the resources matching the entered search criteria. If there is a custom value present for a resource, it will be displayed in the Text column along with the date and the user who customized that entry. If there is no custom value present for a resource, the Text column will display the base text and the Updated Date and Updated By columns will be displayed empty. The user can view, add, edit, or remove custom text for a resource using this screen.

The user can also export the results table to an Excel CSV file, or import an Excel CSV file with customized resources using this screen. The export and import actions allow the user to provide custom text for many resources at one time, and upload all the custom values in a single action in RAAC.

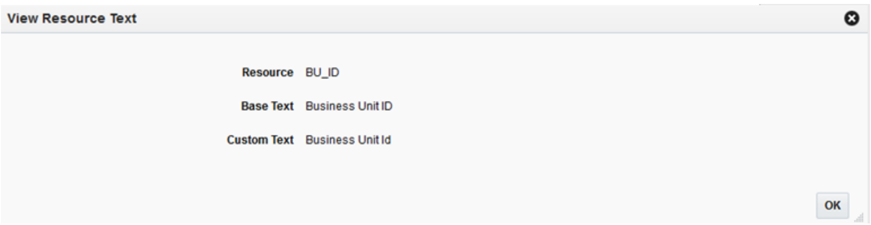
Figure 2–51 View, Add, Edit or Delete Custom Text



View

The user can view a resource, base text and custom text using the View menu item or the binoculars icon. The View option opens up a popup showing the resource, its base text and custom text. Only one record can be viewed at a time in a popup. If more than one record or no record is selected, a warning is displayed to the user.

Figure 2–52 View Resource Text

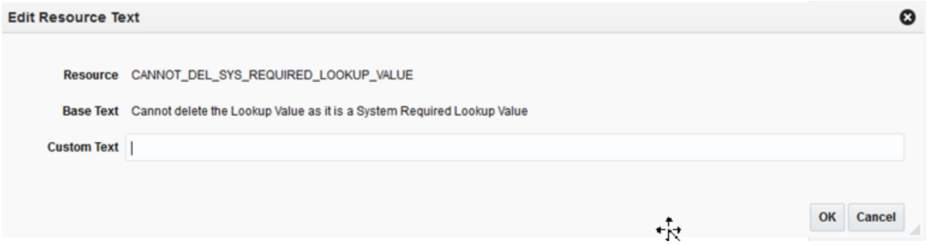


Resource	BU_ID
Base Text	Business Unit ID
Custom Text	Business Unit Id

Add or Edit

The user can add or edit the custom text for a resource using the Edit menu item or the pencil icon. If no custom text is present for a resource, a new custom text will be added. If a custom text is already present for a resource, it will be modified. The Updated Date and Updated By columns will be changed to reflect the addition or modification. The Edit option opens up a popup showing the resource, its base text and editable custom text. Only one record can be edited at a time in a popup. If more than one record or no record is selected, a warning is displayed to the user. The Edit popup can also be opened by double clicking a record on the results table.

Figure 2–53 Edit Resource Text



Edit Resource Text

Resource CANNOT_DEL_SYS_REQUIRED_LOOKUP_VALUE

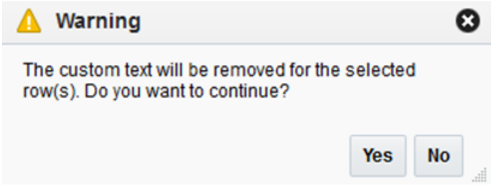
Base Text Cannot delete the Lookup Value as it is a System Required Lookup Value

Custom Text |

Remove Customization

The user can remove the custom text for one, many or all the selected resources using the Remove Customization menu item or the cross icon. The user can select a single or multiple records and remove custom values for the records. The Remove Customization option will give a confirmation warning message before the custom text is removed for the selected records. The base text is not impacted by the Remove Customization operation.

Figure 2–54 Delete Custom Text Confirmation Dialog



Warning

The custom text will be removed for the selected row(s). Do you want to continue?

Export to CSV

The user can export the details of the resources from the results table to an Excel CSV file. When the user selects the Export to CSV action, the browser will perform its download behavior. Depending on the user's browser preferences, the browser may prompt the user asking whether the exported file should be opened or saved, what program should be used to open the file, or where on the user's computer the file should be saved.

Import CSV File

See "Importing Customizations from a CSV File" on page 2-55 for additional details.

Importing Customizations from a CSV File

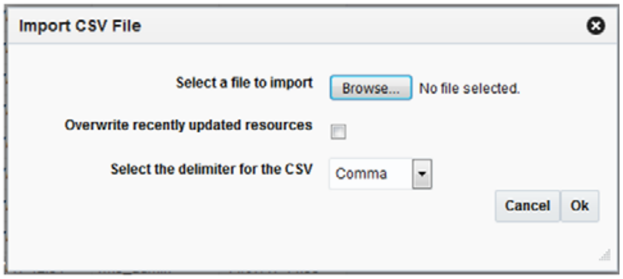
The user can change the values in the Text column of an exported CSV, and then import the CSV file. When the user does this, the values of the Text column are imported into the custom text of each newly customized resource. The user can customize multiple rows with a single action by importing a file which contains multiple customized rows. Importing a file that has not been modified will do nothing, since the text for each resource is already exactly the same in RAAC the Oracle Retail application.

The imported file must meet the following assumptions for the import to succeed:

- The imported file must be a well-formed CSV file. The user can use any compatible program to edit the exported CSV file, as long as the program is able to read the CSV file and save it again in CSV format.
- The user should only edit values in the Text column. If the user edits any of the values in the Base Application Code, Language, Bundled, or Resource columns, the import may fail, or invalid customizations may be created.
- The user can only add or edit customizations in the import. The user cannot remove customizations using import. Deleting the contents of the Text field or copying the Source Text into the Text field will cause the row to be ignored.
- The size of the imported file is limited to 2000 KB. Users will not be allowed to upload a file larger than this.

When the user selects the Import CSV file action, a popup opens prompting the user to select a file to import.

Figure 2–55 Import CSV File Dialog



Import CSV File

Select a file to import: No file selected.

Overwrite recently updated resources □

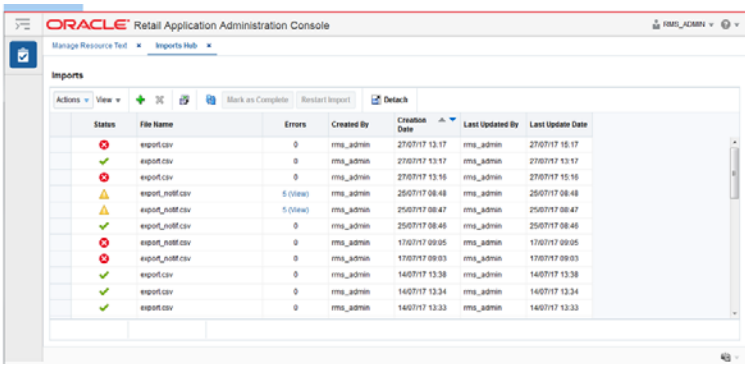
Select the delimiter for the CSV: Comma

It is possible that, after a user exports resources to a CSV file, but before the user imports the file into RAAC, another user may go to RAAC and customize one or more of the exported resources. In this case, the values of resources in RAAC would be newer than the values in the exported file. In order to ensure that an import does not inadvertently overwrite these values, the import action will skip resources that have been recently updated in RAAC, and notify the user. The user can tell the import to instead use the values from the imported file by selecting the "Overwrite recently updated resources" checkbox on the import popup.

Imports Hub

From the RAAC left hand navigation menu, the user can access the Imports Hub link. The Imports Hub screen provides the capability to view and manage import actions that have been created, and take action to resolve any issues encountered during an import.

Figure 2–56 Imports Hub Screen

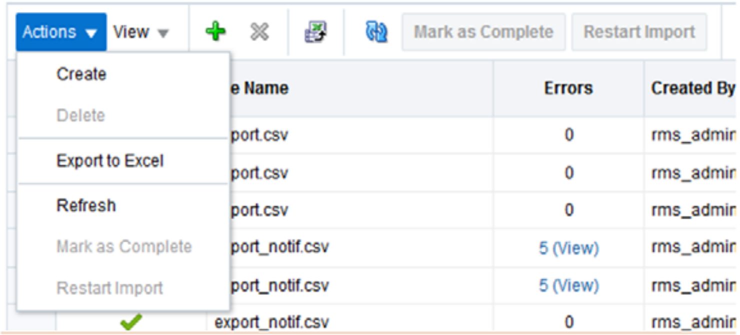


Imports

Status	File Name	Errors	Created By	Creation Date	Last Updated By	Last Update Date
⊗	export.csv	0	rms_admin	27/07/17 13:17	rms_admin	27/07/17 15:17
✓	export.csv	0	rms_admin	27/07/17 13:17	rms_admin	27/07/17 13:17
⊗	export.csv	0	rms_admin	27/07/17 13:16	rms_admin	27/07/17 15:16
⚠	export_notif.csv	5 (View)	rms_admin	25/07/17 08:48	rms_admin	25/07/17 08:48
⚠	export_notif.csv	5 (View)	rms_admin	25/07/17 08:47	rms_admin	25/07/17 08:47
✓	export_notif.csv	0	rms_admin	25/07/17 08:46	rms_admin	25/07/17 08:46
⊗	export_notif.csv	0	rms_admin	17/07/17 09:05	rms_admin	17/07/17 09:05
⊗	export_notif.csv	0	rms_admin	17/07/17 09:03	rms_admin	17/07/17 09:03
✓	export.csv	0	rms_admin	14/07/17 13:38	rms_admin	14/07/17 13:38
✓	export.csv	0	rms_admin	14/07/17 13:34	rms_admin	14/07/17 13:34
✓	export.csv	0	rms_admin	14/07/17 13:33	rms_admin	14/07/17 13:33

The Imports table will display information about each import that has been created. The table will display the Status, File Name, Errors, Created By, Creation Date, Last Updated By, and Last Updated Date. The user can create a new import, delete an import, mark an import as complete, restart an import, or view the errors for an import from this screen.

Figure 2–57 Import Actions Menu



e Name	Errors	Created By
port.csv	0	rms_admir
port.csv	0	rms_admir
port.csv	0	rms_admir
port_notif.csv	5 (View)	rms_admir
port_notif.csv	5 (View)	rms_admir
export_notif.csv	0	rms_admir

Create

The user can import a CSV file from the Imports Hub page. See "Importing Customizations from a CSV File" on page 2-55 for additional details.

Delete

The user can delete one or more imports. When the user deletes an import, that row is removed from the table completely, as well as any unresolved errors in the import. Any customizations that were already created by the import will still exist. The user cannot delete an import that is in "Pending" status. This is to make sure that an import is not deleted while it is being processed.

Note that there is no purge process for imports. All imports will remain in the database until manually deleted by the user.

Mark as Complete

The user can select an import that is in "Complete with Errors" status and change the status to "Complete" This indicates that the user has finished addressing errors with the import, and all outstanding errors should be dismissed.

Restart Import

After the user addresses any errors that were encountered when importing customizations, the user can restart the import to create customizations for the fixed resources.

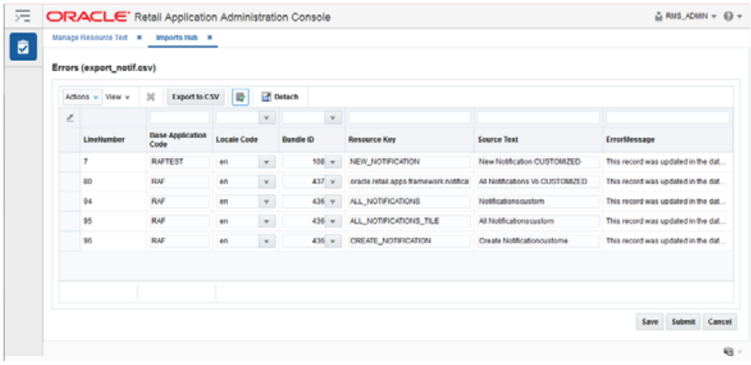
View

When an import on the Imports Hub screen is marked with status "Complete with Errors," this means that the import encountered errors with one or more of the customizations in the imported file. In the table, the Errors column indicates the number of customizations that had errors. This number becomes a link that the user can click to view details for the customizations with errors. This takes the user to a secondary screen within Imports Hub. See the section below titled "View Errors" for more details.

View Errors

The Import Errors screen allows the user to view the details of any errors encountered while importing customizations from a CSV file. The user can reach this screen via the Imports Hub screen. See "View" on page 2-58 within the "Imports Hub" section for additional details.

Figure 2–58 Import Errors Screen



Errors (export_notif.csv)

LineNumber	Base Application Code	Locale Code	Bundle ID	Resource Key	Source Text	ErrorMessage
7	RAFTEST	en	108	NEW_NOTIFICATION	New Notification CUSTOMIZED	This record was updated in the dat...
80	RAF	en	437	oracle.retail.apps.framework.notifica	All Notifications Vo CUSTOMIZED	This record was updated in the dat...
94	RAF	en	436	ALL_NOTIFICATIONS	Notificationscustom	This record was updated in the dat...
95	RAF	en	436	ALL_NOTIFICATIONS_TILE	All Notificationscustom	This record was updated in the dat...
96	RAF	en	435	CREATE_NOTIFICATION	Create Notificationcustome	This record was updated in the dat...

The Import Errors screen allows the user to view all imported customizations that encountered errors, as well the error message indicating why that customization could not be created. The Errors table displays Line Number, Base Application Code, Language, Bundle, Resource, Text, and Error Message. The user can edit or delete an imported customization, or Export to CSV.

Edit

The Errors table provides inline editing for the Base Application Code, Language, Bundle, Resource, and Text columns. This allows the user to resolve cases where a customization does not identify an existing resource, or cases where two or more customizations identify the same resource.

Delete

The user can delete an imported customization. The imported record is removed from the errors table, and no customization is created.

Export to CSV

The user can export the contents of the Errors table back to a CSV file, fix any errors in the CSV, and re-import the file. In this case, the user would generally want to return to the Imports Hub screen and mark the first import as complete, since the errors were fixed by creating a new import.

Important Considerations While Customizing Resources

These are the important considerations that you should keep in mind while customizing resources:

- When customizing a resource text, consider the length of the custom text compared to the base text. Some of the labels and messages may not look good on the page, if the custom text is too long compared to the base text.
- After customizing the resource text, the changes are not immediately visible in the application. The customized resources are visible in the application only after the resource bundle cache expires. Please refer to the application documentation for the cache expiry time.

Manage Asynchronous Task Status

Asynchronous tasks are background processes launched by users of Oracle Retail Applications. An example of a background process is the calculation of allocations.

Each asynchronous task is logged in the database table called RAF_ASYNC_TASKS.

Administrators can view the latest status of asynchronous tasks through the Manage Asynchronous Task Status function from the Oracle Retail Application's Settings menu.

The user can access the Manage Asynchronous Task Status function from the Administration submenu under the Settings menu. This feature is not accessible from the RAAC left hand navigation menu since it is packaged with the application itself rather than the RAAC application. The Manage Resource Asynchronous Task Status screen displays the Asynchronous Task records. Users are able to search for a certain asynchronous task and view a task. Users are also able to purge asynchronous tasks present in the system.

Figure 2–59 Manage Asynchronous Task Status Screen

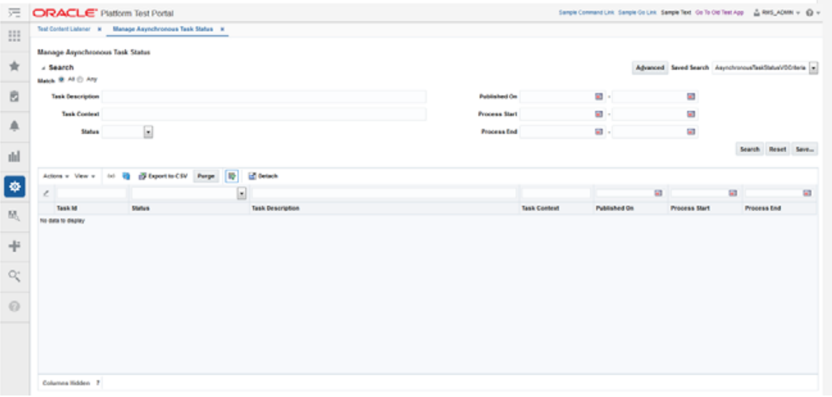
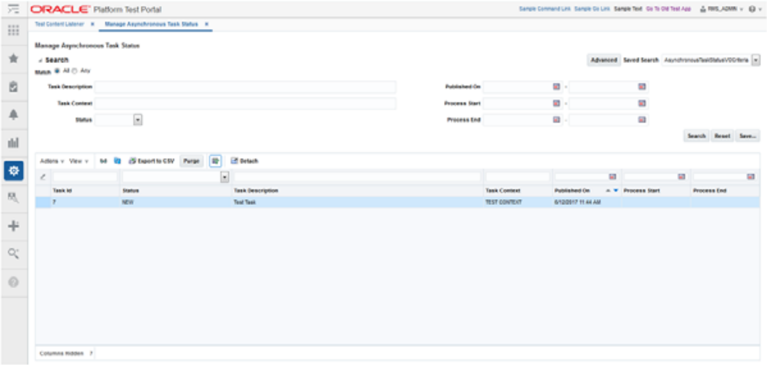


Figure 2–60   Manage Asynchronous Task Status Screen (After search button is clicked)

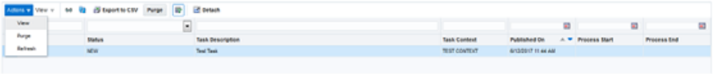


Task Id	Status	Task Description	Task Context	Published On	Process Start	Process End
7	NEW	Test Task	TEST CONTEXT	6/12/2017 11:44 AM		

View

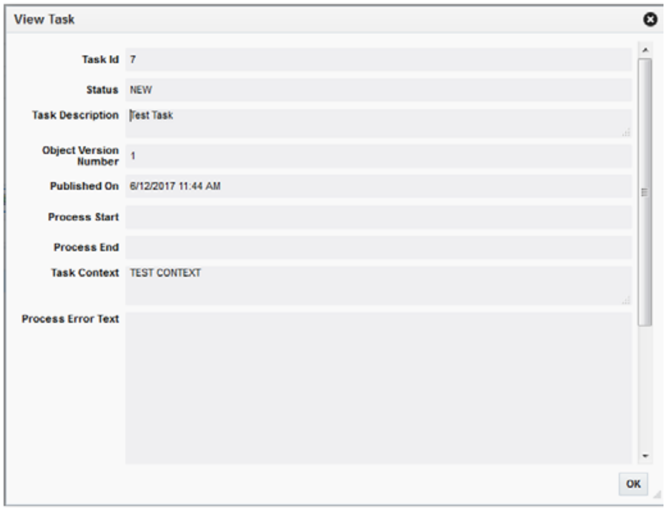
The user can view additional details for the selected asynchronous task by clicking on the View Actions menu item or the View icon of the table toolbar. The View option opens up a popup showing additional details for the selected asynchronous task. Only one record can be viewed at a time in a popup.

Figure 2–61   Action Menu



Status	Task Description	Task Context	Published On	Process Start	Process End
NEW	Test Task	TEST CONTEXT	6/12/2017 11:44 AM		

Figure 2–62   View Task Dialog



Task Id 7

Status NEW

Task Description Test Task

Object Version Number 1

Published On 6/12/2017 11:44 AM

Process Start

Process End

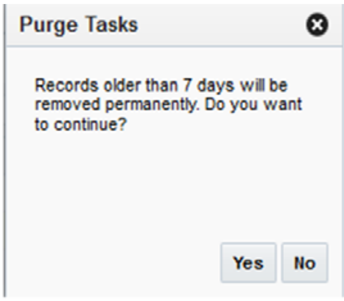
Task Context TEST CONTEXT

Process Error Text

Purge Task

The user can purge asynchronous task records in the system. The number of days is defined in the async.task.purge.retention.days property which can be updated through the Manage Application Properties feature described above in this chapter. The Purge can be invoked through the table toolbar Purge button or Purge Actions menu item.

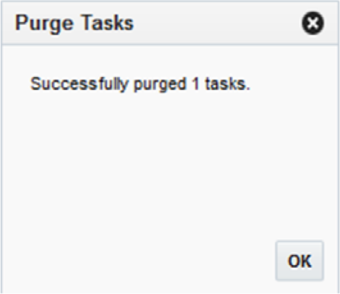
Figure 2–63 Purge Tasks Dialog



Records older than 7 days will be removed permanently. Do you want to continue?

When the Purge action is complete, a popup will appear showing the number of purged asynchronous task records

Figure 2–64 Purge Tasks Success Dialog



Successfully purged 1 tasks.

Export to Excel

The Export to Excel action is enabled whenever Asynchronous Task records are present in the table. This action allows the user to export the Asynchronous Task records to a Microsoft Excel spreadsheet.

Manage Lookups

Lookup records in Oracle Retail Applications represent items that users can select in dropdown and list-of-value inputs in application screens. Examples include:

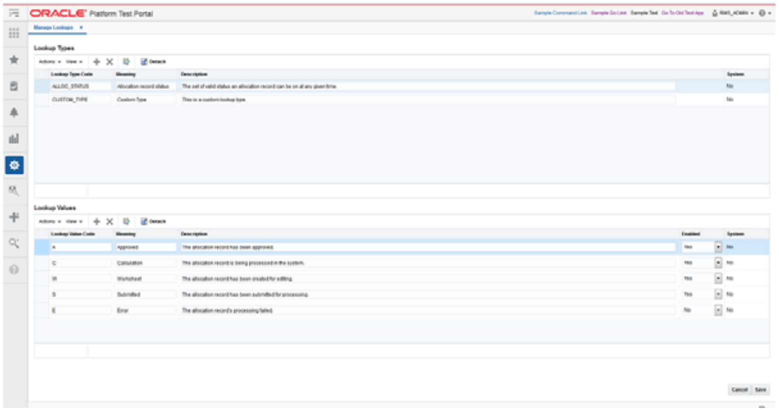
- Location Types (warehouse or store)
- Clearance Status (worksheet, submitted, rejected, approved, etc)
- Markup Types (cost or retail)

These lookups are stored in the database tables RTC_LOOKUP_TYPES_B and RTC_LOOKUP_VALUES_B.

Administrators can customize these lookups through the Oracle Retail Application's Settings menu.

From the Settings menu, the user can access the Manage Lookups screen under the Administration submenu. This feature is not accessible from the RAAC left hand navigation menu since it is packaged with the application itself rather than the RAAC application. The Manage Lookups screen displays the lookup types and their associated lookup values for the Retail Application. The Manage Lookups screen shows information about the lookup types and values such as the Lookup Code, Meaning, Description, System flag, and for the Lookup Value only - an Enabled flag. Users are also able to create, update, delete, cancel, and save changes made to the lookup types and values.

Figure 2–65 Manage Lookups Screen



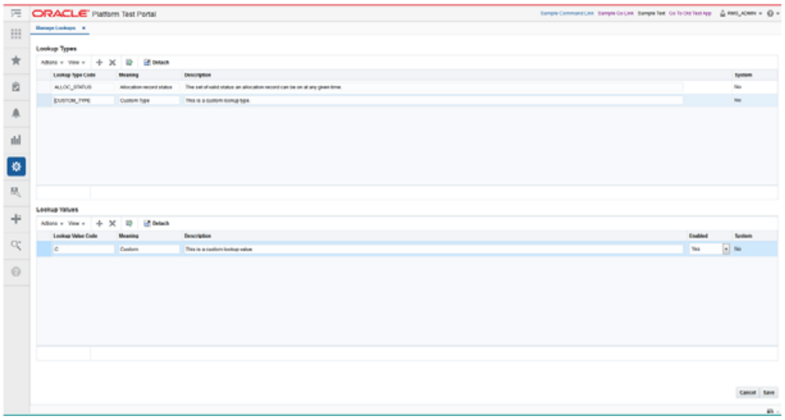
Lookup Types

	Lookup Type Code	Meaning	Description	System
	ALLOC_STATUS	Allocation record status	The set of valid status an allocation record can be on at any given time.	No
	CUSTOM_TYPE	Custom Type	This is a custom lookup type.	No

Lookup Values

	Lookup Value Code	Meaning	Description	Enabled	System
	A	Approved	The allocation record has been approved.	Yes	No
	C	Calculation	The allocation record is being processed in the system.	Yes	No
	W	Worksheet	The allocation record has been created for editing.	Yes	No
	S	Submitted	The allocation record has been submitted for processing.	Yes	No
	E	Error	The allocation record's processing failed.	No	No

Figure 2–66 Manage Lookups Screen (After clicking a different Lookup Type)



Lookup Types

	Lookup Type Code	Meaning	Description	System
	ALLOC_STATUS	Allocation record status	The set of valid status an allocation record can be on at any given time.	No
	CUSTOM_TYPE	Custom Type	This is a custom lookup type.	No

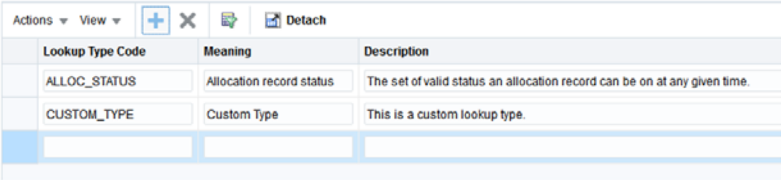
Lookup Values

	Lookup Value Code	Meaning	Description	Enabled	System
	C	Custom	This is a custom lookup value.	Yes	No

Add

The user can add a lookup type by clicking on the Add menu item or the Add icon of the Lookup Type table toolbar . The user can enter the lookup type's Code, Meaning, and Description. The system column is non-editable and will always be set to No when a user creates a new record. Lookup Types must be unique, so if a user enters an already existing Lookup Type Code, an error message will display.

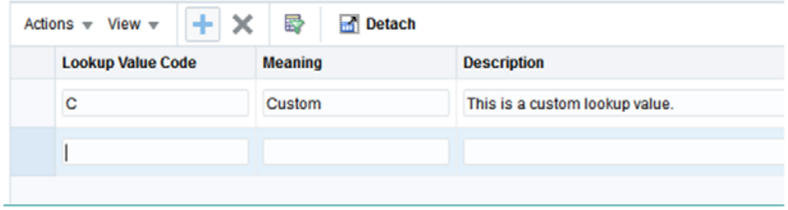
Figure 2–67 Add Lookup Type Screen



	Lookup Type Code	Meaning	Description
	ALLOC_STATUS	Allocation record status	The set of valid status an allocation record can be on at any given time.
	CUSTOM_TYPE	Custom Type	This is a custom lookup type.

To associate a lookup value with the lookup type, the user can click on the Add menu item or the Add icon of the Lookup Values table toolbar. The user can enter the lookup value's Code, Meaning, Description, and Enabled flag. The system flag is also non-editable.

Figure 2–68 Add Lookup Value Screen



Lookup Value Code	Meaning	Description
C	Custom	This is a custom lookup value.
|		

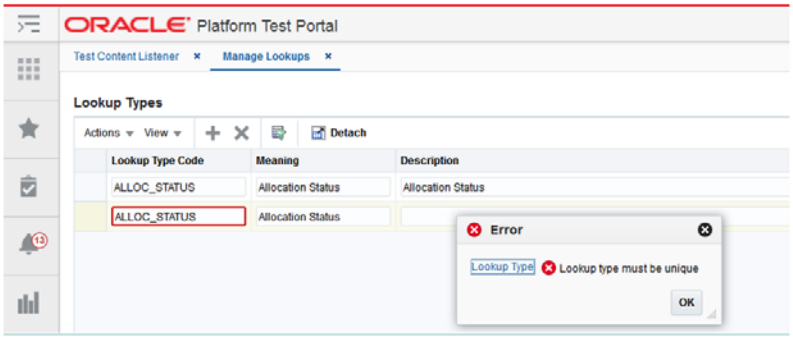
Edit

The Lookup Types and Lookup Value tables are editable so the user can readily update the records. All columns are editable except for the system column. The Lookup Code, however, cannot be edited if it is a system record.

If a lookup type or lookup value is a System record, the user will not be able to update the lookup code for that record.

Lookup code must be unique, so if a user updates to an already existing Lookup Type or Lookup Value Code, an error message will display.

Figure 2–69 Edit Lookup Type (Existing Lookup Code)



Lookup Types

Lookup Type Code	Meaning	Description
ALLOC_STATUS	Allocation Status	Allocation Status
ALLOC_STATUS	Allocation Status	

Error

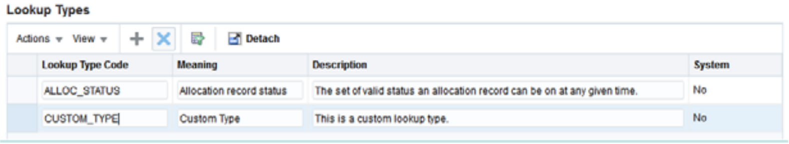
Lookup Type Lookup type must be unique

Delete

The user can delete a lookup type or lookup value by clicking on the Delete menu item or the Delete icon of the Lookup table toolbar . To delete a lookup type or lookup value, the user should select a record then click either the Delete menu item or the Delete icon.

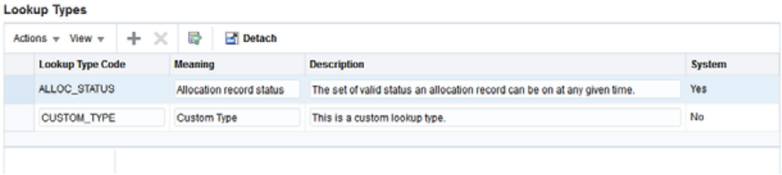
The Delete function is applicable only to Non-System records. When a user selects a system record, the Delete menu item and the Delete icon are disabled.

Figure 2–70 Delete Lookup Type



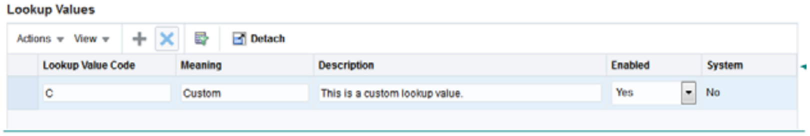
Lookup Type Code	Meaning	Description	System
ALLOC_STATUS	Allocation record status	The set of valid status an allocation record can be on at any given time.	No
CUSTOM_TYPE	Custom Type	This is a custom lookup type.	No

Figure 2–71 Delete Lookup Type (Disabled Delete Button on System Records)



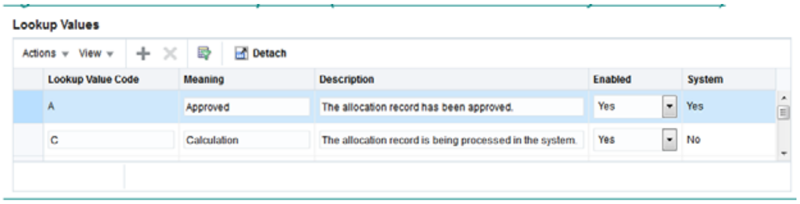
Lookup Type Code	Meaning	Description	System
ALLOC_STATUS	Allocation record status	The set of valid status an allocation record can be on at any given time.	Yes
CUSTOM_TYPE	Custom Type	This is a custom lookup type.	No

Figure 2–72 Delete Lookup Value



Lookup Value Code	Meaning	Description	Enabled	System
C	Custom	This is a custom lookup value.	Yes	No

Figure 2–73 Delete Lookup Value (Disabled Delete Button on System Records)



Lookup Value Code	Meaning	Description	Enabled	System
A	Approved	The allocation record has been approved.	Yes	Yes
C	Calculation	The allocation record is being processed in the system.	Yes	No

Save / Cancel

Save and Cancel buttons are also available to commit and rollback the changes made to the records. These buttons are located at the bottom right section of the Manage Lookups screen.

The user can save changes made to both the lookup types and lookup values tables using the Save button. All changes made using the screen's Add, Edit, and Delete functions will take effect once the user clicks on the Save button.

The user may also use the cancel button to undo changes made to both the lookup types and lookup value tables. However, the Cancel button may only undo changes that have not yet been saved. All previously saved changes may not be undone using the Cancel button.

Clicking on the Cancel button also closes the Manage Lookups screen after the rollback is complete.

3 Accessibility

Accessibility involves making your application usable for differently abled persons such as low vision or blindness, deafness, or other physical limitations. This means creating applications that can be used without a mouse (keyboard only), used with a screen reader for blind or low-vision users, and used without reliance on sound, color, or animation and timing. Application Development Framework (ADF) Faces user interface components have built-in accessibility support for visually and physically impaired users. User agents such as a web browser rendering to nonvisual media such as a screen reader can read component text descriptions to provide useful information to impaired users.

ADF Faces provides two levels of application accessibility support:

- Default: By default, ADF Faces generates components that have rich user interface interaction, and are also accessible through the keyboard. Note that in the default mode, screen readers cannot access all ADF Faces components. If a visually impaired user is using a screen reader, it is recommended to use the Screen Reader mode.
- Screen Reader: ADF Faces generates components that are optimized for use with screen readers. The Screen Reader mode facilitates the display for visually impaired users, but will degrade the display for sighted users (without visual impairment).

Additional fine grained accessibility levels as described below are also supported:

- High-contrast: ADF Faces can generate high-contrast–friendly visual content. High-contrast mode is intended to make ADF Faces applications compatible with operating systems or browsers that have high-contrast features enabled. For example, ADF Faces changes its use of background images and background colors in high-contrast mode to prevent the loss of visual information. Note that the ADF Faces high-contrast mode is more beneficial if used in conjunction with your browser's or operating system's high-contrast mode. Also, some users might find it beneficial to use large-font mode along with high-contrast mode.
- Large-fonts: ADF Faces can generate browser-zoom–friendly content. In default mode, most text and many containers have a fixed font size to provide a consistent and defined look. In large-font mode, text and containers have a scalable font size. This allows ADF Faces both to be compatible with browsers that are set to larger font sizes and to work with browser-zoom capabilities. Note that if you are not using large-font mode or browser-zoom capabilities, you should disable large-font mode. Also, some users might find it beneficial to use high-contrast mode along with the large-font mode.

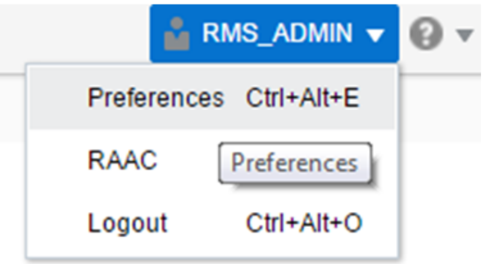
RMS/ReSA provides the ability to switch between the above accessibility support levels in the application, so that users can choose their desired type of accessibility support, if required. It exposes a user preferences screen in which the user can specify the accessibility preferences/mode which will allow the user to operate in that mode.

Configuring Application for Screen Reader Mode

Users can configure their session to the accessibility mode by setting user references on the home page of the application as shown below. Perform the following procedure to configure a user preference for screen reader mode.

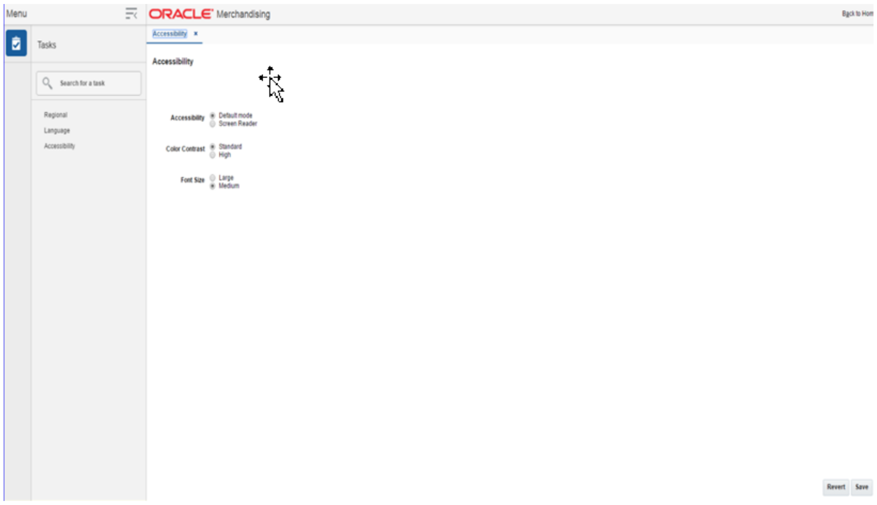
1. Log into the RMS/ReSA application.
2. From the application home page, select **Preferences** from the logged in user menu.

Figure 3–1 Logged-in User Menu



3. From the Tasks pane, click **Accessibility** to open the Accessibility tab.

Figure 3–2 Accessibility Tab



Accessibility

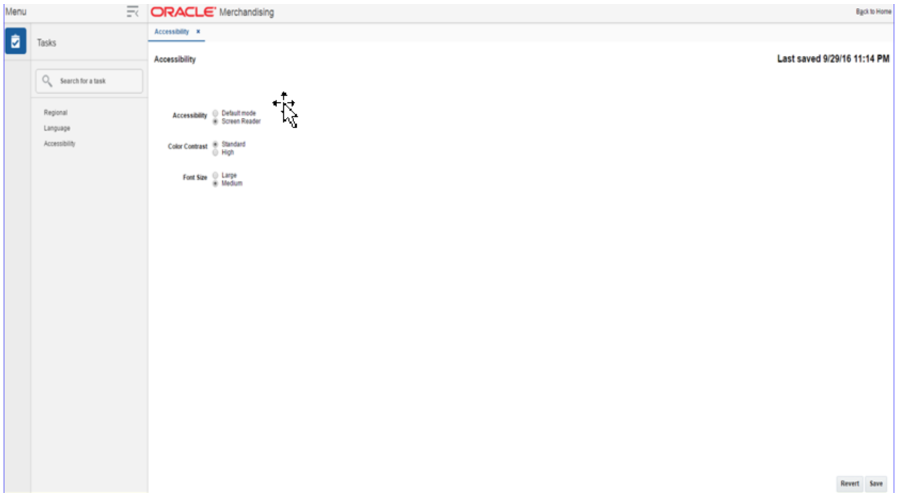
Accessibility ● Default mode ○ Screen Reader

Color Contrast ● Standard ○ High

Font Size ○ Large ● Medium

4. Select Screen Reader to enable accessibility mode, and click **Save**.

Figure 3–3 Enabling the Screen Reader



Accessibility

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Accessibility ○ Default mode ● Screen Reader

Color Contrast ● Standard ○ High

Font Size ○ Large ● Medium

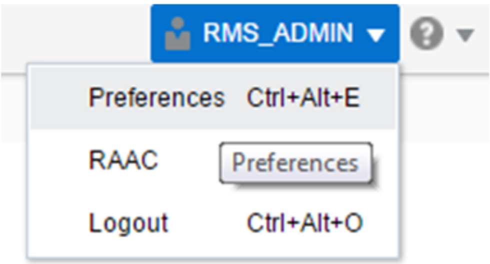
5. Click on Back to Home to return to the home page. Now the application is enabled in the screen reader mode to assist a visibly challenged user. Some of the graphical content of Operational Insights is also displayed in a tabular mode.

Setting Accessibility to Default

Perform the following procedure to set Accessibility mode to Default mode.

1. From the application home page, select **Preferences** from the logged in user menu.

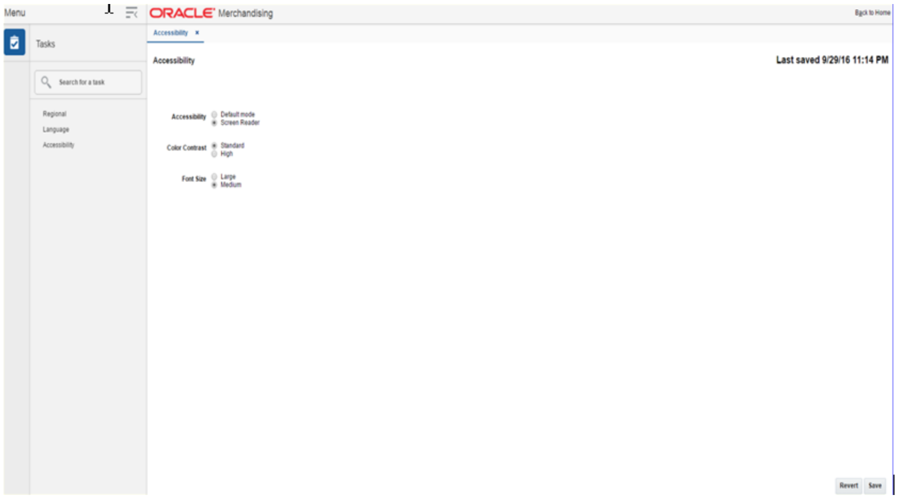
Figure 3–4 Logged-in User Menu



I

2. From the Tasks pane, click **Accessibility** to open the Accessibility tab.

Figure 3–5 Accessibility Tab



Accessibility

Last saved 9/29/16 11:14 PM

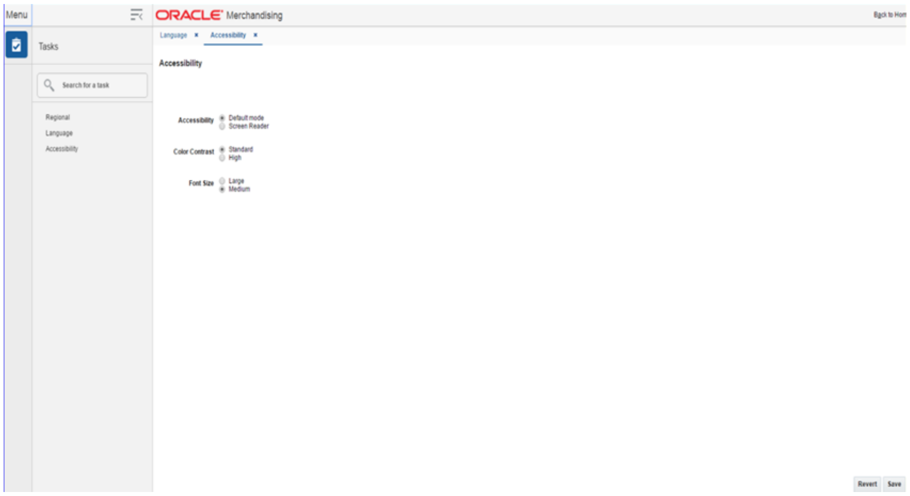
Accessibility ○ Default mode ● Screen Reader

Color Contrast ● Standard ○ High

Font Size ○ Large ● Medium

3. Select Default mode.

Figure 3–6 Accessibility Settings



Accessibility

Accessibility ● Default mode ○ Screen Reader

Color Contrast ● Standard ○ High

Font Size ○ Large ● Medium

4. Click **Save** to save the settings.
5. Click Back to Home to return to the home page. Application is returned to default mode and you can view graphical reports.

4

Oracle Retail Merchandising System

This chapter gives an overview of the information maintained by RMS and RMS integration with other applications.

Information Maintained by RMS

RMS is the System of Record (SOR) for the following:

Seed Data

RMS contains data that must be populated at the time of installation. Either the data is required by the application, or the data is static and can be loaded for any client. The code tables CODE_HEAD and CODE_DETAIL are examples of tables with system-required values that must be loaded at the time of installation. Additional codes can be added as needed to these tables after installation, by either using the online form or additional client scripts. Customization of the seed data is based on the client's requirements.

Additionally, some configuration tables must be populated for the application to open and function correctly, even though the configuration values can be modified later. These configurations are maintained in System Options set of tables, and are required for initial setup that can be updated prior to the implementation, to reflect final configuration.

Foundation Data

Foundation data is the base for all future information on which RMS builds. This information needs to be present before you begin using the system. The majority of foundation data can be set up online; more commonly, a client performs a data conversion process to import this information from legacy systems.

Foundation data consists of three types of information:

- Organizational hierarchy
- Merchandise hierarchy
- Supplier and partner management

Organization Hierarchy

The organizational hierarchy allows you to create maximum of six levels of hierarchy relationships to support the operational structure of your company.

In a Retail store, the customer walks through the store and buys, retails procure goods from suppliers and the retailer acts as a customer. In a Franchise store, the retailer supplies goods to the franchise customers, the retailer acts as a supplier and tracks the sales.

You can create a preferred organizational structure to support consolidated reporting at various levels of the company. You can also assign responsibility for any level of the hierarchy to one or more people to satisfy internal reporting requirements.

The organizational hierarchy also supports two types of stores to satisfy the franchise requirements:

- Franchise
- Company

A company store act as retail store in RMS.

The Franchise stores are used to support franchise business models. Other applications, such as RWMS, view franchise stores as they would view any other store in RMS; however, RMS performs special processing based on the store types.

Merchandise Hierarchy

The merchandise hierarchy allows you to create maximum of six levels of hierarchy relationships to support the product management structure of your company. You can assign a buyer and merchandiser at the division, group, and department levels of the merchandise hierarchy. You can also link a lower level to the next higher level. For example, you must indicate to which group a department belongs, or to which division a group belongs.

Supplier and Partner Management

A supplier supplies the merchandise and a partner is involved in other financial taxation that results in an invoice. Supplier and partner management provides functionality to create and store valid merchandise suppliers and partners. You can maintain a variety of information about suppliers such as financial arrangements, inventory management parameters, types of EDI transactions, and invoice matching attributes. Suppliers are typically created in a financial system and interfaced into RMS. Supplier enrichment can be maintained in RMS.

The supplier structure can be extended to supplier-parent and supplier-site relationships, to accommodate financial systems that support this configuration. A supplier site is a location from which the supplier ships merchandise.

Item Maintenance

RMS is responsible for the creation and maintenance of all items. RMS uses a flexible data hierarchy for an item, with levels that allow you to model items in a desired way. The hierarchy consists up to three levels, highest (level 1) to lowest (level 3). Within the defined levels for an item family, one level is denoted as the transaction level. This is the level at which all inventory and sales transaction takes place. This model gives retailers a flexibility to create families of items that share common characteristics.

RMS creates several types of items, such as regular items, deposit items, packs, concession items, consignment items, and transformable items.

Through item maintenance, RMS also maintains the relationships of items with other entities such as suppliers, locations, and attributes.

Purchasing

The Purchase Order module allows you to create and maintain purchase orders in a variety of ways. It provides commitments to vendors for products in specific amounts for specified locations. Purchase orders are created manually or automatically through replenishment or from an external system. They can be created against entered contracts and deals, or directly through direct store delivery or Vendor Managed Inventory (VMI). RMS also provides the ability to maintain the items, locations, and quantities ordered for Purchase Orders.

Contracts

The contract dialog gives you the ability to create, maintain, submit, and approve contracts. A contract is a legally binding agreement with a supplier to supply items at a negotiated cost.

In RMS, the contracting functions fit closely with the replenishment and ordering functions. The main functions of the Contracts window are to book manufacturing time, track supplier availability and commitments, and match them with business requirements. The main business benefit of contracting is to achieve supplier involvement during the planning phase of a retailer's business.

Deals

Deals management allows you to create and maintain deals with partners or suppliers. Deal partners can be suppliers, distributors, and manufacturers. Within a deal, clients create deal components, specify the items for each deal component, and define thresholds.

Components are deals or parts of deals that a retailer receives from a supplier. There can be multiple components in a single deal. You must define thresholds to define the quantity or amount that must be purchased or sold to receive the deal. RMS components include off-invoice deals, rebates, vendor-funded promotions, vendor-funded markdowns, and fixed deals.

You also define the items and locations for which the deal can be applied. You can choose to include or exclude locations as necessary.

You also define the Proof Of Performance (POP) terms for a deal. POP terms are defined by the deal vendor that offers the deal. For deals, POP terms are defined at the deal, deal/component, or deal/component/item-location combination. For fixed deals, POP terms are defined at the deal level.

The deal pass-through functionality allows a percentage of a deals discount to be passed from a warehouse to a franchise store. This functionality applies to franchise stores.

For clients that choose to use supplier sites with RMS, deals are managed at the supplier parent level.

Cost Management

For cost changes, the Cost Management dialog gives you the ability to:

- Accept cost changes received through EDI (flat files)
- Create a cost change
- Edit a cost change
- View a cost change

A cost change is an adjustment to the supplier cost of an item, either up or down. Before you create a cost change, you must create a list of user-defined cost change reasons and then apply a reason to each cost change. This is useful in reporting.

The initial cost of an item is established at item setup. The cost of the item is adjusted in the item record until the status of the item is Approved. After the item is approved, any cost changes needs to be handled through the cost change dialog.

When a cost change is submitted through EDI, the EDI cost change is reviewed and released to create a cost change document. The cost change document is then viewed and submitted for approval.

When a cost change document is created online, you enter the cost change, an event description, an effective date, and a reason code, and then submit the cost change for approval.

After a cost change is approved, the item/supplier cost record is updated. Any outstanding purchase order line items with no received units are recalculated, if recalculation is indicated on the cost change.

Additionally, you use the Cost Management dialog to create cost zone groups for zone-type expenses for item estimated landed cost. Zone-type expenses are incurred when imported goods are moved from the discharge port to the purchase order receiving location. Because the expenses can vary depending on the distance between the discharge port and the receiving location, cost zones can be configured to appropriately reflect the expenses. The locations (stores and physical warehouses) must be grouped to reflect the expense variances for moving the goods. Normally a zone strategy is used for these cost zone groups, but it is possible that every location within the company has different expenses to move the goods from the discharge port. If that is the case, a store strategy would be used. If every location within the company has the same transportation costs from the discharge port, a corporate strategy is adequate (but not when multiple currencies are being used). After these cost zone groups are defined, they are added to new items as they are created, in anticipation of the expense profiles that are needed for the items.

Multiple Set of Books

Support for multiple sets of books provides better integration with financials systems that supports Multiple Sets of Books within a single installation. Multiple Sets of Books option is enabled by default in RMS and the client will need to set up additional location-specific foundation data, including:

- Organizational units
- Transfer entities
- Set of books IDs

Inventory Control

Inventory functionality in RMS is the core of the application. Inventory is tracked perpetually and financially in RMS. The following describes perpetual inventory tracking. For information on financial inventory tracking, see Stock Ledger.

RMS achieves inventory control through functions that include transfers, Return to Vendor (RTV), Inventory Adjustments, Sales Upload, Purchase Order Receipts (shipments), Stock Counts, Allocations, Franchise Orders and Returns, and Customer Orders.

Transfers

Transfers in RMS provide an organized framework for monitoring the movement of stock. RMS creates and maintains transfers; however, you can also interface transfer information into RMS from other systems.

RMS supports a number of different types of transfers such as intercompany transfers, book transfers, Purchase Order-linked transfers, externally generated transfers, customer orders and franchise order. Transfer functions also support the movement of one or more items between two internal RMS locations, and multi-leg transfers in which the intermediate location is considered a finisher location. Finishers are locations where work is performed on merchandise, such as dying fabric and attaching labels.

Mass return transfers are used to reallocate merchandise to locations or to return merchandise to the supplier.

Returns to Vendor

Return to Vendor (RTV) transactions are used to send merchandise back to a vendor. The RTV transaction in RMS allows one or more items to be returned to a single vendor. For each transaction, the items, quantities, and costs are specified. Upon shipment out of a location, inventory is removed from the stock on hand.

RTVs are created manually in RMS or imported from an external system. RMS also provides the ability to maintain RTVs. Shipped RTVs create a debit memo or credit note request (based on supplier configuration) in the invoice matching staging table in RMS, for export to Oracle Retail Invoice Matching.

Inventory Adjustments

Inventory adjustments are used to increase or decrease inventory to account for events that occur outside the normal course of business (for example, receipts, sales, stock counts). Inventory adjustments are created in RMS or imported from an external system (store or warehouse application). RMS supports two types of inventory adjustments; stock on hand or unavailable inventory. Inventory adjustments can also be created by locations for multiple items, by item for multiple locations, or through a product transformation for a specific location.

Note: The following Inventory Adjustment Reason Codes are required by RMS and cannot be deleted unless the noted functionality is not utilized:

- Reason Code 1 - Used for wastage adjustments
- Reason Code 2 - Used for adjustments against processed stock counts
- Reason Code 13 - Used for inventory adjustment for unavailable receipts
- Reason Code 190 - Used for inventory adjustments related to 'destroy on receipt' situations for Wholesale and Franchise
- Reason Code 191- Used for Customer Returns without inventory

Additionally, reason codes must be synchronized between SIM and WMS, or any other system communicating inventory adjustments to RMS.

Purchase Order Receipts (Shipments)

Purchase order receipts (Shipments) record the increment to on-hand when goods are received from a supplier. Weighted average cost (WAC) is recalculated at time of receipt using the PO landed cost. Transaction audit records are created for financial audit, and the receiver is made available for invoice matching.

Stock Counts

Stock counts are the processes by which inventory is counted in the store and compared against the system inventory level for discrepancies. RMS supports two types of stock counts:

- Unit Stock Counts: These adjust the on hand quantities for the item-locations affected and create an inventory adjustment transaction for the stock ledger.
- Unit and value stock counts: These adjust the on hand quantities for the item-locations affected and adjust the stock ledger to the results of the stock count.

Replenishment

Automated replenishment constantly monitors inventory conditions. Based on inventory conditions, purchase orders or transfers are created to fulfill consumer demand.

Automated replenishment parameters are set up at the supplier, supplier/department, and supplier/location or supplier/department/location level. These parameters include:

- Review cycle and order control
- Due order processing
- Investment buy attributes
- Scaling constraints
- Rounding attributes
- Supplier minimums
- Truck splitting constraints

Items can be set up for automated replenishment through the Item Maintenance dialog, either individually or through item lists.

Automated replenishment also supports different methods to determining whether purchase orders are created and quantities ordered. These replenishment methods are applied at the item/location.

- Constant is a stock-oriented method in which the item is replenished when the inventory level falls below a specified level.
- Min/Max is a stock-oriented method in which the item is replenished up to the maximum when the inventory level falls below a specified minimum stock level.
- Floating Point is a stock-oriented method in which the item is replenished when the inventory level falls below a dynamic system-calculated maximum stock level.
- Time Supply is a stock-oriented method in which replenishment is based on the number of days of supply for the item a retailer wants in inventory. The Time Supply method requires a forecasting system.
- Time Supply Seasonal is the same as Time Supply, but it takes seasonality and terminal stock into account. The Time Supply Seasonal method requires a forecasting system.
- Time Supply Issues is used only by warehouses, this is the same as Time Supply, but it uses warehouse issues forecast rather than store sales forecast. The Time Supply Issues method requires a forecasting system.
- Dynamic is a method that controls inventory using dynamic calculations of order point and order quantities based on a number of factors, including forecast sales over order lead time, review lead time, inventory selling days, lost sales factor, and safety stock. The Dynamic method requires a forecasting system.
- Dynamic Seasonal is the same as Dynamic, but it takes seasonality and terminal stock into account. The Dynamic Seasonal method requires a forecasting system.
- Dynamic Issues is used by warehouses only, this is the same as Dynamic, but it uses warehouse issues forecast rather than store sales forecast. The Dynamic Issues method requires a forecasting system.
- Store Orders is a method that allows replenishment to look at the store order need quantity when determining the recommended order quantity.

Franchise Management

The Franchise Management allows the retailer to manage their franchise business in the following scenarios:

- **Retailer owns and manages the inventory for a franchise location**.

  In this case, the franchise customer (location) needs to be set up as stockholding stores in RMS, with a store type as Franchise. A stockholding franchise store functions similar to a company store with locations of inventory transactions such as Replenishment, Allocation, Stock Counts and Inventory Adjustments being allowed for such stores in RMS. The main differences in these stores are, the way in which the orders are captured and accounted financially.

- **Retailer does not own or manage inventory for a franchise location.**

  Here the retailer does not manage the inventory for a franchise location or wherein the wholesale operations constitute a small fraction of the retailers business and thus does not warrant a separate Order Management System.

In both these scenarios, non-stockholding stores must be setup in RMS to represent these franchise (or wholesale) customers.

Franchise Pricing

Franchise pricing determines the price that is charged on a franchise partners for an item. Pricing for these stores is maintained in the future cost table. The pricing for franchise locations are determined by setting up cost templates in RMS and associating these templates with an item or a franchise location. Franchise pricing includes any landed costs and applicable deals through deal pass-through to the final pricing.

The user has an option to override the future cost franchise price and instead define a fixed price to be charged for an item for manually or through the batch upload orders.

Franchise Ordering

Franchise store can source the merchandise from company locations (Warehouse or Store) or from a supplier. The franchise order can be initiated manually using the franchise order form or by an batch upload process using flat file received from an external application. The franchise order created using the flat file also creates a purchase order for supplier sourced and transfers for company location sourced orders.

In addition, franchise order gets initiated in response to any inventory transaction process where the receiving location is a franchise store and the sending location is a company location or supplier. Some of these inventory transactions are Replenishment Requests, Allocation, Store Orders, Items requests; AIP generated Purchase Orders or Transfers, and externally generated transfers.

Franchise Returns

Franchise stores returns the items back to the company location (warehouse or store). Item return from a franchise store directly to the supplier is not allowed. The franchise returns can either be a physical return to the company location or can be a book return. Book Return is possible when the item is destroyed at the site, in such scenario the inventory is not physically returned but can be financially accounted.

The franchise return can be initiated manually using the franchise return form or by batch upload process using flat file received from an external application. Franchise returns results in creating a transfer to track the inventory movement.

In addition, franchise returns gets created in response to any inventory transaction where the sending location is a franchise store and receiving location is a company location. Some of these processes are AIP or externally generated transfers.

Stock Ledger

The stock ledger in RMS records the financial results of the merchandising processes such as buying, selling, price changes, and transfers. All of these transactions are recorded in the RMS stock ledger and rolled up to the subclass/location level for days, weeks, and months, depending on calendar settings. The aggregate levels in the stock ledger are used to measure inventory amounts and merchandise profitability. The stock ledger is mainly used for reporting purposes; however, there is some online visibility as well.

The stock ledger supports multiple currencies. All transaction-level information is stored in the local currency of the store or warehouse where the transaction occurred. As transaction-level information is rolled up to the aggregated levels in the stock ledger, records are kept in local currency and converted to primary currency. This allows corporate reporting to be performed in the primary currency of the company, while still providing visibility by location to the profitability in the local currency.

The stock ledger supports both the retail and cost methods of accounting. The cost method can use standard cost or average cost, depending on how the system is configured. The stock ledger supports both the retail (4-5-4) and the normal (Gregorian) calendar. If the retail calendar is used, data is maintained by the 4-5-4 month and the week. If the normal calendar is used, data is maintained only by the Gregorian month. Data can also be maintained daily using the retail (4-5-4) or normal (Gregorian) calendar.

RMS supports multiple sets of books. Clients that use multiple sets of books assign

RMS locations to a particular set of books defined in an external financial system. Changes to the stock ledger affect the set of books with which a particular transaction is associated.

Investment Buy

Investment buy facilitates the process of purchasing inventory in excess of the replenishment recommendation in order to take advantage of a supplier deal or to leverage inventory against a cost increase. The inventory is stored at the warehouse or in outside storage to be used for future issues to the stores. The recommended quantity to investment buy, that is, to order, is calculated based on the following:

- Amount of the deal or cost increase
- Upcoming deals for the product
- Cost of money
- Cost of storage
- Forecasted demand for the product, using warehouse issue values calculated by Oracle Retail Demand Forecasting
- Target return on investment (ROI)

The rationale is to purchase as much product as profitable at the lower cost and to retain this profit rather than passing the discount on to customers and stores. The determination of how much product is profitable to purchase is based on the cost savings of the product versus the costs to purchase, store and handle the additional inventory.

Investment buy eligibility and order control are set at one of these four levels:

- Supplier

- Supplier-department
- Supplier-location (warehouse locations only)
- Supplier-department-location

Warehouses must be enabled for both replenishment and investment buy on RMS WH (warehouse) table.

The investment buy opportunity calculation takes place nightly during the batch run, after the replenishment need determination, but before the replenishment order build. The investment buy module IBCALC.PC attempts to purchase additional inventory beyond the replenishment recommendation in order to achieve future cost savings. Two distinct events provide the incentive to purchase investment buy quantities:

- A current supplier deal ends within the look-ahead period.
- A future cost increase becomes active within the look-ahead period.

The calculation determines the future cost for a given item-supplier-country-location for physical warehouse locations only.

If the order control for a particular line item is buyer worksheet, it might be modified in the buyer worksheet dialog, and can be added to either new or existing purchase orders.

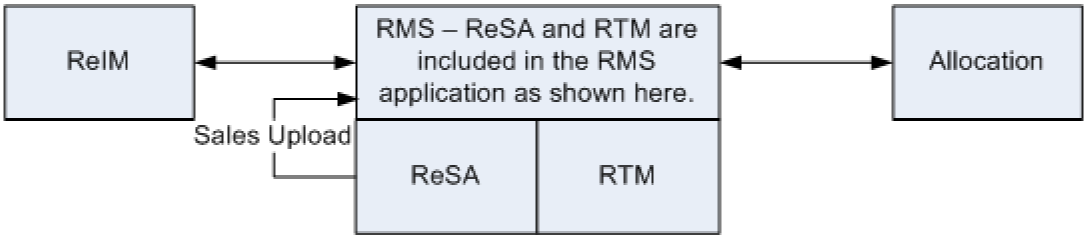
RMS Integration with Other Applications

RMS provides essential information to all of the Oracle Retail Merchandising Operations Management applications (ReSA, RTM, ReIM, Allocation), and interacts with all of them. RMS exists on the same database schema as all of the other applications, which provides flexibility in how information is shared between RMS and the other Oracle Retail Merchandising Operations applications.

Information is shared with other Oracle Retail Merchandising Operations Management applications through direct reads from Oracle Retail Merchandising Operations Management application tables, calls to Oracle Retail Merchandising Operations Management application packages, batch processes, and the Oracle Retail Integration Bus (RIB) if the client is using this option.

The following diagram illustrates the RMS location in the merchandising footprint.

Figure 4–1 RMS Location in the Merchandising Cloud Services Footprint


ReIM
RMS – ReSA and RTM are included in the RMS application as shown here.
Allocation
Sales Upload
ReSA
RTM

RMS and RTM

Oracle Retail Trade Management (RTM) and RMS share the same database instance. When RTM is enabled in an RMS instance, certain import-specific data maintenance is required for country, supplier, partners and items. These are directly updated into the RMS database and subsequently used in RTM.

RMS and ReSA

Oracle Retail Sales Audit (ReSA) and RMS share the same database. ReSA shares some of its master data with RMS. Foundation data such as stores a company/location

close dates, location traits, bank setup and tender types are maintained in RMS and used in ReSA.

Sales Upload Process

Current reference data is retrieved from RMS into ReSA by the batch program SAGETREF. The data is extracted into multiple data files. The data in the files is used by the batch program SAIMPTLOG as reference data for doing validation checks on the POS/OMS transaction data during the data upload to ReSA. Having the reference in data file formats increases the performance of the SAIMPTLOG process. SAGETREF generates the following reference files:

- Items
- Wastage
- Sub-transaction level items
- Primary variant relationships
- Variable weight PLU
- Store business day
- Code types
- Error codes
- Store POS
- Tender type
- Merchant code types
- Partner vendors
- Supplier vendors
- Employee IDs
- Banner IDs

Along with the reference files, the following files are generated:

- Currency File - This file contains valid currency codes in RMS.
- Warehouse File - This file contains valid physical warehouses from RMS.
- Inventory Status File - This file contains valid inventory status values from RMS.

All clean and audited sales and returns data is extracted from ReSA into a POSU file by the batch program SAEXPRMS. All sale and return transactions that do not have RMS errors are extracted into the file. The sales audit system options parameter work unit controls the export of data into files in case of the presence of RMS errors in the POS/OMS transaction data. The shell scripts UPLOADSALES.KSH and SALESPROCESS.KSH will load the data from the POSU file into the RMS tables.

RMS and Allocation

RMS provides the following to Allocation:

- Foundation Data is essential to all areas of Allocation including valid locations to allocate to and from, location groupings, and valid merchandise hierarchies to allocate within.

- Item-Allocations are generated at the item location level so it is necessary that the Allocation application understand what items and item/locations are eligible in the system.
- Purchase Order-One of the sources from which a user can allocate. Allocation relies on RMS to provide Purchase Order information.
- Transfer-One of the sources from which a user can allocate. Allocation relies on RMS to provide Transfer information.
- Bill Of Lading (BOL)-One of the sources from which a user can allocate. Allocation relies on RMS to provide BOL information.
- Advance Shipment Notices (ASN)-One of the sources from which a user can allocate. Allocation relies on RMS to provide ASN information.
- Inventory-In order to determine the correct need at an item location level before performing an allocation the application needs visibility to the current on hand inventory at each location being allocated to. Allocation relies on RMS to provide inventory information at the item/location level.
- Sales Information-Allocation can use historical sales, forecast sales, and plan sales in order to determine the need at an item/location level for an allocation. Allocation interfaces this information in from external planning system to an Allocation table.

Allocation provides the following to RMS/RTM/ReSA:

- Foundation Data is essential to all parts of invoice matching including valid locations for Invoices to be implemented at, valid suppliers to receive invoices from, and supplier addresses to send credits and debits based on invoice matching results.
- Item is essential to the invoice matching process as item information ensures that invoices being received are valid for the business. For example an item received on an invoice is carried by the client, is supplied by the supplier who sent the invoice, and is carried in the locations for which the item was received.
- Purchase Orders are used by Invoice Matching to facilitate the invoice matching process which is performed at the purchase order location level.
- Shipments-Shipment information is used by Invoice Matching to determine if a PO has been received yet which affects the matching algorithm used by the AutoMatch batch program in Invoice Matching.
- Deals and Rebate-Invoice Matching creates credit memos, debit memos, and credit requests based on deal and rebate information in RMS for processing by the financial (AP) system. This is performed by the ComplexDealUpload and FixedDealUpload batch processes that read from RMS staging tables.

Invoice Matching provides the following to RMS:

- Invoice Matching results for shipments-Shipment records are updated with the invoice matching results from the invoice match process (this involves updating the match status and quantity matched of the shipments in question). The matching process is handled by the AutoMatch batch process in Invoice Match which attempts to match all invoices in ready-to-match, unresolved, or multi-unresolved status.
- Receiver Cost Adjustments-An API is executed when invoice matching discrepancies are resolved through a receiver cost adjustment. The API updates the purchase order, shipment, and potentially the item cost in RMS, depending on the reason code action used.
- Receiver Unit Adjustments-An API is executed when invoice matching discrepancies are resolved through a Receiver Unit Adjustment. The API updates the purchase order and shipment in RMS to complete the transaction.

- Closing unmatched shipments-Invoice matching closes the invoice matching status for shipments in RMS after a set period of time (defined by the client in system options). This updates the invoice matching status of the shipment on the shipment table in RMS. This process is managed by the ReceiptWriteOff batch program.

RMS and Xcenter/Xstore

RMS provides the following to Xcenter/Xstore:

- Foundation Data - This data is essential to the Xcenter/Xstore suite functionality. This includes the following:
  - Full organizational hierarchy to support functionality such as rolling out new keyboard configurations by region, etc.
  - Stores including their addresses
  - Full merchandise hierarchy to support Xcenter/Xstore reporting. functionalities.
  - Differentiators and differentiator groups to support functionality such as looking up a sku by style/color.
- Item - Item information is generated at both the corporate and location level specific files and are sent to the Xcenter/Xstore application. Item information being sent includes the Item header, Item/Location, VAT Item, and Related Item information.

Note: The Oracle Retail Merchandising System interfaces can integrate with other third party Point of Sale applications.

RMS and RXM

RXM is the Retail eXtension Module which extends the core RMS data to the Oracle Commerce applications, RMS leverages Bulk Data Integration (BDI) to interface data from RMS to RXM. BDI (Bulk Data Integration) is an integration system that facilitates the bulk transfer of data between Oracle Retail applications. On this particular integration stream, the data flow is from RMS to RXM. RMS publishes full set data snapshots for RXM to consume. This information will be used to support Commerce Anywhere v2.0 business requirements. To accomplish this data transfer, BDI will be calling RMS owned API’s that will pull data and deliver these to the BDI integration layer. These API’s will be divided into multiple functional entities, each contained in its own PLSQL package.

- Differentiators: Groups, IDs
- Items and Item/Locations, Related Items
- Merchandise Hierarchy
- Stores, Store Addresses
- Warehouse Available Inventory
- Store Available Inventory

ReSTful Web Service Implementation for RMS

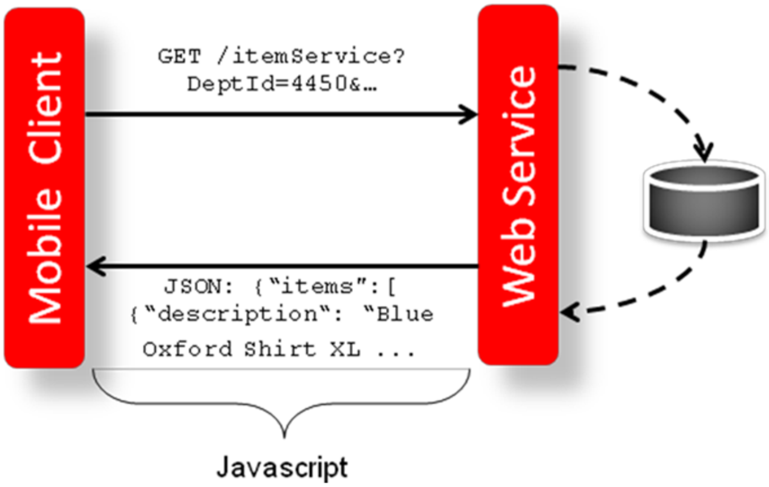
This section gives an overview about the RMS ReSTful Web service Implementation API designs used in the RMS environment and various functional attributes used in the APIs. Retailers can access back end functionality by calling the application’s ReSTful Web services. For more information on ReST architectural style applied for building Web services, access the following URL:

`http://www.oracle.com/technetwork/articles/javase/index-137171.html.`

Introduction

The RMS ReSTful Web services are based on a mobile application defined by Oracle Retail. The services are designed to support the mobile application functionality.

Figure 4–2 Mobile Client and Web Services integration through Javascript



Other Uses

The main objective of the ReSTful Web service is to support mobile applications, some of the services functionalities may not be useful for general use.The services are used for client's custom mobile application. The ReSTful Web services Java code cannot be customized, but the MBL PL/SQL functions and object types can be customized for a client use. In addition, the client uses the RSE tool to create their own custom services in place of the ReSTful Web services.

Using ReSTful WebService

The services should not be used during the restricted batch window.

Deployment

RMS packages its ReST services in RmsRestServices.ear as part of the application's Enterprise Archive (EAR) file. Specifically, those services are packaged as a Web Archive (WAR) within the EAR.

See the *RMS Installation Guide* for instructions on deployment of the ReST web services.

Security

Services are secured using J2EE-based security model.

- **Realm-based User Authentication**: This verifies users through an underlying realm. The username and password is passed using HTTP Basic authentication.
- **Role-based Authorization**: This assigns users to roles, which in turn are granted or restricted access to resources/services. The authorization of ReSTful web services is static and cannot be reassigned to other rules post installation. The following role is associated

with ReSTful Web Services and should be added to the Enterprise LDAP if not already exists for RMS Application:

ROLE_NAME
RMS_APPLICATION_ADMINISTRATOR
BUYER

All enterprise roles defined above are mapped in web.xml and weblogic.xml of the ReST Service webapp.

- The communication between the server and the client is encrypted using one way SSL. In a non-SSL environment, the encoding defaults to BASE-64 so it is highly recommended that these ReST services are configured to be used in production environments secured with SSL connections.
- RMS user data security is implemented in the APIs. The application user ID should be added to the RMS SEC_USER.APPLICATION_USER_ID table then associated to the appropriate group in SEC_USER _GROUP, FILTER_GROUP_ORG, FILTER_GROUP_MERCH and SEC_GROUP_LOC_MATRIX tables

Standard Request and Response Headers

Retail Application ReSTful Web services have the following standard HTTP headers:

```
Accept: application/xml or application/JSON
Accept-Version: 14.1 (service version number)
Accept-Language: en-US,en;q=0.8
```

Depending on the type of the operation or HTTP method, the corresponding response header is updated in the HTTP response with the following codes:

- GET/READ : 200
- PUT/CREATE : 201 created
- POST/UPDATE : 204
- DELETE : 204

Standard Error Response

Example response payload in case of service error is shown below:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<messagesRDOes>
<messagesRDO>
<message>REST Service Version Mismatch</message>
<messageType>ERROR</messageType>
<status>BAD_REQUEST</status>
</messagesRDO>
</messagesRDOes>
```

- Message: The error message - translated.
- MessageType: Value of 'ERROR' is returned.
- Status: For a bad request or error, the status is BAD_REQUEST.
- The http error code for an error response is 400.

URL Paths

The following links provide access to the Web services:

- To access the RMS ReSTful web services javadoc:

  `http://<host:port>/RMSReSTServices`

- To access the RMS ReSTful web services' WADL file:

  `http://<host:port>/RMSReSTServices/services/private/application.wadl`

- To access the RMS ReSTful web services:

  `http://<host:port>/RMSReSTServices/services/private/<service>`

Date Format

All input date and output date fields must be in long format.

Paging

Some of the RMS ReSTful Web services have the potential to bring back a large number of records and therefore these services are equipped to segmenting the result into pages. The page number to retrieve and the size of the page are added as input parameters to all the paged services.

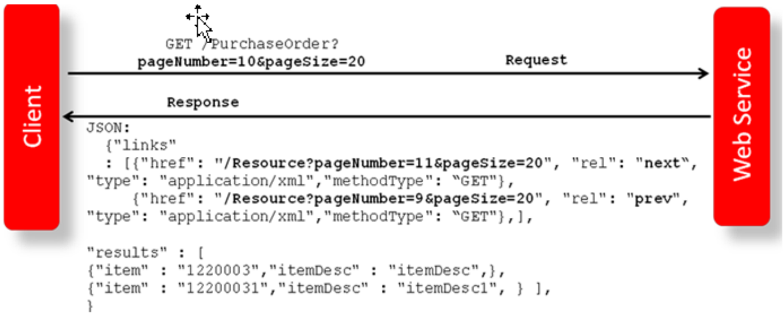
Each paged result includes the following information:

- **Total Record Count:** Displays the number of all records matching the service input criteria.
- **Next Page URL:** Shows the service URL with same input parameters, but with the pageNumber plus 1, when more records exists.
- **Previous Page URL:** Shows the service URL with same input parameters and the pageNumber input value minus 1, when page number is not 1.

Next or previous page URL is not provided when:

- No records are returned.
- Previous page is not returned, when the page number is 1.
- Next page is not returned, when the record reaches the last page.

Figure 4–3 Javascript for Paging Information in RMS Web Services



```
GET /PurchaseOrder?
pageNumber=10&pageSize=20
```

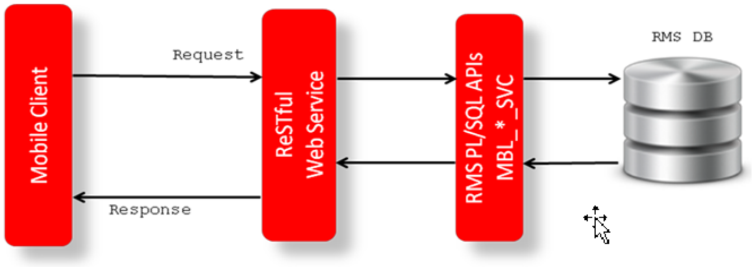
```
JSON:
  {"links"
  : [{"href": "/Resource?pageNumber=11&pageSize=20", "rel": "next",
"type": "application/xml","methodType": "GET"},
      {"href": "/Resource?pageNumber=9&pageSize=20", "rel": "prev",
"type": "application/xml","methodType": "GET"},],

"results" : [
{"item" : "1220003","itemDesc" : "itemDesc",},
{"item" : "12200031","itemDesc" : "itemDesc1", } ],
}
```

Web Service APIs Process Flow

The diagram shows the Web service API process flow.

Figure 4–4 Web Service APIs Process Flow



Dynamic Hierarchy

The hierarchy terms used by RMS like department or class may not be the terms used by the retailer to call the merchandise hierarchy. They may be referring to these levels as Category and Sub-Category. The dynamic hierarchy capability of RMS allows retailers to configure at install time 15 hierarchy terms.

The UI labels and message along with code_detail description and rtk_errors message have tokens like @MHP4@ which refers to Department. The mapping of tokens to the default RMS terms and to custom client's terms is maintained in the table dynamic_hier_token_map and this table is loaded during installation using the script dynamic_hier_token_map.sql. During the installation process, the tokens in ADF bundle files inside the application ear and the tokens in code_detail and rtk_errors tables gets replaced with a client provided value for these tokens. If the client provided value is not available, the tokens get replaced with the RMS default value.

Note: The dynamic hierarchy support in the previous version was carried out by run-time token replacement in the strings. The token replacement now happens during install and patch time to avoid performance overhead for every message and label during runtime.

If the retailer wants to use to use the dynamic hierarchy capability to use different terms to refer to the hierarchy terms, they should update the script dynamic_hier_token_map.sql with their client value of the token as a pre-installation step. The dynamic hierarchy strings can be changed post installation by updating the client value in the dynamic_hier_token_map table and running the installation again to replace the tokens with the new value for client value.

The list of dynamic hierarchy tokens and its default RMS terms are listed below.

Token	RMS Value	Token	RMS Value
@COM@	Country Of Manufacture	@COMN@	Countries Of Manufacture
@MH2@	Division	@MHP2@	Divisions
@MH3@	Group	@MHP3@	Groups
@MH4@	Department	@MHP4@	Departments
@MH5@	Class	@MHP5@	Classes
@MH6@	Subclass	@MHP6@	Subclasses
@OH1@	Company	@OHP1@	Companies
@OH2@	Chain	@OHP2@	Chains

Token	RMS Value	Token	RMS Value
@OH3@	Area	@OHP3@	Areas
@OH4@	Region	@OHP4@	Regions
@OH5@	District	@OHP5@	Districts
@SUH1@	Manufacturer	@SUHP1@	Manufacturers
@SUH2@	Distributor	@SUHP2@	Distributors
@SUH3@	Wholesaler	@SUHP3@	Wholesalers
@SUH4@	Franchise	@SUHP4@	Franchisee

Note: The dynamic hierarchy is translation supported and the translation entries are maintained in dynamic_hier_token_map_tl table. The installation token replacement replaces the tokens by language in code_detail_tl, rtk_errors_tl and the language bundle files in the application ear.

Internationalization

For details on the language supported information see, Oracle Retail Merchandising System documentation for the current release.

Operational Insights

Oracle Retail Operational Insights dashboards and reports provide pervasive business intelligence. To provide a seamless user experience, they are designed to be embedded within RMS application.

The RMS_OI_SYSTEM_OPTIONS table drives the configuration parameters for RMS Operational Insights Dashboards and reports. Default values are populated by seed data script during installation and can be changed later according to the customer requirements. Values for these parameters can also be defined at Department level using the RMS_OI_DEPT_OPTIONS table. Department level values take precedence over the system level configuration.

Report Name	System Option	Definition	Column Name	Department Level?
Cumulative Markon Variance	Variance threshold	A count of subclass/locations with variance higher that this number would result in tile turning Yellow or Red.	FA_CUM_MARKON_VAR_CRITICAL_CNT	No
Cumulative Markon Variance	Minimum Variance %	Configuration used to compare the CMO % of displayed month to the department budgeted intake %.	FA_CUM_MARKON_MIN_VAR_PCT	Yes
Early/Late Shipments	Beginning of Week to Estimated Arrival Date Duration	Number of days between beginning of week and Estimated Arrival Date to determine if an order qualifies as an OTB Shift In issue.	B_NUM_DAYS_BOW_EAD	No

Report Name	System Option	Definition	Column Name	Department Level?
Early/Late Shipments	Estimated Arrival Date to Open to Buy Date Duration	Number of days between Estimated Arrival Date and OTB End of Week date to determine if an order qualifies as an OTB Shift Out issue.	B_NUM_DAYS_ EAD_OTB	No
Early/Late Shipments	Not After Date to End of Week Duration	Number of days between Not After Date and End of Week Duration.	B_NUM_DAYS_ NAD_EOW	No
Early/Late Shipments	Display OTB for Reports	This configuration allows the user to decide whether OTB should be shown in reports.	B_OTB_IND	No
Incomplete Items	Dimensions	Possible Values: Required, Optional and No. This will determine whether the report will show dimension details.	DS_SHOW_ INCOMP_ITEM_ DIMEN	Yes
Incomplete Items	HTS	Possible Values: Required, Optional and No This will determine whether the report will show item HTS details.	DS_SHOW_ INCOMP_ITEM_ HTS	Yes
Incomplete Items	Images	Possible Values: Required, Optional and No This will determine whether the report will show item image details.	DS_SHOW_ INCOMP_ITEM_ IMAGES	Yes
Incomplete Items	Import Attributes	Possible Values: Required, Optional and No This will determine whether the report will show item import details.	DS_SHOW_ INCOMP_ITEM_ IMP_ATTR	Yes
Incomplete Items	Locations	Possible Values: Required, Optional and No This will determine whether the report will show Location details.	DS_SHOW_ INCOMP_ITEM_ LOC	Yes
Incomplete Items	Minimum days past item creation	Specifies number of days post creation of items after which the item will appear in this report.	DS_DAYS_ AFTER_ ITEM_ CREATE	Yes

Report Name	System Option	Definition	Column Name	Department Level?
Incomplete Items	Reference Items	Possible Values: Required, Optional and No This will determine whether the report will show reference item details.	DS_SHOW_ INCOMP_ITEM_ REF_ITEM	Yes
Incomplete Items	Related Items	Possible Values: Required, Optional and No This will determine whether the report will show related item details.	DS_SHOW_ INCOMP_ITEM_ REL_ITEM	Yes
Incomplete Items	Replenishm ent	Possible Values: Required, Optional and No This will determine whether the report will show replenishment details.	DS_SHOW_ INCOMP_ITEM_ REPL	Yes
Incomplete Items	Seasons / Phases	Possible Values: Required, Optional and No This will determine whether the report will show seasons/phases details.	DS_SHOW_ INCOMP_ITEM_ SEASONS	Yes
Incomplete Items	Simple Packs	Possible Values: Required, Optional and No This will determine whether the report will show Simple Pack details.	DS_SHOW_ INCOMP_ITEM_ SPACK	Yes
Incomplete Items	Substitute Items	Possible Values: Required, Optional and No This will determine whether the report will show substitute details.	DS_SHOW_ INCOMP_ITEM_ SUBS_ITEM	Yes
Incomplete Items	Tickets	Possible Values: Required, Optional and No This will determine whether the report will show ticketing details.	DS_SHOW_ INCOMP_ITEM_ TICKETS	Yes
Incomplete Items	UDAs	Possible Values: Required, Optional and No This will determine whether the report will show UDA details.	DS_SHOW_ INCOMP_ITEM_ UDA	Yes

Report Name	System Option	Definition	Column Name	Department Level?
Incomplete Items	VAT	Possible Values: Required, Optional and No This will determine whether the report will show VAT details.	DS_SHOW_INCOMP_ITEM_VAT	Yes
Inventory Variance to Forecast	Low Lower Inventory Variance %	Specifies the lower limit of the lower threshold range which will limit the items returned in the table based on the inventory variance percentage for an item to the forecasted value.	IA_VARIANCE_RANGE_PCT_2	No
Inventory Variance to Forecast	Low Upper Inventory Variance %	Specifies the lower limit of the upper threshold range which will limit the items returned in the table based on the inventory variance percentage for an item to the forecasted value.	IA_VARIANCE_RANGE_PCT_4	No
Inventory Variance to Forecast, Order Alerts	Filter Location Type	Specifies if the user wants to see the inventory variance at the area level or at a store grade level.	IA_VARIANCE_RANGE_PCT_1	No
Inventory Variance to Forecast	High Lower Inventory Variance %	Specifies the upper limit of the lower threshold range which will limit the items returned in the table based on the inventory variance percentage for an item to the forecasted value.	IA_VARIANCE_RANGE_PCT_2	No
Inventory Variance to Forecast	High Lower Inventory Variance %	Specifies the upper limit of the lower threshold range which will limit the items returned in the table based on the inventory variance percentage for an item to the forecasted value.	IA_STORE_GRADE_OR_AREA_IND	No
Late Posted Transactions	Transaction Variance Threshold	If the count of late transactions per location is greater than this number the tile color will change to Yellow or Red.	FA_LATE_POST_THRESHOLD_TRN_CNT	No
Late Posted Transactions	Location Count threshold	If the count of locations with late transaction is greater than this number the tile color will change to Yellow or Red.	FA_LATE_POST_THRESHOLD_LOC_CNT	No

Report Name	System Option	Definition	Column Name	Department Level?
Late Posted Transactions	Organizatio nal Hierarchy Display Level	Configuration to define the level of organization hierarchy that the chart should display on its Y axis.	FA_LATE_POST_ ORG_HIER_ LEVEL	No
Negative Inventory	Quantity Threshold	Indicates the count per item/location below which the item/loc should appear in this report.	IC_NEG_INV_ TOLERANCE_ QTY	Yes
Unexpected Inventory	Item/Locati on Critical Count	A count of locations with unexpected inventory that is higher than this number would result in the related tile turning Red in the dashboard.	IC_UNEXP_INV_ CRITIAL_COUNT	No
Unexpected Inventory	Item/Locati on Warning Count	A count of locations with unexpected inventory that is higher than this number would result in the related tile turning Yellow in the dashboard.	IC_UNEXP_INV_ WARN_COUNT	No
Order Alerts	Include Factory Check	This option will control whether or not to check if a Factory has been associated with the order.	IA_ORD_ERR_ FACTORY_IND	No
Order Alerts	Validate Reference Items	This option will control whether or not to check for the existence of at least one Reference item for each item on the Order.	IA_ORD_ERR_ REF_ITEM_IND	No
Orders Pending Approval	Show Worksheet Orders	Determines whether orders in worksheet status will be shown in the report for approval.	B_PO_PENDING_ APPROVAL_ LEVEL	No
Overdue Shipments	Past Expected Receipt Date	Number of days since the transfer, allocation or RTV should have been received into a location, beyond which the transfer, allocation or RTV should be shown in the reports.	IC_OVERDUE_ SHIP_DAYS	No
Shrinkage Variance	Maximum Variance %	Will be used to determine the color of the tile (Red).	FA_ SHRINKAGE_ VAR_MAX_PCT	No
Shrinkage Variance	Variance Count	Will be used to determine the color of the tile along with the variance value.	FA_ SHRINKAGE_ VAR_CRITICAL_ CNT	No

Report Name	System Option	Definition	Column Name	Department Level?
Shrinkage Variance	Variance Tolerance %	Define the tolerance outside of which if the variance between budgeted shrinkage and actual shrinkage falls, that subclass/location will be shown in the report.	FA_SHRINKAGE_VAR_TOLERANCE_PCT	No
Stock Count Unit Variance	Variance Threshold %	Variance percent above or below what was expected on a count which determine if a location should appear on the report.	FA_STK_CNT_VALUE_TOLERENCE_PCT	No
Stock Count Value Variance	Variance Threshold %	Define the value variance tolerance % exceeding which the subclass/location will be displayed in the report. Open Q. Given that this is at the subclass location level can we re-use stake_cost_variance and stake_retail_variance.	IC_MISS_STK_COUNT_CRIT_DAYS	No
		Number of days since the stock count, which if count results have not been received would trigger the count/location to appear in the report.		
Stock Counts Missing	Stock Count Location Exception Count	This will determine whether the tiles for the applicable report is green, yellow, or red.	IC_MISS_STK_COUNT_CRIT_CNT	No
Stock Count Unit Variance	Stock Count Unit Location Exception Count	This will determine whether the tiles for the applicable report is green, yellow, or red.	IC_STK_COUNT_VAR_LOC_CNT	
Stock Count Value Variance	Stock Count Value Location Exception Count	This will determine whether the tiles for the applicable report is green, yellow, or red.	FA_STK_CNT_VALUE_VAR_CRIT_CNT	No
Stock Orders Pending Close	Past Receipt Date	Number of days since the transfer or allocation was received but is not yet closed, beyond which it should appear in this report.	IC_STKORD_CLS_ PEND_CRIT_DAYS	No
Transfers Pending Approval	Stock Order Exception Count	This will determine whether the tiles for the applicable report is green, yellow, or red.	IC_TSF_APPRV_PEND_CRITIAL_CNT	No
Stock Orders Pending Close	Stock Orders Pending Exception Count	This will determine whether the tiles for the applicable report is green, yellow, or red.	IC_STKORD_CLS_ PEND_CRIT_CNT	No

Report Name	System Option	Definition	Column Name	Department Level?
Overdue Shipments	Overdue Shipments Exception Count	This will determine whether the tiles for the applicable report is green, yellow, or red.	IC_OVERDUE_ SHIP_COUNT	No
Transfers Pending Approval	Past Creation Date	Number of days since transfer creation - determines whether a submitted transfer appears in this report.	IC_TSF_APPRV_ PEND_CRITIAL_ DAYS	No
Unexpected Inventory	Include Deleted Item/Locati ons	Indicates whether item/locations in deleted status with a ranged ind = Y should be included in this report if they have inventory.	IC_UNEXP_INV_ DELETE_IND	Yes
Unexpected Inventory	Include Discontinue d Item/Locati ons	Indicates whether item/locations in discontinued status with a ranged ind = Y should be included in this report if they have inventory.	IC_UNEXP_INV_ DISCONTINUE_ IND	Yes
Unexpected Inventory	Include Inactive Item/Locati ons	Indicates whether item/locations in inactive status with a ranged ind = Y should be included in this report if they have inventory.	IC_UNEXP_INV_ INACTIVE_IND	Yes
Unexpected Inventory	Quantity Threshold	Indicates the count per item/location above which the item/loc should appear in this report.	IC_UNEXP_INV_ TOLERANCE_ QTY	No
WAC Variance	Maximum Variance %	This value will be used to determine the color of the tile, denoting the criticality along with # of item/locations.	FA_WAC_VAR_ MAXIMUM_PCT	No
WAC Variance	Variance Count	This value will be used to determine the color of the tile, denoting the criticality along with Max variance.	FA_WAC_VAR_ ITEMLOC_CNT	No
WAC Variance	Variance Tolerance %	Identifies the tolerance outside of which if the variance between unit cost and average cost falls, that item/location will show in the report.	FA_WAC_VAR_ TOLERANCE_ PCT	No
Inventory Analyst Dashboard	Item Filter Display	Indicator to display all Item filters (Item/Item Parent/Parent Diff) in inventory analyst dashboard prompt.	IA_ITEM_ PARENT_FILTER	No

Report Name	System Option	Definition	Column Name	Department Level?
Variance to Forecast	Variance to Forecast Indicator	Indicates if the Inventory Variance to Forecast report in the Inventory Analyst dashboard is supported. If yes, the system will preserve 4 weeks of item weekly forecasted sales data before loading the next set of forecasting data.	IA_VARIANCE_TO_FORECAST_IND	No
Margin Impact Contextual Report	Margin Impact Month Range	Defines a Month Range Considered for Margin Impact Contextual BI Report	MI_MONTH_RANGE	No

Secure Development

When developing custom extensions for RMS, it is important to use the exposed APIs securely. This section contains guidelines for secure usage of these APIs.

Sensitive Data Considerations

- If custom extensions produce output files, ensure that no sensitive data is written or that all files containing sensitive data are stored securely.
- If sensitive data is written, zero out the data when it is no longer needed.
- Audit access to custom functions that operate on sensitive data.
- Do not write sensitive data to log files.

Data Validation

Validate all data coming from an untrusted source before passing it to the Merchandising Foundation application. The Merchandising Foundation application will validate incoming data; however, it is good practice to validate untrusted data before passing it along.

Authorization/Authentication

- User IDs and passwords must not be hard-coded, shipped, or defaulted in the integrating application.
- Passwords must not be stored in plaintext, either in a file or a database table.
- Passwords must be stored in an encrypted format. Developers should not create their own password encryption mechanism. Consider storing passwords and other credentials in a wallet, or use an approved algorithm such as one recommended by National Institute of Standards and Technology.
- If using Java, it is recommended that the user store all sensitive data in char arrays instead of strings so it can be zeroed out.
- Error Handling:
  - Custom extensions must handle all exceptions securely. Care must be taken to respect data types and to process error conditions.

- See the *Oracle® Retail Merchandising System Operations Guide - Volume 2* for details on message formats and return codes.

Technology-Specific Guidelines

For additional information on available APIs, see the *Oracle® Retail Merchandising System Operations Guide - Volume 2*.

ReSTful Web Services

Merchandising Foundation ReST services provide visibility to a limited amount of data. Custom extensions that utilize the ReST services must ensure that any sensitive data retrieved is handled in a secure manner. Potentially sensitive data exposed by the ReST services include:

- System options
- Supplier data
- Purchase Order data
- Transfer data

SOAP Web Services

XML should be parsed using a well-known XML Framework.

The XML Framework settings should be updated to prevent XML External Entity (XXE) and XML Entity Expansion (XEE) attacks.

- Disable external resource resolution, unless absolutely necessary. If this cannot be disabled, limit allowed values to a known set (whitelist).
- Limit recursion depth.
- Disable the ability for documents to specify their own DTD or XML schema, unless absolutely necessary. If this cannot be disabled, limit allowed values to a known set (whitelist).
- Validate XML documents against the registered set of known DTDs or XML schemas applicable to the document. Reject non-compliant documents.

RIB Subscription APIs

Subscription APIs modify records in tables that contain potentially sensitive information. Therefore, care should be taken to ensure that when an error message is returned, the error message is handled properly so as not to expose potentially sensitive information. For instance, an error message may confirm the existence of certain records in the system or may include record numbers. External applications should take this into consideration before logging errors or passing error messages to other external systems.

RIB Publication APIs

Publication APIs publish records that contain potentially sensitive information. Therefore, care should be taken to ensure that external systems handle this data securely when storing and transferring it.

5

Oracle Retail Trade Management

This chapter is an overview of Oracle Retail Trade Management (RTM).

Master Data

Oracle Retail Trade Management shares the same database with RMS. RTM is enabled in an RMS instance by the following system options parameter settings:

- Simplified RTM Indicator is N
- Import Indicator is Y

RTM requires certain master data maintenance such as outside locations, Freight Type, Freight Size and Standard Carrier Alpha Codes (SCAC). Import-specific data maintenance is required for country, supplier, partners and items. For calculation of duties, fees, and taxes applicable on import merchandise, Harmonized Tariff Schedule (HTS), files must be uploaded or entered into the system.

Landed Cost

Landed cost is the total cost of an item received from a vendor inclusive of the supplier cost and all costs associated with moving the item from the supplier's warehouse or factory to the purchase order receiving location. RTM facilitates the setting up of various cost components, associating them to the purchase orders, calculating the estimated landed costs at the time of purchase order creation. It also facilitates the tracking and booking of the actual costs after the receipt process.

Estimated Landed Cost (ELC) is composed of cost components from the Supplier, Trading Partners, Item and Origin Country, which are brought together during Purchase Order (PO) creation to develop an estimate of costs associated with purchasing a particular item on the current PO.

The components of landed cost are defined using Expenses, Assessments, and Computation Value Bases (CVBs).

Expenses

Expenses are direct and indirect costs incurred in moving a purchased item from the supplier's warehouse/factory to the purchase order receiving location. Expenses should not be confused with up charges, which allow add-on costs from an initial receiving location to a final retail location and are not part of the landed cost.

An example of a direct expense is the packing cost or insurance cost. Charges incurred for clearing and loading goods at the lading port are an example of indirect costs. Expenses are either added to the base inventory value or booked as a separate expense. Expenses apportioned to inventory affect the weighted average cost (WAC) of the item. Expenses can be assigned to a particular country, supplier, or partner. Expenses are tracked at country or zone levels, as the following defines.

Country Level Expenses

Country level expenses track the costs of bringing merchandise from the origin country, through the lading port, to the import country's discharge port. For example, track expenses for a silk blouse from China, through the lading port, Hong Kong, to the discharge port, Los Angeles.

Zone Level Expenses

Zone level expenses track the costs of bringing merchandise from the import country's discharge port to the purchase order receiving location. For example, track expenses for a silk blouse from discharge port, Los Angeles, through to the retailer's New York City warehouse and to the retailer's Chicago warehouse. Costs are different based on the final destination (for example, longer truck route, railroad).

Zones are defined using the Cost Zone dialog (see Cost Management information in RMS documentation). When the zones are created they are used to define expenses at the supplier level (by zone) for default to items.

Assessments

Assessments are the cost components that represent the total tax, fee, and duty charges for an item. Computation formulas and specific fee and tax types contained in the harmonized tariff schedule (HTS) determine most assessments. The harmonized tariff schedule is defined for an import country.

The HTS comprises a hierarchical structure for describing all goods in trade for duty, quota and statistical purposes. The HTS structure is based on the international Harmonized Commodity Description and Coding System (HS), administered by the World Customs Organization in Brussels, Belgium.

There are two components used to track HTS within the system:

- HTS chapter tables
- HTS tariff item tables

The HTS chapter tables are organized by the first one to four digits of the tariff schedule classification. The HTS tariff item tables are organized around the full tariff item number. The length of the HTS heading or chapter is defined by import country along with the display format of the tariff number on the HTS import country setup table. The item level tariff codes do vary among GATT (General Agreement on Trades and Tariffs) countries. Each tariff item has various duty rates assigned to it. Classification of goods in this system must be done in accordance with the country-specific rules. For example, in the U.S. it should be done as per General and Additional U.S. Rules of Interpretation, starting with the a four digit heading level to find the most specific provision and then moving to the subordinate categories. Other assessments, such as taxes, fees, countervailing charges, and anti-dumping charges are also assigned at the tariff item level.

RTM also allows the retailer to set up the quota restrictions imposed by the government on an item. The quota is linked to the HTS classification.

HTS calculations can be performed based on the country of manufacture or the country of sourcing for their products. This determination is made at implementation time and is defined on the System Options table.

Computation value bases (CVB) are mechanisms used to create a compound expense or assessment. CVBs allow expenses to be a certain percentage of a group of other expenses and assessments rather than just of one value.

Purchasing

If RTM is enabled in an RMS instance, then import orders can be created in RMS. The purchase order dialog provides additional import functionalities along with standard PO information, if the import purchase order indicator is checked. Throughout each step of the import purchase order creation, there are several options available to capture additional information-specific to ordering imported merchandise.

The menu options within the PO Header Maintenance window are used to attach shipping, letter of credit, order dates, attributes, required documents, and timeline information. The menu options within the PO Item Maintenance window are used to attach HTS, required documents, and timeline information for line items on the PO. The PO Item/Location window provides the option to assign expenses at the Item/Location level. All of the expense components are brought together in one view in the Order Item Expense Maintenance window.

Letter of Credit

A letter of credit (LC) is a bank instrument used by most retailers to finance purchase of imported goods. LCs are a preferred method of international settlement because the conditions of the purchase, such as required documents and special instructions are detailed in the text of the LC and reviewed by the bank for compliance before the release of payment. They provide importers with a secure method to pay for merchandise and vendors with a secure method to receive payment for merchandise. Letters of credit can be created and applied to purchase orders. Activity against the letter of credit can also be tracked. When the goods are shipped and shipping documents are available, the seller presents documents at the desk of the advising bank, and if there are no discrepancies, collects the specified payment amount. The advising bank debits the issuing bank for the amount of the negotiation as well as any charges, and the issuing bank makes payment and notifies the retailer of the amount of the principal draw down and associated charges.

RTM also supports the exchange of letter of credit (LC) information with a bank in the internationally recognized Society for Worldwide Interbank Financial Telecommunications (SWIFT) format.

Transportation

The transportation functionality in RTM provides a facility to track information from trading partners as merchandise is transported from the manufacturer through customs clearance in the importing country. This information is recorded at various levels: vessel/voyage, bill of lading (BOL), container, PO/item, and commercial invoice. Transportation information is most often received through EDI. When entered, the information is tracked and edited, as it changes.

The Transportation module is used to track the following information: Shipments, deliveries, licenses and visas, claims, missing documents, packing, dates, timelines, commercial invoices, inland freight, and totals.

When a transportation record is complete, the record is finalized. Finalized transportation records are used to automatically create customs entries. The goods are then tracked as they move through customs.

Customs Entry

The Customs Entry module manages entries of merchandise for clearance through customs while providing the information required for government documentation and reporting. Government duties, taxes and fees are calculated in accordance with the country of import. Entry information is prepared for transmission to the customs broker for entry submission. The Customs Entry module provides the ability to track the arrival of a shipment at customs, the customs clearance or associated delays, customs exams, and entry and liquidation payment amounts.

When the charges and assessments are complete, the retailer can choose to allocate the costs to the actual landed cost module. When the customs entry is complete, the custom entry record needs to be confirmed. Non-merchandise invoices are created automatically from confirmed customs entries in the Oracle Retail Invoice Matching application.

Obligations

As an item progresses through the import process, bills are received from various service providers. As non-merchandise invoices are received from trade partners and suppliers, they can be recorded in the obligations module. They are allocated over the shipment, orders and items that they cover, and the system proportionally allocates the charges to the line item level. Approving an obligation allocates the costs to the actual landed cost module. Approving an obligation creates a non-merchandise invoice in approved status in the Oracle Retail Invoice Matching application.

Actual Landed Costs

RTM helps to track the actual landed cost incurred when buying an import item. The module reports variances between estimated and actual landed costs by cost component and shipment. The Actual Landed Cost (ALC) dialogs provide the flexibility to view information about actual and estimated landed costs for any item on a purchase order or invoice obligation. The information can be organized by obligation, obligation cost component, shipment, or location. Duties, fees and taxes are posted directly to the Actual Landed Cost module bypassing the obligations maintenance process. While finalizing the ALC at a purchase order level, the user can also choose whether or not to update weighted average cost (WAC) for each purchase order. For those circumstances where goods might be partially or completely processed through a distribution center to another location prior to assembly and calculation of ALC, it might be more accurate to have WAC be determined by ELC to stand rather than updating it with an ELC/ALC variance.

RTM Integration with Other Applications

This section describes RTM integration with other application.

Integration with RMS

Oracle Retail Trade Management (RTM) and RMS share the same database schema. When RTM is enabled in an RMS instance, certain import-specific data maintenance is required for country, supplier, partners and items. These are directly updated into the RMS database and subsequently used in RTM.

Integration with Oracle Retail Invoice Matching

RTM, RMS, and ReIM share the same database schema.

Customs Entry Record - Confirmation of the customs entry record inserts an approved non-merchandise invoice record into the Invoice Matching staging tables for extract and uploads into ReIM.

Obligations Entry - Approving an obligation inserts an approved non-merchandise invoice record into the Invoice Matching staging tables for extract and upload into ReIM.

Integration with External Partners

RTM automates the international import transaction data. Four components of RTM: Customs entry, harmonized tariff schedule, letter of credit, and transportation have batch-processing modules that facilitate the flow of data between RTM and external applications and files.

Sharing the Letter of Credit Data with the Trading Partners

Letter of credit batch modules process letter of credit applications and amendments to banks, and upload confirmations, drawdown notifications, and related information from banks. Letter of credit batch module downloads and uploads data in an internationally recognized standard format called SWIFT (Society for Worldwide Interbank Financial Telecommunications).

The batch program LCADNLD extracts approved letter of credit applications to banks. The LCMT700 Perl script converts the LC applications from an RTM file format to the SWIFT (MT 700) format.

The issuing bank sends the retailer a confirmation when it agrees to stand as guarantee for the LC. The LCMT730 Perl script converts letter of credit confirmations from a SWIFT format (MT730) to an RTM flat file format. The batch program LCUPLD uploads the converted data from the table to the RTM database tables.

The issuing bank informs the retailer when credit draw downs are made against the LC or when bank charges the retailer the bank fees. The LCMT798 Perl script converts draw downs and bank fees data from a SWIFT file format to an RTM format. The batch program LCUP798 uploads the converted data from the table to the RTM database tables.

At times after a LC has been issued and confirmed, the retailer might want to make amendments to the LC. An amendment to a LC is valid when all parties involved agree to the new conditions and the agreement has been registered. Retailer initiated amendments are extracted by the batch program LCMDNLD. The LCMT707 Perl script converts the LC Amendments from an RTM file format to the SWIFT (MT707) format.

Integration with Customs Broker

The batch program CEDNLD (customs entry download) extracts custom entry information from the RTM database to custom brokers. Custom Entry (CE) transactions that are in a Sent status are written into a flat file. One flat file is written per broker. Information contained in the files include: order items, bill of lading/airway bill information, shipment information, container information, license, and visa information, broker charges and missing documents information.

The output file could be FTP to the broker. This process has to be handled during implementation and is outside the scope of RTM.

Upload of HTS Data

Customs agencies provide HTS data, this information must be converted to the RTM HTS upload file format for uploading into the system. The RTM batch program TRANUPLD uploads the data from the file into the RTM/RMS database. The program handles both the initial HTS information load as well as mid-year HTS updates that are supplied by the import country's government. The initial upload is handled by inserting information from the file into the tables. HTS information already available in the tables is handled by adjusting the effective dates of the existing HTS records and inserting a new set of HTS records into the tables. Files provided by the import country's government includes HTS Chapters, HTS classification, HTS Tax, HTS Fee, HTS OGA, Tariff Treatments, Tariff Treatment Exclusions.

The files provided by the import country government must be placed in the proper input directory after it is converted, so that the batch program TRANUPLD can pick up the file and process the data.

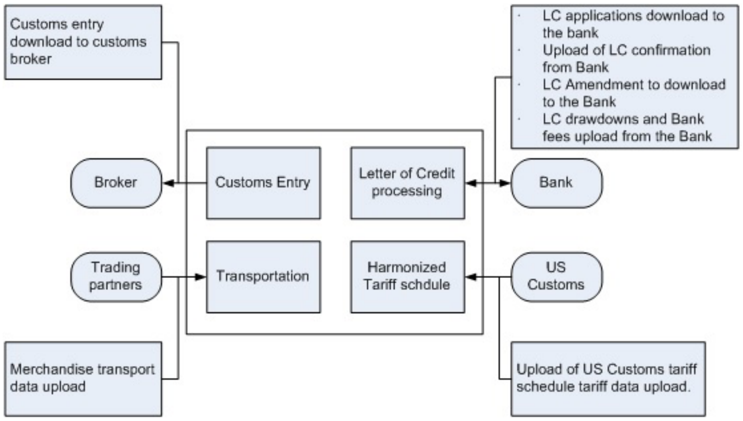
Integration with Supply Chain Partners

As the merchandise moves from manufacturers' warehouse/factory to the discharge port at the import country, the supply chain partners share information with the retailer in a specified file format. The batch program TRANUPLD uploads the information provided in the files into the transportation tables in RTM/RMS database, thus providing online visibility of the merchandise in the supply chain.

The files provided by the supply chain partners should be placed in the proper input directory, so that the batch program TRANUPLD can pick up the file and process the same. In case the files provided by the supply chain partners differ from the expected file format, custom program must be written to convert the data from the original file format to the required file format.

The following diagram illustrates the interaction between RTM and external agencies.

Figure 5–1 Interaction between RTM and External Agencies


Customs entry download to customs broker
· LC applications download to the bank
· Upload of LC confirmation from Bank
· LC Amendment to download to the Bank
· LC drawdowns and Bank fees upload from the Bank
Broker
Customs Entry
Letter of Credit processing
Bank
Trading partners
Transportation
Harmonized Tariff schdule
US Customs
Merchandise transport data upload
Upload of US Customs tariff schedule tariff data upload.

User Setup and Security

As RTM and RMS share the same instance, the application shares the security framework of RMS. The user setup, role assignment and access permission are done in the RMS framework.

For details on the user and security setup in RMS, refer to the *RMS Users and Security section* of this guide.

Simplified RTM Configuration

RTM is a simplified version of Oracle Retail product suite targeted at mid-tier retailers. The simplified Oracle Retail Merchandising Operations Management applications support basic retail processes needed by a mid-tier retailer. Advanced features are turned-off through system parameters, with the goal to reduce implementation complexity and enabling faster implementation and lower total cost of ownership.

If the system option parameter Simplified RTM indicator is enabled, then the following RTM functionality is not available in the application:

- Setting up RTM-specific master data such as freight type, freight size, and standard carrier alpha codes (SCAC)
- Letter of credit functionality
- Transportation functionality
- Customs entry functionality
- Obligation maintenance
- Actual landed costs

If both the Simplified RTM indicator and the Import indicator are enabled, then some import-related functionality is available in RMS. With this set up, the retailer has the option to set up the HTS data and use it in the purchase order process. The retailer can also choose letter of credit as a payment option in the Purchase Order header level, but all other related LC functionality is not available. It is assumed that the retailer is using some other external system for LC processing.

If the import indicator is not enabled, then no RTM functionality is available in the application. For additional information on setting the value in a System Configurations table, see *Oracle Retail Merchandising System Installation Guide*.

Other Features

As RTM is related to import purchases and might use foreign currency, it is important that the current exchange rate between the primary currency and the supplier's currency is maintained in the application. RMS does maintain currency exchange rates and can accept currency updates.

6

Oracle Retail Sales Audit

This chapter is an overview of Oracle Retail Sales Audit (ReSA).

Information Maintained by ReSA

The following information is maintained in the ReSA application.

System Options

Oracle Retail Sales Audit (ReSA) contains a set of system options that is different from the RMS system options set. These system options control functionality in ReSA. One of the important system option parameters is the balancing level. The balancing parameter could be Cashier or Register. If the balancing parameter is Cashier, the totals are balanced for each cashier. If the balancing parameter is Register, the totals are balanced for each register. Another important option is the unit of work. This determines whether transactions are exported prior to the elimination of all errors for the store/day. Other parameters include defining the escheatment party and the details of the clearinghouse. Certain business rules like duplicate and missing transaction number checks are also controlled through the system options setting.

Foundation Data

ReSA requires a certain amount of foundation data to start working. ReSA shares some of its foundation data with RMS, while the rest of the foundation data needs to be maintained in ReSA.

Foundation data in ReSA includes company/location close dates, location traits, bank setup, tender types, reference maintenance, error codes and store-specific foundation data.

Totals

ReSA allows the retailer to define the Totals needed for their business. Totals in ReSA can be a ReSA-calculated value from raw transaction data or a total that comes from the POS/OMS through the RTLog. ReSA calculates a total based on raw transaction data or on existing totals. Totals are used for performing store balancing over/short analysis within ReSA. Totals are also used to create data for external systems such as General Ledger. By assigning an audit rule to the total, business validation is built in ReSA. For example, the retailer defines a ReSA-calculated total of total cash tendered at a register for a store/day. He defines another total, a POS/OMS-declared total, for the total cash declared at the register for a store/day. He defines an audit rule to compare both the totals for over/short analysis. Totals are used to export consolidated data to an external system. So, while defining a total, the retailer defines the systems to which the total is exported.

Audit Rules

Rules are used in ReSA to perform custom data validation against transactions and totals. Audit rules run on POS/OMS transaction data and totals during the automated and interactive audit process. When the rule is broken, an exception error is thrown that must be edited or overwritten by the auditor. ReSA comes with some standard pre-configured rules and also provides flexibility to the retailers to define rules needed for their business.

Error Codes

Error codes provide information to the auditor about the type of error and the remedial action needed to solve the error, thus increasing the effectiveness of the audit process. When setting up audit rules for automated audit process, an error code is associated to the rule. The error code contains an explanation of why the rule failed, as well as a recommended solution. The error code also contains security settings to determine if the error can be overridden at the store or headquarters. When a rule fails, the error code is available to the auditor in the error list. Additionally the specific location where the error has occurred is available in the transaction details, thus helping the auditor to quickly understand and correct the error.

Automatic Audit Process

Automatic auditing is done in ReSA using batch programs. The goal of the automatic audit process is to accept transaction data from point-of-sale (POS/OMS) applications and move the data through a series of processes that culminate in clean data. ReSA uses several batch-processing modules to perform the following activities:

- Import POS/OMS transaction data from the RTLog.
- Perform initial validation of data during upload of data from the RTLog to ReSA database.
- Produce totals using user-defined totaling calculation rules that are user reviewable during the interactive audit.
- Validate transaction and total data with user-defined audit rules and generate errors whenever data does not meet the criteria. The user reviews these errors during the interactive audit.
- Create and export files of clean data in formats suitable for transfer to other applications.
- Update the ReSA database with adjustments received from external systems on previously exported data.

Interactive Audit Process

Auditors use the interactive audit process to view and correct errors. This process is done after the automated audit is completed. This process allows the auditors to view errors at summary or detail level, fix or override errors, update the totals and close the store/day. In addition, it is also possible to review and edit data of missing transactions or transactions that have passed automated audit, add transactions and delete invalid or missing transactions.

Summary Views

ReSA provides summary views for the auditor to identify and fix the problem areas quickly. A Store/Day Summary View screen contains the following information about a store/day: The audit status, the data status, the number of transactions, the number of errors and the over/short amount. The auditor has access to other options in the Store/Day Summary screen such as: The error list, the balancing level summary, over/short, miscellaneous totals, missing transactions and the import/export log.

ReSA provides two other summary views: Tender Summary and Item Summary.

Automated Clearing House (ACH) Processing

Automated Clearing House (ACH) is a U.S.-based banking network used to electronically transfer funds. Retailers use ACH to enable them to have access to funds before the funds have been physically deposited in the bank. This is done by estimating the following day's bank deposit and sending this amount to the consolidating bank through the ACH network. In this way, the cash to be received from the stores is hedged.

Escheatment Processing

Escheatment is the process of forwarding monies of outstanding, non-expiring vouchers to the proper government authorities (state or country) after a defined period of time from the date of issuance. Some government authorities require that unredeemed vouchers be escheated after a specific period of time has passed. When a voucher is escheated, an invoice is generated that initiates payment of the escheated voucher amount to the government authority. The government authorities then attempt to locate the consumers owed the monies.

To accommodate Escheatment, a new total should be added to Sales Audit to create escheatment totals. ReSA automatically totals sales transactions based on calculation definitions set up for the total.

Audit Trail

The audit trail functionality provides the users with the capability of tracking all changes to transactions and totals. ReSA maintains versions of all modified transactions thus enabling easy tracking of changes.

Totals for General Ledger that are impacted by a revised transaction are reversed and both the reversal and the new total are extracted for the General Ledger.

Reporting

ReSA provides some basic online reporting that allows users to view sales audit data that is in the system. The following reports are available in ReSA:

- Flash Sales report
- Flash Totals report
- Voucher Activity report
- Operational Insights ADF DVT report

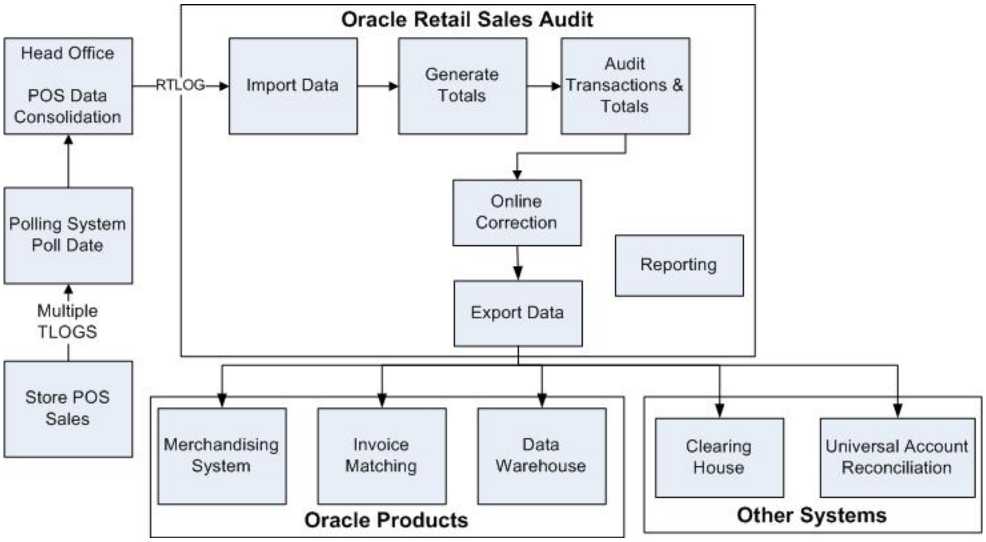
Integration with Other Applications

Oracle Retail Sales Audit interfaces with the following Oracle products:

- Oracle Retail Merchandise System
- Store Inventory Management
- Oracle Retail Invoice Matching System
- Retail Analytics

This figure displays the ReSA interfacing products:

Figure 6–1 Oracle Retail Sales Audit Interface



Oracle Retail Sales Audit also interfaces with the following third-party applications:

- Automated Clearing House.
- Universal Account Reconciliation System.

Integration with Oracle Retail Merchandising System

ReSA and RMS share the same database. ReSA shares some of its master data with RMS. Foundation data such as items, stores, company/location close dates, location traits, bank setup, and tender types are maintained in RMS and used in ReSA.

Current reference data is retrieved from RMS into ReSA by the batch program SAGETREF. The data is extracted into multiple data files. The data in the files are used by the batch program SAIMPTLOG as reference data for doing validation checks on the POS/OMS transaction data during the data upload from POS/OMS to ReSA. Having the reference in data file formats increases the performance of the SAIMPTLOG process. SAGETREF generates the following reference files: Items, Wastage, Sub-transaction level items, Primary variant relationships, Promotions File, Currency File, Warehouse File, Inventory Status File, Variable weight PLU, Store business day, Code types, Error codes, Store POS, Tender type, Merchant code types, Partner vendors, Supplier vendors, Employee IDs, Banner IDs.

All clean and audited sales and returns data is extracted from ReSA into a POSU file by the batch program SAEXPRMS. All corrected sale and return transactions that do not have RMS errors are extracted into the file. The sales audit system options parameter work unit controls the export of data into file in case of presence of RMS errors in the POS/OMS transaction data. The shell scripts UPLOADSALES.KSH and SALESPROCESS.KSH load data from the POSU file into the RMS tables.

Integration with Xstore Point-of-Service and Order Management System

Sales, returns, and other transaction data are loaded into ReSA from a Point-of-Service application, such as Oracle Retail Xstore, for in-store transactions and an Order Management System, for ecommerce orders fulfilled from non-store locations. These applications should provide a standard RTLog file. The RTLog data is loaded into ReSA either in trickle mode or once a day. If the data is uploaded in trickle mode, then corporate inventory reflects a more accurate intra-day stock position. The data from the RTLog is loaded into ReSA using the batch program SAIMPTLOG for end-of-day. If trickle processing is used the final RTLog for the day must include a count of all RTLog files for the store/day.

Integration with Oracle Retail Invoice Matching

In the normal course of business, payments are made to vendors at the store level. Payments for merchandise purchases done at store level are booked against a corresponding merchandise invoice. Payments of non-merchandise purchases or miscellaneous services availed at the store are booked against a corresponding non-merchandise invoice. These transactions are passed from the POS/OMS to ReSA as specially designated PAID OUT transactions (sub-transaction type of EV - Expense Vendor or MV - Merchandise Vendor). All these invoices are assumed paid. The batch program SAEXPIM transfers the PAID OUT type of transactions to the Invoice Matching staging tables.

The batch program SAEXPIM is also used for escheatment processing. Unclaimed monies of outstanding, non-expiring vouchers are totaled after a defined period of time from the date of issuance of the voucher and posted to the Invoice Matching staging tables as a non-merchandise invoice by SAEXPIM. The unclaimed amount is paid out as income to the issuing Retailer. In some U.S. states, it is paid out to the state (based on configuration). ReSA determines who receives this income and accordingly posts a non-merchandise invoice for the partner. These invoices are assumed not paid.

The batch job EDIDLINV is used to extract the invoices from the Oracle Retail Invoice Matching (ReIM) staging tables and load as EDI invoices to ReIM.

Integration with Oracle General Ledger

The batch program SAEXPGL transfers the sales data from ReSA into the financial staging tables in RMS. This batch program executes only if the external financial system is set to O (for other), E-Business Suite, or some other external financial application based on system options configuration.

SAEXPGL directly inserts the data into financial stage tables of RMS.

Integration with Automated Clearing House

ReSA determines the estimated bank deposit for each store/day. The batch program SAEXPACH posts the store/day deposits into a database table and creates the standard ACH format file. The output file is sent to a Clearing House. The output file conforms to the requirements imposed by the National Automated Clearing House Association (NACHA). The nature of the ACH process is such that as much money as possible must be sent as soon as possible to the consolidating bank. Any adjustments to the amount sent can be made front-end. This batch assumes that there is only one total to be exported for ACH per store/day.

Integration with Universal Account Reconciliation Solution

The batch program SAEXPUAR extracts specified TOTALS to a flat file that is interfaced to an account reconciliation application. For each store day, all specified totals are posted to their appropriate output files. All the stores and totals with usage type starting with UAR are exported.

Integration with Store Inventory Management

ReSA sends audited data to SIM which helps SIM to be synchronized with RMS with respect to inventory levels. The batch program SAEXPSIM extracts information from transactions with changed item quantities, item deletions, item addition, change in item status to VOID, and change in transaction status to PVOID. This information in the form of a file (SIMT) is uploaded and processed by SIM.

User Setup and Security

Access to ReSA and access to stores an auditor can take action against, is controlled by privileges available to the user's application role and RMS data level security.

To access ReSA, the user must be mapped to one of the available ReSA roles. There are four default application roles:

- Sales Audit Analyst
- Sales Auditor Manager
- Finance Manager
- Application Administrator

Each of these roles have multiple privileges attached to them. The privileges are defined at granular level and restrict access to a particular screen, or access to take specific audit action. The privileges get directly assigned to the user once a user is mapped to the ReSA roles. A user can be assigned multiple roles.

ReSA shares the database instance with RMS. RMS location level data security is also applied to ReSA users. The location level security is assigned to every ReSA user. This controls the Organization Hierarchy locations the user has access to.

Note: RMS also supports Item and Merchandise Hierarchy level data security to restrict user access to specific products. Item level security is not applicable for ReSA.

7

Oracle Retail Allocation

This chapter provides an overview of Oracle Retail Allocation.

Information Maintained by Allocation

The following information is maintained in the Allocation application:

Standard Allocations - Oracle Retail Allocation provides the customer a number of sources from which to allocate products. These sources include:

- Purchase Orders
- Advanced Shipment Notifications (ASN)
- Transfers
- Bill of Lading (BOL)
- Warehouse inventory
- Approved warehouse-to-warehouse allocations

Customers have more access and control to existing transactions as a result of the different item sources, which results in increased supply chain efficiency.

What if Allocations - These allocations are similar to the standard ones with the exception that it is assumed that these have an infinite amount of product available to allocate. This allows a customer to determine the true need for the locations being allocated to, and they can choose to create a purchase order based on the allocation to fulfill the need. The user can also enter a finite available quantity during the creation of a 'what if' allocation, in which case this value gets treated as an upper cutoff.

Scheduled Allocations - Manually re-creating allocations that have the same criteria requires time. Oracle Retail Allocation allows users to define an allocation and schedule it to be automatically re-created on specific dates and time until the end date is met, warehouse stock is depleted, or threshold is met.

Allocation Templates - Oracle Retail Allocation users can create standard templates to apply to allocations to save time. Two types of templates can be created: allocation location groups and policy.

Policies - Oracle Retail Allocation requires the selection of a policy for the calculation of an allocation. The policy defines the source of the data used in the calculation of the allocation and other parameters that are used in the calculation.

Advanced Need Determining Calculations - Allocations are calculated in real time by advanced internal algorithms that calculate store or warehouse need based on the policy parameters established by the customer and the current perpetual inventory and sales for the items being allocated.

Split Allocations - Oracle Retail Allocation allows users to react to changes (such as short ships, delays, and cancelled product) by splitting an allocation. Using this functionality, users can split one or many items off from an existing allocation and onto a new allocation of their own.

Implementation Considerations

As part of the implementation of Allocation, customers may need to make specific choices about RMS item setup and location ranging. Customers may also need to populate tables used by Allocation in order leverage certain functionality, such as size profiles or auto quantity limits. This section provides details on the expected values to leverage these capabilities.

Allocation Item Types

The way items are classified in Allocation is different from RMS and most of the enterprise. The ALC_ITEM_TYPE is best explained with examples. This is not the exhaustive list of possible combinations, but is instead an illustration of possibilities. When examples of the data in the item_master table are presented, please be aware that the example only shows a small subset of the columns on the table. Not all items in the ITEM_MASTER table will be considered by Allocation. Thus, not all items in ITEM_MASTER will have the ALC_ITEM_TYPE column populated.

ALC_ITEM_TYPES

- Staple Item (ST)
- Sellable Pack (SELLPACK)
- Style (STYLE)
- Fashion Item (FA)
- Fashion SKU (FASHIONSKU)
- Pack Component (PACKCOMP)
- Non-sellable Fashion Simple Pack (NSFSP)
- Non-sellable Staple Simple Pack (NSSSP)
- Non-sellable Staple Complex Pack (NSSCP)
- Non-sellable Fashion Multi-color Pack (NSFMCP)
- Non-sellable Fashion Single Color Pack (NSFSCP)

Staple Item

A one level item is not related to any other items.

Item (ID, not null)	Item_ parent (nullable)	Item_ grandparent (nullable)	Item_level (not null)	Tran_level (not null)	Diff_1	Diff_2	ITEM_ AGGREGA TE_IND	ALC_ ITEM_ TYPE
182920285	Null	Null	1	1	Null	Null	N	ST

Transaction level items of multiple level item families that have their aggregation indicator marked as N.

Item (ID, not null)	Item_ parent (nullable)	Item_ grandparent (nullable)	Item_level (not null)	Tran_level (not null)	Diff_1	Diff_2	ITEM_ AGGREGATE _IND	ALC_ ITEM_ TYPE
100001393	Null	Null	1	2	COLOR	SIZE	N	
100001828	100001393	Null	2	2	RED	SMALL	N	ST
100001561	100001393	Null	2	2	BLUE	SMALL	N	ST
100075018	Null	Null	1	3	null	null	N	
100075026	100075018	Null	2	3	null	null	N	
100075034	100075026	100075018	3	3	null	null	N	ST

Sellable Packs

All pack items that have ITEM_MASTER.sellable_ind = Y are classified as Sellable Packs in Allocation.

Item (ID, not null)	Item_level (not null)	Tran_level (not null)	PACK_IND	SELLABLE_ IND	ALC_ITEM_ TYPE
110919650	1	1	Y	Y	SELLPACK
110919649	1	1	Y	Y	SELLPACK
111394648	1	1	Y	Y	SELLPACK

Fashion Item Families

These are item families where the transaction level is 2 and the aggregation indicator at level 1 is Y. Allocation introduces a new level between the level 1 item and the level 2 items. These intermediate level items (1.5) do not exist on the ITEM_MASTER table.

Level 1 items hold diff groups and level 2 items hold diffs in fashion item families

Item (ID, not null)	Item_ parent (nullable)	Item_ grandp arent (nullabl e)	Item_ level (not null)	Tran_ level (not null)	Diff_1	Diff_2	ITEM_ AGGRE GATE_ IND	DIFF_ 1_ AGGRE GATE_ IND	DIFF_ 2_ AGGRE GATE_ IND	ALC_ITEM_ TYPE
100001393	Null	Null	1	2	COLOR	SIZE	Y	Y	N	STYLE
100001828	100001393	Null	2	2	RED	SMALL	N	N	N	FASHIONSKU
100001561	100001393	Null	2	2	RED	LARGE	N	N	N	FASHIONSKU
100001465	100001393	Null	2	2	BLUE	SMALL	N	N	N	FASHIONSKU
100001721	100001393	Null	2	2	BLUE	LARGE	N	N	N	FASHIONSKU

The Allocation constructed items (FA) between the STYLE items and the FASHIONSKU items are a combination of the STYLE and the unique aggregation diffs of the FASHIONSKU items. In our example the STYLE is 100001393. The unique aggregation diffs (where the DIFF_X_ AGGREGATION_IND is Y at the STYLE level): RED, BLUE. They are concatenated in this format {STYLE agg position~aggregation diff}

ITEM	ALC_ITEM_TYPE
100001393 1~RED	FA
100001393 1~BLUE	FA

The same example if DIFF_2_AGGREGATE_IND is Y instead of DIFF_1_AGGREGATE_IND

Item (ID, not null)	Item_ parent (nullable)	Item_ grandparent (nullable)	Item_ level (not null)	Tran_ level (not null)	Diff_1	Diff_2	ITEM_ AGGREGATE_ IND	DIFF_ 1_ AGGREGATE_ IND	DIFF_ 2_ AGGREGATE_ IND	ALC_ITEM_ TYPE
100001393	Null	Null	1	2	COLOR	SIZE	Y	N	Y	STYLE
100001828	100001393	Null	2	2	RED	SMALL	N	N	N	FASHIONSKU
100001561	100001393	Null	2	2	RED	LARGE	N	N	N	FASHIONSKU
100001465	100001393	Null	2	2	BLUE	SMALL	N	N	N	FASHIONSKU
100001721	100001393	Null	2	2	BLUE	LARGE	N	N	N	FASHIONSKU

ITEM	ALC_ITEM_TYPE
100001393 2~SMALL	FA
100001393 2~LARGE	FA

Non-sellable Staple Simple Pack

These are non-sellable simple packs that contain only 1 component item. The component item must be classified as a Staple item by Allocation.

In this example pack item 110919650 is a simple pack with 1 component item 110919649 which is a ST item.

Item (ID, not null)	Item_level (not null)	Tran_level (not null)	PACK_IND	SELLABLE_ IND	SIMPLE_ PACK_IND	ALC_ITEM_ TYPE
110919650	1	1	Y	N	N	NSSSP
110919649	1	1	N	Y	N	ST

Non-sellable Fashion Simple Pack

These are non-sellable simple packs that contain only 1 component item. The component item must be classified as a Fashion sku item by Allocation.

In this example pack item 110919650 is a simple pack with 1 component item (110919649) which is a FASHIONSKU item.

Item (ID, not null)	Item_level (not null)	Tran_level (not null)	PACK_IND	SELLABLE_ IND	SIMPLE_ PACK_IND	ALC_ITEM_ TYPE
110919650	1	1	Y	N	N	NSSSP
110919649	1	1	N	Y	N	FASHIONSKU

Non-sellable Staple Complex Pack

These are non-sellable complex packs that only contain staple items as components.

In this example pack item 110919650 is a simple pack with 3 component items which are ST items.

Item (ID, not null)	Item_level (not null)	Tran_level (not null)	PACK_IND	SELLABLE_IND	SIMPLE_PACK_IND	ALC_ITEM_TYPE
110919650	1	1	Y	N	N	NSSSP
110919649	1	1	N	Y	N	ST
110919648	1	1	N	Y	N	ST
110919647	1	1	N	Y	N	ST

Non-sellable Fashion Single Color Pack

These are non-sellable complex packs that only contain FASHIONSKU components. The component items must all share the same item_parent. The component items must all share the same aggregate diff values.

In this example, let's say pack item 110919650 has two components: 100001828 and 100001561. The two components share a common parent item (100001393). The two components are classified as FASHIONSKU in ALC_ITEM_TYPE. The aggregation diff for the STYLE the components both belong to is position 1 and both components have the same value for DIFF_1.

Item (ID, not null)	Item_parent (nullable)	Item_grandparent (nullable)	Item_level (not null)	Tran_level (not null)	Diff_1	Diff_2	ITEM_AGGREGATE_IND	DIFF_1_AGGREGATE_IND	DIFF_2_AGGREGATE_IND	PACK_IND	SELLABLE_IND	SIMPLE_PACK_IND	ALC_ITEM_TYPE
100001393	Null	Null	1	2	COLOR	SIZE	Y	Y	N	N	Y	N	STYLE
100001828	100001393	Null	2	2	RED	SMALL	N	N	N	N	Y	N	FASHIONSKU
100001561	100001393	Null	2	2	RED	LARGE	N	N	N	N	Y	N	FASHIONSKU
100001465	100001393	Null	2	2	BLUE	SMALL	N	N	N	N	Y	N	FASHIONSKU
100001721	100001393	Null	2	2	BLUE	LARGE	N	N	N	N	Y	N	FASHIONSKU
110919650	Null	Null	1	1	Null	Null	N	N	N	Y	N	N	NSFSCP

Non-sellable Fashion Multi Color Pack

These are non-sellable complex packs that only contain FASHIONSKU components. The component items must all share the same item_parent. The component items can have varying aggregate diff values.

In this example, let's say pack item 110919655 has two components: 100001828 and 100001721. The two components share a common parent item (100001393). The two components are classified as FASHIONSKU in ALC_ITEM_TYPE. The aggregation diff for the STYLE the components both belong to is position 1 and both components have different values for DIFF_1.

Item (ID, not null)	Item_parent (nullable)	Item_grandparent (nullable)	Item_level (not null)	Tran_level (not null)	Diff_1	Diff_2	ITEM_AGGREGATE_IND	DIFF_1_AGGREGATE_IND	DIFF_2_AGGREGATE_IND	PACK_IND	SELLABLE_IND	SIMPLE_PACK_IND	ALC_ITEM_TYPE
100001393	Null	Null	1	2	COLOR	SIZE	Y	Y	N	N	Y	N	STYLE

Item (ID, not null)	Item_ parent (nullable)	Item_ grand parent (nullable)	Item_ level (not null)	Tran_ level (not null)	Diff_1	Diff_2	ITEM_ AGGREGATE_IND	DIFF_ 1_ AGGREGATE_IND	DIFF_ 2_ AGGREGATE_IND	PACK _IND	SELLABLE _IND	SIMPLE_ PACK _IND	ALC_ ITEM_ TYPE
100001828	100001393	Null	2	2	RED	SMALL	N	N	N	N	Y	N	FASHIONSKU
100001561	100001393	Null	2	2	RED	LARGE	N	N	N	N	Y	N	FASHIONSKU
100001465	100001393	Null	2	2	BLUE	SMALL	N	N	N	N	Y	N	FASHIONSKU
100001721	100001393	Null	2	2	BLUE	LARGE	N	N	N	N	Y	N	FASHIONSKU
110919655	Null	Null	1	1	Null	Null	N	N	N	Y	N	N	NSFMCP

Items Not Supported By Allocations

Item below transaction level items

Allocation does not support Items where the item_level is greater than the tran_level.

Non-sellable complex packs that contain a mix of FASHIONSKU and ST components

Allocations does not support packs with both ALC_ITEM_TYPE = FASHIONSKU and _ ITEM_TYPE = ST components.

Non-sellable complex packs that contain FASHIONSKU items with different parent items

Allocations does not support packs with component items that belong to more than one fashion item family.

Size Profile

Overview

All fashion, fashion pack, and fashion group allocations need to have size profile information. Size profile information is determined based on the selling ratio of the fashion items and is used to spread the quantity being allocated from Style/Color down to the SKU level. If an item / destination location does not have size profile information, it is excluded while performing the calculations.

In order to properly use Allocation for fashion items, customers need to populate the size profile data either through the UI or the database table. Each record should have hierarchy, location, and quantity information and should only contain details relevant to the target hierarchy level. For further information about size profile please see the Allocation and SPO section.

A combination of a merchandise hierarchy and location group can have multiple size profiles set up, which are termed as Generation IDs (GIDs). Size Profile Optimization application in RPAS provides size profile information for different seasons. These seasonal profiles are stored using three different tables in Allocation.

Table 7–1 ALC_GID_HEADER

Column	Required	Description
ID	Y	This is the primary unique ID generated from the sequence
GID	Y	This is the GID season code, populated from SPO
GID_DESC	Y	The description for the GID
CREATED_BY	Y	Indicates the user who created the record
CREATION_DATE	Y	The timestamp of the record creation date
LAST_UPDATED_BY	Y	Indicates the user who last updated the record
LAST_UPDATE_DATE	Y	The timestamp of the last updated date for the record
LAST_UPDATE_LOGIN	Y	Indicates the session login associated to the user who last updated the row.

Table 7–2 ALC_GID_PROFILE

Column	Required	Description
GID_ID	Y	This is the foreign key to the primary key of ALC_GID_HEADER
GID_PROFILE_ID	Y	This is the primary unique ID generated from the sequence
CREATED_BY	Y	Indicates the user who created the record
CREATION_DATE	Y	The timestamp of the record creation date
LAST_UPDATE_DATE	Y	The timestamp of the last updated date for the record
LAST_UPDATE_LOGIN	Y	Indicates the session login associated to the user who last updated the row

Table 7–3 Size Profile Table details

Column	Required	Description
SIZE_PROFILE_ID	Y	This column is auto-generated
LOC	Y	This column stores the location to which the size profile will apply. This column should always be populated
DEPT	N	This column stores the dept to which the size profile will apply. This column should be populated only for dept, class, and subclass level size profiles.
CLASS	N	This column stores the class to which the size profile will apply. This column should be populated only for class, and subclass level size profiles.
SUBCLASS	N	This column stores the subclass to which the size profile will apply. This column should be populated only for subclass level size profiles.

Table 7–3 (Cont.) Size Profile Table details

Column	Required	Description
STYLE	N	This column stores the Style Id to which the size profile will apply. This column should be populated only for Style, or Style Diff level size profiles.
SIZE1	N	This column stores the aggregated or non-aggregated Diff_1 information to which the size profile will apply. In the case of Style_Diff level, This column contains the aggregated or non-aggregated diff. In the case of Dept, Class, Subclass or Style Level; This column contains the non-aggregated diff.
SIZE2	N	This column stores the aggregated or non-aggregated Diff_2 information to which the size profile will apply. In the case of Style_Diff level, This column contains the aggregated or non-aggregated diff. In the case of Dept, Class, Subclass or Style Level; This column contains the non-aggregated diff.
SIZE3	N	This column stores the aggregated or non-aggregated Diff_3 information to which the size profile will apply. In the case of Style_Diff level, This column contains the aggregated or non-aggregated diff. In the case of Dept, Class, Subclass or Style Level; This column contains the non-aggregated diff.
SIZE4	N	This column stores the aggregated or non-aggregated Diff_4 information to which the size profile will apply. In the case of Style_Diff level, This column contains the aggregated or non-aggregated diff. In the case of Dept, Class, Subclass or Style Level; This column contains the non-aggregated diff.
SIZE_GROUP1	Y	This column stores the value 'X'
SIZE_GROUP2	N	This column stores the value 'null'.
QTY	Y	This column stores the individual size profile quantity.
CREATED_BY	Y	This column stores the created by user name
CREATION_DATE	Y	This column stores the creation date
LAST_UPDATED_BY	Y	This column stores the last updated by user name
LAST_UPDATE_DATE	Y	This column stores the last updated date
LAST_UPDATE_LOGIN	Y	This column stores the last updated login
OBJECT_VERSION_NUMBER	Y	This column store the object version number

Table 7–3 (Cont.) Size Profile Table details

Column	Required	Description
GID_PROFILE_ID	N	This column stores the GID_PROFILE_ID. This column is populated when the size profile is part of a Seasonal or Generation set. This column is null if it is a standard size profile. This column is a Foreign Key on the table ALC_GID_PROFILE
SIZE_PROFILE_ LEVEL	Y	This column stores a numerical size profile level. Dept = 1, Class = 2, Subclass = 3, Style = 4, Style_Diff = 5

Auto Quantity Limits

Overview

Auto quantity limits provides users a way to store pre-defined quantity limits for multiple merchandise hierarchy levels, including item, style diff, style, department, class, and subclass levels. Auto quantity limits will automatically use the lowest available hierarchy level to apply to each item location. The quantity limits information retrieved from the auto quantity limits table will display in the existing quantity limits section of the UI. These values will then be saved to the Allocation as normal quantity limits, so once auto quantity limits are applied to an allocation, changes to the values in the auto quantity limits table will not be reflected. Allocations can use auto quantity limits through a checkbox in the quantity limits tab. Auto quantity limits can be used by default for every allocation through a system option. A UI is also available to define the Auto Quantity Limits.

Implementation

In order to use the auto quantity limits, customers need to populate the auto quantity limits table manually or through the UI. Each record should have hierarchy and location information and should only contain information relevant to the target hierarchy level. Every record uses a start and end date to determine the effective dates of that record. Start dates must be populated, however, end dates are optional.

Overlapping dates for a particular hierarchy level location are not supported. If there is a record with no end date specified, then only records with start and end dates can be populated in the time period before the start of the original record which has no end date.

Table 7–4 Auto Quantity Limits

Column	Required	Description
AUTO_QUANTITY_ LIMITS_ID	Y	This column is auto-generated
LOCATION_ID	Y	This column stores the location to apply the quantity limits to. This column should always be populated
DEPT	N	This column stores the dept to apply the quantity limits to. This column should be populated only for dept, class, and subclass level quantity limits.
CLASS	N	This column stores the class to apply the quantity limits to. This column should be populated only for class, and subclass level quantity limits.
SUBCLASS	N	This column stores the subclass to apply the quantity limits to. This column should be populated only for subclass level quantity limits.

Table 7–4 (Cont.) Auto Quantity Limits

Column	Required	Description
ITEM_ID	N	This column stores the Item id or Style Id to apply the quantity limits to. This column should be populated only for Item, Style, or Style Diff level quantity limits.
DIFF_1	N	This column stores the Diff_1 information to apply the quantity limits to. This column should be populated only for Style Diff level quantity limits where Diff_1 is the aggregate Diff.
DIFF_2	N	This column stores the Diff_2 information to apply the quantity limits to. This column should be populated only for Style Diff level quantity limits where Diff_2 is the aggregate Diff.
DIFF_3	N	This column stores the Diff_3 information to apply the quantity limits to. This column should be populated only for Style Diff level quantity limits where Diff_3 is the aggregate Diff.
DIFF_4	N	This column stores the Diff_4 information to apply the quantity limits to. This column should be populated only for Style Diff level quantity limits where Diff_4 is the aggregate Diff.
START_DATE	Y	This column stores the date when this record can start to be applied. This column should always be populated. (This Column may be depreciated in version 15.0)
END_DATE	N	This column stores the date that this record can no longer be applied. This column does not need to be populated, in which case, anything date after the start date is valid. (This Column may be depreciated in version 15.0)

Integration with Other Applications

A retailer that acquires Oracle Retail Allocation gains the ability to achieve more accurate allocations on a stable product. Having the right product in the right stores or warehouses allows for service levels to be raised, sales to be increased, and inventory costs to be lowered. By accurately determining which stores or warehouses should get which product, retailers can meet their turnover goals and increase profitability.

The Oracle Retail Allocation retailer benefits from the following capabilities:

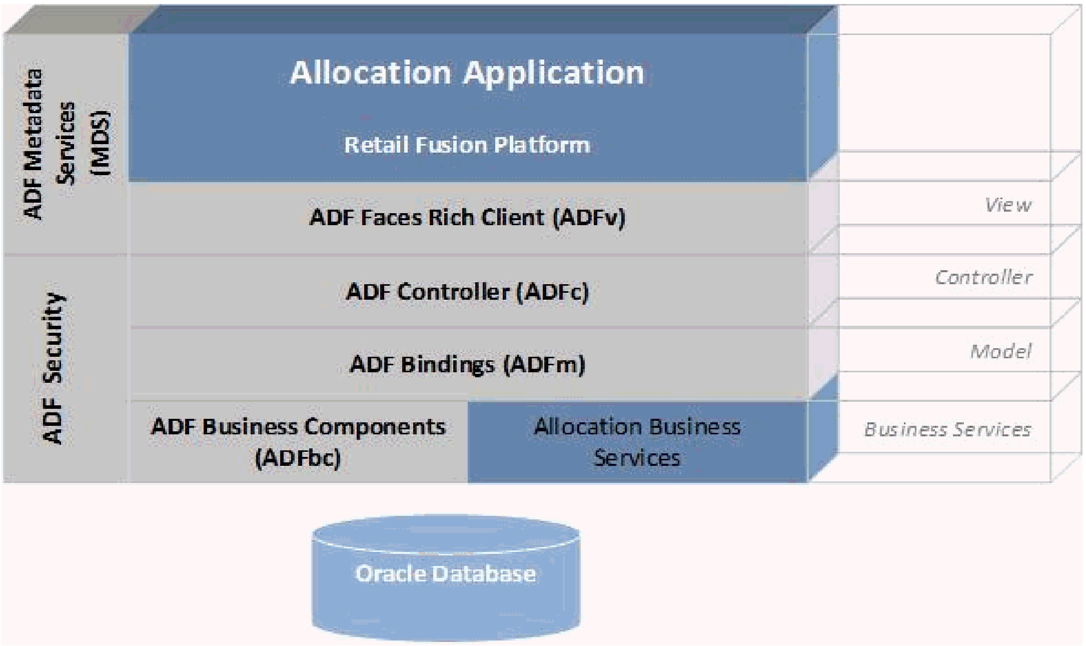
- Built on ADF Technology stack, it allows the ability to quickly add UI based on ready to use design patterns, metadata driven tools and visual tools. Debugging can be performed more rapidly; maintenance and alteration costs are kept low using the Meta data driven Application Development.
- The application's interface takes advantage of the Java Database Connectivitiy (JDBC), ADF's built-in transaction management, along with connections to datasources handled in Weblogic server hence minimizing the interface points needed to be maintained.
- The application's robust algorithm executes rapidly and the call to the calculation engine has been ported over from C++ library to a Java Library thus minimizing the overhead/issues related to maintaining codebase consisting of two languages.
  - For retailers with other Oracle Retail products, integration with the Oracle Retail product suite means that item, purchase order, supplier, sales, and other data are accessed directly from the RMS tables, with no need for batch modules. The allocation information containing the item, location, and allocated quantity details is passed from

RMS to a warehouse management system, such as the Oracle Retail Warehouse Management System (RWMS).

- Access Control to the System is better managed by using Fusion Security Architecture.
- The application allows for retailers to adjust to changing trends in the market by facilitating real time allocations.

The following diagram illustrates the Allocation n-tier architecture:

Figure 7–1 Allocation n-tier Architecture



Allocation n-tier Architecture

RMS owns virtually all of the information that Oracle Retail Allocation needs to operate and the information that Oracle Retail Allocation provides is of primary interest/use for RMS. As a result Oracle Retail Allocation has limited interaction with other Oracle Retail Merchandising Operations Management applications. For Oracle Retail Merchandising Operations Management applications that Oracle Retail Allocation does interact with, it is managed through direct reads from Oracle Retail Merchandising Operations Management application tables, direct calls to Oracle Retail Merchandising Operations Management packages, and Oracle Retail Allocation packages based on Oracle Retail Merchandising Operations Management application tables.

For more information on the Merchandising Architecture, see *Retail Reference Architecture artifacts on My Oracle Support.*

Allocation and RMS

RMS provides the following to Allocation:

- **Foundation Data**-This information is essential to all areas of Oracle Retail Allocation including valid locations to allocate to and from, location groupings, valid merchandise hierarchies to allocate within, and so forth.
- **Item**-Allocations are generated at the item/location level so it is necessary that the Allocation application understands what items and item/locations are eligible in the system.

- **Purchase Order**-One of the sources from which a user allocates is an approved Purchase Order. Oracle Retail Allocation relies on RMS to provide Purchase Order information.
- **Transfer**-One of the sources from which a user allocates is an approved Transfer. Oracle Retail Allocation relies on RMS to provide Transfer information.
- **BOL**-One of the sources from which a user allocates is a bill of lading. Oracle Retail Allocation relies on RMS to provide BOL information.
- **ASN** -One of the sources from which a user allocates is an ASN. Oracle Retail Allocation relies on RMS to provide ASN information.
- **Approved Allocation -** Allocation relies on RMS for approved warehouse to warehouse allocation identifiers, which can be used to source further allocations.
- **Inventory** -In order to determine the correct need at an item-location level before performing an allocation, the application needs visibility to the current on-hand inventory at each location being allocated to. Oracle Retail Allocation relies on RMS to provide inventory information at the item/location level.
- **Shipping Information** - Once an allocation is shipped by the Warehouse Management System, this information is passed on to the RMS. This shipment information implies that the allocation has been processed and is not available for any further user edits from the UI. Oracle Retail Allocation relies on the RMS to provide shipment information.
- **Sales Information** - Oracle Retail Allocation uses historical sales, forecast sales, and plan in order to determine the need at an item/location level for an allocation. Oracle Retail Allocation relies on RMS to provide sales information, RDF to provide forecast information, and Assortment Planning (or external planning system) to provide plan information.
- **Item/Location Ranging** - Oracle Retail Allocation uses the item/location ranging data set up in RMS. The following logic is applied during the determination of valid item/location combinations:

  a. For Staple, Fashion and Sellable Pack items, the transaction item will be used to determine valid Item/Location ranging.

  b. For Non Sellable Packs, Pack or Component item will be used to determine the valid Item/Location ranging, by considering FP_PACK_RANGING value P or C in System Options.

  Allocation uses RMS ITEM_LOC, Store and WH table to identify the valid Location, logic is as follows:

  – If the 'Use Default Sourcing Location Only' checkbox is checked, then the SOURCE_WH in ITEM_LOC table is considered first to identify the warehouse that is valid to allocate to a destination location. If this is not found, then the DEFAULT_WH specified in the Store or WH table for the destination location will be used.

  – If the 'Use Default Sourcing Location Only' checkbox is not checked, then the SOURCE_WH in ITEM_LOC table is considered first to identify the warehouse that is valid to allocate to a destination location. If this is not found, then the DEFAULT_WH in Store or WH table for the destination location will be used. If neither of these options is able to meet the destination need, then a sequencing logic will be used based on the ORG_UNIT, CHANNEL, PROTECTED indicator (of the source warehouse), and PRIMARY indicator (of the source warehouse) in the Store or WH table will be used to identify the valid Source based on the legal entity which will be either the transfer entity or set of books, depending on the Intercompany Basis defined in RMS. For more details, see the *Oracle Retail Allocation User Guide*.

Allocation and RTM

No information is exchanged.

Allocation and ReSA

No information is exchanged.

Allocation and ReIM

No information is exchanged.

Allocation and AP

Allocation is integrated with RPAS Assortment Planning via RETL using the Receipt Plan feature. Assortment Plan data ideally represents what the store or warehouse is expected to receive at the item level.

Allocation and SPO

Oracle Retail Size Profile Optimization enables you to create various seasonal sets of store size profile data in terms of generation IDs (GIDs). GIDs are commonly created in advance of a selling period and based off current trend. Oracle Retail Allocation will allow you to select a specific GID to be applied during the allocation process. This is illustrated in the following three business case examples:

- **Business Case 1**: When creating a pre-allocation for the upcoming fall season. You may want to use a forward out Subclass Fall 2017 set of size profile data. This helps to better align the planning and execution process.
- **Business Case 2**: When creating an in-season allocation, where the allocation is expected to be processed the next day, you may want to take advantage of a current trend GID and select the Style level GID set of size profile data. Results will be based off actual trend data.
- **Business Case 3**: For key items, you may want to apply key item level specific GIDs instead of the store size profile data created at higher levels, such as Class or Subclass.

> **Note:** The GID option applies only to stores. For a fashion allocation involving destination warehouses, there are other options to determine the size profile. For more details, see the *Oracle Retail Allocation User Guide*.

Allocation System Options

In order to increase operational efficiencies, Allocation has provided the ability of viewing/maintaining the system properties settings via the UI based on user privileges. The Allocation Foundation > Manage System Options under the updated Task List allows you to view various system settings.

The System Options UI displays the existing set of system options in the form of logically grouped containers. Out of the set of options, System Properties which are global system settings and get configured and defined during install and implementation are controlled and maintained by the System Administrator user role. The User Group Properties are the ones which the Allocation user group can manage such as business trend and needs which change due to a shift in season or a change in their business model. These properties are controlled and maintained by the Allocation Manager user role. Allowing allocation users have view access of these settings which allows for them to better understand the Allocation product, process and results.

System Properties

- DISPLAY ITEM LOCATION WARNING

  Indicates whether a warning message needs to be displayed to the user in case of, selection of an invalid item/location combination. This system option is important for customers to understand that invalid item/locations combinations have been added in an allocation. Once these are identified, the user can take necessary steps to rectify them before proceeding with the workflow.

- END OF WEEK DAY

  Indicates the day treated as the end of the week. This system option is vital for all customers implementing Oracle Retail Allocation. Any weekly rollups performed by the application during need calculations are based on this setting. For accurate results, this needs to be in sync with the setup within the merchandising system.

- DISPLAY ITEM LOCATION WARNING

  Indicates whether a warning message needs to be displayed to the user in case of, selection of an invalid item/location combination. This system option is important for customers to understand that invalid item/locations combinations have been added in an allocation. Once these are identified, the user can take necessary steps to rectify them before proceeding with the workflow.

- AUTO UPDATE LOCATION GROUP

  Indicates whether the location groups need to be updated for worksheet allocations. This system option is important for customers who extensively use location groups. In cases where a location group undergoes modifications within the merchandising system, where there are stores that were added to or deleted from the group, the Allocation user would be alerted of such changes on accessing an allocation making use of the modified location group.

- SIZE PROFILE VALIDATION LEVELS

  Indicates the levels at which the validation should be done. The valid values are STYLE, STYLE/COLOR, SUBCLASS, CLASS, and DEPT. If you want to specify more than one value, then use the comma as a delimiter.

  This needs to be set to the merchandise hierarchy levels at which the retailer is likely to store the size profile data.

- USE SISTER STORE DEMAND

  Indicates whether the need of a similar store can be used during allocation calculation. If this is set to True, the system uses the sister store's need when the records don't exist for a store. If this is set to False, the system uses the sister store's need when the records don't exist for a store or when there are existing records but with zero need.

  This gives the retailer the option to use item sales data from a like store in case of no existing records from the store in the allocation or there is a new store receiving goods for the first time and which is unlikely to have any past history data.

- CONSIDER ON ORDER IN STOCK CALCULATION

  Indicates whether the On Order quantities against open purchase orders are considered while calculating item stock on hand.

On Order quantities against open purchase orders are considered while calculating stock on hand (SOH) for the items in the order only if this option is set to Yes. This setting needs to be taken into consideration while analyzing the net need quantity generated for a store by the calculation algorithm.

- LOCATION STATUSES TO EXCLUDE

  Indicates the item-location relationship status that needs to be excluded from product sourced allocations. Separate multiple statuses with a space. Example: Location Exception Reason Product Sourced = C D I. If you want to exclude a non-existing item location relationship, add NULL to the list.

  Within the merchandising system, there are multiple item-location relationships that may exist. During the implementation phase, it is very important that the retailer takes a decision around which of these relationships would be considered valid during the creation process for a regular allocation. Defining the set of invalid relationship status through this system option removes an additional overhead of having to individually examine each allocation and manually remove invalid item location combinations.

- "WHAT IF" SUMMARY DEFAULT ACTION

  Indicates the What If Summary Default Action: Create or Update PO.

- LOCATION STATUSES TO EXCLUDE

  Indicates the item-location relationship status that needs to be excluded from What If allocations. Separate multiple statuses with a space. Example: Location Exception Reasons What If = C D I. If you want to exclude a non-existing item location relationship, add NULL to the list.

  Within the merchandising system, there are multiple item-location relationships that may exist. During the implementation phase, it is very important that the retailer takes a decision around which of these relationships would be considered valid during the creation process for a 'what if' allocation. Defining the set of invalid relationship status through this system option removes an additional overhead of having to individually examine each allocation and manually remove invalid item location combinations.

- DEFAULT IMPORT WAREHOUSE

  Indicates the default warehouse for import based purchase orders from What If allocations. This is a non-finisher virtual warehouse where the customer would require the delivery of purchase orders created out of What If allocations. It needs to be noted here that this warehouse would be considered only in cases where the destination stores do not have a designated default delivery warehouse in the merchandising system.

  Business example: Default What If Import Warehouse = VWH1. For store S1, default delivery warehouse in the merchandising system = VWH2. For store S2, there is no default delivery warehouse in the merchandising system. In the above setting, a What If PO raised for S1 would be sent to VWH2 and for S2 would be sent to VWH1.

- DEFAULT WAREHOUSE FOR BULK ORDERS

  Indicates the non-finisher virtual bulk warehouse ID for PO creation for What If allocations. This is a non-finisher virtual warehouse where the customer would require the delivery of bulk purchase orders created out of What If allocations. It needs to be noted here that this warehouse would be considered only in cases where the destination stores do not have a designated default delivery warehouse in the merchandising system.

  Business example: Bulk Warehouse Setting = VWH1. For store S1, default delivery warehouse in the merchandising system = VWH2. For store S2, there is no default delivery warehouse in the merchandising system. In the above setting, a bulk PO raised for S1 would be sent to VWH2 and for S2 would be sent to VWH1.

- ITEM SOURCE QUERY LEVEL

  For this property, the retailer would need to set the merchandise hierarchy at which the maximum number of item queries are likely to be carried out while creating a What If allocation. This would largely need to be a corporate decision during the implementation phase.

- CONSIDER FUTURE AVAILABLE

  Indicates whether or not to consider Future Available inventory for What If Allocations. True - Use the future SOH; False - Use the current SOH only.

  While raising purchase orders out of What If allocations, this system option gives the retailer the extra edge of being able to see inventory likely to be delivered within the time horizon of the allocation at the locations being covered by the allocation. The order quantity gets optimized as a result of this and it also safeguards the retailer against over-allocation and markdown scenarios.

- LOCATION LIST THRESHOLD

  Indicates threshold value to be used in SQL IN while fetching a location list.

- ITEM SEARCH MAXIMUM ROW COUNT

  Indicates the limitation on the number of rows that are returned by the item search.

- ALLOCATION RETENTION

  Indicates the number of days you can retain allocations that are not linked to RMS allocations in the system without them being picked up by the purge batch. This is calculated based on the last modified date of the allocation.

- WORKSHEET RETENTION

  Indicates the number of days to keep worksheets not linked to any RMS allocations in the system. Purging occurs once this time frame is over.

- BATCH PROVIDER PATH

  Indicates the WebLogic context Uniform Resource Locator (URL) that the Async process uses. This property requires a reboot/restart of Oracle Retail Allocation to take effect.

- CALCULATION LOG PATH

  Directory path to hold calculation dat files. This property requires a reboot/restart of Oracle Retail Allocation to take effect.

User Group Properties

The User Group properties are assigned to the Allocation Manager standard user role.

- BAYESIAN SENSITIVITY FACTOR FOR PLAN REPROJECT

  Indicates the plan sensitivity value used while using the Plan Re-project policy. The sensitivity factor is set to 0.3 by default. This value can be changed to any value between zero to one based on the requirements.

- DEFAULT RELEASE DATE

  Indicates whether or not to use Default Release Date. 'Yes' indicates Allocations will have a default release date and 'NO' indicates Allocation will not have a default release date.

- DEFAULT AUTO QUANTITY LIMITS

Indicates whether or not to use Default Auto Quantity Limits. 'Yes' indicates Allocation will have Default Auto Quantity Limits and 'No' indicates Allocation will not have Default Auto Quantity Limits

- DISPLAY SECONDARY DESCRIPTION

  Indicates whether to display secondary description of store or supplier in store field and supplier field respectively.

- ENFORCE BREAK PACK FUNCTIONALITY

  Indicates whether the break pack functionality is enabled or not.

- DEFAULT PRESENTATION MINIMUM

  Indicates if presentation minimums are initially defaulted into the quantity limits UI. This field impacts the default setting of the Auto Quantity Limits check box in the Quantity Limits tab on the Policy Maintenance window.

- DEFAULT CALCULATION/ORDER MULTIPLE

  Indicates the default store calculation multiple. Possible Values are:

  - Each
  - Inner
  - Case
  - Pallet

- DAYS BEFORE RELEASE DATE

  Indicates the number of days before the release date, that is used during the creation of a purchase order for a What If allocation. This field is set to three days by default.

- DEFAULT SOURCE TYPE FOR ITEM SEARCH PAGE

  Indicates the Item Source that will be checked by default when entering the Item Search page.

- MAXIMUM ITEM DESCRIPTION DISPLAY LENGTH

  Indicates the maximum length to be used for display of Item descriptions in the user interface.

- RULE TYPE FOR NEED DISPLAY IN ALLOCATION MAINTENANCE

  Indicates the rule type for which the need value is displayed on the Allocation Maintenance window.

- DISTRIBUTION METHOD FOR QUANTITY LIMITS IN LOCATION GROUPS

  Indicates the method of splitting quantity limits across individual stores in a location group.

- MAXIMUM ITEMS FOR DISPLAY IN USER SELECTION

  Indicates the maximum number of items per alternate hierarchy selection.

- VALIDATION LEVEL FOR PACK RANGING

  Indicates the option of performing pack ranging at either of the following levels:

  - Pack Level: Allows the retail to plan and execute at the same level.
  - Component Level: Allows each unique component within the pack to be ranged to the store. If a single component of the pack is not ranged, the pack cannot be allocated to the store.

Database Statistics

In order to ensure optimal performance of Oracle Retail Allocation, ensure that an appropriate database statistics strategy is in place for the Allocation database tables. Of particular importance is a strategy for managing the temporary tables used within the calculation processing and user online sessions.

The calculations tables can be identified by the naming standard, ALC_CALC_***_TEMP, and they represent the volatile tables that are subject to high concurrent users and application logic inserting data (and later deleting). Gathering stats against these temp tables has always been a challenge because the number of rows changes at a very high frequency. Cardinality is the estimated number of rows that will be returned by a query operation and is the key to getting representative statistics (and not necessarily the latest statistics). With this architecture, we have no way of knowing during the session if the upper boundary of a temp table is 100 rows,10000 rows or 1000000 rows and so our cardinality is unpredictable and the Oracle Optimizer Engine gives you a false estimate and produce bad query response times.

The following is the list of the volatile tables which must be set up for using dynamic sampling or a locked statistics approach:

- ALC_CALC_DESTINATION_TEMP
- ALC_CALC_NEED_DATES_TEMP
- ALC_CALC_NEED_TEMP
- ALC_CALC_QTY_LIMITS_TEMP
- ALC_CALC_RLOH_ITEM_TEMP
- ALC_CALC_RLOH_TEMP
- ALC_CALC_SOURCE_TEMP
- ALC_HEAD_TEMP
- ALC_MERCH_HIER_RLOH_TEMP
- ALC_SESSION_ITEM_LOC
- ALC_SESSION_ITEM_LOC_EXCL
- ALC_SESSION_QUANTITY_LIMITS
- ALC_WORK_SESSION_ITEM
- ALC_WORK_SESSION_ITEM_ALL
- ALC_WORK_SESSION_ITEM_LOC

So generically, we need to choose one of two options: using DYNAMIC_SAMPLING, or locking the statistics at an approximate average level.

Dynamic Sampling

Using DYNAMIC_SAMPLING (an Oracle system parameter), Oracle gathers just enough stats on the referenced table to give it a best guess. So if you select dynamic sampling, you must drop the current stats on the reference temp table(s) and then lock them. This prevents the auto stats from collecting them or a DBA mistakenly creating them and also tells the Optimization Engine that these referenced tables are candidates for dynamic sampling collection. Then, it is recommended setting the DYNAMIC_SAMPLING to 6. It can be set either at the system or session level. See the following article for more details on dynamic sampling: *Optimizer Dynamic Sampling (OPTIMIZER_DYNAMIC_SAMPLING) (ID: 336267.1).*

Locking Statistics

Oracle recommends that if you are not using dynamic sampling, their size be monitored and the statistics gathered at, or close to, their peak size. The statistics should then be locked using dbms_stats.lock_table_stats().

> **Note:** The volatile tables need to be maintained by running the AlcDailyCleanUp batch process nightly. For more details on the batch, see the Oracle Retail Allocation Operations Guide

The following are additional recommendations on statistics relevant to Allocation:

- If statistics are currently being gathered manually, Oracle assumes that automatic statistics gathering has been disabled. If not, set DBMS_STATS.SET_GLOBAL_PREFS ('AUTOSTATS_TARGET', 'ORACLE'). This will still gather dictionary table statistics.
- The remaining ALC% tables should follow best practices for statistics gathering using DBMS_STATS.GATHER_*_STATS procedures, namely allowing ESTIMATE_PERCENT to default to AUTO_SAMPLE_SIZE. Running these statistics on a weekly basis should suffice unless a major change occurs in the characteristics of the data (e.g. size, density, etc).
- Finally, if not carried out previously, we recommend that fixed object statistics be gathered (DBMS_STATS.GATHER_FIXED_OBJECTS_STATS) while there is a representative load on the system. If that is not feasible, then these should be at least gathered after the database is warmed-up and v$session, v$access, vsql, vsql_plan, etc are populated.

Internationalization

For details on the language supported information see, Oracle Retail Merchandising System documentation for the current release.

Operational Insights

Oracle Retail Operational Insights dashboards and reports provide pervasive Business Intelligence. To provide a seamless user experience, they are designed to be embedded within Allocation application.

Operational Insights Dashboards and report does not require SSO for seamless integration of dashboards and reports except when there is a contextual launch from the report into a task flow of an external application. Such as in Allocations, there is a link from the PO Arrivals report to open the order maintenance task flow in RMS.

For more information on security configuration and implementation, see the Oracle Retail Merchandising Operations Management Security Guide.

The ALC_SYSTEM_OPTIONS_OI table drives the configuration parameters for the Allocation Operational Insights dashboards reports and is present in the Allocation application database schema. This following table describes the configuration parameters for OI reports for Allocation:

System Option	Definition	Column Name
Need Calculation Type	The PO Arrival/Shipment Arrival report, WH Inventory report and the Allocated to Plan/Forecast have the ability to support using either Forecast or Plan data.Retailers should configure this parameter based on the data that they have available for their items and wish to see in these reports. Values - P (plan); F (forecast)	NEED_CALC_TYPE
PO Allocation Time threshold	Number of days before the not after date of the purchase order that the retailer expects a quantity greater than the 'Percentage Allocated PO Threshold' to be allocated.	PO_ALC_TIME_ THRESHOLD
Percentage Allocated PO Threshold	The percentage of the warehouse order quantity against the given PO that is expected to be allocated within the 'PO Allocation Time Threshold' defined.	ALLOCATED_PO_ THRESHOLD

8

Oracle Retail Invoice Matching

This chapter is an overview of Oracle Retail Invoice Matching (ReIM).

Information Maintained by ReIM

The following information is maintained in the ReIM application.

Multi-dimensional matching utilizes complex matching logic designed to maximize match rates and processing productivity for both invoice and credit note matching.

Discrepancy routing identifies cost and quantity discrepancies when a match has not occurred after a user-specified period of time and automatically routes discrepancies to the Discrepancy Review List.

Resolution dialog offers a powerful, streamlined approach to handling invoice discrepancies where reviewers can disposition a discrepancy based on a set of user-defined reason codes.

Self-billing and deals bill-back integration provides robust integration with the Oracle Retail Merchandising System that supports supplier billing for RTVs, rebates and other deals, consignments, direct store delivery, evaluated receipts, and other non-merchandise billings from obligations and customs entry.

Receiver adjustments integration provides direct updates of receiver cost and quantity adjustments initiated from the matching/resolution process to inventory valuation and positions in the RMS.

Best terms date uses payment terms rankings (predetermined by the user) to identify the invoice or purchase order term best supporting the retailer's cash management objectives. Payment terms and terms date information is exported to the retailer's accounts payable solution to support payment of the invoice, as well as processing of other documents..

Debit reversals allow the user to efficiently convert a supplier-disputed debit memo into an editable credit memo with supplier comments for resolution.

Matching tolerances offers the flexibility to set up tolerances by monetary range, nominal amount, or percent. Separate tolerances can be applied for quantity and cost and for discrepancies in either the retailer's or its supplier's favor. Tolerances created as individual entities and can be mapped to supplier site, supplier, supplier group, or department. One tolerance entity can be designated as the system default.

Integration with Other Applications

The Invoice Matching application's primary purpose is to match invoices so they can be exported to Accounts Payable (AP) to be paid. Invoice Matching has limited interaction with the Oracle Retail Merchandising Operations Management applications with the exception of

RMS. RMS is the owner of the information that Invoice Matching needs to match invoices it receives.

Information from the Invoice Matching application is shared with Oracle Retail Merchandising Operations Management applications through direct reads from Oracle Retail Merchandising Operations Management application tables, calls to Oracle Retail Merchandising Operations Management application packages, Invoice Matching packages based on Oracle Retail Merchandising Operations Management application tables, and batch processes. Invoice Matching is also integrated with Oracle Retail Merchandising Operations Management via EDI link.

For more information on the Merchandising Architecture, see *Retail Reference Architecture artifacts on My Oracle Support*.

Invoice Matching and RMS

RMS provides the following to Invoice Matching:

- **Foundation Data** is essential to all parts of invoice matching, including valid locations for invoices to be executed, valid suppliers from which to receive invoices, supplier addresses to send credits and debits based on invoice matching results, and more.
- **Item** information is essential to the invoice matching process as item information ensures that invoices being received are valid for the business. For example, an item received on an invoice is carried by the client, is supplied by the supplier who sent the invoice, and is carried in the locations for which the item was received.
- **Purchase Orders** are used by Invoice Matching to facilitate the invoice matching process which can be performed at the purchase order/location level as well as the purchase order level.
- **Shipments** information is used by Invoice Matching to determine if a PO has been received, which affects the matching algorithm used by the AutoMatch batch program in Invoice Match, as well as online matching process.
- **Deals and Rebate**-Invoice Matching creates credit memos, debit memos, and credit note requests based on deal and rebate information in RMS for processing by the financial (AP) system. This is performed by the ComplexDealUpload and FixedDealUpload batch processes that read from RMS staging tables.
- **Staged Accounts Payable transactions**-Accounts Payable documents created in RMS for consignment invoices, Obligations invoices, customer entries invoices, payment transactions sent through ReSA, and Return to Vendor chargebacks (either debit memos or credit note requests) are staged to Invoice Matching staging tables in RMS and extracted using the batch EDIDLINV to be loaded as EDI documents into Invoice Matching.

Invoice Matching provides the following to RMS/RTM/ReSA:

- **Invoice Matching results for shipments**-Shipment records are updated with the invoice matching results from the invoice match process. This involves updating the match status and quantity matched of the shipments in question. The matching process is handled by the AutoMatch batch process in Invoice Matching, which attempts to match all invoices in ready-to-match, unresolved, or multi-unresolved status, as well as online matching process.
- **Receiver Cost Adjustments**-An API executed when invoice matching discrepancies are resolved through a receiver cost adjustment. The API updates the purchase order, shipment, and potentially the item cost in RMS, depending on the reason code action used.
- **Receiver Unit Adjustments**-An API is executed when invoice matching discrepancies are resolved through a receiver unit adjustment. The API updates the purchase shipment in RMS to complete the transaction.

- **Closing unmatched shipments**-Invoice matching closes the invoice matching status for shipments in RMS after a set period of time (defined by the client in system options). This updates the invoice matching status of the shipment on the shipment table in RMS. This process is managed by the ReceiptWriteOff batch program.
- Additionally Invoice Matching can provide information about inaccurate tax setup in RMS determined as part of tax discrepancy resolution process.

Invoice Matching and RTM

RTM provides to Invoice Matching:

- **Finalized Customs Entry**-When Customs Entries are confirmed in RTM, a non-merchandise invoice is automatically created in Invoice Matching staging tables.
- **Approved Obligations**-when an Obligation is approved in RTM, a non-merchandise invoice is automatically created in Invoice Matching staging tables.

> **Note:** Invoice Matching provides no information to RTM.
>
> RTM data, as well as any other data staged for ReIM in RMS would need to be extracted from RMS using EDIDLINV RMS process to generate EDI files and loaded into ReIM using EDIInjector from EDI files.

Invoice Matching and ReSA

ReSA provides the following to Invoice Matching:

Store Level Purchasing-Payments for merchandise purchases done at store level are booked against a corresponding merchandise invoice. Payments of non-merchandise purchases or miscellaneous services availed at the store are booked against a corresponding non-merchandise invoice. These transactions are passed from the POS/OMS to ReSA as specially designated PAID OUT transactions. All these invoices are assumed paid. The batch program SAEXPIM transfers the specially-designated PAID OUT type of transactions to the Invoice Matching staging tables for extract to the Invoice Matching application.

Escheatment Processing - Unclaimed monies of outstanding, non-expiring vouchers are totaled after a defined period from the date of issuance of the voucher and posted to Invoice Matching staging tables as a non-merchandise invoice by SAEXPIM. The unclaimed amount is paid out as income to the issuing retailer or, in some U.S. states; it is paid out to the state. ReSA determines who receives this income and accordingly posts a non-merchandise invoice for the partner. These invoices are assumed not paid.

> **Note:** Invoice Matching provides no information to ReSA.

Invoice Matching and Allocation

Information is not shared between these applications.

Invoice Matching and Financial Systems

Invoice Matching exports data to financial staging tables through the FinancialPosting batch program. However, clients using any other system for financials must create their own interface to deliver information to that system. Invoice matching validates accounts against the financial system.

Valid accounts can be pre-loaded into Invoice matching to improve performance of the posting process.

Payment terms and currencies need to accurately synced between the financial system and RMS.

Invoice Matching provides optional extraction capability for the financial system data. The data can be extracted from the tables and exported as CSV files.

Invoice Matching and External Suppliers

Invoice Matching gets invoices from external suppliers in one of two ways: EDI or hardcopy. When EDI is used, the EdiInjector batch program is responsible for uploading the invoice details from the vendor using a standardized file format. When a hardcopy is used, the client needs to manually enter the invoice in the system before matching can proceed.

Notification to suppliers of charge backs and requests for credit notes, as well as credit memos is provided in a flat file extracted by EdiDownload batch process.

9

Oracle Retail Merchandising Foundation Cloud Services – Pricing

The Merchandising Foundation Cloud Service Pricing module (called Pricing throughout the rest of document) is a configurable and flexible pricing solution designed to meet the varied needs of the retail industry. Pricing empowers retailers to streamline pricing strategies across the organization, yielding a more predictable and profitable outcome. It provides decision support through pricing-focused business information to validate and approve new retails and markdowns. This approach results in improved margins and strengthened productivity, all while remaining competitive.

Pricing supports the creation and management of price changes, clearances and promotions, integrating with the pricing execution systems, such as the POS in the store and e-commerce systems, to provide details on these events when approved.

The following flowchart illustrates the position of Pricing in relation to other Oracle Retail modules:

Pricing Foundation Data

During installation and implementation, Pricing requires some initial data setup to create and implement price changes and clearances. This foundation data includes zone structures, initial price zone definitions, and rounding rules.

Zone Groups and Zones

The zone structure in Pricing allows you to define groupings of locations for pricing purposes and eliminates the need to manage pricing at the most granular, location, level. At the highest level, these groupings are divided into categories called zone groups. Zone groups are used in regular, clearance and promotional pricing. You can determine how zone groups are created for your business based on a number of different factors, the type of pricing event, regular and/or clearance, or the items being priced, such as by department or division.

Within zone groups are groupings of locations (stores or warehouses) called zones. The function of these zones is to group locations together in a manner that best facilitates company pricing strategies. For example, you might choose to create a zone group based on geographic region such as the North America. Then, within the North America Zone Group, you could have regional zones, such as:

- US East region
- US West region
- Mexico stores

Similarly, you can create a zone group based on customer characteristics. Then, within the zone group create zones with similar geographical or customer characteristics, such as

- US urban stores
- US rural stores

There are no restrictions on the number of locations a zone can contain and a location can (and likely will) exist in multiple zone groups. For example, a New York City store might exist in the US urban stores zone as well as the US East region zone, which is part of the North American Zone Group. However, two rules apply to the relationship between locations and zones:

- A location cannot exist in more than one zone within a zone group.
- All locations within the same zone must use the same currency.

Adding New Stores or Warehouses

When new stores or warehouses are added in Merchandising, a pricing location is designated for the new store or virtual warehouse. Pricing will take this information for the new location and attempt to add the new location to every zone group/zone in which the pricing location exists across all zone groups. If the pricing location and the new location are not of the same currency, then the new location will be added to every zone group where the pricing location exists, but the system will create a new zone for the location with the currency of the new location. This process applies for all store types, including company and customer (franchise, or wholesale) stores and stockholding or non-stockholding locations.

Note: Pricing of warehouses is determined by a system option in Pricing.

Empty Zones

You can create an empty zone and add locations to the zone at a later date. Price events can also be created against a zone with no locations, based on a system option setting; however, conflict checking will not run and records are not generated on the Future Retail table. Once locations have been added to those zones, any new item/location relationships created will be added to price events created for those zones.

Zone Maintenance

When a location is added to an existing zone, the location will participate in any price events which are approved in the future, but it will not inherit any existing approved events. When a location is removed from a zone, it will stay on any existing approved events, but will not be included in any new events created for that zone. If a location needs to be added to or removed from an existing event, setting the event back to worksheet and then re-approving will add that location.

Initial Price Zone Definition

Once zone groups are created in Pricing, you are able to assign them to Initial Price Zone Definitions. This allows you to specify the zone structure that is used when pricing new items added in a particular department, class, or subclass, including markup percentage, and markup type (cost or retail), and rounding rules.

Note: Markup is also defined as part of the department creation process, but Pricing uses the Initial Zone Definition to determine initial price markup.

Rounding Rules

Rounding rules help you create a uniform pricing strategy. They are used to smooth proposed retails in order to maintain a consistent set of price points by applying "ends in" logic to retail values. Rounding Rules are defined globally, but can also include exceptions or exclusions based on merchandise hierarchy and/or currency. This provides a simple but flexible configuration to handle a wide variety of scenarios.

> **Note:** Editing rounding rules details will only affect retails derived by the rounding rules from that point on. It will not affect/overwrite any retails that have already been derived based on the old rounding rules.

Rounding rules are optional. If you do not use rounding rules, the following rules are enforced for "percent off" price events, based on the number of decimal places defined as part of the currency set up in Merchandising:

- Regular Price Changes: if the extra digit (beyond the number of digits for the currency) is between 0 and 4, round down; if it is between 5 and 9, round up.
- Clearance Events: retail will always round down

Price Events

This section of the document provides details that pertain to all types of price events and helps provide insight on how to optimize and configure data to get the most out of the functionality in Pricing.

Price Changes

Price changes are the pricing events that affect the regular retail price. When a price change is created, the following information is specified:

- The item receiving the price change, by specifying items by parent, parent/diff, or transaction item.
- Where the price change is occurring, by selecting zones or locations.
- How the price is changing, by selecting a percent or amount change, or a new fixed price.
- When the price change will take effect, by designating an effective date
- Why the price change is occurring, by optionally specifying a reason code

Price change groups are used to group together multiple price change events for easier management of the individual events, such as facilitating mass approval of items in the group. For example, a price change group might be used to group together items whose prices are changing on the same date within a department or a set of zones.

When price change events are approved in Pricing, they are made available in advance of their effective date to multiple systems for ticketing and to prep selling locations for the upcoming changes. Normally, only one price change for an item/location on a given day is allowed to be approved, however there can be more than one if an "emergency" retail price change is entered and executed by an authorized emergency user. Once the emergency price is received by the selling systems (POS, ecommerce) it will overlay the other retail price that was received previously. For more on emergency events, see below.

Clearance Events

Clearance events are defined as a reduction in the permanent retail designed to increase demand and move inventory out of stock. These reductions may consist of a single markdown or a series of markdowns, with the goal of selling through all stock in the locations designated. When a clearance event is created, you specify the items and locations where the clearance is in effect along with the discounted price and the dates on which it will apply. Like price changes, clearance events can be created for parent items, parent/diffs, or transaction items. Locations where the markdown applies are selected by zone or individual location.

Clearance groups are used to group together multiple clearance events for easier management of the individual events. This is particularly helpful for items that will have multiple markdowns throughout their lifecycle to provide visibility to the various markdown prices and dates together for easier management. This can also help facilitate mass update of the events in the group, such as approving multiple events together.

Promotion

Promotional price changes are temporary reductions in price for one or more items at one or more stores for a defined amount of time. Promotions are made up of a collection of offers, which define the reward and the conditions to receive the reward. Offers can be applied to regular priced items, clearance items, or both.

Pricing supports two levels of offers, item and transaction. Each offer level has templates associated with it which define how the offer is set up. For example, some offer templates will require only reward related information to be defined, such as the item level offer Get Y for Discount. This type of offer requires only the list of items that can be discounted if purchased and the discount amount or percent. Whereas other offer types, such as the transaction level Spend X, Get Discount offer, require a conditional spend amount, as well as a list of items that must be purchased to reach that spend amount, along with reward details such as the discount amount/percent and, optionally, a list of items excluded from the transaction level discount.

Best Practices

When creating price change and clearance events for a group of items, it is recommended to enter the item data at the highest level possible. For fashion items, this is generally parent item (style) or parent/diff (style/color), whereas for grocery and hardlines this is generally at the transaction item level (SKU). This is also true for the selection of locations; it is recommended creating price events at zone level, rather than by store or warehouse. This provides the following advantages:

1. Managing price events at the higher levels will increase the usability of the application by having fewer rows for you to manage. It will also help ensure pricing consistency for similar items and locations, in line with your company pricing strategy.
2. The Future Retail tables will have the ability to store data at the highest level possible which, in turn, will ensure that Pricing will run as efficiently as possible, including response time for processing and screen flow.

Emergency Price Events

There is a system option called Price Event Processing Days that is set to designate the number of days required between the current date and the effective date of a price event. This rule ensures that price changes, clearances and promotions are created and approved with enough advance timing that stores and other impacted areas can react accordingly.

However, for situations where price events were missed for one or more items or locations, emergency price events can be created. This allows you to create events that go into effect less than the standard number of processing days, which can even include the current date. A separate security privilege provides the ability to limit the users that can create these emergency events, while preventing others who have the ability to create price change and clearance events from creating emergency events. For example, if the setting for price event processing is 3 days, you will be prevented from creating or approving an event that occurs within 3 days, unless you have emergency security privileges.

When an emergency price event is created and approved the information is passed to downstream systems the next time the batch extracts are run. If the price change is to go into effect on the current date, then the item/location price in Merchandising is done on approval, along with any markdowns or markups in the stock ledger.

Conflict Checking

Whenever a price change or clearance is submitted or approved, it will be subject to the conflict checking process. This ensures that invalid prices, or prices out of alignment with your pricing strategy, are not sent down to the point of sale. Conflicts that are checked can be configured using some of the Pricing system options, which are covered in detail below. It also relies on a calculated "future retail" to help determine when a conflict has occurred.

Future Retail

When price changes and clearance events are approved or unapproved, they can negatively impact the retail value of an item/location when it goes into effect, which can cause conflicts. As such, the Pricing module uses these events to calculate a future retail price for the impacted items and locations on the events. This allows it to have a view to the regular or clearance price on any given day and helps facilitate the conflict checking process.

A roll-up batch ensures the system holds future retail data at the highest level possible. This batch looks at lower-level timelines and attempts to roll up to a higher level where timelines match exactly between lower levels and higher levels.

When conflicts occur, the Conflicts window displays the price event at the level of the timeline where the conflict occurred, which could be higher than transaction item and location level.

Pricing and Merchandising

As referred to above, Merchandising shares a number of key pieces of information with Pricing, including items, locations, item/location relationships, and merchandise hierarchies. Pricing also provides Merchandising with key information. This section will outline the key data points that are shared between modules.

Pricing to Merchandising

Price Event Execution

When regular or clearance price changes are set to go into effect, the Price Event Execution batch process integrates the new price information to update the item and stock ledger information in Merchandising. This initiates the process to update the unit retail and the clearance flag for the item/location (if needed), records the markup or markdown in the stock ledger, and records the price history for the item so that sales can be correctly classified when they occur as either regular or clearance.

Initial Pricing

Initial pricing for items is dependent upon the Initial Price Zone Definition managed in Pricing. When the department, class, and subclass are selected for the new item, the markup percent and type defined are used to calculate a suggested initial price based on the unit cost for the primary supplier that has also been defined for the item. Rounding rules are also applied, if included in the definition to calculate the suggested retail using a standard "ends in" amount.

Margin

Merchandising also relies on future retail details that are provided by Pricing to calculate item/location level margin information. Future retail, combined with the future cost calculations in Merchandising, provides the ability to show not only the current margin for an item/location, but also a view of future margin based on upcoming clearance and price changes.

Merchandising to Pricing

Foundation Data and Items

Foundation information, such as merchandise and organization hierarchies, is essential to Pricing functionality. Price events ultimately impact an item, so Pricing needs to know all approved, sellable items currently in Merchandising, including their item/location relationships.

When an item is reclassified to a new department/class/subclass in Merchandising, Pricing is notified. Similarly, when an existing item is deleted in Merchandising, Pricing is notified to remove all references to that item including table clean up and removing them from existing price events.

Foundation Data and Item information are accessed directly from Merchandising to support pricing functions and allow for more streamlined communications between modules.

Stores and Warehouses

As noted above, new stores and virtual warehouses created in Merchandising must be added to a zone structure in Pricing to ensure that items sold in the locations can be priced according to company strategies.

Item/Locations

When new item/location relationships are established in Merchandising, Pricing is informed to create the initial Future Retail record (for sellable, approved, transaction items) and looks to see if there are any pricing events that will be inherited by this new relationship. If any active events, such as the item/location should be on clearance due to the location's zone relationship, pricing information in Merchandising will be updated immediately. For future events, the Future Retail timeline will be established and the price event will be sent for the item at the new location to the selling systems, as needed.

When an existing item/location is deleted in Merchandising, Pricing is notified to remove all references to that item/location, including table clean up and removing it from existing price events.

System Options and Defaults

The Pricing module uses a number of system options to configure the functionality, which allows you to tailor the functionality for your business, including conflict checking options, defaulting commonly used values, and data retention.

System Options

All of the following system options can be viewed and edited through the Pricing screens.

System Options	Functional Area	Description
Single UOM for All Items	Price Changes Clearance Promotion	When a value is designated for this system option, this value is used as the unit of measure (UOM) for all price events created and Pricing does not perform UOM validation when you create events. If a value is not selected, when you create fixed-price price changes or clearance events, either a UOM must be designated, or Pricing will attempt to derive one and will raise errors if it is not consistent amongst items in the event.
Price Event Processing Days	Price Changes Clearance Promotion	Number of days required between the current date and the effective date for price changes and clearance. It ensures that price events are created with enough advance timing that stores and other impacted areas can react accordingly. Security will permit certain users to create price events inside this window, including creating same day price events, sometimes called "emergency" changes. This must be set to a value greater than zero. Note: this system option does not determine the communication processes to the selling systems. Default value: 1
Offer End Date Required	Promotion	If this indicator is checked, the End Date on the Offer becomes a required field. The user must enter it before navigating to the next screen. Default value: Unchecked.
Regular Retail Greater than Clearance Retail	Conflict Checking	If the indicator is checked, conflict checking will raise a conflict for the event when the retail of the clearance is greater than the regular retail for the item location. If the indicator is unchecked, conflict checking will skip this rule. Default value: checked
Clearance Retail less than Previous Markdown	Conflict Checking	If the indicator is checked, conflict checking will raise a conflict for the clearance event when the retail of the clearance is greater than the previous markdown for the item/location. If the indicator is unchecked, conflict checking will skip this rule. Default value: checked
Run for Submit	Conflict Checking	This option determines whether or not conflict checking will be performed when submitting a price event for both price changes and clearance. If this system option is checked, conflict checking process will be performed when you submit a price event. Otherwise, conflict checking will be skipped and not performed until approval. Default value: No (unchecked)

System Options	Functional Area	Description
Parent Ranging	Zones	If this system option is checked, when you create a price change/clearance at a level higher than transaction item/location, there must be at least one ranged item/location combination represented. If there is not at least one, then the system will not allow you to create the event. If this system option is not checked, then ranging checks will not be performed on events created at a level higher than transaction item / location. Default value: Yes (checked)
Recognize Warehouses as Locations	Zones	This system option controls whether warehouses will exist in zone groups/zones and if price events can be created against warehouses. When the system option is checked, warehouses can be assigned to price zones and can be used in price events. When the system option is unchecked, warehouses cannot be added to zones or events. Default value: No (unchecked)
Price Change/Clearance Rejects	Data Retention	This field defines the number of days after the effective date of a rejected price change or clearance the event should be purged from the system. Valid values: 1- 999 Default values: 30
Clearance Groups	Search Results	This option limits the data that is displayed in the Clearance Group Search results to a manageable number to review. You can enter additional criteria to narrow down the list if the groups they are searching for is not returned in the initial search. Valid values: 1-999 Default value: 100
Price Change Groups	Search Results	This option limits the data that is displayed in the Price Change Group Search results to a manageable number to review. You can enter additional criteria to narrow down the list if the groups they are searching for is not returned in the initial search. Valid values: 1-999 Default value: 100

System Defaults

The following system defaults can be viewed and edited through the user interface. Also, there are separate options for price changes and clearance for each of these defaults, so that different values can be used for defaults by price event type.

System Defaults	Functional Area	Description
Diff Type	Price Change Clearance Promotion	This defines a default value for the desired default diff type in price change and clearance events. Examples of diff types are color, size, flavor, and so on. Valid values for diff type are defined as part of Merchandising Foundation Cloud Service Foundation Data.
Item Level	Price Change Clearance Promotion	This defines the default item level that will be used when you create a price change or clearance. Valid values are Parent, Parent/Diff, or Transaction Item. If a value is not defined for this option, then Transaction Items will be used.
Change Type	Price Change Clearance Promotion	This defines a value for the change type that will be displayed when you are creating a price change or clearance. Valid values (price change): Change by Percent, Change by Amount, or Fixed Price Valid values (clearance, promotion): Percentage Off, Amount Off, or Fixed Price **Note:** For promotion, this field is called Discount Type. Default value: Change by Amount
Reason Code	Price Change Clearance	This defines a value for the default reason code in price change and clearance events. Valid values are dependent on the values setup in the Pricing system.

Internationalization

For details on the language supported information see, Oracle Retail Merchandising System documentation for the current release.