Oracle® Retail Predictive Application Server

Release Notes
Release 13.0.2

October 2008

ORACLE

Oracle® Retail Predictive Application Server Release Notes, Release 13.0.2

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Value-Added Reseller (VAR) Language

Oracle Retail VAR Applications

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Preface

A Release Notes document can include some or all of the following sections, depending upon the release:

- Overview of the release
- Functional, technical, integration, and/or performance enhancements
- Assumptions
- Fixed and/or known issues/defects

Because of their brevity, Release Notes do not include chapters, appendices, or a table of contents.

Audience

Release Notes are a critical communication link between Oracle Retail and its retailer clients. There are four audiences in general for whom a Release Notes document is written:

- Retail clients who wish to understand the contents of this release.
- Integrators and implementation staff who have the overall responsibility for implementing Oracle Retail Predictive Application Server into their enterprise.
- Business analysts who are looking for high-level functional information about this release.
- System analysts and system operation personnel who are looking for high-level functional and technical content related to this release.

Related Documents

For more information, see the following documents in the Oracle Retail Predictive Application Server Release 13.0.2 documentation set:

- *Oracle Retail Predictive Application Server Administration Guide*
- *Oracle Retail Predictive Application Server Configuration Tools User Guide*
- *Oracle Retail Predictive Application Server Configuration Tools Online Help*
- *Oracle Retail Predictive Application Server User Guide*
- *Oracle Retail Predictive Application Server Online Help*
- *Oracle Retail Demand Forecasting Release Notes*

Customer Support

https://metalink.oracle.com

When contacting Customer Support, please provide the following:

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

Review Patch Documentation

For a base release (".0" release, such as 13.0), Oracle Retail strongly recommends that you read all patch documentation before you begin installation procedures. Patch documentation can contain critical information related to the base release, based on new information and code changes that have been made since the base release.

Oracle Retail Documentation on the Oracle Technology Network

In addition to being packaged with each product release (on the base or patch level), all Oracle Retail documentation is available on the following Web site:

http://www.oracle.com/technology/documentation/oracle_retail.html

Documentation should be available on this Web site within a month after a product release. Note that documentation is always available with the packaged code on the release date.

Conventions

Navigate: This is a navigate statement. It tells you how to get to the start of the procedure and ends with a screen shot of the starting point and the statement "the Window Name window opens."

> **Note:** This is a note. It is used to call out information that is important, but not necessarily part of the procedure.

```
This is a code sample
    It is used to display examples of code
```

A hyperlink appears like this.

Release Notes

Overview

The Oracle Retail Predictive Solutions are a set of products used for generating forecasts, developing trading plans, and analyzing customer behavior. These products use predictive technology to examine historical data and to predict future behavior.

The Oracle Retail Predictive Solutions run from a common platform called the Oracle Retail Predictive Application Server (RPAS) that includes features such as:

- Multidimensional databases
- Hierarchical data (product, time, and business location hierarchies)
- Aggregation and spreading of data
- Workbooks and worksheets for displaying and manipulating data
- Wizards for creating and formatting workbooks and worksheets
- Menus, quick menus, and toolbars
- Exception management and user-friendly alerts

Current Patch - RPAS 13.0.2

Release Information

The following table provides information about the current release.

Release Information	Details
Code Cut Off Date	October 3rd 2008
Supported OS, Server and Compilers	Sun Solaris 9 and 10: gcc 4.1.1 AIX 5.3 (TL5 or greater): gcc 4.1.1 HP-UX 11.23 (Itanium): aCC 6.15 Oracle Enterprise Linux 4, Update 5: gcc 4.1.1
Supported OS, Client	Windows NT, 2000, XP, Vista
Required 3rd Party Software	JRE 1.5 (installed on client and server machines). Note that RPAS will move to JRE 1.6 in the next Patch/Release.

Note for HPUX, AIX and Solaris Customers: The libz.sl/libz.so is required by RPAS. The PATH environment variable should also include the directory in which it is located on the server. The environment variable for shared libraries is LD_LIBRARY_PATH for Solaris, LIBPATH for AIX, and SHLIB_PATH for HPUX. This shared library typically comes pre-installed on AIX and Solaris operating systems; however, it does not come installed on HPUX servers and is not part of the standard C library. Libz.sl/libz.so may be obtained by contacting your Operating System customer representative.

Patching Process

RPAS patches can be applied directly to an existing installation of the same major release. However, if you are moving from one major release to another, customers should install the new release first, and then patch it with the latest patch for that release. RPAS does *not* require customers to incrementally patch their installation.

An important aspect of patching is upgrading the existing RPAS domain to be compatible with the most recent patch that has been applied. This can be done with the use of a RPAS utility called upgradeDomain.

Though RPAS encourages customers to stay up-to-date with releases and patches, it is possible that particular customers may not have been able to update to the current patch. At the time of the release of the 13.0.2 patch, Oracle Retail is aware of customer implementations that are still below version 12.1. Oracle Retail advises such customers that they be sure to follow the process outlined in the 12.1 version of the *RPAS Installation Guide* to convert their pre-12.1 domain to a post-12.1 domain. Fundamental change have been made to RPAS's storage layer, and pre-12.1 domains will not be upgradeable to 13.0.2 domains simply with the use of the upgradeDomain utility.

For details of the patching process, please see the *RPAS Installation Guide* and the *RPAS Administration Guide*.

Functional Enhancements

The following sections describe new functionality, removed or modified functionality, and functionality in development. Please see the 13.0.2 RPAS documentation set for details such as configuration procedures, administration procedures and end-user interaction with the system.

Locking Positions

Some retailers may wish to plan a few stores individually while planning others at aggregate levels, such as regions. When planning a region, such a retailer would likely wish to ensure that a planner can see the influence of the special stores in the region on the aggregate values in the region; however, the planner's aggregate level input should not spread down to the special store and alter the special plan that was prepared for it. Instead, it should spread around them to the generic stores in the region; i.e., retailers should plan the special stores and the generic stores within the scope of one workbook so that appropriate visibility is maintained at all levels of planning.

In current RPAS configurations, this is usually achieved by configuring separate measures for the special store, and configuring a complex set of rules that incorporate the influence of the special stores at the aggregate levels. While this method mostly achieves the effect, it has limitations. The user cannot arbitrarily change the "special" status of a store and use such a change as a variable in the what-if analysis. Furthermore, measure rules invoke protection processing, making some kinds of edits impossible or very hard to achieve. For example, you cannot change the measure for the special store while also entering a plan value at the aggregate level, and then invoke a deferred calculation. You would have to make changes one at a time, and this may not achieve the desired effect.

Position locking has been introduced in RPAS to provide for such multi-level planning where a position, such as a store along the location hierarchy, can be locked off so that nothing for the position changes along any measure within the workbook as a result of a user entry, or indirectly from a calculation resulting from a user entry, thus ensuring that the whole plan is protected. Hence, you can plan a few stores or classes individually, lock them, roll up the location and product hierarchies, and plan them at the aggregate level, all while being assured that the plans will not change as a result of spreading, and that

the aggregate numbers being seen are following all principles of the RPAS calculation engine.

To lock a position, all one has to do is select the position in the worksheet, right-click it and select the context menu to lock the position. A position may be unlocked with the same ease. Positions may be locked at aggregate levels or aggregate level positions may be used to unlock any locked positions underneath it. Through this feature, RPAS has made multi-level what-if planning for positions possible, such that one can now decide which position, such as store or class, to treat as special or not.

Using this feature does not require any changes to existing configurations unless system designers want to ensure that refreshes and custom menus will not overwrite locked positions. To help system designers with the latter, a new function named "positionLocked" has been added to RPAS' list of functions. This Boolean function can be used with every expression that can potentially modify a locked position during a refresh or custom menu execution. Such configuration changes are patchable.

Limiting Number of Selectable Positions on Two Tree Wizards

For applications such as pricing, a retailer may wish to restrict the selection of SKUs in a planning workbook to only one category. A planner may be allowed to plan several categories within a department, but only one category per plan. Per the retailer's business process, a category would establish a coherent set of SKUs, the cross-item effects of which could be considered meaningful for a price optimization algorithm. Mixing in SKUs from two more categories could be considered as polluting the cross-item effects and therefore an undesirable situation. Retailers may also require the ability to select SKUs or Classes that comprise a subset of possible SKUs or Classes within the Category, but not the entire category.

With this latter requirement, a single-select wizard at the category level would not allow the user to filter subsets of SKUs or Classes. What would be required is an ability to make multiple selections at the SKU or Class levels, as in a standard RPAS two tree wizard, while still ensuring that only one Category is used. Even though this can be achieved through the disciplined selection of SKUs and Classes in a two tree wizard, so far there has been no way for the retailer to enforce this as a hard constraint.

RPAS has now added a feature to enforce this kind of constraint on standard two tree wizard pages. When such a constraint has been put into place for a specific wizard, the wizard page does not let the user proceed with the selections unless the constraint is satisfied. A pop-up message informing the user of the violation of the constraint appears as the user tries to move to the next wizard page, and forces the user to go back and correct the situation.

The constraint can be easily established within the Standard Wizard definition dialog in the Workbook Definition tool of the Configuration Tools. Two new fields are available for every two tree selection page in the standard wizard, one where the user selects the level from the hierarchy and another where the user enters the maximum number of selectable positions from that level. These fields are optional and if left empty, there is no limit on the number of positions that may be selected using the wizard. These fields are also available for two tree pages used in custom wizards.

Apart from the functional ability to restrict selections to coherent sets of positions that this feature provides, it also allows system designers to constrain the size of workbooks by limiting the maximum number of positions that a user can add to a workbook. In the past, users have been known to add all positions to a workbook because such a selection is easy to make. They may only require 5-10% of those positions, but they still add them all because they can easily work with the desired subset in the workbook. System designers would like to prevent such abuse of the flexibility that workbooks provide,

primarily because such abuse leads to wastage of disk space and because it slows down online performance due to the extra work that RPAS has to do with unnecessary positions. System designers may therefore constrain the workbook to, for example, not include more than 500 SKUs at a time. The number 500 may not have any functional meaning, but it may be chosen because it does not constrain functionality in any way while still helping to constrain the size of the workbooks.

This is a patchable feature; i.e., existing configurations can be enhanced to benefit from this feature enhancement.

Pre-ranging Selections in Standard Two Tree Wizards

Retailers may often be required to filter the positions available for selection based on previously selected positions from a different hierarchy. For example, if a system designers has selected "Fall 2009" in the Calendar hierarchy, he or she might want to pre-range the products available to the planner to those products that are targeted for Fall 2009. A more focused retailer might establish such a relationship amongst seasons, regions, and products. For example, merchandise available for assortment planning would be pre-filtered based on whether the Southeast or Northeast region has been selected for Fall 2009. Such scenarios are made possible by the new Multi-Tier Hierarchy Pre-ranging feature for the RPAS Configuration Tools.

Even though it was possible to enforce such limitations in the past, it could only be done through the creation of custom wizards for every customer implementation. However, generally available RPAS now provides an ability to configure such pre-ranging for both Standard Wizards and for two tree pages used in custom wizards.

System designers can create a Boolean mask measure to relate up to five hierarchies, and they can establish relationships at aggregate levels and at levels below the levels being selected in the wizard. System designer can also restrict hierarchies that are not shown in the wizard, while also not being required to constrain all hierarchies that are being shown in the wizard. The measure can be one-dimensional, thus allowing independent filtration of a hierarchy; however, a workbook is limited to one such measure.

This is a patchable feature; i.e., existing configurations can be enhanced to benefit from this feature.

Sorting Without Creating an Attribute

With the click of a button, RPAS users can now sort a dimension's positions based on a slice of a measure's value to draw insights, such as how product classes rank in terms of gross-margin. RPAS has now added the ability to, with the click of a toolbar button, sort a dimension based on a measure's value, without requiring the user to create any attributes, and without creating persistent data structures in the back end. This enhancement is expected to significantly improve usability, and also to enhance users' productivity and ability to draw quick insights from their RPAS UI.

Previously, RPAS users were required to either use one of the existing attributes or to create a dynamic attribute for sorting a dimension's positions. Having to create attributes added to the number of steps the user had to take to do something as simple as sorting based on a measure's value. Furthermore, the dynamically created attributes would clutter the list of attributes for the user and would also add to the space consumed by each subsequent workbook.

Two new buttons, one for ascending sort and one for descending sort, are now available in the RPAS toolbar. These buttons become enabled when the user selects a one-dimensional slice of a measure. Clicking on these buttons sorts the dimension's positions in either ascending or descending order.

Reconnecting After Losing a Client-Server Connection

RPAS users can now log back into the system soon after loosing their RPAS Client-Server connection, and can also be assured that their work until the last calculation has been automatically saved.

Until this version, if you lost your RPAS Client-Server connection, you would have to either wait until the server timed out or ask a system administrators to kill your server process. In the process, you would loose all your work since the last explicit save. As more and more users are transitioning to using wireless connections, the frequency of connection loss has increased and this limitation has been adversely affecting user productivity.

RPAS has now introduced the ability to log back in soon after the reestablishment of a connection, without requiring to call in system administrators. A user can restart an RPAS Client session and attempt a re-login. If a process is already running for the server from a previous connection, RPAS will ask the user to either abort the login or terminate the existing process and continue with this new login. If the user chooses the latter, his or her existing process will first be gracefully terminated, and the user will be logged in to RPAS again. A new RPAS server session will be started for this login request.

During graceful termination, RPAS will let any running calculation or custom menu processes complete so that the workbook is in a consistent state. It will then auto-save a copy of the workbook until the last calculation.

An important side effect of this feature is the user's ability to terminate an RPAS Client-Server session remotely from a different machine.

Workbook Auto-save

In previous versions of RPAS, users would loose all their work since the last time they saved the workbook if the RPAS Client-Sever connection were lost, or if the server timed out while waiting on the Client; now, RPAS auto-saves workbooks in these cases. If a workbook has previously been saved, it creates a new workbook with "_autosave" appended to its original name. This new workbook has all of the user's work until his or her last calculation. Any edits pending calculation will be lost. If a workbook was never saved and named by the user, a new copy is not created but the original untitled workbook is saved up until the last calculation.

Auto-save is automatically enabled for all users.

Renaming a Workbook

RPAS has added the ability to rename a workbook without having to save it as a different workbook. A user can simply select the "Rename…" menu item from the **File** menu to rename any workbook, including the one he or she is currently working on and has write access for. Renaming the current workbook is instantaneous; i.e., it does not require a save. The Most Recently Used list of a user is updated to reflect the new names the next time the user logs into RPAS.

Controlling the Execution of a Custom-Menu Based on the Value of a Boolean Measure

Custom menus in RPAS allow for configuring actionable procedures that can be invoked on demand; for example, seeding a plan or a forecast with appropriate numbers, or for invoking an optimization schedule to recommend prices and volumes. However, not all such actions should be performed until all preconditions have been met; for example, the workbook must be seeded properly before a forecast is run, and a forecast must be run before a price recommendation is requested.

Previously, system designers have had no easy way of ensuring that custom menus would be executed only when all required conditions had been met. Normally, they would encode each rule such that it looked for a condition before execution. This method was both tedious and prone to encoding errors, thus significantly affecting timelines of implementation projects.

RPAS Configuration Tools has now been enhanced to configure a scalar, Boolean "Condition Measure" for each custom menu. Before executing the rule-groups and scripts in a custom menu, RPAS checks this measure to decide whether execution is allowable or not.

Like any other measure in the workbook, its value can be changed at any time, either manually or through calculations.

This is a patchable feature; i.e., existing configurations can be enhanced to benefit from this feature.

Returning Customized Messages on the Successful or Failed Execution of a Custom-Menu

After the execution of a business or planning process executed through the use of a custom-menu, retailers may wish to inform the user of special circumstances that can only be determined by the business process; for example, "the plan could not be sent for approval because the number of price changes is below threshold". RPAS now provides system designers with the ability to display a customized and dynamically changeable pop-up message to users after completion of a custom menu.

Previously, the only mechanism that system designers had to inform the user of any such condition was through providing a measure for this purpose in the workbook and populating it with the desired message. The pop-up message that RPAS displayed after the execution of the custom menu was not customizable and did not provide any meaningful insight to the user.

RPAS has now been enhanced to customize the message that pops up after execution of the custom menu. RPAS Configuration Tools now provide for configuring a scalar, String "Return Message Measure" for each custom menu.

This is a patchable feature, i.e., existing configurations can be enhanced to benefit from this feature.

Removing All Errors from the Task List of Configuration Tools

In RPAS Configuration Tools, the users can now remove all errors from the task list in one attempt by selecting the newly available option in the context menu of the task list. While the new method is similar to the existing functionality of removing all warnings in one attempt, this enhancement is intended to improve productivity for system designers.

Customizing Wizard Page Labels

The standard wizard can now be defined to have a customized page title. A new field has been added to the wizard definition dialog in the RPAS configuration tools where system designers could configure the page title.

Controlling Precedence of Cell Fill Color Formatting

Some retailers may wish to alter RPAS formatting priorities to better suit their corporate approach to usability. By default in RPAS, if a cell is read-only, the read-only format overrides any measure-specific formatting. However, an administrator can now override this behavior by setting up a domain property called *MEAS_FILLCLR_PRECEDENCE*. If

the property has a value of TRUE, the measure fill color takes precedence over the read only fill color; i.e. to decide which fill color to use, the RPAS Client looks in the following order: measure, read-only, hierarchical, and finally, read/write. If the property is not set (or reset) to FALSE, the precedence of cell fill color would be: read-only, measure, hierarchical, and then read/write.

Removed or Modified Functionality

The following sections detail functionality that has been removed or significantly modified in this patch or release. Note that end user documentation has been updated to reflect the current state of the functionality.

Removed Support for Internal Position Names in Rules, Functions, and Procedures

Previously, RPAS allowed internal (prefixed) position names to be used in mapping measures in procedures such as *lookup*. Not only was this functionally incorrect because internal names are RPAS-specific and the customer should not have to know about RPAS internal names, it was also a source of bugs in some RPAS-based applications.

From this release onward, internal names will no longer be usable in mapping measures for procedures such as *lookup*, nor will internal names will not be usable for features such as Single Hier Select.

This change could cause significant problems in existing implementations that were implemented such that they used internal names instead of external names. When upgrading to this version or higher, customers will have to make the following three kinds of changes to their implementation to ensure that their implementations do not break when upgrading to 13.0.2. The nature of these changes should also indicate where to look for possible issues.

1. All RPAS rules that use position names in any kind of comparisons (such that they concatenate the external position name with a prefix to build an internal name that will be used in procedures such as *lookup*) will have to be updated to simply use the external position names.
2. All measures that store position names as their values will have to be updated to use external names instead of internal names. An RPAS utility named FixDomain is provided to scan desired measures and convert internal position names to external position names while reporting those positions that could not be resolved. This utility simply removes the dimension prefix to convert an internal name to a external name.
3. Any measure load files (and related integration mechanisms) that load position names into measures will have to be modified to load external names only.

Affected RPAS functions and procedures include *lookup, flookup, index* and transform aggregation and spreading methods such as *transformSum* and *transformRepl*.

For the special case of *flookup*, where the position name is directly entered in the dimension specification in the expression, all position names starting with a numeric character must be marked up in double quotes to prevent parsing errors.

Removed Support for Double Quotes in Measure Description

In RPAS Configuration Tools, the measure configuration tool used to allow use of double quotes in measure description. From this release onward, this use will no longer be allowed.

Modifications to Functionality In Development

This section lists modifications to or the removals of existing functionality that are currently in development. The in-development changes are described here only to help customers prepare for the possibility of these changes in the future.

Purging Back-Up Databases by Default

Currently, there are several RPAS utilities that reshape arrays, and in the process create backup databases. These backup databases are not automatically purged by the utilities even though they roll back changes in case of failure. Oracle Retail is developing functionality such that these backup databases will be cleared by default, irrespective of whether or not the utility was successful in performing the intended operation. The utilities will continue to roll back changes in case of a failure.

Utilities such as loadHier and reshapeArrays that have the –purgeBackups and the –purge options, will continue to support those options, but they will not in any way affect new behavior, as they will purge backups by default. Other utilities such as *CreateGlobalDomain, DimensionManager, PositionBufferMgr* and *ReconfigGlobalDomainPartitions* that currently do not have a purge option, but create backup databases, will purge backups by default.

Discontinuing .clr and .inc Measure Load Formats

RPAS allows four measure load formants: overwrite (.ovr), replace (.rpl), increment (.inc) and clear (.clr).

- .ovr – (Overwrite) Existing values in the measure are overwritten with the values in the input file. Any values not included in the input file are not changed in the measure.
- .rpl – (Replace) The existing measure is cleared and the values in the input file are taken as the new values for the measure. Existing values for cells that do not exist in the load file will be switched to NA.
- .inc – (Increment) Increment mode is primarily used with numeric measures where the load file contains incremental values. Therefore, if a cell had a value of 2 and the .inc file provided a value of 3 for that cell, the new value for the cell would be 5 (2 incremented with 3).
- .clr – (Clear) Clear mode is a variation of replace mode. It is meant to be used when measure data is loaded in parts, staggered in time, such that data for all positions grouped by an aggregate level position is replaced if one or more positions for that group of positions is being loaded. For example, if there are four regions, each with several stores, and you load the data region-by-region, or for a subset of regions, at a time. When loading data, you want to ensure that the data for a region is completely replaced with the new load if the load file has data for one or more stores from that region, while other regions should be left untouched. This is made possible by clear loads where the clear intersection (clearint) property of a measure specifies the aggregate level at which to group positions for completely replacing the data.

Internal investigation tells us that increment and clear modes of measure have either not been used in the field, or have not been used in several years. Supporting these modes keeps the complexity of RPAS administrative utilities high, and also increases Oracle Retail's test burden. These modes (increment and clear) are therefore planned for possible removal in a major future release.

Technical Enhancements

The following sections describe technical enhancements for RPAS. For more details on these enhancements, please see the 13.0.2 RPAS documentation set.

Controlling Profile Logging

Previously, there was no way to prevent the accumulation of profile logs in the profiling log file. Any time a batch would be run such that log level was at or included profiling, the profile logs would be appended to the default profile log file, which is different from the general log file. The file would eventually grow too large and require manual deletion or management. To alleviate this problem, RPAS has added two new environment variables that give system administrators better control on profile logs:

- RPAS_PROFILING_ENABLE – When available and set to true, this environment variable enables the writing of profile logs to a profiling log file, which is otherwise not able to be written to.
- RPAS_PROFILING_PATH – The environment variable allows the system administrators to change the default profiling log file name and path. By default, the log file is called rpasProfile.log, but this can be changed to any other file name or path.

Integration Enhancements

The following sections describe integration enhancements for RPAS. For more details on these enhancements, please see the 13.0.2 RPAS documentation set.

FilterHier utility

Sometimes, a retailer may have a master file of hierarchy data that needs to be loaded into multiple domains. Some of these domains may be missing one or more levels from the master hierarchy, mostly because the planning levels in these domains are higher than the lowest level in the master, and the domains do not need to have all the lower levels. For example, a retailer may have one domain for Merchandise Financial Planning where the lowest level is Category, and another for Item Planning where the lowest level is Item. The hierarchies in these two domains would have their relevant hierarchy load data in one master file; using loadhier, the retailer would not be able to load just what is relevant to the domain from the master. Instead, system integrators would need to write custom scripts to parse out irrelevant columns from the master file to prepare load files suited for individual domains.

The filterHier utility does the filtering of columns for the system integrators, ridding them of the need to write custom scripts. This utility analyzes the target domain and trims down the master file to only have those columns that are needed by the target domain. FilterHier acts on CSV formatted files and requires the input file to contain a header line containing the names of the columns, for example, *SKU,SKU_label,STCO,STCO_label*. The output of the utility file will be a .csv.dat file that can be subsequently used by the loadHier utility.

Exporting NA-Value of the Mask Array when Exporting Data

When exporting RPAS data using the exportData utility, you can use a Boolean mask to tell RPAS which values to export and which to not include in the export. However, the values of this mask measure would not have been exported by default, and could not be exported if the mask measure itself was being exported. From this release onward, a new command line option, *-displayArrayNaValue*, has been added to the exportData utility,

which, when used with *–skipNA* option, will export the values of the mask measure as well.

Performance Enhancements

RPAS strives for performance improvement and continually enhances existing algorithms to this end. In general, RPAS users should see slightly improved performance from the 13.0.1 patch during saving, closing and deleting workbooks. RPAS ODBC driver users should also see improved performance for queries with large filter conditions. Since the performance of these operations largely depends on the size of the workbook or query, average factors of improvement cannot be provided.

Fixed Issues/Defects

The following table contains issues or defects that have been fixed for the current release.

Fixed Issue/Defect	Defect Number
An issue with refreshing the grid formatting when measure profiles are siwtched was removed to ensure that grid format does not wait until user activity such as scrolling to refresh	6331976
In version 11.1.8, non-administrative users were able to see Security Administration and User Administration tabs in the workbook open dialog. These workbooks were made administrative only in subsequent releases, thus requiring user to have administrative privileges to see those tabs. However, administrators can see all workbook templates including these. To reduce clutter, administrators want to restrict access to templates for administrators. A new domain property has been added that helps system administrators override RPAS default behavior and restrict workbook access to administrators using the Security Administration workbook. This property is called 'OVR_DEF_ADMIN_PRIVILEGES'. For details of this domain property, please see the *RPAS Administration Guide*.	6332042
Building or patching domains was showing a spurious error in the console even though there was no error in the build or patch process. The error has now been removed.	6332867
A change to logging of rejected records from the loadMeasure utility was reverted to ensure that complete information about rejected records is available to users	6345614
Previously, there was no way to prevent the accumulation of profile logs in the profiling log. This lack of control led to the file being appended each time batch runs would be done with profile level logs. The file would grow too large in size, thus causing disk space problems. Two new environment variables have been added to RPAS setup. With the use of these environment variables (RPAS_PROFILING_ENABLE and RPAS_PROFILING_PATH) the user can control the file appending behavior of profile logs, thus ridding administrators of the need to delete profile logs every time a batch is run.	6395562
Previously the RPAS Client would crash if the user performed and invalid fill operation. The handling of this failure has now been made much more user friendly such that the user can easily recover from a situation and continue working. A pop-up message informs the user of the invalid situation and allows him or her to continue work thereafter.	6610758
The Russian translation for the tooltip text of the wizard's Forward button' was corrected.	6634637

Fixed Issue/Defect	Defect Number
There was a logical error in the domain patching process where the styles database was getting corrupted in some RDF (Retail Demand Forecasting) domains. The cause for the corruption problem has now been removed.	6635850
If there are alert measures in a workbook, RPAS checks to see if any alerts have been raised; if none have been raised, it informs the workbook user that there are no alerts and hence the functionality will be disabled. RPAS should not do this if none of the alert measures are being displayed. The RPAS Client's behavior was corrected to suppress the informational message if alert measures are not displayed in the workbook, but are in the workbook because of their use in rules for the workbook.	6637257
The space on the Image Display dialog did not allow image details to show all levels when the number of displayed levels was seven or more. The Image Display dialog's presentation was changed to allow the display of many levels.	6671319
Corrected the problem of wbbatch not displaying the correct log file name. The utility's output now prints the name with the time stamp - the same name by which the file is saved to disk	6711844
In the RPAS Client, when somebody would use the **Del** key to delete an entry from a picklist type cell, the cell would assume a value that was not given in the picklist. RPAS has been enhanced to select the NA Value of the picklist measure in this case. Oracle Retail advises that system implementers always provide a NA Value selection in the picklist.	6731385
Added the following missing aggtype modifiers to the expression builder in Configuration Tools: average_pop, total_pop, max_pop, min_pop, median and median_pop.	6733199
The hierarchy and dimension labels at the top of the Attribute Definition Dialog were not being updated when user updated the selection in the dimension selection tree. The event model for the UI components was corrected to update the dimensions on the change of selection.	6736318
The RPAS Client was hanging after extended usage due to resource leakage in an underlying object. This issue has now been corrected.	6741965
Corrected the behavior of the RPAS Client to ensure that it checks the domain property ovr_def_admin_privileges when determining which template groups should be made visible to the user.	6744627
A context menu was added to the Configuration Tools' task list to remove all errors from the list in one attempt.	6750490
Corrected an issue that caused the RPAS Client to crash when trying to display ambiguous aggregate values for checkbox-type cells.	6762104
In some cases, the initial load of the workbook did not show read-only cells formatted in read-only color until the user switched tabs and then came back to the original tab. This behavior has been corrected.	6778274
Corrected bookkeeping of user IDs in the DomainDaemon. DomainDaemon now ensures that it is fully synchronized with every RPAS Client session, and that only valid user IDs are served by RPAS Servers. Previously, DomainDaemon would wrongly catalog the first user ID that was supplied by an RPAS Client, irrespective of whether it was valid or not, or whether a different user had logged in using the same client after a failed login attempt with the previous user ID.	6797569

Fixed Issue/Defect	Defect Number
By default, if a cell is read-only, the read-only format overrides any measure-specific formatting. However, now an administrator can override this behavior by setting up a domain property called MEAS_FILLCLR_PRECEDENCE. If the property has a value of "1" (one), the measure fill color takes precedence over the read-only fill color; i.e. to decide which fill color to use, the RPAS Client looks in the following order: measure, read-only, hierarchical, read/write. If the property is not set (or reset to "0"), the precedence of cell fill color would be: read-only, measure, hierarchical, read/write.	6804159
Corrected the problem of displaying garbage characters for some Simplified Chinese text by ensuring that the right character set was used.	6826363
Canceling the Format Grid changes was causing the grid to switch its background to a gray theme. This problem has now been corrected.	6827833
Increased the limit on the number of custom menus in a workbook from 12 to 20.	6867213
When in outline mode, the Dimension combo box in the Cut/Copy/Paste Special dialogs would have their contents duplicated every time the Cut/Copy/Paste All Slices checkbox was clicked. This duplication has now been removed.	6868426
The loadHier utility was raising false alarms by displaying error messages when purging positions along the partition hierarchy. This used to be impossible in earlier versions of RPAS (hence the message), but has been possible for quite some time now. The false alarm has been removed.	6875452
Previously, if Configuration Tools properties had been set up to display measure labels instead of measure names, the user was unable to see them for certain features such as position queries. This issue has been corrected and the user can see measures for all features.	6886650
Corrected an issue with rpasInstall utility to prevent internal errors from being thrown when patching domains with style updates.	6900567
The Dynamic Position Maintenance dialog was allowing the user to proceed with adding a position without providing a label for the new position. However, the RPAS Client would crash soon after. The RPAS Client no longer allows the user to proceed without entering a label for the new position.	6907049
Fixed a problem that prevented application formatting settings from being saved when the user did not have administrative privileges on the PC on which the RPAS Client was being run. To fix this problem, the default location of Foundation.ini has been changed. The RPAS Client now looks in the following folders (in order) for foundation.ini.: **1.** The user's 'Application Data' folder. **2.** The same folder as the currently loaded foundation.exe. **3.** The current working folder. **4.** The Windows folder (C:\Windows). If the foundation.ini is found, but cannot be written, it is copied to the user's "Application Data" folder and opened from there. If the foundation.ini is not found, then a new one is created in the user's "Application Data" folder. The first three items in the search list for foundation.ini are also used for finding foundation.fcf. Therefore, it is now possible to have foundation.ini and foundation.fcf in the same folder.	6910770

Fixed Issue/Defect	Defect Number
The RPAS Client was not preserving the hidden status of some positions between saves and reopens of the workbook. This behavior has now been fixed.	6932868
If the intersection of a measure used in a position query were changed, the position query would not be revalidated by the Configuration Tools. In the absence of a validation error, the domain would be inadvertently built with an invalid position query, causing various kinds of unintended runtime behaviors. Validation of position queries has now been enhanced to validate against the event of intersection change.	6953026
When trying to view measures at intersections that include hierarchies not present in the base intersection of a measure, the RPAS Client should hash out the cells because the measure does not have a valid value for that intersection. The RPAS Client was instead displaying an error to the user. The behavior has now been corrected.	6982518
An enhancement was made to filter out non-DPM generated positions from the list of positions when Modify DPM Positions dialog is used.	6983349
The "&" character was being replaced with the "_" character in the tooltip text of position labels in RPAS. This behavior has now been fixed to display the original text.	6991650
mapData has been modified to copy the NA value of the source array to the destination array if both arrays have the same dimension space and the destination array is empty.	6992272
The RPAS ODBC driver was failing on large queries that aggregated data using SQL aggregate functions, and produced large number of result records, approximately 200,000 or more. This problem has now been fixed such that it cannot be observed in very large RPAS deployments.	6994974
A contention issue was fixed to prevent loadHier from failing when run with multiple processes.	6996594
An invalid position name error was being logged for positions at or below the partition dimension in domains in which the position did not exist. This was not causing any data inconsistency, but was raising false alarms. The utility has been corrected to not raise this false alarm.	7007910
Spanish translations for the “Update” and “Refresh” buttons were the same, thus confusing to the users. The translations were changed to be more meaningful to the end user.	7010346
Corrected behavior of copyDomain utility to update configmeasdata.r_subdomainindex array when it is used with –xmlConfigFile.	7018280
SQL queries for aggregate data would fail when querying measures with four or more dimensions in their intersection. The behavior has been corrected.	7019371
RPAS can internally change default values of a measure's data structure to be different from the measure's default value to optimize storage of the measure. The mechanism that handles aggregation and spreading of measures where the data structure has changed internally had broken as a result of recent changes in the source code. This was resulting in inconsistent values being calculated during aggregation and spreading. This mechanism has now been corrected.	7025917
Changes to user-defined dimensions were not immediately exercised after committing the changes; the user was required to commit, close, and then reopen the workbook to see his or her changes. This behavior has now been changed to immediately refresh the hierarchy changes after commit.	7035219

Fixed Issue/Defect	Defect Number
Charts were not maintaining changes to scale when the view was toggled to a chart and back. This behavior also manifested when calculation was performed after making changes through the chart. Furthermore, only the first change from the chart would be persisted, and all others would be discarded. Both of these issues have been fixed.	7037749
The printMeasureInfo utility was failing when called with the -all, -popcount, and -lastupdate options for measures that do not have a database assigned to them. The utility's behavior has been corrected to return proper results for valid options (-all) and to indicate improper use when used with invalid options (-popcount and -lastupdate).	7038167
rpasInstall was passing a -maxProcesses option to hierarchyMgr even when the option was not valid for that utility. This was causing runtime failures. Domain building and patching has now been fixed to not pass the parameter.	7040757
In Configuration Tools, when the user deleted a measure that was being used in one or more rules, and switched to the rules management tool, the Configuration Tools hung and terminating the validation, corrupted the configuration. Configuration Tools was not properly handling validation in the case the measures were no longer in the configuration. The validation behavior has been made more robust and the user should not encounter this behavior.	7043808
Invalid attribute names were causing runtime failures in RPAS. Validation in Configuration Tools has been enhanced to flag invalid attribute names.	7044017
The loadHier utility was not performing well when purging a lot of positions. Performance enhancements were made to alleviate this problem.	7044659
There were several issues with consistency of behavior when copying and pasting data from clipboard. These have been corrected to match user intuition. For details for expected behavior please see the *RPAS User Guide*.	7045173 7111323 7111338 7111355
The RPAS Client was popping up one error message for each failed cell when copying and pasting multiple cells from clipboard. Additionally, it was not rolling back partial copies. Copy and Paste from Clipboard has been corrected to paste all cells or none, and to display only one failure message in case of copy failure for one or more cells.	7045192 7045315
regMeasure was throwing MeasurePropertyNotValidException when it tried to modify the measure property PERIODSTARTVALUE. The behavior has now been corrected.	7109720
On machines with limited memory and virtual memory, the ODBC driver was failing when queries were written to sort (using order by clause) large number of records (approx. 6 million in the test). This problem has been fixed with a change to the sorting algorithm.	7113938
When building a 13.0.1 domain, the user would receive a warning message from installPristineDomain utility. This did not cause any issues with the domain building process or with the built domain. The cause for the warning has now been removed.	7113956
Positions along the Calendar hierarchy were automatically hiding between saving, closing, and reopening a workbook. These positions would reappear when the user pivoted the grid around. This behavior has been corrected to ensure that none of the Calendar hierarchy positions are automatically hidden.	7114482

Fixed Issue/Defect	Defect Number
In version 13.0.1, changes to codebase to correct another problem introduced the problem of being unable to save changes to attribute definitions. This issue has been corrected so that user can save changes.	7118700
Corrected the problem of the RPAS Client being unable to show the complete text of a cell when the cell was selected using a mouse. This problem was only visible on some machines after RPAS was made Microsoft Windows Vista compatible.	7121069
Corrected the problem of the RPAS Client being unable to show the complete text of a cell when the cell was selected using a mouse. This problem was only visible in some machines after RPAS was made Microsoft Windows Vista compatible.	7121069
When applied from the Sort & Display Attributes dialog, a sort did not apply until the sort was explicitly changed and then reapplied. This behavior has been corrected.	7122074
If the value of the "total" parameter to the resizenorm function were invalid, RPAS would crash. Proper checks have been put in place to detect use of invalid values and prevent RPAS from caching. The user should expect to see errors informing him or her about the use of invalid value.	7150106
Corrected an issue with the copyDomain utility to prevent its failure if the global domain being copied has invalid subdomain paths in the r_subdomainpath measure. Now, the utility gives a warning message about such subdomains, but proceeds to complete the copy of the rest of the subdomains.	7151904
Ensured that context-sensitive Help from the print setup page brings up Help on print setup instead of launching the home page for RPAS Help.	7166221
Corrected degradation of workbook build performance that resulted from algorithmic redundancy introduced during an enhancement to user security management.	7168960
In version 13.0, there was an issue with the elapsed lock feature; elapsed time was sometimes not updated due to problems with caching values. The issue has been resolved and the elapsed time locks update properly per values set by the rules.	7172532
Builds of security administration workbooks were failing because of mismatch or metadata introduced by another issue in the dynamic attribute functionality. The behavior has been corrected	7188518
Due to a logical error in a recent bug fix in version 13.0, in some cases, dynamic hierarchies were not being loaded properly in the RPAS client such that none of the roll ups were being shown. The problem has now been corrected.	7189335
Dimension splitting on large workbooks was causing a connection failure related to memory exhaustion. The dimension splitting algorithm was optimized and the problem no longer exists with known large workbooks.	7189578
When hierarchies were collapsed (hidden) in the page axis, only one page was being printed. This behavior has been corrected to print all pages.	7189889
copyDomain -clone was performing poorly for large domains and also running out of memory is some cases. Performance improvements were made to alleviate both problems.	7191579

Fixed Issue/Defect	Defect Number
When rebuffering, the RPAS utility positionBufferMgr was reporting incorrect numbers for dimensions at and below the partition level in a global domain configuration. This report has been corrected.	7196583
Window placement of widgets in the "Add autobuild wizard" was corrected to avoid overlapping when the window is resized.	7196981
In global domain configurations, PST and PET aggregation types were not returning correct results if the aggregation eliminated the Calendar hierarchy, and if aggregation was above the partition level. This aggregation behavior has now been corrected.	7208590
The Measure Maintenance workbook was showing spurious errors with alerts even though there were no alerts in the workbook. The spurious errors have been removed.	7226223
A performance bug was introduced in the 12.1.3 patch that led to online calculations becoming much slower than previous versions. This problem has been corrected.	7242710
The Dynamic Position Maintenance dialog was not showing the scroll bar when using Simplified Chinese or Japanese languages. The problem has been corrected.	7249202
Hierarchy loading was failing due to unrelated data in change management data structures. This unrelated data belonged to measures that were no longer in the domain. Hierarchy loads should not have failed due to unrelated data. RPAS has been made to be robust to existence of unrelated change management data.	7253196
The RPAS Client was showing "?" instead of Italian translation for the word "Help" when using the Italian language. The proper translation is now used.	7258295
If a parent position has not been assigned to a child position, the RPAS Client was not showing any position in the aggregate dimension. The situation is not allowed in RPAS and it should inform the user of the error situation that orphan children exist in the hierarchy. RPAS has been enhanced to inform the user of the error situation which they need to fix by ensuring that each position has a parent position in the aggregate level.	7258604
ConvertDomain was failing when converting 11.1.12 domains to the new format. This issue has been resolved.	7258614
Copy / Paste functionality was not working for Percent-of-Parent measures. This issue has been corrected.	7262283
In Configuration Tools, users who unrealized a measure with invalid intersections continued to see an error complaining about the invalidity of the intersection for the unrealized measure. Task list should not flag errors with unrealized measures. The validation model in Configuration Tools has been fixed to remove the error from the task list when the measure is unrealized.	7271994
When exporting data using exportData, the mask array used with option -naArray does not get exported. A new option, -displayArrayNAValue, has been added to the exportData utility to allow users to also export the mask array values.	7274403
Very large queries were failing such that the driver would crash due to memory exhaustion. The driver code was optimized to minimize redundancy in usage of intermediate data structures, thus both alleviating the problem and improving performance.	7280260

Fixed Issue/Defect	Defect Number
Users were receiving an error message when re-opening the Translation Administration workbook. This problem has been fixed	7287504
RPAS was locking the wrong cells when zoom was turned on. This problem has now been corrected.	7294361
The usage description of the loadHier utility was not consistent with upgraded behavior. The usage description is now updated.	7301384
A new feature has been implemented in RPAS that allows the user to re-login when a connection fails, such that the user no longer has to wait for server timeout. For details the user is referred to the *RPAS User Guide*.	7316143
The lookup procedure was having problems working with loaded names and could only work with RPAS internal names for buffered positions. This behavior has been corrected and the procedure now only works with names loaded using loadHier or names entered by the user when creating positions using Dynamic Position Maintenance.	7316788
Some chart properties were discarding user changes and incorrectly reverting to default values after a workbook refresh or after workbook close and open. The behavior has been corrected to persist user changes.	7322325
When running the loadHier process with a purgeAge of 0 and maxProcesses greater than 1, the process was failing due to inability to obtain a write lock on a database in the global domain. This was due to faulty locking request trying to lock a database in the global domain even though the operation was being performed in the local domain. The faulty locking request has been eliminated and loadHier is now working as designed.	7322458
Single Hier Select dialog in the RPAS Client was sorting calendar positions alphabetically, making it extremely difficult for users to select positions in chronological order. The behavior of Single Hier Select has now been changed to not sort Calendar hierarchy by label.	7322644
Use of double quotes, i.e., the character ", in measure descriptions was causing several failures within RPAS. The valid character set for measure description has been changed to disallow usage of double quotes.	7326493
When invoking loadHier from outside the domain directory, loadHier was erroring out. The behavior has now been corrected.	7328946
A recently introduced bug in the RPAS Client was preventing users from formatting BOP and EOP measures when they were both visible in the same worksheet. This was caused due to problem in mapping UI selection with the internal object in the code. The problem has now been corrected and users can format both these types of measures in the same view.	7329319
Spurious errors were being displayed in loadHier logs. The spurious errors have been removed.	7330590
Configuration Tools were allowing the user to rename a dimension or a hierarchy with an existing name without flagging a validation error. Since duplicate names are not allowed in RPAS, this was causing a domain build error. Validation in configuration tools has been enhanced to raise a error in case duplicate names are created as a result of renaming.	7335583
The Workbook tool in the Configuration Tools was enhanced to accept position query definitions with measures higher than the base intersection of the worksheet.	7335806

Fixed Issue/Defect	Defect Number
The domainInfo utility was requiring the user to use the -d option with the -expectedVersion option. The user should not be required to use a -d option with the -expectedVersion option because the latter is only meant to query the RPAS server for what would be an expected domain version for the domain to be compatible with the server. The unnecessary constraint of requiring -d option has been removed.	7336133
userMgr was asking the user to supply a -password parameter even though it is not required with the -addUsers option. The usage and the behavior have been corrected to not require the -password option with -addUsers.	7342275
Configuration Tools was not ensuring that the agg state of a measure should be read only if a spread method has not been specified. The domain build process was automatically overriding the agg state to read only in such cases. Configuration tools validation checking has been enhanced to flag such a situation as an error.	7348700
Corrected a resizing problem with the Attribute Address Selection window where window components were not being positioned properly after resize.	7351531
A defect with aggregation and spreading of Boolean measures was resolved. Users were observing inaccurate spreading in some cases. This behavior has been corrected.	7354782, 7274711, 7439441
The ODBC server was locking the security databases for unnecessarily long times. This was causing contention problems with commit requests from the Security workbook. The lock times have been reduced to only those periods for which the query is checking security thus significantly alleviating the contention problem.	7355633
In version 13.0.1.2 a bug was introduced preventing the user from entering a number the digits of which exceeded the length of the column. This problem has now been corrected.	7371391
The pop-up dialog for modifying or deleting a DPM (Dynamic Position Maintenance) position was not listing any positions. This problem has been corrected to correctly list all DPM created positions.	7374111
RPAS 13.0.1 introduced a bug where workbooks could not be saved if the global domain was distributed between different mounts. The problem was introduced during a performance enhancement to saving and deleting workbooks. This problem has been corrected.	7390995
A spurious error was being displayed when building or patching domains. The error has now been removed.	6332867
The find measure functionality in the Configuration Tools Workbook Designer's Measure tab was not working. The behavior has now been corrected so that user can find measures by typing all or part of their names in the textbox.	7019145
Users were receiving “invalid intersection” errors for unrealized measures in the Configuration Tools Measure Configuration tool. These spurious errors will no longer occur.	7109084

Fixed Issue/Defect	Defect Number
Help functionality for the following areas was made accessible again: ▪ File – New Window ▪ File – Open Window ▪ File – Delete Window ▪ Workbook Wizard Tree	7111596
Users were able to desynchronize a split's definition with the split on screen by changing its definition at a time when the worksheet had already reached the limit on number of hierarchies it can have on the screen. This condition is now specifically checked and RPAS does not allow desynchronizing a split's definition with what is being used on the worksheet.	7355524
When loading a hierarchy file that contained a different label than what was currently stored in the domain, the label did not get overwritten with the new label. LoadHier was mapping the new labels to different positions. The mapping problem has been corrected and the user should no longer see these problems.	7359884
Two-tree wizards were loosing the sort order established by the user when the user changed the rollup. This problem has now been corrected.	7387249
In the RPAS Configuration Tools Dimension Manager, the user was unable to properly edit the RPAS name of a newly created dimension. The UI incorrectly flagged the entered name as having errors and would not let the user edit the name. This problem has now been corrected.	7387528
Registration of dimension was failing during patch installs due to memory exhaustion. Dimension registration algorithm was changed to use significantly less memory thus resolving the problem.	7393983
In some cases, when building a workbook with a hierarchy that had alternate rollups and when the user had traversed to the alternate hierarchy in one of the previous build attempts, the two-tree wizard would show errors with spurious dimension or position names. This problem has now been corrected.	7409513
When doing a commit in the Hierarchy Maintenance workbook, positions above the base dimension were disappearing. The problem has now been corrected.	7416338
Duplicate records were being returned by the ODBC driver due to incorrect parsing of the OR join condition. This problem has been resolved.	7417708
LoadHier was performing very poorly when purging a large number of positions. IO algorithms were enhanced to significantly improve performance of such operations.	7422994
Users were able to go beyond the limit of 8 hierarchies on a worksheet by updating a split which's definition had been changed. This was causing the system to crash when the update caused the count to go beyond 10 hierarchies. The limit has now been enforced for dimension split updates. Furthermore, it is ensured that a split's definition is always in synch with what is displayed on the worksheet, thus preempting such a situation from occurring.	7428768
When operating on large number of positions, loadHier was reporting errors due to memory exhaustion. Algorithms for memory management have been improved to prevent such situation from occurring	7435173

Fixed Issue/Defect	Defect Number
After editing a measure and calculating, changing rollups along the Calendar hierarchy was causing code validation errors and crashing the RPAS Client. The code validation error has been removed as it is not required.	7445143
Avg_pop agg type was not returning correct values due to improper initialization. This problem has now been resolved.	7451557
The position labels were incorrect after loading a hierarchy. This problem has been corrected.	7455540
RPAS documentation has been corrected to say that Dynamic Position Maintenance does allow entering position names that start with non-alpha characters.	7462669

Known Issues/Defects

The following table contains issues or defects for the current release.

Known Issue/Defect	Defect Number
Queries canceled by OBIEE (Oracle Business Intelligence Enterprise Edition) do not get immediately cancelled in the ODBC Measure Mode Server.	7212285

Previous Releases

For additional information on previous RPAS release enhancements and additional information, refer to the release notes and documentation that accompany the previous release.