Oracle® Retail Predictive Application Server

Release Notes

Release 13.0.3

February 2009

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

Hardware and Software Requirements

See the *RPAS Installation Guide* for information about the following:

- Hardware and software requirements
- Oracle Retail application software compatibility information

13.0.3 Patching Process

RPAS patches can be applied directly to an existing installation of the same major release. However, if 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 RPAS utility upgradeDomain.

Though RPAS encourages customers to stay up-to-date with releases and patches, it is possible that some customers may not have been able to update to the current patch. At the time of the release of the 13.0.3 patch, Oracle Retail is aware of customer implementations that are still below version 12.1. Oracle Retail advises such customers to be sure to follow the process outlined in the 12.1

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version of the *RPAS Installation Guide* to convert their pre-12.1 domain to a post-12.1 domain. Fundamental changes have been made to RPAS's storage layer, and pre-12.1 domains are not upgradeable to 13.0.3 domains simply with the use of the upgradeDomain utility.

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

Functional Enhancements

RPAS 13.0.3 includes the following functional enhancements.

Change in User Interface for Dynamic Position Maintenance

For pre-13.0.3 releases of RPAS, Dynamic Position Maintenance (DPM) user interface functionality allowed the user to cause errors that resulted in unintended hierarchical changes, or in rare but severe cases, domain corruption. The latter result would only occur if a series of steps were executed in a manner that users are not likely to make on a day to day basis.

To remove the possibility for these errors, the DPM user interface has been enhanced in the following ways:

- In the Add Position dialog, the user cannot modify the rollups of existing loaded or DPM created positions.
- In the Add Position dialog, the user must add new DPM positions to all levels from the root to the level at which they want to add an aggregate level new position. The user cannot choose an existing position in the middle of the hierarchical tree while creating a new position at the top.
- In the Modify Position dialog, users will always have to change the name or label of existing aggregate level positions unless they check a new checkbox in the pop-up dialog which states that the name change is the instantiation of a new position. The creation of aggregate level positions in the Modify Position dialog is allowed for cases where the user wishes to move an entire tree of positions under a new aggregate position, such as moving a class and all its SKUs to a new department.

Modifications to Functionality in Development

The following sections detail modifications to or the removal of existing functionality that are being considered for development. The possible changes described here are only intended to help customers prepare for upcoming releases.

Not Discontinuing .inc and .clr Measure Load Formats

In the 13.0.2 RPAS Release Notes, it was mentioned that Oracle Retail was considering the possibility of discontinuing support for the .inc and .clr file load formats for measure data loading. However, it was been shown that there is significant value in retaining the ability to load measure data incrementally. Thus, it has been decided that RPAS will continue to support .inc and .clr measure load formats.

Business Case Example: RPAS deployments sales data comes from a variety of sources for the same Store/SKU/Day intersection. These sources of sales

information include separate buckets for promotional, markdown, and normal sales in addition to late sales (sales from a previous day). The .inc functionality allows all of these sources to be loaded independently, with the correct value being incremented where they share a common Store/SKU/Day intersection. Similarly, the .clr format is used in some planning deployments to clear weekly and load new data for Open-to-Buy measures.

Note: See the "Fixed Issues/Defects" section, defect #7614983.

Integration Enhancements

RPAS 13.0.3 includes the following integration enhancements.

Added -recordLogLevel Option to the loadmeasure Utility

A new argument, -recordLogLevel, is now available for use with the loadmeasure utility. This argument is used to set a logging level for record loading issues.

In RPAS, issues such as parsing errors, missing positions, and data conversion errors are evaluated for every record in the measure load file. By default, these errors are logged in the log file of the loadmeasure utility. With use of the -recordLogLevel argument, customers can downgrade the logging level for such record loading issues if they so desire.

When logging, loadmeasure compares the record logging level to the utility's logging level (set using -loglevel). If the utility's logging level is less verbose than the record logging level, record issues will not be logged. If the utility's logging level is at the same or higher verbosity as the record logging level, the record issues will be logged with the log indicator as set with the -recordLogLevel argument.

The standard log levels (error, warning, information, and profile) can be used as parameters to this argument.

Domain Creation Now Automatically Filters Hierarchy Files

In RPAS 13.0.2, a new utility, filterHier, was introduced. This utility can transform a master hierarchy load file to a dedicated load file for the target domain by filtering out columns representing dimensions that do not exist in the target domains hierarchy.

As of the 13.0.3 patch, by default, RPAS domain creation will automatically utilize the filterHier utility. Thus, when building domains, users can directly use a master file without worrying about either manually modifying it or using the master file after the creation of the domain.

Performance Enhancements

RPAS 13.0.3 includes the following performance enhancements.

Improved Workbook Build Performance

General enhancements have been made to RPAS to improve the performance of workbook building. In some cases, these enhancements have been shown to improve performance by 30%.

Fixed Issues/Defects

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

Table 1 Fixed Issues and Defects

Fixed Issue/Defect	Defect Number
RPAS' programmatic API for the function PNIDimension::findKey has been changed to only work with external position names. Previously, this API worked with both RPAS-internal and external names (loaded using loadhier). In certain cases, it was impossible to determine which name had been passed in, causing unexpected results. External API should only work with customer-supplied names and not with RPAS internal names. This API may now only be used with external names.	6317470
The "Committed" date-time stamp in the "wbmgr" output was being cleared when closing the workbook. This issue has been corrected.	6918308
The defrag utility was occasionally failing due to a memory address generation fault. This issue has been corrected.	6919525
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. Instead, the RPAS client was displaying an error to the user. The behavior has been corrected.	6982518
If convertDomain was run originally without the -purge flag, then re-running convertDomain on the already-converted domain could have overwritten recent changes with older data. This was due to convertdomain not checking whether or not the domain had already been converted. This issue has been corrected.	7026200
When inserting measures in a workbook, the format of which had been saved in the past with the inserted measure, the inserted measure was not appearing in the Show/Hide dialog. This problem has been corrected. Newly inserted measures without saved styles will appear at the end in user-defined sort order. Newly inserted measures with saved styles will appear in their saved position. If another measure is already in that position, then the inserted measure will appear directly after that measure. All measures will be displayed in the Show/Hide dialog and the order of the measures in that dialog will match the order displayed on the grid view if sorting by user order.	7130377
SKU cloning was failing due to RPAS' differential treatment of buffered and unbuffered positions. SKU cloning has been enhanced to accommodate this differential treatment.	7162211

Table 1 Fixed Issues and Defects

Fixed Issue/Defect	Defect Number
When refreshing a workbook with display-only measures, the RPAS Client would occasionally crash. This problem was related to RPAS treating display-only measures the same as materialized measure. This issue has been corrected.	7236432
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 of userMgr have been corrected to not require the -password option with -addUsers.	7342275
The RPAS Client was spending excessive time on changing rollups if a large number of positions were imported into the workbook. This problem was due to a slow position mapping algorithm which has now been changed to have greater speed.	7408321
When validating configured rules, the rule validation engine was returning errors and/or validation messages to the RPAS Configuration Tools such that the textual content of the rule could cause a parse error. The return mechanism has been altered to prevent such parse errors in the future.	7414325
Dynamic Position Maintenance (DPM) user interface (UI) for adding and modifying positions did not separate concerns properly, and allowed modification of rollups in the addition dialog and adding new positions in the modification dialog, even though the intention might have been to modify an aggregate position. The UI has been enhanced to separate concerns more intuitively and to prevent human errors when making changes at the aggregate level. Please refer to the Functional Enhancements section of these release notes for more information.	7417201
Buffered dimensions (PNI enabled dimensions) that branch off the partitioned hierarchy were not reshaping correctly in subdomains after a loadHier. This was causing FNHBI measures that used these dimensions to behave erratically. RPAS has been enhanced to correctly reshape such buffered and branching dimensions.	7422788
Workbook build performance has been improved.	7424428
The function buildDimension (const AliName& name, const String::SetT& posVec) was removed from the Dimension class to prevent system extension developers from trying to add position names that are different when a case sensitive compare is performed, but are the same when a case insensitive compare is performed. In RPAS, position names are case insensitive.	7429440
When loading multiple measures in the same input file and using the processes flag in loadMeasure, the data of the first measure in the file was getting loaded into the last measure in the file. This bug was introduced with the support of CSV files for loading measure data. This issue has been corrected.	7455751

Table 1 Fixed Issues and Defects

Fixed Issue/Defect	Defect Number
The RPAS Configuration Tools allows a user to alter measure properties for a specific workbook by loading it in the Measure tab of the workbook and then overriding specific properties. However, Configuration Tools was overriding all properties shown in the measure tab, including those that the designer specifically overrode, and also those that were available for overriding but that the designer did not override. This problem manifests itself when the designer alters an un-overridden property in the domain and it fails to reflect in the workbook because it was unintentionally overridden. This issue has been corrected.	7457796
When creating a new subdomain and reclassifying positions at the same time, the loadHier utility was failing due to an undesired corruption of metadata in the new subdomain. The cause of data corruption has been removed and this issue has been corrected.	7461570
In RPAS Configuration Tools, changes to measure attributes were not being properly applied to the domain. This issue was manifesting as duplicate measures in the patched domain. This issue has been corrected.	7478502
If a cell were locked before executing Dimension Splitting, upon execution of splitting, the split view would appear with all cells in a read-only state. This issue has been corrected.	7485891
If a user set the measure component property to Name (and not to Label), then the class tree could also be used to rename components. In such a situation the user could inadvertently name multiple measure components with the same name. Additional validation has been added to prevent users from naming multiple measure components the same with the same name.	7495839
If an SQL query were executed on a domain for a fact table with a dimension which has DPM enabled, after which the DPM positions were added to the domain using the RPAS client, and then the query was run again, the Query would fail. This was due to the dimension cache getting out of synch after DPM position addition. This issue has been corrected.	7495919
When creating a new local domain as a result of introducing a new position along the partition dimension, the NA values of the measures in the new domain could be different from those that were configured for the measure. This issue has been corrected.	7499104
For measures with intersections defined using the labeled intersection feature in RPAS Configuration Tools, rpasinstall was failing to patch changes to their measure properties. This issue has been corrected.	7499420
NA values of type date were not being handled properly when set from the Configuration Tools. At build time, RPAS was parsing the entry to decipher a wrong date. This issue has been corrected.	7502487

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Fixed Issue/Defect	Defect Number
If the range property is not specified when registering a measure, RPAS registers the measure with the measure type's default range. However, when updating the measure, if range is not specified, measure range is updated to "", which is invalid. Update Measure should process measure properties the same way as when registering a measure. So, when updating a measure, a range of "" is now interpreted as the measure type's default range.	7519286
Memory exhaustion was causing loadHier to core dump when very large hierarchies were being loaded. Algorithms have been modified to more efficiently manage memory.	7523611, 7597276
The maximum length of a measure string was increased from 555 to 1100.	7526896
The new sort functionality in 13.0.2 was causing the client to crash when used against non-materialized (display-only) measures. This issue has been corrected.	7526994
When using multiple measure load files distinguished by second extensions (such as .1, .2, etc.), loadMeasure was overwriting processed files with the last file loaded during the process. This was due to loadMeasure ignoring the second extension when moving loaded files to the processed directory. loadmeasure now retains the second extension when moving files to the processed directory.	7530988
In the RPAS Client, when a window was maximized, the domain name and the workbook name were disappearing from the title bar. The behavior has been corrected to show the domain, workbook, and window names in the following format: [<domain name>] <wb name> - [<window name>].	7553215
13.0.2 showed degraded performance for online operations such as calculating, scrolling, or maximizing a workbook. This performance degradation was removed.	7554878, 7504692
When sorting after running a position query, RPAS was bringing back positions hidden by the position query. RPAS now ensures that positions hidden by the position query remain hidden after executing a sort.	7561579
When invoking copyDomain with -d but no other arguments, rather than just relativizing the paths, the subdomains were actually being copied into the master domain. This issue has been corrected.	7564600
Calculation was failing after updating a recalc measure due to an internal error when opening and copying measure arrays. This issue has been corrected.	7585303
Inactive processes were being created when a workbook was saved. Now, any processes spawned to parallelize saving of workbooks are terminated soon after they complete their work.	7590667
The RPAS ODBC Driver was not aggregating values correctly if the hierarchy had been reloaded while the ODBC Server was still up. This was due to a problem in synchronizing the ODBC driver's intermediate storage with hierarchy loads. This issue has now been corrected.	7597323

Table 1 Fixed Issues and Defects

Fixed Issue/Defect	Defect Number
Sorting using the toolbar buttons was causing the RPAS Client to crash when there were empty cells in the numeric measure being used for sort. This issue has been corrected.	7599253
RPAS was displaying zero ("0") when a cell's value was not a number. This UI misrepresentation of value was being perceived as a miscalculation of aggregate value. RPAS now displays "-nan" in cells where the value is not a number. The aggregate value of a measure where any cell in the aggregating cells is a "-nan" is also a "-nan".	7609634
There was no output from printMeasure -list or printMeasure -specs. A recent change in code was automatically changing log levels, thus preventing these options from outputting information. This issue has been corrected.	7630960
In chart view, integer values could be dragged to decimal values, and these values would then be displayed as integers. This issue has been resolved by rounding the chart value to the nearest integer.	7661162
When used with the -range and -wide options, exportData was missing the last element of the range. This issue has been corrected. Furthermore, the customer is instructed to not use the -dim option for the innermost dimension when using the -wide option, because the innermost dimension is put across the columns when the -wide option is used; therefore, the -dim option to print position labels in row identifiers does not make sense.	7669688
Offline batch operations on workbooks did not appear to be working on the workbooks because the changes made by the batch operations were lost when the workbook was opened. This issue has been corrected and RPAS preserves backend changes.	7688787
RPAS was showing spurious errors in the domain build log. These were due to obsolete entries still existing in the log creation components. These entries have now been removed and the reported spurious errors will no longer be reported.	7694147
The RPAS Client was crashing when a workbook was opened where the active window was toggled to the chart view and when "Collapse positions by default" was selected in Application Formatting. This issue has been corrected.	7697387
A recent change in 13.0.2 had broken hierarchical protection processing such that an edit at a lower level always protected all aggregate levels. This erroneous behavior has been rectified and protection processing is now workings as before.	7697704
In the RPAS Client, when a REPD entry was made at an aggregate level and a cell was also edited at the base level, a subsequent calculation ended up spreading wrong values to the remaining cells at the lowest level. Additionally, the aggregate value was not the actual aggregate value for the spread generated values. The values were off by seemingly random offsets. Spreading and aggregation of REPD values has been corrected.	7698417

Table 1 Fixed Issues and Defects

Fixed Issue/Defect	Defect Number
If a lower level cell was locked and a REPD value were entered at an aggregate level, spreading was causing the locked cell to change its value. This issue has been corrected and RPAS now honors the locks as expected.	7698455
domaininfo -domainVersion was not printing out correct information. This issue has been corrected.	7705389
In 13.0.2, a bug was introduced that disabled the position query button when it should be active. This issue has been corrected.	7711456
If multiple files of different load types are present in the input directory, loadMeasure should load them in the following order: .rpl, .ovr, .clr and finally .inc. However, with the introduction of support for loading CSV files for loading measure data, loadMeasure could have broken this load order if some files were CSV and others were corrected width because RPAS was first looking for corrected width files and then for CSV files. This erroneous behavior has been corrected. Furthermore, loadMeasure only allows one .rpl file load.	7718833
Customers were having issues running hierarchy loads. It was determined that the domain was corrupted, however the cause of the corruption could not be determined. RPAS now exits gracefully when such a corruption is encountered.	7719665
When using the sort functionality in the RPAS Client, String measures were being sorted in the reverse order due to erroneous reversal of operands. This issue has been corrected.	7720386
When a dimension was not visible on a RPAS Client window but was being used in the SingleHierSelect widget on another window, the RPAS Client was showing internal names instead of external names that are known to the customer. This issue has been corrected.	7835430
The report generator in RPAS Configuration Tools was hanging when generating a workbooks report. This issue has been corrected.	8198623
When the RPAS Client tried to connect to a domain on a server using a port that had been blocked, RPASDBServer was deleting the domain when the connection attempt failed. This issue has been corrected.	8204795
If the RPAS Client were killed while the server was processing a request to create a new dimension attribute, the server process crashed, leaving the attribute management databases in a corrupt state. This corruption prevented users from building specific workbooks. RPAS' processing of attribute creation has been enhanced to not abort if the RPAS Client is killed during the processing. This will prevent the attribute databases from getting corrupted in such a scenario.	8214324
Based on the feedback received from customers regarding the business value of continued use of .inc files, it has been decided to not decommission the use of .inc files for loading measure data. RPAS will continue to support .inc file formats for loading measure data.	7614983

Known Issues

The following table contains issues that have been identified for the current release.

Table 2 Known Issues and Defects

Known Issue/Defect	Defect Number

Customers logged an issue where one of the aggregation types did not work with one of the data types documented as valid for that aggregation type. This led RPAS development to examine the mapping of measure types with aggregation types. Some gaps were found, and Oracle Retail is working on determining the best approach to resolve them. Until a resolution is made, it is recommended that customers only use the following measure types with their recommended aggregation types.
■ Boolean measure type
  ■ And, Or
■ Numeric measure type
  ■ Total, Average, Average_Pop, Min, Min_Pop, Max, Max_Pop, Median, Median_Pop, PopCount, PST, PET
■ String measure type
  ■ Ambig, Ambig-Pop
■ Date measure type
  ■ Min, Min_Pop, Max, Max_Pop
	7612074

Related Documentation

For more information, see the following documents in the Oracle Retail Predictive Application Server 13.0.3 documentation set:

- *Oracle Retail Predictive Application Server Installation Guide*
- *Oracle Retail Predictive Application Server Administration Guide*
- Oracle Retail Demand Forecasting documentation

Previous Releases

For additional information on previous Oracle Retail Predictive Application Server release enhancements and additional information, refer to the release notes and documentation that accompany the previous release.

Oracle Retail Predictive Application Server Release Notes, 13.0.3 for Windows
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