Oracle® Retail Predictive Application Server

Release Notes

Release 15.0

E64565-03

February 2016

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 *Oracle Retail Predictive Application Server Installation Guide* for hardware and software requirements.

Cygwin

Cygwin is required if the RPAS Server is to be installed on Windows operating systems. You can find more information about downloading this product at http://www.cygwin.com.

For installation guidance, see the following note on My Oracle Support (https://support.oracle.com):

Cygwin Setup Guide for RPAS (Doc ID 1333398.1)
This document details necessary options you should select when installing Cygwin to make it function properly with RPAS.

Upgrade Notes

When upgrading RPAS, note the following issues:

Patching Domains

When applying any RPAS server upgrade, you should also run a configuration patch over the domains that are upgraded. There are times where the configuration resources have been updated and the domain must be patched to reflect those changes. An example of this situation is presented in bug 9680094.

Chart Formats

Bugs 9297192 and 9837542 describe problems with uninitialized chart formats saved with saved formats. This leads to potential issues such as unavailable legends to intermittent crashing. It also prevents chart formats from being inherited from a higher level saved format. These issues have been fixed for uninitialized chart formats created in the future, but the solution does not resolve issues with preexisting saved formats.

Because the RPAS Classic Client uses a third-party chart control, it cannot be determined which chart formats have been initialized and which ones are invalid. The only solution is to determine if the window is in grid or chart mode.

A saved format schema update has been introduced that erases any chart formats for all windows in grid mode. This is a one-time update, and once completed, the user does not need to save the windows in chart mode again.

To keep a template with saved styles containing chart formats, perform the following steps:

> **Note:** These instructions are required if you are upgrading from a version of RPAS prior to 13.2. If you are upgrading from 13.2, these instructions do not apply.

1. Before upgrading, create or open a workbook for that template.

2. Navigate to the windows with chart formatting you want to preserve.

3. Toggle the window to chart mode.

4. Save the formats to the level (user, group, or template) in which you want the chart formats.

5. After upgrading, create a new workbook for that template.

6. Optional: Toggle the windows back to grid mode.

7. Save the formats as described in Step 4.

For more information about the patching process, see the *Oracle Retail Predictive Application Server Installation Guide*, *Oracle Retail Predictive Application Server Administration Guide for the Classic Client*, and *Oracle Retail Predictive Application Server Administration Guide for the Fusion Client*.

Default bitSizes

The rule, expr, meas, wb, and wbq dimensions come with a default bitSize. Their bitSizes should not be increased after a new domain is built. When the domain is upgraded and/or patched, these dimensions were found to get fragmented and eventually hit the threshold level for the available address space. The user gets a message to reindex them. There is no need to increase the bitSize for these dimensions and only defragging is sufficient to bring the address space back to the required level.

The following commands must be run on the domain after it is upgraded and/or patched if the message to reindex appears on any of these dimensions:

```
reindexDomain -d <dompath> -dimSpec rule -force
```

or

```
reindexDomain -d <dompath> -dimSpec expr  -force
```

or

```
reindexDomain -d <dompath> -dimSpec meas -force
```

or

```
reindexDomain -d <dompath> -dimSpec wb -force
```

or

```
reindexDomain -d <dompath> -dimSpec wbq -force
```

or

```
reindexDomain -d <dompath> -dimSpec rule,expr,meas,wb,wbq -force
```

Functional Enhancements

The functional enhancements described below are included in this release.

Performance

As data volumes grow, Oracle continues to invest in performance improvements for the RPAS Platform. The following enhancements are made in this release:

- Eliminate lags in the RPAS Fusion Client when moving from week 1 to week 2 and/or from measure A to measure B. No configuration is required, just an upgrade of the RPAS Platform.

- Reduce RPAS Fusion and Classic Client workbook wizard navigation and workbook build/refresh times through the use of multiple small pre-range masks rather than a single, large pre-range mask. Some configuration is required to adjust the pre-range masks.

- Reduce execution time for planning processes that are activated with a button in the upper right hand corner of the RPAS Fusion Client or from the Planning menu in the RPAS Classic Client (such as, seeding, approving, and so on). No configuration is required, just an upgrade of the RPAS Platform.

Visual Planning

In the 14.1 release of the RPAS Platform, visual planning, the ability to use images throughout the planning process without impacting workbook performance (in a configurable way) was added. In the 15.0 release, the following enhancements to visual planning are made. Visual planning is supported in the RPAS Fusion Client only:

- In the 14.1 release of the RPAS Fusion Client and earlier, drag and drop was enabled in the workbook wizards (to add/remove products, points of commerce or time periods, and so on, to/from the workbook) and in the Show/Hide measure dialogue (to add/remove measure from a worksheet or to reorder them).

  In the 15.0 release, drag and drop are enabled in the planning workspace through a worksheet type called a Tiled View. Users can add or remove one or more styles or style-colors from a cluster's assortment or a promotion, and so on. This capability is fully configurable.

- With the launch of visual planning in the 14.1 release, measures in the pivot table now may contain images, not just text, symbol, numeric data, and so on. However, unlike text, symbol and numeric data, image measures could not aggregate. If a worksheet containing style level images was aggregated to Subclass and so on, a question mark (?) image would appear.

  In the 15.0 release, the aggregation of images is enabled. For example, perhaps the style with the highest sales plan in Subclass A could appear when a worksheet is aggregated from Style to Subclass A without requiring the creation and maintenance of a unique Subclass image. Or, just the most frequently appearing image in a style could be chosen to represent the subclass. Some configuration is required to adjust the aggregation types of image measures in the configuration layer.

- In the 14.1 release, a new worksheet type, an image pop-up window, was added to the platform. In the 15.0 release, the ability to zoom in on the focus image in the upper left hand corner is added. No configuration is required, just upgrade the RPAS Platform.

For more information, see the *Oracle Retail Application Server User Guide for the Fusion Client*.

Updated Export to Excel API

At various points in the Planning process, it may be helpful to export data from your RPAS based Planning, Supply Chain, or Pricing solution to Microsoft Excel (for an ad-hoc report, and so on). In the past, what was exported was far from What You See is What You Get (WYSiWYG). In the 15.0 release of the RPAS Platform, an updated Export to Excel API supports WYSiWYG exports from RPAS to Excel. This means that formatting and images, not just character data are exported. No configuration is required, just an upgrade of the RPAS Platform. This capability is exclusive to the RPAS Fusion Client.

New Look and Feel for Fusion Client

Fusion Client has a new look and feel in RPAS 15.0. It uses the new skin, which is tailored to support tablets.

RPAS Mobility

Previously, the RPAS Fusion Client was certified on the desktop/laptop versions of the following browsers: Microsoft Internet Explorer, Google Chrome, and Mozilla Firefox. With 15.0, the Apple Safari browser is added for the iPad Tablet. No additional configuration or software is required, just an upgrade of the RPAS Platform. This capability is exclusive to the RPAS Fusion Client.

For more information, see the following document available on My Oracle Support:

Oracle Retail Predictive Application Server Using RPAS with Mobile Devices White Paper (Doc ID 2089261.1)

Front Door / Online Administration

As more and more retailers have begun to deploy their RPAS based solutions on Public and Private Clouds, it has become necessary to move away from requiring back door access to the server to administer the RPAS Platform. In the 15.0 release, front door access using the RPAS Fusion Client is added to virtually all RPAS Administration activities (running batch rules groups, tracking their progress, running hierarchy changes, and so on). This means the application administrator would not require access to the server to administer RPAS and no longer needs to know special RPAS commands (MACE and so on) as a more retail language based administration module is created. No additional configuration is required, just an upgrade of the RPAS Platform. Users can see the status of the tasks in the Fusion Client using the new Online Administration Dashboard. This is supported in full in the RPAS Fusion Client and in part in the RPAS Classic Client (set up, but not monitor).

For more information, see the *Oracle Retail Application Server Administration Guide for the Fusion Client* and *Oracle Retail Application Server Administration Guide for the Classic Client*.

Technical Enhancements

The technical enhancements described below are included in this release:

Distributed Workbook Storage

An administrator can now designate multiple locations on the file system that can be used to store RPAS workbook data (often the largest consumer of disk space in an RPAS-based application). This removes the constraint that all workbook data must be stored in the domain in which it was used. All of the workbook-related features and utilities are updated to work with the new expanded storage structure.

New RPAS Aggregation Type

A new aggregation type called mode is introduced. The mode aggregation type selects the most frequently occurring value in a set as the aggregate value. The sets can be either all cells (mode) or just the populated cells (mode_pop). This new aggregation method is applicable to string and media data types. The impetus for this feature is to allow for the aggregation of media type data (images) in a way other than ambig.

New RPAS Functions and Procedures

There are several new RPAS functions and procedures:

- The RankAgg function allows you to select a representative aggregate value from a set based on another measure. This enhancement is aimed at giving richer tools for the aggregation of images, for example, selecting the best selling style-color to represent a style.

- The ConvertToString function converts any data type to a string. This is a convenience that allows inline conversion and concatenation without the need for intermediate measures.

- The new rand function generates random data within specified bounds for multiple data types. This is another convenience method which allows, for example, the quick generation of test data.

For more information, see the *Oracle Retail Application Server Administration Guide for the Fusion Client* and *Oracle Retail Application Server Administration Guide for the Classic Client*.

Additional Performance and Convenience Enhancements

There are also a number of performance and convenience enhancements:

- loadmeasure is rewritten to make it significantly more capable of parallel processing and therefore faster.

- The Fusion Client installer can now automate the set up of the taskflow when the domain is available.

- Charting in the Fusion Client is tightened up.

- There are now GUI tools to allow data entry for some of the metadata files used by RPAS (such as globaldomainconfig.xml), so that it is no longer necessary to edit that file in a text editor.

Software Operating Environment Upgrades

> **Note:** The list below announces the addition of Oracle Retail support for the technology described. See the Installation Guide requirements section for critical information, such as whether the enhancement below replaces previous versions or is supported in addition to already existing versions.

Fusion Client

The following technology is supported:

- Oracle Identity Management 11g (11.1.1.9)

- Oracle Identity and Access Management 11g (11.1.2.3) - only needed for Single Sign-On

- Oracle Access Manager Webgate 11g (11.1.2.3) - only needed for Single Sign-On

- Oracle Application Development Framework (ADF) 12.1.3 with patch 21934304 and CPUs 20838345 and 20716006

- Microsoft Windows 7 and 8

- Supported browsers include Microsoft Internet Explorer 11, Mozilla Firefox 38 ESR, and Google Chrome 40+
- Mobile Support:
  - Apple iOS 8 with Safari
  - No Flash player is needed to run features such as Dynamic Position Maintenance. Consumer Decision Trees as these are rendered in HTML5 on mobile devices.

Noteworthy Defect Fixes

The following noteworthy defect fixes are included in RPAS 15.0:

Affected Component	Fixed Issue/Defect	Defect Number
Classic Client	In the Classic Client, when a user selected a region of cells to copy and that selection scrolled off the screen, only the visible part of the selection was actually copied to the clipboard. This is corrected.	20554429
Classic Client	Attempting to sort a column of dates by clicking the column header could cause an exception to be thrown. This happened when the date measure had a special value NULL type. This is corrected.	20632006
Classic Client	RPAS now warns, but does not forbid, users from saving a workbook with an existing name.	20638329
Classic Client	When adding a DPM position in the Classic Client, the system auto-advanced to the next DPM position when the user clicked Apply. If the user subsequently clicked OK, two positions were created. This behavior is revised so that the dialog does not auto-advance to the next DPM position.	20983034
Classic Client	Classic Client used to crash when the fill function was used in a workbook. This was caused by a bug in the code for single select hier measure's auto fill operation. The defect is fixed.	21223278
Classic Client	Selecting (or highlighting) new rows in the Classic Client did not automatically result in previously selected rows getting de-highlighted. This is fixed.	21866092
Classic Client, Charting	Editing measure values in Chart view mode by dragging chart points and toggling to the Grid view mode resulted in losing the edited values. This is fixed by using the correct chart row indices.	20577056
Classic Client, Windowing	Instead of staying at the bottom of the window, the OK and Cancel buttons were floating around the Hierarchy Rollup pop-up screen when the window was resized. This is fixed by changing the Resizing property of the pop-up window.	19717627
Classic Client, Windowing	In a workbook with multiple tabs, a maximized window explicitly hidden by the user was still visible in all the tabs. This occurs due to known issues with Microsoft Foundation Class (MFC). This is fixed.	20576587

Affected Component	Fixed Issue/Defect	Defect Number
Classic Client, Windowing	When there were more than nine windows open, the More Windows menu under Windows was clicked, and a window from the list of windows displayed was selected, a window different from the one selected was displayed at times. This was caused by a known MFC problem and is fixed by implementing custom More Windows functionality.	20576731
Classic Client, Windowing	A user opened the selection list of a SingleHier measure and, instead of selecting a hierarchy position from the list, the user toggled to another program running on the computer while keeping the selection list open. When the user toggled back to RPAS Client and pressed the cancel button, an exception was being thrown. This is fixed.	20576832
Classic Client, Workbook	A newly created and saved attribute was not visible after reopening the workbook. This is fixed by converting the attribute display value to the appropriate case before writing it to XML.	19915625
Classic Client, Workbook	Upon changing a measure in a workbook that affected a Single Hier Select measure, the edited measure changed from showing labels to showing position names. This occurred because the position name was in uppercase and the client was not able to find a corresponding position label. This is fixed.	19988772
Classic Client, Workbook	Building of a workbook failed when the size of the data being loaded (positions from wizard page) exceeded 2 GB. This occurred because 32-bit RPAS Classic Client can address only 2 GB of data. Setting the LARGEADDRESSAWARE flag to true in the Client allows it to handle 4 GB of data.	20157838
Command-line Utilities	The exportMeasure utility was leaving behind temporary output files after merging results into the real output file. The utility now properly cleans up.	19689266
Command-line Utilities	The "domaininfo -shellsubdomains" was wrongly including control characters in its output. This could cause problems when the output from the command was intended to be parsed and used by another script. This fix removed the spurious control characters.	21194117
Command-line Utilities	The exportMeasure utility was truncating the value field for string measures in excess of 2560 characters. The length limit on exported values is removed.	21366447
Configuration Manager	In the Configuration Manager, attempting to save a merged configuration without specifying the output path resulted in a nonsensical error message. This is corrected.	20416701
Configuration Manager	In the Configuration Manager, users could experience either an exception or a conflict when merging changes to rules. The conflict, when it occurred, always involved an attempt to move a rule. This is fixed.	20670704
Config Tools	While trying to generate and save the Measure extractor report to a user specified folder, clicking OK sometimes did not work. This occurred because the user did not have write permissions for the specified folder and the error was getting written to the console which the user could not see. Now the user is shown an appropriate error message in such cases.	19722000

Affected Component	Fixed Issue/Defect	Defect Number
Config Tools	An error prevented the use of the maximum number of selectable positions functionality within the workbook build wizard process when the configuration for the domain contained a different RPAS name from the Tools name of the restricted dimension. This error is resolved and limiting the number of selectable positions within the wizard process now works regardless of whether the configuration uses the same RPAS name and Tools name for a dimension or different ones.	20052798
Config Tools	An error was preventing workbooks built by the RO plug-in from being saved when the configuration was subsequently saved and closed unless the Save As file operation was performed. The issue is resolved and workbooks generated by the RO plug-in now save correctly during the Save operation.	20137520
Config Tools	Even though the Configuration Tools allow rule names to include an underscore (_), the filter on the Add Existing Rules popup did not allow users to actually use that character to search for existing rules. This is corrected.	21072328
Config Tools	In the Configuration Tools, removing a dimension attribute from the window formatting of a worksheet also removed the default (label) attribute. This is addressed.	20440423
Config Tools	In the measure section of Configuration Tools, in the measure component tree view, when users right-clicked on a measure component and selected the menu item Rename, nothing would happen. RPAS allowed this previously; however, another change disallowed direct editing of nodes in the tree. The resolution to this issue is that now when the user selects a measure component in the tree view and selects Rename from the context menu, the measure component table is scrolled to bring that line into view with the name cell for that component having the focus and ready to edit.	20440556
Config Tools	In some cases, the Configuration Tools did not recognize a copy of a rule (to a new rule group) as an edit, so the changes were not retained on a save. This is fixed.	20521613
Config Tools	Running the rules validation in Configuration Tools could sometimes cause a valid rule to be flagged as invalid. This is corrected.	20611685
Config Tools	Within the Rule Tool, when users initiate the Edit Expressions action, the Configuration Tools revalidate every rule group in the domain. This is unnecessary. The tools now only revalidate those rule groups that contain the modified rule.	20631378
Config Tools	Dimension attribute details were not getting displayed properly under display attributes in Configuration Tools. This is corrected.	20828832
Config Tools	Under some conditions, using the filter in the column header of the measure interface could produce inaccurate results. This is corrected.	20961567
Config Tools	There are many updates and improvements with Java 8. Some of these affect how certain things within the Configuration Tools are handled. The Configuration Tools are updated to work with both Java 7 and Java 8.	21107512

Affected Component	Fixed Issue/Defect	Defect Number
Config Tools	Trying to load a configuration in the Configuration Tools caused an error when a position query in the solution was based on a measure that existed in a separate solution, and that measure had not been imported from the first solution. This condition no longer causes an error, and loads correctly allowing the underlying cause to be addressed.	21135634
Config Tools	Picklist labels for some measures within a workbook were not getting localized. This is fixed.	21577097
Config Tools	For picklist measures with workbook-level overrides, translation placeholders were not being generated by the Configuration Tools. This oversight is addressed. In addition, all translations for overridden properties are contained in the file r_measlabel.ovr, unlike normal picklist translations, which are contained in r_measpicklist.ovr.	21157264
Config Tools	A number of usability improvements are made in Configuration Tools. Examples of some such improvements are display of appropriate error messages, display of confirmation messages before delete operations, and objects getting highlighted in proper sequence when using traversal keys such as the keyboard Tab key.	21471524, 19498602, 19472994, 21515838, 21418289, 19636541, 19521787, 19521161, 19520955, 19520864, 19488830
Config Tools, Config Manager	The ConfigManager and rpasConfigMgr utilities were not properly processing changes to the measure order within workbook profiles. The issue is resolved and a change in the order of profile measures is now detected and processed.	19952194
Config Tools, rpasInstall	The rpasInstall utility was not always returning a non-zero exit code when the process ended due to an error condition. Only some failures were resulting in a non-zero return code. The issue is resolved and rpasInstall now returns with an exit code of zero when the process exits normally and not due to an exception.	19867324
Config Tools, rpasInstall	When a measure was assigned a non-existent style, it was instead assigned no style during the domain build process. The behavior is corrected to preserve the style name and alert the end user.	20609459, 21117700
Config Tools, Workbooks	Creating, and then deleting, a workbook-only dimension that aggregated the root dimension of a hierarchy could leave the Configuration Tools User Interface (UI) in an unstable state. This often prevented any further work from being done on the workbook. This is corrected.	20538917
Config Tools, Workbooks	Not all of the axis and intersection fields were being updated after a user edit. This could make it look like there were validation problems, when in fact, there were none. The Configuration Tools now repaint these fields after every edit.	20547450
Config Tools, Workbooks	Removing all dimensions for any hierarchy in Workbook Hierarchies Panel caused the Configuration Tool to hang. This is fixed.	21080128

Affected Component	Fixed Issue/Defect	Defect Number
Domain Daemon	In several instances, it was not possible to connect to the Domain Daemon with Fusion Client. This occurred only on AIX, only for SSL level 2, and only for cipher suites 0 and 2. This was due to an incomplete update of the server code for new SSL modes. The resolution to this issue is to align the lists of supported cipher suites in the components on either side of the encrypted communication in the RPAS server. Both cipher suite options should be enabled now. However, both of these options are now deprecated, and cipher suite 3 is preferred in this case.	20567203
Domain Daemon	Starting the Domain Daemon with SSL 3 and then stopping it resulted in an odd condition. It seemed to stop, but the port was unavailable. Also, the process was still listed when using the UNIX ps command. This was due to how the Domain Daemon was being created. The creation method is updated to alleviate this issue.	20589718
Domain Daemon, SSL	Due to the discovery of vulnerabilities, support for several SSL protocols is discontinued. Updating to Java 7 update 75 or later is also strongly recommended.	20559991
Domain Installation, Workbooks	Leaving an orphan entry in the Measures tab in a workbook template (for example, by deleting rules featuring that measure and then unrealizing the measure) was causing rpasInstall to fail. This is addressed.	20423274
Domain Utilities, Alert Manager	The alertmgr utility -findAlerts option was not throwing an error when an invalid alert category was specified. This behavior is corrected so that if all categories passed to alertmgr are invalid, RPAS displays a message on the shell. If some (but not all) alerts are invalid, RPAS logs a message and runs findAlerts -sumAlerts for the valid categories.	20218434
Domain Utilities, Alert Manager	When findAlerts was run, the rule groups used to get evaluated multiple times resulting in performance getting hit. This is fixed by making sure that a rule group gets evaluated only once.	21862497
Domain Utilities, convertDomain	convertDomain did not copy the setup directory from source to destination. This is corrected.	21560938
Domain Utilities, copyDomain	The domain utility copyDomain was running instances of mapData sequentially, even with the maxProcesses parameter set to greater than one. Other sub-processes invoked by copyDomain were running in parallel. With this fix, mapData is being executed in parallel as expected.	20411421
Domain Utilities, copyDomain	Running copyDomain with the -skipInput or -clone parameter did not create either the input or output directories in the destination domain. This might have caused problems when attempting to run batch on the cloned domain. The copyDomain utility is updated to create the input, input/processed, and output directories in the destination domain if they do not already exist.	20517413
Domain Utilities, copyDomain	The copyDomain utility did not update the domain history in destination local domains like it did for the global domain. Instead, it used to update the history in the source local domains. This is corrected so that the domain history gets updated in the destination local domains.	20859231

Affected Component	Fixed Issue/Defect	Defect Number
Domain Utilities, DomainInfo	The *Oracle Retail Predictive Application Server Administration Guide* and online help for the domaininfo utility both mention that the -d argument (used for specifying path to domain) was not necessary when using the -expectedversion command. This was not working as described. The code is modified so that domaininfo behaves as described in the Administration Guide and online help.	20021986
Domain Utilities, loadHier	loadHier and exportMeasure utilities did not properly export and import CSV data files for string measures that had new line characters in the data. This is fixed.	19694566
Domain Utilities, loadHier	When loading a hierarchy data file that was in CSV format, loadHier used to throw an "Illegal data characters after closing quote" exception and then skip loading that particular record. This was happening when the last field/column was enclosed in double quotes and the line was terminated with CR+LF. This error is fixed.	20638148
Domain Utilities, loadmeasure	Internal performance testing revealed that loading large amounts of data into a domain could be unacceptably slow. Several improvements are made to parallelize the data loading process where possible. Data loading that can exploit these parallelization enhancements is now significantly faster.	20216374
Domain Utilities, Mace	Mace expression was taking a long time to execute in a new domain that was built through a reclass. This occurred because, while calculating, mace was iterating through all the positions in the measure array even if all the positions were inactive. This is fixed by skipping empty arrays.	20157942
Domain Utilities, pqdMgr	The PqdMgr utility was not able to load XML files that had hierarchy names in uppercase. This is fixed.	20191387
Domain Utilities, reconfigureGlobalDomainPartitions	The "Transaction Not Initialized" exception was being encountered while running reconfigureGlobalDomainPartitions. This is fixed by wrapping the call within a transaction.	20070821
Domain Utilities, regMeasure	The regMeasure utility was not respecting the environment variable RPAS_PROCESSES, and was instead running serially over each local domain. This could result in a performance hit when dealing with a significant number of local domains. RPAS_PROCESSES is now utilized by regMeasure.	21252895
Domain Utilities, reindexDomain	When reindexDomain ran, it used to start a new run for each master and local domain. While reindexing master arrays, it should not have touched any arrays in local domains if the local domain paths were added to the skip list. This was done because the symbolic link paths created for local domains were not added to the skip list and reindexDomain went into the symbolic link paths and reindexed all local domain arrays based on master domain context. It changed all dimpath options. Later, when it tried to reindex a local domain, it failed. Code is added to skip symbolic links to local domains while reindexing master domain.	21688167
Domain Utilities, rpasInstall	The rpasInstall utility was not returning an error code when a problem occurred in the regUserDim executable. As a result, there could have been problems with a domain build related to user-defined dimensions that were not flagged. This is fixed.	20601930

Affected Component	Fixed Issue/Defect	Defect Number
Domain Utilities, syncNAValue	Using syncNAValue with the -d option and absolute path of a global domain resulted in the utility going into an infinite loop. This occurred because child processes spawned for each local domain were expecting a relative path from the global domain instead of an absolute path. This is fixed so that the child processes get the correct path for local domains.	20009923
Domain Utilities, transferData	The documented behavior of transferData when used with "no mask with -clearDest" was to clear the destination arrays and change the destination array's NA value to the source measure's NA value at the beginning of the process. This expected behavior was not occurring, particularly when baseint and loadint levels were different as transferData used to export the source measure data at the baseint level and tried to load the destination measure data at the loadint level. This is fixed.	21754334
Domain Utilities, wbbatch	When the Next Build Date was set in the future, wbbatch returned a correct message: "The autoworkbook '#' was scheduled to be built in future. Not Build," but returned the exit code as two which was incorrect. This is fixed such that wbbatch returns an exit code of zero if the next build date is in the future.	19812802
Global Domain Aggregation	There are some cases in which RPAS was not able to compute an aggregate value, based on the presence of alternate rollups in the hierarchy that contained the partition dimension, and the aggregation type selected. This was because no generic aggregation algorithm existed for these cases. These cases are now flagged when they occur.	20452756
Hybrid Storage Architecture	When RDM was not partitioned but the domain was partitioned, a workbook build on the global domain used to fail with an ODBLoadImpl exception. This is fixed.	20824110
Hybrid Storage Architecture, checkRdm	checkRdm had some errors. It returned an exception saying "Reference to uninitialized collection." It also returned an error saying some positions had a status mismatch between the domain and RDM. These are fixed.	21628155
Hybrid Storage Architecture, loadDimData	When the partition dimension was the highest level, loadDimData resulted in an exception. This error was encountered along the alternate hierarchy first. This is fixed.	21606672
Hybrid Storage Architecture, loadDimData	The purgeAge -xxx option of loadDimData did not work correctly. It was incorrectly purging positions. The purge functionality is corrected.	21863841
Hybrid Storage Architecture, loadFactData	The Dataload API package was throwing an error while loading data from the staging table to the fact table. This was due to a case mismatch in the staging table name. This is fixed.	21417934
Hybrid Storage Architecture, patchRdm	After running PatchRdm, the factGroups.ary array in the RDM directory was out of sync with the RDM database. This resulted in a failure of fact group checking. This is fixed.	21626553
Hybrid Storage Architecture, prepareRDM	prepareRDM.ksh used to fail in Linux environments because of the use of an incompatible shell command. It is fixed.	21790643

Affected Component	Fixed Issue/Defect	Defect Number
Hybrid Storage Architecture, upgradeRDM	Oracle directory is added as a RDM property from the 14.1.1.12 release of RPAS. As a result, physical Oracle directory and Oracle directory objects are created on the Oracle database. All the RPAS schema users have been granted appropriate permissions for this Oracle directory. A new upgrade module is provided to add the new RDM property.	21681474
RPAC	Several arguments to the RPAC utility (-test and -suite) were not correctly pattern matching when determining which tests and test suites to run. This is corrected.	19712810
RPAS Installer	This issue is a follow-on to the Configuration Tools fixed defect 1157252. It addresses a fix for an issue found during testing in another part of the product.	21264000
RpasTemplates, Auto Workbook Maintenance	The Autoworkbook maintenance edit screen allowed invalid values such as -1, 0.1 or 97987987979797979798846544443 for the frequency in days entry since no validation was being done for frequency value. Validation is added.	20204996,
Server, Aggregation and Spreading	For attribute and position functions, the NA value at the Right Hand Side (RHS) was calculated based on index zero (first position) in dimension which gave a wrong NA value sometimes. When the NA value was incorrect, the populated cells were shown incorrectly and hence the aggregated value was also shown incorrectly if the aggregate type was ambgp. This is fixed.	20436820, 21926041
Server, Alert Manager	alertmgr -sumAlerts returned an unhelpful exception if -findAlerts was not run before it. Since findAlerts was not yet run, there were no alerts in the alert_resolved array, so alertmgr was not able to convert the NA type during the -sumAlerts run. To resolve this issue, the alerts are skipped that do not yet exist in the alert_resolved array.	20122456
Server, Calc Engine	When a Left Hand Side (LHS) in an expression and the ignore keyword is a Higher Base Intersection (HBI) measure, it is designed to directly update the HBI measure instead of bringing it to the local domain. But, this logic got applied to RHS measures as well resulting in incorrect calculation results. To fix this, RHS measures are now brought to the local domain before doing the calculations.	21944656
Server, Java Bridge	Picklists with a value intended to represent the NA value can have apparently inconsistent results when the values are exported, workbooks recreated, and so on. The resolution to this issue is to explicitly communicate both the special value (that is, a value that is to be shown when the value of the cell is NA) and the NA value in calls to and from the Fusion Client to the RPAS Server. Prior to this fix, they were merged into a single value and sent back and forth.	20523904
Server, Java Bridge	A new Java Bridge API is added to take dimension names as inputs and return translated user labels for the specified dimension names.	21554849
Server, Mace	Occasionally, running a rule group in a local domain would fail, while running each expression in the rule group individually would succeed. This was due to some array metadata being out of date. This is corrected.	20862553

Affected Component	Fixed Issue/Defect	Defect Number
Server, Mace	In some cases where an expression contained a javaexpression, running that expression in mace could succeed while running a rule that contained that expression might fail. This was because of slight variations in how RPAS managed the locking of the measure arrays involved. The locking strategies are updated to allow these types of expressions to run regardless of context.	21104997
Server, ODBC Driver	Users were not able connect to RPAS using ODBC driver if the user name was specified in uppercase or in mixed case. This is fixed.	19789693
Server, Rules	The attribute function was sometimes calculating an incorrect value at an aggregate level. This calculation is adjusted to give the correct value in this case.	21065204
Server, Workbook	A No transaction initialized error message was shown when a context selection XML was used to build the workbook. To resolve this issue, the server transaction that handles the build workbook request is updated.	19905886
Server, Workbook	An error was being encountered while creating a workbook without using the wizard and that had a pre-ranging mask. Putting the measure to cached mode while fetching the mask arrays base interaction solves this issue.	20070914
Server, Workbook	Trying to open a workbook after renaming a position on a dimension that had label translation enabled resulted in an error. This is fixed.	20103656
Server, Workbook	A position that was informal earlier, but had been formalized in the domain, could be modified even after formalization. This had the potential of corrupting the hierarchy data and should not have been allowed. Extra validations are added to ensure that formal or deleted positions in the domain cannot be modified.	20130896
Server, Workbook	If a workbook was created based on a template that included a Percentage of Parent (POP) integer measure and if that POP measure was formatted (for example, changed the precision), an error was being encountered. This is fixed.	20191221
Server, Workbook	References to extended measures could persist in saved formats even after the extended measures had been deleted. This resulted in the extended measures still being available in the workbook. Patching now updates the saved formats to match the actual extended measure definitions.	20802482
Server, Workbook	After renaming an open workbook, making some other changes in the workbook, and saving the workbook, the workbook still had old name and not the new name. This is fixed.	21388429
Server, Workbook	When the result of an expression went out of the dimension positions of a hierarchy, it used to throw an expression and abort the evaluation of expression. This is fixed.	21885793
Workbook Manager	The wbmgr utility was interpreting a supplied value as a user name for the -list argument, but as a user ID (internal RPAS user identifier) for the -remove argument. This was resulting in inconsistent and confusing behavior in the utility. This is corrected to be consistent in interpreting the supplied value as a user name.	20616294

Affected Component	Fixed Issue/Defect	Defect Number
Workbooks, Pivot Table Sorting	Attempting to sort a column of dates by clicking the column header could cause an exception to be thrown. This happened when the date measure had a special value NULL type. This is corrected.	20567788
Fusion Client, Charts	The flip chart axis operation on Treemap was running into exceptions. This issue is fixed and users can successfully flip chart axis for Treemaps.	20883344
Fusion Client, Charts	The ADF exception with editing a Boolean measure on a line chart is fixed.	21031433
Fusion Client, Charts	The graphs were getting rendered when there was a Boolean series available, but in cases when the measure was on the Column axis and the user selected Boolean and non-Boolean measures to plot the graph, the conditions were not getting met as there was a mix of Boolean and non-Boolean types. The issue is resolved by letting the graph plot even when there is a mix of Boolean and non-Boolean types.	21038130
Fusion Client, Charts	Edit on a line graph ran into an exception as the code allowed only one level of dimension - member pair to be added in the case of worksheets that have multiple levels on the row axis or column axis (if the chart is flipped). The issue is fixed and logic is added for edge swapping.	21069764
Fusion Client, Charts	An operation failed error was thrown on the edit of a line graph with flip chart axis on as the code allowed only one level of dimension - member pair to be added in the case of worksheets that have multiple levels on the row axis or column axis (if the chart is flipped). The issue is fixed and logic is added for edge swapping.	21070004
Fusion Client, Charts	Labels were not displayed on charts when a dimension with multiple visible levels was in block mode and a few positions were drill-collapsed. The algorithm used is fixed to use build slice labels.	21204345
Fusion Client, Charts	Chart did not drill on a clicked member when in block mode and the member was not at the highest visible level as implementation always assumed it was being drilled on a member in the highest layer of the slice. This is fixed to resolve the click to the appropriate member before drilling.	21204352
Fusion Client, Charts	Treemap was drilling down even when the lowest levels nodes were selected. Using the refactored API fixes this issue. Treemap does not drill down on lowest level members now.	21264299
Fusion Client, Charts	Treemap retained the display of non-relevant groups labels in legends even after the groups were changed. The fix is to clear the Treemap children on any format change.	21264341

Affected Component	Fixed Issue/Defect	Defect Number
Fusion Client, Charts	Color range values were not appropriately reflected in Treemap on drill as range values were not recalculated on drill. With the fix, color range values are reflected as follows on drill: ■ Continuous Treemap: When both values, on-drill selected: Min and max are adjusted to appropriate min and max based on child nodes. When Values: un-selected, on-drill selected: Min and max adjusted to be in the same proportion as the root min and max were to root node color values. When on-drill un-selected: Min and max retained same as root nodes. ■ Grouped Treemap: When both values, on-drill selected: Group cutoffs auto-calculated based on color values from child nodes and number of groups. When Values: un-selected, on-drill selected: Group cutoffs adjusted to be in same proportion as the root cutoffs were to root node color values. When on-drill un-selected: Group cutoffs retained same as root cutoffs.	21264478
Fusion Client, Charts	Chart was drilling down even when the lowest levels nodes were selected. Using the refactored API fixes this issue. Chart does not drill down on lowest level members now.	21292454
Fusion Client, Charts	The SERIES_MAX property is introduced in rpasConfig.properties which is used for maxSeries Validation in Fusion Client charts.	21363504
Fusion Client, Context Menu	Users were not able to select the sub-menu item of the last menu item in the context menu which was overflowing the screen. This issue is fixed by adding a blank menu-item to the last menu-item.	21802167
Fusion Client, Dynamic Position Maintenance	Trying to create a new position in a Dynamic Position Enabled (DPM)-enabled dimension that rolled up to a non-DPM enabled workbook-only dimension could cause an exception when the created position had a long name (greater than 20 characters). This is corrected.	19781620
Fusion Client, Edit Measures	A synchronized measure was not getting updated on editing the source measure and a javascript error was being thrown. The issue is resolved by fixing the related function to handle the cell positions array (QDR).	21624068
Fusion Client, Elapsed Functionality	When a dynamic percent to parent measure was created from a measure that was not-editable in the elapsed period, the percent to parent measure was editable in the elapsed period. This is adjusted to respect the elapsed period in all cases.	20110966
Fusion Client, Find	The find on the wizard was not giving proper results. This issue is fixed.	21190279
Fusion Client, Installer	The label.properties is used with media utilities. A sample file is added to the product CD. It is also verified that the installer copies it to config/rpas folder during install so users can refer to it.	20859192
Fusion Client, Installer	RPAS Fusion Client installer is updated to use 2048 as the key size for self-signed certificates. This is in accordance with security guidelines.	21691614

Affected Component	Fixed Issue/Defect	Defect Number
Fusion Client, Measure Profiles	In the Dim Popup, the user was not able to drag drop and reorder measures among the available tree and selected tree. Now the drag drop among the trees works and the positions can be reordered within the visible measures list.	21522395
Fusion Client, Picklist	When the NA value was part of a picklist range value, blank space was displayed in the picklist drop down after calculate. The reason was when a measure contains an NA value and it was part of a picklist range, there was mismatched ID data and label value. So it was not finding the correct value. This is fixed.	20894955
Fusion Client, Pivot Table	The entire pivot table was getting refreshed on clicking calculate, even though the partial refresh properties were set. Only edited cells should be refreshed, not the entire pivot table. This assumes either pivottable.calculate.single.cell.updates=true or the pivottable.calculate.single.cell.updates property is not set at all within RpasConfig.properties and therefore the default value is true.	20852424
Fusion Client, Pivot Table	When a pivot table integer cell is edited and then re-edited by entering /0 as the value, a proper error message should be shown. This is fixed to show the "Divide by zero" error instead of an NPE.	20927277
Fusion Client, Pivot Table	Edit in an active cell was getting lost on pivot-swap using the tiles on page edge. This is fixed.	21088618
Fusion Client, Pivot Table	The row alignment issue in pivot table with higher screen resolution and text zoom is fixed. With the introduction of iPad support, the row height is adjusted for usability. For more details, see the *Oracle Retail Predictive Application Server Administration Guide for the Fusion Client*.	21222533
Fusion Client, Pivot Table	The values displayed in edited cells of the workbook were getting truncated in Internet Explorer 11. This issue is resolved by fixing the stylesheet.	21373627
Fusion Client, Pivot Table	User-specified column header height in the rpasConfig.properties file was not reflected on Fusion Client. This issue is fixed and pivottable.default.column.header.row.height is being appropriately honored.	21932309
Fusion Client, Plug-ins	There was an issue with a specific use case of the Reporting Plug-in. On a task flow step, with multiple tabs and a worksheet in each tab, and with each worksheet configured to launch an OBIEE report. Launch the reports in each worksheet and save the workbook. Reopen it. The report contents were not visible, for any of the reports. The user had to relaunch the reports, to get back the reports as in the case of multiple tabs; the OBIEE module assignment was not getting updated on the switch tab action, thereby preventing the OBIEE reports in multiple tabs from getting initialized. The issue is fixed by adding code to clear existing assignments on the switch tab action.	21226475
Fusion Client, PO View	When there was no data to be displayed in PO View, the message "No data to display" was not being translated into the local language selected. Users now see this message in their specified language.	20118324

Affected Component	Fixed Issue/Defect	Defect Number
Fusion Client, PO View	It was possible to configure the PO View in such a way that the search criteria box was not displaying all levels at which an order could be displayed. This was a simple graphical glitch which is corrected.	20118456
Fusion Client, Position Filtering	The list of available targets for position filtering included all windows, even those for which position filtering made no sense, such as OBIEE reports. The list of target windows is refined to exclude such things.	20112141
Fusion Client, Revert/Undo	The revert/undo operation from the Global Toolbar was broken, giving a Javascript error. The height of the table in the inline style element is changed to fix the issue.	20842134
Fusion Client, Task Flow, Dynamic Tasks	This situation only arose where, in the taskflow, there were at least two activity groups, and one of them had a workbook that was referenced with a dynamic task. Creating the dynamic task workbook, then navigating to the home page without saving, and finally creating a workbook from a different activity group caused an error. The code now properly handles this set of conditions.	20110981
Fusion Client, View/Manage Images Dialog	It was occasionally possible to get an error message when working with images in the View / Manage Imaged dialog. This usually happened when changing dimension levels. The cause of the issue is addressed.	20147769
Fusion Client, Wizards	Mozilla Firefox was having an issue where selecting multiple positions and dragging them to the selected box was only adding the first one. This is addressed in a patch of the underlying framework, and should no longer be an issue.	17456936
Fusion Client, Workbooks	Changing the locale settings from or to a locale where the thousands and decimal separators (for example, period and comma) were reversed could incorrectly affect calculation results. This occurred because the system was interpreting the numbers formatted according to the previous locale in light of the new locale settings. This is fixed.	20110308
Fusion Client, Workbooks	The Save/Commit dialog was not properly verifying whether a user with read-only access to a workbook could actually save and commit changes. The user's rights are now checked more rigorously to prevent this type of behavior.	20136279
Fusion Client, Workbooks	A certain series of steps (move a Dynamic Position Maintenance enabled dimension to the row edge (y-axis), create some placeholder positions, hide all positions except the placeholders, then delete the placeholders) caused an error in the workbook. This is fixed.	20172241
Fusion Client, Workbook	Fusion Client was unable to recover when incorrect level initialization data was returned from the domain/server. The resolution is to introduce additional safeguards during create/open workbook to handle such cases graciously.	21149468
Fusion Client, Workbook	In Fusion Client, the read-only measure at aggregate was seen as editable as it was not considering the case where the worksheets intersection was higher than the measure's intersection while opening the workbook. A check is added that takes care of the case where the worksheets intersection is higher than the measure's base intersection.	21190210
Fusion Client, Workbook	An issue is fixed with the workbook open case when a user tries to abandon all edits and reopen the same workbook.	21338782

Affected Component	Fixed Issue/Defect	Defect Number
Fusion Client, Workbook Performance	There were a number of issues with performance in the client. For example, clicking or tabbing to a cell for editing, scrolling and fetching new data, and rendering large data sets were all cited as opportunities for improvement. A number of performance enhancements implemented in this release, such as the Client Side Editing feature and deferred loading, address many of the concerns.	17423875, 17423806, 17423158, 17294947

Hot Fix 15.0.0.1 Available for RPAS 15.0

Hot fix 15.0.0.1 is available at My Oracle Support to address some issues discovered in RPAS 15.0. You must download and install this hot fix.

Access My Oracle Support at the following URL:

https://support.oracle.com

See the README file included with the hot fix for more information about the content of the hot fix and instructions for installing it.

Known Issues

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

Affected Component	Known Issue/Defect	Defect Number
Hybrid Storage Architecture	This applies only to domains making use of Hybrid Storage Architecture (HSA). The issue occurs when working with a shared measure and attempting to merge new data into the fact table. The process normally involves creating a global temporary table, populating that with the new data, and then using the merge operation to merge the new data with the data already present in the fact table. In this case, the merge operation fails.	22037070
Hybrid Storage Architecture	When attempting to upgrade RPAS from a previous version to 14.1.1.12, and the domain makes use of HSA, the upgrade fails. The issue occurs when running upgradeRDM in the module UpgradeDbViewModule. This does not affect upgrades where the domain does not use HSA.	22157528
Online Administration Tools	In the Online Administration Tools, on the Schedule Task wizard step, the drop-downs for the various recurrence fields can show blank or truncated values. This is a display issue only; the values are there, but they are not being shown because of the size of the controls.	22103806

Affected Component	Known Issue/Defect	Defect Number
Workbooks, Dynamic Position Maintenance	Immediately after creating new placeholder (dynamic position maintenance) positions, the new positions are not visible in other worksheets within the same workbook. There are two workarounds. The first is to rebuild the workbook. The second is to select the placeholder positions, select Modify Position, and then select Save and Close without making changes.	21820749
Workbooks, Pivot Table, Cell Editing	The context menu for reverting the contents of an edit in a pivot table cell is not working as expected in all cases. For example, editing a cell, clicking calculate, and then editing the same cell again should show "Revert Cell" as active on the context menu, but instead it is disabled. As a workaround, selecting File / Revert does enable the "Revert Cell" context menu item.	21909016
Workbooks, Pivot Table, Cell Editing	When a cell is cleared, it is expected that the measure's special value is shown if it is defined, and its NA value is shown if it is not. This is not happening in every instance. Sporadically, the cell is just cleared, with no value set.	22043961
Workbooks, Pivot Table, Cell Editing	Editing cells and then toggling from outline to block mode can cause the edits to be lost. This can also happen on hiding the edited position.	22149600
Server Utilities	For an expression of the form A = B.max, mace is not calculating properly if the left hand side measure (A) is registered at the global domain level and the right hand side measure (B) is registered at the local domain level. Only the first cell of A is getting populated.	21960447
Server Utilities	When attempting to run loadMeasure in parallel on HP-UX Itanium 32-bit (that is, with the -processes argument greater than 1), loadMeasure fails. A workaround is to run the loadMeasure command without the -processes argument.	22180918
Fusion Client, Export to Excel	Attempting to export data from a worksheet to Excel does not work on the iPad.	21624295
Fusion Client, Export to Excel	Attempting to export a data set with a column count that exceeds what Excel can handle (16,384 columns) results in an Excel workbook that cannot be opened.	22173474
Fusion Client, Mobile	Editing on the chart does not work consistently on the iPad.	22245522
Fusion Client, Wizards	Using Ctrl+A to select all items from the Available Items (or products, or locations, and so on) panel and then pressing the Add button does not actually add all items to the selected panel. Note that using Shift+select or Ctrl+Select does select and add all the items.	19443341

Related Documentation

For more information, see the following documents in the Oracle Retail Predictive Application Server 15.0 documentation set:

- *Oracle Retail Predictive Application Server Installation Guide*

- *Oracle Retail Predictive Application Server Administration Guide for the Classic Client*

- *Oracle Retail Predictive Application Server Administration Guide for the Fusion Client*

- *Oracle Retail Predictive Application Server and Applications Security Guide*

- *Oracle Retail Predictive Application Server User Guide for the Classic Client*

- *Oracle Retail Predictive Application Server User Guide for the Fusion Client*

- *Oracle Retail Predictive Application Server Configuration Tools User Guide*

Supplemental Documentation at My Oracle Support

The following document is available through My Oracle Support. Access My Oracle Support at the following URL:

https://support.oracle.com

Cygwin Setup Guide for RPAS (Doc ID 1333398.1)

This document details necessary options you should select when installing Cygwin to make it function properly with RPAS.

Oracle Retail Predictive Application Server 15.0 Cumulative Fixed Issues (Doc ID 2075633.1)

This document details the fixed issues and defects for all RPAS patch releases prior to and including the current release for the 15.0 code line.

Supplemental Training on My Oracle Support

The following document is available through My Oracle Support. Access My Oracle Support at the following URL:

https://support.oracle.com

Release Readiness Transfer of Information (TOI) Recordings (Doc ID 732026.1)

Online training is available to Oracle supported customers at product release. These online courses provide release-specific product knowledge that enables your functional and technical teams to plan, implement and/or upgrade and support Oracle Retail applications effectively and efficiently. Note that Oracle Retail products with minor updates often do not have an associated TOI.

Previous Releases

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

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle
Accessibility Program website at
http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

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impaired.