Oracle® Retail Predictive Application Server

Release Notes

Release 14.0

E50567-01

December 2013

This document highlights the major changes for Release 14.0 of the Oracle Retail Predictive Application Server.

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 the following:

- 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 information about hardware and software requirements.

> **Note:** See the Known Issues section of this document for information about defect 17436875, which addresses a known issue where attempts to build the IP-COE application on HP-UX 64 are failing.

Upgrade Notes

When upgrading RPAS, note the issues below.

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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.

Functional Enhancements

The functional enhancements described below are included in this release.

Real-Time Workbook Alerts (Fusion Client)

Currently, the RPAS Exception Management supports batch alerts, where a user can configure alerts based on some business rules to alert users of some exceptional conditions that need attention. A batch utility then has to be executed to identify the exceptions and alert the user. These alerts can be viewed in the workbook.

In RPAS 14.0, RPAS includes an enhanced Exception Management feature to support real-time workbook alerts. These alerts get activated during any workbook operation involving calculations and reflect user changes to the workbook in real time. Real Time Alerts may be used alongside batch alerts, if desired.

Real Time Alerts are configured on workbook templates, and use a calculated expression to detect alert conditions based on business logic. These conditions define formatting and text info which the Fusion Client will display on alerted cells. These alerts are updated on each workbook operation involving a calculation.

Fusion Client users are able to navigate to the real-time alerts using the Alert navigation feature. They are also able to modify the formatting via the client.

Picklist Translation

Previous versions of RPAS would display the Picklist options as what was configured. Users were not able to translate the Picklist labels.

In RPAS 14.0, users are able to load in translated picklist labels, in the same way that other translations take place within RPAS. The translation of Picklist labels is supported only for static picklists, which are defined and fixed in the RPAS Configuration Tools.

RPAS supports the localization of labels, by registering additional measures in the language database of a multi-lingual domain, to store the localized strings. The RPAS installation process registers a new measure, r_measpicklist, that is required for picklist translation. The intersection of this measure consists of MEAS and LANG dimensions. During a domain build, the configured labels are loaded in the domain. loadmeasure can be used to load additional translation files.

Loading Mixed Data File Types

In RPAS 14.0, loadmeasure has been enhanced to support the mixing of CSV and fixed-width files together in the same input directory. Previous versions of RPAS supported CSV and fixed-width input files. However, RPAS did not support loading them in a single run when they are co-located in the same input directory.

The two reasons for supporting CSV format for translation files are:

- The maximum length for measure names has been increased from 24 to 30 since RPAS 13.3. However, the current fixed-width field for "meas" dimension only supports 24 characters.

- The picklist translation feature fits a whole picklist in one translatable message, easily exceeding the limit of the fixed-width message label field, which is 256 characters.

In order to allow backward compatibility of existing customer scripts, loadmeasure has been enhanced to support the mix of CSV and fixed-width formats.

Position Filtering (Fusion Client)

The RPAS Fusion Client has added the ability to filter a worksheet view based on a selection of cells. The user can now select data cells in one view and use it to filter another view, or even the same view. This filter can be removed at a later time, without disrupting existing hide position settings.

Consumer Decision Tree Changes (Fusion Client)

Fusion Client users viewing or editing Consumer Decision Trees (CDTs) can now see the SKU count and weight (correlation) of each CDT node. This functionality helps the user understand the relationships of the nodes and distribution of SKUs. The SKU count is calculated by determining the subset of SKUs common to the node and its parent. Weight values are provided by the Oracle Retail Advanced Science Engine and are no longer displayed after the node is changed.

Consumer Decision Trees can now be configured to be Read Only.

The CDT Editor now shows labels instead of ids for attribute names and values, for a more user-friendly presentation.

RPAS Extension Framework (Fusion Client)

In previous releases, the Fusion Client UI could only show data from RPAS domains retrieved through the traditional RPAS client/server protocol and displayed in RPAS workbooks. In this release, the RPAS Extension Framework is introduced that allows for independent applications to be built that serve as solution plugin modules, appearing as part of the Fusion Client user interface (UI). These plugin modules can access data from RPAS or Non-RPAS data sources. Each module uses ADF Security to control access to and navigation within the module.

One or more plugin modules can be installed into the Weblogic Server as an ADF shared Library. Modules can be configured to launch on the Fusion Client Home Page, as a link in the taskflow navigation panel, or in context from a selection on an RPAS worksheet.

An API enables Fusion Client and plugin modules to communicate. Modules can request JNDI names of data stores, initialization parameters, installed RPAS Solution names, worksheet selection context. Modules can create an RPAS workbook, load and save favorites, and flag unsaved changes. The fusion client can query modules about unsaved changes and expose module-specific menu items in the global toolbar.

For more information, see the *RPAS Configuration Tools User Guide and the RPAS Extension Development Guide* (ID 1261344.1)

PO View (Fusion Client)

This Purchase Order View plugin module leverages the RPAS Extension Framework described above, providing a Fusion Client interface to view currently open/pending purchase orders within the RMS system. Users can select on an on-order value and invoke a pop-up window that displays purchase order information about what comprises the on-order value. With this knowledge, Merchandise Financial Planning (MFP) users can better plan their open to buy (OTB) budgeting and enhance their Merchandise plans.

For more information, see the MFP documentation set.

Drilling in Charts (Fusion Client)

The Fusion Client now supports drill-down functionality in charts, allowing the user to select a position on the chart and display the same chart with the children of that position replacing the parent positions. Subsequently, the user can "drill back" up to the parent level.

Extra Worksheets (Fusion Client)

Custom wizards can result in extra worksheets that are not specified in the Fusion Client task flow configuration. These extra worksheets may be generated based on user selections in the wizard pages such as, for example, the Extra Measures capability in Oracle Retail Demand Forecasting (RDF).

The Fusion Client task flow can now be configured to specify that unassigned worksheets are to be included for specified tasks.

Technical Enhancements

The technical enhancements described below are included in this release.

DomainDaemon IP Filtering

The RPAS DomainDaemon is a server process that enables communication between RPAS Clients and RPAS domains. The DomainDaemon listens for requests from RPAS Clients on a specified port. Once the DomainDaemon receives a Client request, it spawns an RPASDbServer process, and the Client connects to it.

Host systems may be configured with multiple network interfaces, and each network interface may be assigned one or more IP addresses. Prior to RPAS 14.0, RPAS DomainDaemon and RpasDbServer would listen on a given port to all local host IP addresses of the host system. Administrators are now able to configure a specific IP address to which RPAS services should listen for connections. DomainDaemon and RpasDbServer now have a new optional command-line argument to specify the local IP address.

Password Security and Cryptography

RPAS 14.0 has been enhanced to support a new password storage mechanism. RPAS has replaced its proprietary encryption algorithm with a one-way de-optimized hashing algorithm. The hash algorithm and hash iteration count can be configured by the system administrator. The passwords are hashed by the selected algorithm and then stored. In the Classic Client, the Password Administration Template includes two new measures that enable the hash algorithm and iteration count to be modified.

The Fusion Client manages its own users and passwords, and does not use the passwords associated with the RPAS accounts. In this release, the usermgr utility has been enhanced with an optional parameter not to specify the password. These RPAS accounts can only be used in the Fusion Client.

The usermgr utility has been enhanced to support the features below:

- List the various hashing algorithms supported in the current release to indicate whether the algorithm has been deprecated or is the default.

- Enable the user to set the hash algorithm and the hash iteration count.

- Enable the system administrator to force a password change for a particular user or all the users.

- Enable users to be created without specifying the password.

In this release, DomainDaemon has also been enhanced to support certain cryptographic requirements related to SSL, including the following:

- Because passwords must be sent over an SSL encrypted channel, DomainDaemon has dropped support for -ssl 0 (unencrypted) option.

- All DomainDaemon commands need to specify the wallet information for all commands to a DomainDaemon that was launched with -ssl 1, 2 or 4. The wallet information can either be provided through an argument or the new RPAS_SSL_ WALET environment variable.

- DomainDaemon makes use of a cipher suite that can be configured by the system administrator. If one cipher suite gets compromised, the administrator can easily disable it.

- A new command has been added to DomainDaemon that provides a list of available cipher suites. This command also indicates which algorithms are recommended and which are deprecated.

- A new optional command has been added to DomainDaemon that sets the cipher suite to be used.

> **Note:** Web tunneling is a legacy RPAS feature that has been rendered obsolete with the prevalence of VPNs. This feature has been removed from RPAS.

Oracle Retail 14.0 Predictive Application Server Diagnostic Tool

A new diagnostic tool has been introduced to help with troubleshooting of customer defects. This tool functions according to the record and play model, where customers can record their transactions and then send them to Oracle. The support team can replay the transactions in the exact sequence as they occurred and diagnose the problem. Customers can enable the transaction logging by setting a property in rpasconfig.properties.

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

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.

Server

The technology below has been upgraded.

- AIX 7.1

- Solaris 11

- Oracle Linux 6.3

- Java 1.7

Configuration Tools

The technology below has been upgraded.

- Java JRE 1.7.0+ for the configuration tools.

Fusion Client

The technology below has been upgraded.

- MS Office 2007 and 2010

- Oracle Single-SignOn 11.1.1.7

- Java 1.7

    - IBM JDK 1.7 SR9 for AIX

    - Oracle JDK 1.7 update 25 or higher for Solaris and Linux

    - HP JDK 1.7.0_7ia for HP-UX

- Web Tier:

    - Oracle HTTP Server 11.1.1.7

    - Oracle Access Manager 11.1.1.7 (if using SSO)

    - Oracle Internet Directory 11.1.1.7

- Application Server: WebLogic 10.3.6 with ADF 11.1.1.7 (and Patch 16788543)

- Browser: Firefox ESR 17 (support for Chrome has been removed)

Documentation Enhancement

Security Guide

This new guide addresses RPAS's security architecture, pre and post installation considerations for the RPAS Server and the Classic and Fusion client, securing the Clients and Server, authentication topics, Domain creation and maintenance,

integration and security, and security concerns related to extending and customizing the products.

Noteworthy Defect Fixes

The following noteworthy defect fixes are included in RPAS 14.0.

Table 1   Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Classic Client - Alert Manager	When the user tries to roll up to an aggregate level in the outline view, the client was throwing an exception when the alert workbook was built using the alert manager. During the workbook creation process, after building and opening a workbook, a look up was done on the position map to populate the alert position details. When the workbook was built using the alert manager, the positions were not yet populated into the map. So the lookup was happening on an empty map which resulted in the client throwing an exception. Fixing the client side code to load the positions when the position map was found to be empty before the lookup is done resolved the issue.	16284069
Classic Client - Alert Navigation	After inserting an alert into the currently opened workbook, if a user tries to navigate the alert a few times and then close the workbook and open it again, the alert navigation menu was found to be disabled. When users reopen the saved workbook, all measures in the worksheet get checked against the measures in the current measure profile and the ones that were missing from the current measure profile get hidden resulting in the alert measure being hidden as it was not part of the current measure profile, the alert navigation menu gets disabled. Even after un-hiding the alert measure, the alert navigation menu was not getting enabled. If users save and reopen the workbook again, navigation starts working again. This is because when users un-hide a measure the current list of visible measures does not match the current measure profile users are using and so users set the current measure profile to empty. Therefore when users re-open the workbook next time users do not hide the alert measure because users are using an empty measure profile, so the alert navigation works. Enabling the alert navigation menu when alert measure is un-hidden and setting the measure profile correctly after adding the alert resolved the issue.	17230081

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Classic Client - Attribute Definition	Login to domain via Classic Client. Select any product position. Right click and select Attribute definition. Select a Source measure and click ok. The Attribute Definitions window appears. Click new and enter an attribute label and click Ok. Now when the user selects Update Selections, the newly given attribute name was removed. The reason for the issue is that the same method in the code was used to initiate and update the attribute definitions. The update selections were actually trying to initiate a new attribute which clears rather than updates the existing selections. Fixing the code to handle the init and update selections by different methods resolved the issue.	17028796
Classic Client - Attribute Definition Dialog	On the Classic Client, the existing dimension attribute cannot be modified. The currently selected attribute on the dialog gets cleared or reset once the user closes the update selections dialog on the classic client. Caching and restoring the attribute to be modified from the list of available attributes resolved the issue.	16591793
Classic Client - Attribute Definition Dialog	On the Classic Client, when the user does not select any position on the attribute definition dialog but selects 'All', and clicks OK, the client crashes. Here the user has not made any selections through the single hier select dialog that pops up for a particular dimension to enable the user to select a position to add it to the attribute definition. Disabling the 'OK' button when the user has not made any position selections for attribute definition and enabling it only after positions were selected has resolved the issue.	16573539
Classic Client - Chart Mode	The Classic client was crashing when the user tried to make a copy of the window in chart mode when there were edited cells. When the copied window was getting initialized, the grid was marking the edited cells as dirty which should not be the case as in chart mode there was no grid data. Fixing the client code to prevent the grid from marking the edited cells in chart mode resolved the issue.	16447918

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Classic Client - Charting	On a chart view, if hierarchies were arranged such that no hierarchy was put on either the top or left axis, placing the cursor on a data point was causing the classic client to crash. When the cursor was placed over any data point, the RPAS classic client prepares for the drag and drop action. During this process, an improper index was used to access the node data. Checking that the node is not empty and using the correct index resolved the issue.	17031251
Classic Client - Clipboard Copy/Paste	After executing a dimension split on a workbook, the copy to clipboard and paste from clipboard does not work. An exception message was displayed about an invalid format and not being able to paste to a real number cell. When the dimension split was selected with Cluster option, the value for invalid cell was coming out as an empty string and while it was being copied into numeric type measure, it has an issue with a type mismatch. While constructing the source string during copy to clipboard, a "cell_undefined" text has now been added for invalid cells instead of an empty string. The paste operation is skipped for these invalid cells which resolved the issue.	16626317
Classic Client - Copy / Paste	When multiple rows were copied and pasted, only the first copied row was getting pasted. In the classic client, the count of number of selected nodes was decremented when cells were unselected. However, the lower bound is not checked and hence this number became negative when many cells were un-selected at once. Because of this the link to the next selected node was not updated correctly. Adding a check to see that the count does not turn in to a negative number When decrementing the count of selected nodes resolved the issue.	17305764
Classic Client - Copy / Paste	In the classic client, when trying to paste the value of one copied cell to an entire column, only the first cell in the column was getting pasted with the value. The client code was not returning the correct index of the cell and the paste operation was getting applied to the same cell multiple times. Properly looping over all the selected cells to be pasted resolved the issue.	16697419

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Classic Client - Copy / Paste	The Classic Client was failing when trying to paste a block of cells copied from Excel into the Classic client workbook grid. This happens only when the size of the copied area exactly matches the size of the area to be pasted into. The client builds an array to hold all the pasted values. That array was sized from the number of selected rows and columns. However, the size calculation was incorrect and resulted in the array containing one extra row and one extra column. When the data from the array was copied into the grid, an invalid memory access occurs because it was beyond the bounds of the grid. The Classic Client code is fixed while calculating the number of rows and columns in the pasted data which has prevented the buffer overflow when copying that data into the grid view which resolved the issue.	16538010
Classic Client - DateTime Control	On the classic client, the DateTime control selections were not getting set correctly once the user enters the values. The cell containing the DateTime control was losing focus which resulted in deleting the control and the values that were entered. Adding proper event handlers to prevent the control from getting deleted resolved the issue.	16515032
Classic Client - DateTime Control	When users clicked on a date-time cell whose value was out-of-bounds, users were not able to navigate to another cell unless they first changed the value of the current cell. When the user navigates to another cell via the arrow keys or the mouse pointer, the current cell remains active. In addition, when the date-time control's value was set to a value outside the range, that value was changed to one inside the range (either the minimum or maximum depending on which is closer). However, the time portion of the value remains because even though the date was valid, the time of that day can still put the cell out-of-bounds. A message is now displayed while leaving a date-time cell and when the value of the cell is out-of-bounds. The message displays the time even if the format was set to hide the time because the time portion may cause the value to be out-of-bounds even though the date portion is in-bounds. Notifying the user to change the value of the date-time cell when the value is out of bounds resolved the issue.	17073952

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Classic Client - Dimension Split	On the Classic Client, the unsplit dimension option was disabled after the user splits a dimension. The unsplit option in the context menu was disabled and as a result, user cannot unsplit an already split dimension. Enabling the unsplit option resolved the issue.	16591633
Classic Client - DPM	The page-axis position queries were not run after adding a DPM position. Therefore, the new informal position was visible when it should have been hidden by the position query. The DPM code did not accommodate the page-axis position queries. Fixing the DPM code to execute page-axis position queries after a position is added or modified resolved the issue.	12693490
Classic Client - Econfigure	The Classic Client was not able to load the changes to the foundation.fcf file through Econfigure. The Econfigure settings were getting stored to a location which was not in the Classic Client search. Fixing the client side code to ensure the location where the foundation.fcf file gets stored was the same place where the Classic Client searches resolved the issue.	14044450
Classic Client - Export Sheet	On the Classic Client, the export sheet functionality was broken causing a client crash. After building a workbook, if the user tries to export a worksheet, the client crashes. The grid export dialog of the client had issues dealing with the export. Rectifying the client-side code resolved the issue.	16573602
Classic Client - Grid Display	In the Classic Client, a worksheet in a workbook shows up under the wrong tab. Switching the tabs back and forth fixes the problem but when the user closes the workbook and opens again, the problem reappears. The worksheet windows which were maximized and are under non-current tabs were not hidden correctly thereby causing issues to the current worksheet to display under the correct tab. Fixing the client code to hide the windows correctly resolved the issue.	16537375

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Classic Client - Grid Display	After saving a workbook template format consisting of multiple open worksheets under the same tab and one of them was brought to the foreground, reopening the workbook displays the wrong worksheet in the foreground. Due to this, users were not able to view the worksheets in the desired format even after saving. The Classic client code was assigning an order of 0 for minimized worksheets but when the format was getting saved, even the foreground worksheet's order was getting set as 0. This was causing the wrong worksheet to be displayed. Fixing the client code to set the order index from 1 onwards for maximized worksheets and keeping the order 0 for the minimized worksheets resolved the issue.	16754988
Classic Client - Grid Display	The color gradients for shading dimensions on the grid axis were too small and not noticeable. The user would build a workbook, and then change the rollup on the hierarchy to a high level so that many dimensions were shown. This resulted with the dimensions were nearly all of the same color. For shading dimensions, the user created color gradients from the axis fill color to a lighter tint of that same color. If the axis fill color was lighter to start with, then the shift from that color to the lighter version of that color was small. When that was divided into many gradients, the difference between the gradients became unnoticeable. Fixing the Classic Client code to have a minimum difference between color gradients and making sure the effective axis fill color is darkened as necessary so that all the gradients will fit in to the color space resolved the issue.	16575821
Classic Client - Grid Display	In the Classic Client, the z-axis slice at the time of saving the workbook was not the one brought back when the workbook was closed and reopened. The dimensions reverted back to the first position. The Classic Client while opening the saved workbook was not reading the workbook xml file properly. Fixing the client code resolved the issue.	16344790

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Classic Client - Grid Display	Users were not able to select the correct window using the menu option 'window' when multiple windows were created for a workbook. When opening the workbook, the windows were shown, but none of them were set to active. Thus, there was no active frame, document, or workbook, which resulted in an access violation. Fixing the client code to ensure that when opening the workbook, the windows are activated, not merely shown, for the active frame, document, and workbook, resolved the issue.	11938708
Classic Client - Grid Display and Select	The select all feature was not selecting all the cells as expected in the classic client. This happens both for the Edit -> Select All and for CTRL + A. As part of the changes to the integer indexing architecture, the functionality dealing with the selection of nodes was not turned on in the later branches of the code. Properly enabling the select all functionality resolved the issue.	16697385
Classic Client - Grid Display and Select	In a Classic Client workbook with multiple columns selected, when the user tried to click on any one of the selected columns, that particular column was getting deselected but the remaining previously selected columns remained selected. The expected behavior here should be the reverse where the final selected column should stay selected and the previously selected columns should be deselected. Code to deselect an already selected single node was getting triggered in this scenario causing the wrong behavior. Adding an additional condition to the client code which will trigger an unselect only when the number of nodes selected is one, resolved the issue.	16507421
Classic Client - Grid Selections	On the Classic Client, when the user deselects the base dimension and all the rollup dimensions of calendar hierarchy, the client crashes. When all the dimensions of the calendar hierarchy were deselected, the calendar tree node would become empty, and an exit path was not available when the tree node became empty. Properly handling the empty tree node resolved the issue.	16655797

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Classic Client - InstallShield	The RPAS Classic Client installation did not install the language DLLs for internationalization. Run the RPAS Classic Client installation and check the install folder for the language DLLs such as Spanish.dll. The files are not found in the installation folder. In 14.0, the language DLLs were moved to the 'Language' subfolder to eliminate potential file name conflicts and to simplify the build process. However, the changes made to update the InstallShield installation were not working correctly, and the Language subfolder was not created when the client was installed. Correctly setting the installation folder for the Language DLLs and making sure in the InstallShield project the LanguageDllsComponent is installed by default resolved the issue.	16836542
Classic Client - Position Query	When an auto position query evaluation was set to true and the result dimension was hidden, the user was not able to navigate using the top left dimension on the page axis as it was always getting reset to the first visible position. For example if a workbook has a position query where 'str' drives 'sku' and both the 'Location' and 'Product' hierarchies were on the page axis. When the user navigates to the second 'str' position, the auto position query gets triggered and the 'sku' visible positions were updated. But if the 'sku' dimension was hidden, then the top-left dimension of the page axis (str in this case) was getting reset to the first position even though the user has navigated to the second position. The code that handles the position queries was resetting the top left dimension while trying to set the visible position of the hidden dimension. Fixing the position query code not to reset the top-left dimension while setting the result dimension resolved the issue.	15902095
Classic Client - Print Settings	Print preview and page setup does not work as expected in the Classic client. Reordering the controls in the Page tab of the Page Settings dialog so that all the radio buttons are together without any other controls between them and fixing the settings of the scaling, landscape/portrait, and print dialog resolved the issue.	13459187

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Classic Client - Show / Hide	In the outline view of the Classic Client, several CLND positions that were 'removed/hidden' using the Show/Hide functionality were still visible on the client. The client was not able to detect the visible nodes correctly which caused an issue to hide the nodes. Fixing the client to detect all the visible nodes and properly hide the ones removed/hidden on the show/hide dialog window resolved the issue.	16230329
Classic Client - Sorting	The Classic Client was aborting the attribute based sort when no dimension was found on the x-axis. When users place the measure on the Y-axis (lower left corner of the client) and keep the x-axis (upper right corner of the client) empty and select a measure and try to do an attribute based sort, the Classic Client aborts immediately. Client side code was not using the correct hierarchy to perform the attribute based sort. Fixing the client code resolved the issue.	17497817
Classic Client - Synchronization	In the Classic client, the synchronized worksheets functionality was not working correctly. Changes to one worksheet were not getting propagated to other worksheets to keep them synchronized even when the synchronize worksheet flag was turned on. Client code is fixed to enable worksheet synchronization properly to resolve the issue.	14796683
Classic Client - Translation	In the Classic client, the translation of the word 'Alerts' on the Alert Manager dialog shows up as garbled when a language other than English was used. Font for this text was not set properly causing the foreign language texts to display incorrectly. Setting the font correctly resolved the issue.	16496667
Classic Client - Wizard Label Translation	In any Classic Client workbook wizard, the wizard title comes suffixed with the string "wizard". This was causing problems while translating the wizard label text to other languages. Some languages need the string "Wizard" before the wizard label; others need it after the label or need a separation between the two for the translation to be meaningful in that language. Fixing the client to have the wizard label prefixed with "Wizard:" seems to be acceptable in all languages and that resolved the issue.	16485691

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Classic Client - Wizard Two Tree	In a two tree wizard, when the user makes a selection in the workbook wizard and then unselects some of the positions in the left tree, those positions were still visible in the right tree and would still show up in the workbook. When users deselect a year after hiding all other dimensions in the calendar hierarchy, the year's child nodes were not getting deselected because they were not visible. Fixing the client code to deselect all the child nodes (even if they are not visible) when a parent node is deselected resolved the issue.	16713404
Classic Client - Wizard Two Tree	In a two tree wizard, user selection was not getting cleared if the user unselects an already selected position on the left tree. Resulting in the selected list of positions getting stored at the leaf dimension level. So when the user selects a higher level position, the wizard code was not comparing that to a leaf position in the selected list. Fixing the wizard code to create a list of all the leaf positions of the selected position and then comparing it with the selected list has resolved the issue.	16507910
Classic Client - Wizard Two Tree	In a two tree wizard, a selected position cannot be unselected by using the 'remove selection' from the right click menu. The remove selection was supposed to remove the focus node if there was no selection. The remove selection code was using a map between the dimensions and set of positions. The remove selection code checked for selections, but it was not checking whether the set of positions for a particular dimension was empty or not; it was checking whether the map was empty or not. Fixing the code to check whether the set is empty or not resolved the issue.	14738922
ClassicClient - Grid Display	Arranging the hierarchy tiles in a particular order on the Classic Client crashes the client. The issue was observed in one of the internal drops of 14.0. Subsequent internal drops did not detect the issue. The issue was resolved due to some of the changes made in the later drops.	16880655

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Config Tools - Rule Tool	The Use Existing Rules checkbox was missing from the 'Copy Selected Rules Window' in the Configuration Tools. It was there in 13.3.x but was removed in 13.4.x. The Configuration Tools User Guide still refers to this feature. The functionality was removed due to a conflict with Find/Replace. Re-work of the "Copy Selected Rules" functionality resulted in the loss of this behavior which can be used to create a set of rules with identical expressions to the input set of rules but were separate rule instances and not shared rules that existed in multiple rule groups. The functionality has been restored. The "Use Existing Rules" checkbox is once again present in the "Copy Selected Rules" wizard. When the control is checked, rules will be inserted in the target rule group to create shared rule instances. When the control is not checked, new rule instances with identical expressions will be created. Note that, when the "Find/Replace" functionality is used, new rules instances will be created for any rule modified by the find replace. This new rule generation will still occur even if "Use Existing Rules" is checked.	16998151
Config Tools - Config Manager	When using the RPAS Configuration Manager, users noticed that new Workbook Only Dimension entries, when created by the manager, would not have their attributes properly specified. The attributes of the new dynamic hierarchy entry for the workbook only dimension were missing from the merged configuration. The RPAS Configuration Manager was using the wrong accessor method to process the initial attribute values for added dynamic hierarchy entries. Fixing the RPAS Configuration Manager to use the correct accessor method resolved the issue.	17306344
Config Tools - Config Manager	When using the RPAS Configuration Manager, users would notice that the tabs added to the configuration and merged into the final configuration were missing their worksheet assignments. The initial attribute value for a new Tab's worksheets was not being properly processed. This resulted in the value reverting to the default value of no worksheets. Fixing the configuration manager to properly process the worksheets of a new tab resolved the issue.	17307344

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Config Tools - Config Manager	When using the RPAS Configuration Manager, users would notice that the activity group properties of an activity were omitted from the list of changes detected by the tool. The activity group properties (name, label, and description) were improperly added to the list of properties managed by the configuration manager. Fixing the configuration manager to check the properties at the same time as other activity properties are checked resolved the issue.	17307148
Config Tools - Config Manager	The RPAS Configuration Manager did not detect some changes to dynamic hierarchies. In particular the label of the dynamic hierarchy was not being processed. An error in the logic was preventing the proper comparison of the original and modified labels when comparing two configurations. Fixing the configuration manager to properly evaluate the original and modified configurations to detect all dynamic hierarchy changes resolved the issue.	15860161
Config Tools - Domain Build	The RPAS domain build process was not getting aborted even after receiving an exception from the Alert Manager. This was resulting in the domain getting built without Alerts registration. The RPAS installer utility which builds the domain was disregarding the AlertManager exception and finishing the domain build without proper Alerts registration. The utility was modified to consider AlertManager exceptions and to abort the build process when such exceptions were raised.	17403118
Config Tools - Domain Patching	Users upgrading RDF from pre-integer indexing architecture to integer indexing architecture were experiencing a failure when attempting to patch the domain as a part of the upgrade process. The RpasInstall process was attempting to modify the dimensions of a system hierarchy in RDF called DATA hierarchy which gets managed outside of the configuration. The calls to dimensionMgr being made by RpasInstall resulted in exceptions. The dimension patching functionality of RpasInstall now ignores the DATA hierarchy and does not attempt to update its dimensions.	16856830

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Config Tools - Hierarchy Tool	Navigating to the hierarchy tool through tools and examining the tool tip for the width column of the dimension table, users were seeing information that the maximum value for width was 24 which was not true. The restriction was no longer present. When the restriction was removed, the tooltip was not updated. Updating the tooltip text to remove the restriction resolved the issue.	17078522
Config Tools - Hierarchy Tool	Errors occurred when opening a configuration in configuration tools where a dimension has a different value for the Tools name and RPAS name. Attempting to edit the RPAS name attribute of the dimension to be identical to the Tools name results in an error saying that the name was already in use. Tools should allow the names to be identical. To prevent duplicate names, the Tools populate a look-up table with the names of all hierarchies and dimensions. Due to an error in generating this table, the Tools name was getting cached as the RPAS name. Subsequent attempts to use it as an RPAS name was getting flagged as invalid. Fixing the Tools to prevent the incorrect caching of the tools name as the RPAS name resolved the issue.	14498293
Config Tools - Hierarchy Tool	The Configuration Tools for the process RpasInstall were not generating the translation resources for some of the applications custom wizard labels. As a result those custom wizard labels were not getting translated, and displayed only in English. These labels were not standard labels but were additional fields within the wizard. The RpasInstall process did not know that these labels existed, and did not know to place them in the generated resources. The RpasInstall process has been fixed so that, whenever it encounters a custom wizard whose type name ends in "TwoTreeWizard", it will search for the fields and, if present, adds them to the generated resources to resolve the issue.	15984639
Config Tools - Measure Tool	In the RPAS Configuration Tools the shortcut "CTRL+Insert" was not working to add a new major component in the Measures Managers pane. The Swing appears to be consuming the key event unlike other key combinations where the focused control was not receiving an event for the key press. After experimenting it was found that alt+insert does result in an event being issued to the focused control. Fixing the tools to map the action to alt+insert resolved the issue. Now instead of ctrl+insert, users should now use alt+insert to add a new major component.	16090009

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Config Tools - Picklist Validation	Config tools allows a user to enter a range value as [lowerbound:upperbound] for UI type 'picklist' measure, but this type of format needs to be used for non-picklist integer / real type measures. Config tools was not validating this issue resulting in an error being displayed. Also, when the range was not specified for a picklist measure, the config tools processes without validating the condition even though the range parameter requires a value for the picklist type measure. Adding proper validation logic to validate the above two conditions resolved the issue.	16602819
Config Tools - Plug-In	While running a plugin task, config tools was throwing an exception resulting in the loss of plugin data. Before running a plugin task, the tools saves a backup of the configuration, so that the state of the configuration can be restored in case of a failure. Any tools exception causes this backup to be loaded to replace the current configuration. During the restoration of the back up configuration, config tools was improperly registering the plugin data with the plugins rendering the plugins unable to access the data for the config when automation was re-run. The problem with the registration of plugin data has been corrected. The data associated with the automation backup of the config should now be accessible.	16828086
Config Tools - Plugin Automation	If a user ran a plug-in automation, then saved, closed and without exiting tools, then re-opened the configuration, the second attempt to run the automation would result in the loss of all plug-in data for the configuration. A second attempt to run the automation would result in the popup dialog containing no information. The saving process was failing to clean-up all the artifacts in the automation API. As a result, upon re-loading the configuration, the plug-in data for the configuration would not be handed to the plug-ins correctly. Fixing the tools to do a proper clean-up resolved the issue and now the plug-in data is properly handled.	17189939

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Config Tools - RPAS Install	When using RpasInstall to patch a new hierarchy to the domain, the log contains error messages saying that RegUserDim could not add a new dimension. Also, all user defined dimensions on the newly added hierarchy were not present in the domain. Due to an issue in the ordering of operations, RpasInstall was attempting to add the new user defined dimensions before the new hierarchy had been created. As a result, the RegUserDim calls fail and the dimensions do not get into the domain. The operations have been re-ordered. In the future, user defined dimension registration will not occur until after the addition of new hierarchies.	17061902
Config Tools - Rule Validation	Config tools flagged a rule as invalid when an expression in that rule has a non-reclc measure on the left hand side (LHS) with a level modifier which was allowed. This rule has more than one expression and one of the expressions was for a reclc measure on the LHS. The validation logic was checking at the rule level and since both conditions were satisfied: a) the level modifier b) the reclc measure, it flagged the rule as invalid. Correcting the logic to validate at the expression level instead of at the rule level resolved the issue.	17451030
Config Tools - Rule Validation	In Config Tools, the task list shows Rule Group Error in Red. However, no error was listed in the Rule Definitions for the Rule Group, Rules within the Group or expressions within the Rule. The "recalc measure without calc rule" validation is marked as warning at the expression validation level, but it was getting marked as an error at the Rule Group level resulting in the Rule Group name to be shown in Red. Earlier there was no warning status logged at the 'Rule Set' level. Changes showing the Rule level warning as warning at the RuleSet level and considering the validation as warning at the Rule Group level resolved the issue.	17487133
Config Tools - Rule Validation	Customers upgrading their configuration from older branches were seeing errors appearing within the tasklist and rule tool for rules that were valid earlier. An incorrect validation was added to the Configuration Tools to flag the use of a reclc measure on the right hand side (RHS) of a reclc expression for another reclc measure as an error. Many configurations, including the generally available versions of RPAS applications, make use of this approach. Removing the validation resolved the issue.	16856970

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Config Tools - Task Flow	Custom Menus were defined in RPAS Config Tools at the Workbook level. Taskflow designer needs to see the Custom Menu items identified by the names defined in RPAS Config Tools under the "label" column. In the interest of backward compatibility with existing xml parsing, adding a label attribute to the CustomMenu element was designed. The Fusion Client will continue to parse CustomMenu for its enclosed ID, but the taskflow designer will use the label to look up a user-friendly name for the menu item. Worksheets were identified in the generated xml by their RPAS Name alone. This was also a problem for Taskflow Designer because these are not the exact labels that the FC user will see, which will be the User Label. Taskflow Designer should be provided with a user facing label key by which it can look up the user facing label for each worksheet. Changes were made to provide the worksheet and menu item labels for user presentation outside a workbook.	16820675
Config Tools - Workbook	Users creating large number of 'workbook only dimensions' in configurations would eventually see that the length of the new 'workbook only dimensions' names was exceeding 4 characters, the maximum character limit for RPAS dimension names. Default names were generated using a prefix and a counter (prefix + integer number). If the length of the prefix was 2 and the number of 'workbook only dimensions' reaches 100, then the generated name length crosses the 4 character limit. The name generation algorithm has been altered so that it will begin truncating the prefix to avoid long names. In the above case, if the number of 'workbook only dimensions' reaches 100, then the prefix gets truncated to one character such that the name length does not exceed the 4 character limit. Note that in extreme cases, it is still be possible for generated names to exceed the four character limit and in such situations, users are expected to supply their own names.	14834864

Table 1 (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Config Tools - Workbook Template - Custom Attributes	Config Tools was not able to persist the changes made to the configuration for a custom attribute such as the wizard 'Title'. When the user removes the custom attribute and saves the configuration and reopens it, the removed attribute returns. The action of adding or removing a custom attribute did not result in the wizard being flagged as needing to be saved. In the absence of this flag, the change to remove the attribute never was saved to the disk. Changes to flag the wizard as needing to be saved upon the addition or removal of custom attributes has resolved the issue.	16827591
Config Tools - Workbook Tool	The profile administration panel within the workbook tool was not allowing users to add new profiles if a worksheet already contained ten profiles. The 'Add Profile' option in the right click menu was getting disabled. This was an artificial limit imposed upon the UI within the tools. There was no known reason as to why more than ten profiles could not be created. The check preventing the creation of additional profiles if a worksheet already has ten profiles was removed and the 'Add Profile' option was enabled now to create additional profiles.	16848098
Config Tools - Workbook Tool	Users that performed the "remove dimension" operation on a dimension that was the modified dimension of a dynamic hierarchy roll-up would see the dimension removed from the workbook; but the dynamic hierarchy entry associated with the dimension would remain. This was actually a validation error. Users were prevented from performing certain operations within the tool. When this occurs, the user gets notified of the problem and told how to resolve it. The use of the dimension in a dynamic hierarchy should have caused such a validation message. The user is now given a message informing them that the dynamic hierarchy rollup of which the dimension is a part of must be removed first before the dimension is removed from the workbook.	14834996
Domain Utilities - Copy Domain	CopyDomain was setting the wrong masterpath.cfg in the local domains dimregistry if the local domains were completely outside the master domain directory and -xmlConfigFile was not used. CopyDomain was only copying the files and not updating the path. Fixing copyDomain to update the masterpath.cfg resolved the issue.	14785940

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Domain Utilities - Convert Domain	On any pre-integer indexing domain with a security enabled hier/dim, if a user builds a security admin workbook, saves the format, and then converts that domain to integer indexing architecture, and tries to build a security admin workbook, the result is a failure. The hierarchy names after conversion had a case mismatch which was affecting the security administration workbook build. Fixing the ConvertDomain utility to prevent case mismatch after conversion resolved the issue.	17308088
Domain Utilities - Convert Domain	ConvertDomain was failing while trying to convert a SPO domain. A required argument -genUnlinkedList was not provided, and convertDomain was not checking whether this argument was passed in or not and hence the failure. This argument specifies the output file for generating a list of arrays which may contain one or more unlinked dimensions. Fixing convertDomain to check for the required argument resolved the issue.	16717976
Domain Utilities - Convert Domain	In a 13.2.x domain, an error occurred when the user created a security admin workbook where one of the hierarchies was security enabled then saved the workbook format and then tried to convert and upgrade the domain to 13.3.x and then tried to build the same workbook. While saving the format on 13.2.x, the window names were saved in upper case whereas in 13.3.x, the names were in lower case. The case mismatch causes the convert domain to fail. Convert domain is fixed to convert the window names to lower case before converting the domain to resolve the issue.	17334428
Domain Utilities - CopyDomain	The input/processed directory was not getting created for local domains when running copyDomain on a source domain which has an empty input/processed directory. This happens only when the xmlConfigFile option was used. The impact of the missing processed directory was that loadmeasure fails without this directory. Without the xmlConfigFile option, the value of the input parameter skipEmptyDir was used correctly. But with the xmlConfigFile option, the value of skipEmptyDir was not checked for subdomains and instead true was used. Fixing the copyDomain to use the correct value of skipEmptyDir while copying subdomains with the xmlConfigFile option resolved the issue.	16404454

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Domain Utilities - CopyDomain	CopyDomain was failing when the skipConfig, skipInput, and clone options were used. The skipConfig and skipInput were incorrectly skipping the config directory. Any subsequent call to loadHier to update the partition hierarchy requires the config directory to be present to reflect the changes. The resulting domain after the copyDomain run was missing an essential structure. Removing the skipConfig option of copyDomain (as it offers no benefit) resolved the issue.	15872810
Domain Utilities - CreateGlobalDomain	The CreateGlobalDomain utility fails when specifying a globaldomainconfig.xml file containing different paths for sub-domains. If each local domain has a different path specified, then the RpasInstall was failing with a message saying that either the domain path or the partition position does not exist. The createGlobalDomain utility was initializing the subdomain even before the master path and domain type were set correctly. This was resulting in a failure to create sub-domains under different paths. Setting the master path and domain type before creating any sub-domains resolved the issue.	15867155
Domain Utilities - Hierarchy Manager	In the integer indexing architecture, the configured order of dimensions in a hierarchy was not matching with the displayed order of dimensions in the wizard and workbook. Here for the dimensions with multiple parents the parent dimensions were displayed in the sorted order. In post 13.3.0 versions a map was used to cache the dimensions by the hierarchy manager which caused the dimension order to be sent out in a sorted order. By saving the original order of the dimension names and using that order to pull out dimensions from the map resolved the issue.	14092395
Domain Utilities - InformalPositionMgr	The InformalPositionMgr which formalizes or informalizes positions of a specified hierarchy after processing the input xml file, was moving the processed file into the 'processed' directory under the source directory from where the command was launched and not into the 'processed' directory under the input folder of the domain root. Fixing the informalPositionMgr utility to place the processed files under the input folder processed directory resolved the issue.	15860149

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Domain Utilities - Load Measure	When loading a string type measure with blanks, the measure's values were set incorrectly. The LoadMeasure code is placing a 'true' when it encouters blanks to be loaded. Fixing the LoadMeasure utility to handle the blank values properly resolved the issue.	16635579
Domain Utilities - Load Measure	When loading a measure in multi-process mode with a clear (CLR) file, loadmeasure seems to clear out more cells then it needs to. Place the CLR file in the input directory and load the CLR file using loadMeasure with processes greater than 1. Check the PopCount. The apply process is based on one file at a time. When splitting the file in a multi-process mode, loadmeasure generates multiple files causing the clear intersection to be applied multiple times. Fixing loadmeasure to prevent the CLR file from getting split in the multi-process mode resolved the issue.	16775843
Domain Utilities - Load Measure	Loadmeasure fails in the multi-process mode if the OVR file contains lines which cannot be parsed. A malformed OVR file for a non-HBI measure cannot be loaded through loadmeasure only in a multi-process mode. The Measure File Splitter used by loadmeasure in a multi-process mode was returning an error when it encountered malformed data. The Measure file splitter code is modified to output the malformed data as a warning while continuing to load the well formed data which resolved the issue.	16165727
Domain Utilities - Load Measure	The LoadsToKeep parameter was not being respected when loadmeasure was executed. Consequently, the file system was getting filled up. Loadmeasure was leaving more staging arrays in staging db than the number specified in the LoadsToKeep measure attribute. The loads kept, were one more than the LoadsToKeep attribute. Fixing the cleanup to keep the correct number of staged loads resolved the issue.	13003901

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Domain Utilities - LoadHier	The values committed for user defined dimensions (UDDs) attached to the lowest level of the main product hierarchy spine were being replaced with "unassigned" after running the loadHier binary. While reloading existing positions using loadHier for UDDs defined on the root of the product hierarchy, the positions added through hierarchy maintenance workbook were reset back to 'unassigned'. LoadHier assumes the root positions in the input file to be new positions and sets them as 'unassigned'. LoadHier is fixed to check the existence of the UDD positions for the root dimension to resolve the issue.	16597771
Domain Utilities - LoadMeasure	In the Fusion Client, a picklist measure did not display the values even when there was data present in the master domain workbook array. There were some overwrite (OVR) files with carriage return and line feed terminators. These OVR files when loaded on a non windows platform get loaded into the measure array causing the picklist measure to display incorrectly. Fixing the code to remove the carriage return and the line feed terminators in the OVR file resolved the issue.	16507635
Domain Utilities - LoadMeasure	When using loadmeasure in multi-process mode where the base intersection was different from the load intersection, data loaded was not getting aggregated correctly. These steps included the following: Load an OVR file (size > 16 MB) for a partitioned measure using load measure with multiple processes. Register the measure with a load intersection lower than the base intersection. Finally, export the measure and compare the values with a single process run to find that the values were different. When splitting the data file in multi-process mode, loadmeasure was splitting it into multiple data files in the subdomain. These files by design were loaded individually affecting the aggregated value. Fixing the loadmeasure to split the data file in single process mode when it detects the base and load intersections are different resolved the issue.	17236054

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Domain Utilities - LoadMeasure	When executing the loadmeasure utility in order to load the time and date information into date measures, the time information was ignored and not loaded. The loadmeasure utility was stripping out the time portion of the value for the date time measures as it was hardcoded to use only %Y%m%d to parse the input string. Changing the format to use %Y%m%d%H%M%S to initially parse the string and if the string length is found to be less than that, switching to a %Y%m%d format resolved the issue.	17079692
Domain Utilities - LoadMeasure	The loadMeasure utility was causing performance issues in some situations while loading OVR and replace (RPL) files. Performance was improved by not staging the loads and by directly loading the data into the measure array. This approach can be taken only when there are no stage only measures and the apply loads option was not used, and when the load intersection is equal to the base intersection.	16424895
Domain Utilities - Mace	Mace was generating incorrect results while executing rule groups from the master domain when the rules in the rule group contained expressions with non-higher based intersection (HBI) measures. Instead of populating the local domains, the master domain measure database was getting populated. Even though the rule group contains only non-HBI measures, Mace was not designed to execute rule groups from the master domain, and then spawn the process across local domains since it works differently for special expressions which can have both HBI and non-HBI measure arguments on the left hand side (LHS). Other computation complexities dictated the Mace design to allow it to run only from local domains when non-HBI measures were involved. The rule group should only run from the master domain when all the LHS measures of the expressions in the rule group are HBI measures. Adding proper validation checks to Mace to detect these conditions and warn the user and exit gracefully resolved the issue.	16036821
Domain Utilities - Move Domain	The move domain utility fails while trying to relocate an individual sub-domain. The DomainManager path cache was not getting cleared after the sub-domain move. Fixing the logic and clearing the cache resolved the issue.	16785453

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Domain Utilities - Move Domain	The MoveDomain fails on some OS platforms when moving the source global domain and when the command was run from inside the source global domain directory. OS dependent behavior existed when trying to remove the current working directory of a process. Fixing the MoveDomain to check the domain path and determine whether it is the current working directory, and then changing it to the parent directory, resolved the issue.	16888762
Domain Utilities - Reclassification	The reclassification of partition dimension positions were taking took too long to complete. In any large domain containing populated measures, reclassification was exceeding the batch window. Reclassification logic was reworked to resolve the issue. Now the reclassification is achieved within the batch window.	16452486
Domain Utilities - RegMeasure	If a picklist measure was registered using RegMeasure with a range string containing only values, then the range string was getting stored in r_measpicklist measure array as a value(label) pair, where a default label was provided which matches with the value. If the same measure with only values in the range string was configured through config tools, and a domain was built, then only values are available in the domain r_measpicklist array. The measure registration process through the tools takes a different route compared to the measure registration process through RegMeasure. Fixing the RegMeasure utility code to avoid adding default labels when only values are provided during measure registration (keeping the behavior in sync with measure registration through tools) resolved the issue.	16602656
Domain Utilities - ReindexDomain	Running ReindexDomain on a domain where a prior ReindexDomain run failed, the recovery mode does not work properly corrupting the domain. When ReindexDomain was started a second time with a different set of parameters compared to the first run, it causes domain corruption. The second run is treated as a recovery mode and supplied parameters are ignored. Storing the first run parameters and reusing them resolved the issue.	17289616

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Domain Utilities - ReindexDomain	ReindexDomain defrags the dimensions even when there was no need for defragmentation because the dimension Capacity minus the Maximum Physical ID was greater than the threshold. When defragging was not required, the dimension registry was copied from the old dimension registry to the new dimension registry. While copying this dimension entry, the reindex process was incorrectly checking and storing some of the dimensions as candidates to be reindexed and hence they were getting reindexed. Fixing the ReindexDomain to properly check for the dimensions to be reindexed resolved the issue.	16370449
Domain Utilities - Transfer Data	The Transferdata utility does not give any indication either as an error or as an entry in the log when a mask measure not registered in the domain was used. Data transfer does not take place and the user was not informed about the invalid mask measure. Fixing the TransferData utility to inform the user and also log it as an error resolved the issue.	16291018
Domain Utilities - User Manager	The User Manager runs through, even when the user option was not specified or when multiple users were provided on the command line. The Utility class used for all RPAS utilities was not throwing an exception when there were extra arguments on the command line. Fixing the utility base class to throw an invalid argument exception resolved the issue.	17018697
Domain Utilities - User Manager	Previously, passwords could be changed only through the client interfaces (Change Password Dialog, Edit User Template). Now from the command line through usermgr, users can change passwords without logging in to the client. Adding an option called changePassword to the user manager resolved the issue.	13551133
Domain Utilities - wbbatch	Adding a workbook batch category using the wbbatch domain utility did not allow those categories to be deleted through the utility. Even after deleting the added category, the print queue still shows the category when the utility was run from the local domain. The wbbatch delete category process was not looping across local domains. Fixing the wbatch utility to loop across local domains while deleting the categories resolved the issue.	16297463

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Domain Utilities - Wbbatch & createGlobalDomain	The RPAS utility wbbatch was throwing an error when there were workbook auto build requests in different local domains. The workbook queue (WBQ) dimension was initially centralized, and the dimension registry for the WBQ dimension was present only in the global domain and not in the local domains dimension registry. Whenever the wbbatch utility was run from the local domain, an auto workbook build entry was made in the local domain but the wbq dimension registry entry was made in the global domain. Since the global domain dimension registry was storing all local domains wbq entries, whenever the wbbatch was utility was run from a particular local domain, an exception was getting thrown due to a wrong count of wbq entries made available to the utility. Decentralizing the WBQ dimension and modifying the createGlobalDomain and upgrade module resolved the issue.	14102982
Domain Utility - RIDE	The RIDE utility of RPAS was not working correctly when there were two or more partition dimension positions in a local domain. If there was more than one partition dimension position in a local domain, the RIDE utility prematurely exited after completing its run for the first position. Correcting the logic inside RIDE utility to loop over all the partition dimension positions resolved the issue.	17532256
Domain Utility - RPAC	Building workbooks through the RPAC domain utility results in a core dump on HP-UX. The problem was due to the class name conflict which causes an issue to call the correct library function. The RPAC utility uses a class named "MeasureWrapper", and a class with the same name also exists in RpasCore. During the workbook build, instead of calling RpasCore, the RPAC function was getting called. Renaming the RPAC utility class to "MeasureWrapperRpac" resolved the issue.	17212862
DomainDaemon - Usage	The DomainDaemon help was not clearly mentioning that the 'wallet' location also must be specified to stop the DomainDaemon. The DomainDaemon usage text was missing details about the 'wallet' specification at the time of stopping the DomainDaemon. Correcting the DomainDaemon usage text resolved the issue.	17044776

Table 1 (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
DomainUtilities - Argument Validation	Invalid or redundant arguments to UserMgr does not result in an exception being thrown. Using '-user' option with two users, 'user1' and 'user2', was not getting validated as an error. The base class that performs the command line parameters validation for all DomainUtilities is not checking this condition. Adding proper validation checks to the utility base class resolved the issue.	17024769
Fusion Client, Alerts	For Dynamic steps should not show up in taskflow	17416618
Fusion Client, CDT Editor	Users can successfully add a child node in the Consumer Decision Tree (CDT) editor.	16601283
Fusion Client, Charts	Fixed the odd looking grid lines on a chart when the min and max values for an axis are the same.	16217178
Fusion Client, Copy/Paste	Copy/Paste to the clipboard is no longer supported for Firefox version 15 ESR and above. The user will be required to use the "Copy to External..." and "Paste from External..." menu items for interaction with the system clipboard.	16483057
Fusion Client, Display/Sort	Attribute sort is now correctly applied after a measure edit and refresh of attribute values	16284100
Fusion Client, DPM	Added an informal position check for positions to be deleted in Dynamic Position Maintenance.	16230935
Fusion Client, DPM	In the case of a single Dynamic Position Maintenance Add, the name now defaults to skudpm prior to a save, and skudpm<sequencenum> after a save.	13112819
Fusion Client, DPM	A user is now allowed to close the Dynamic Position Maintenance editor after an error message is displayed.	17025640
Fusion Client, Dynamic Tasks	Fixed the IndexOutOfBounds Exception while opening or creating a workbook with dynamic tasks.	17437080
Fusion Client, Edit/Undo	User can now edit a value to include single or double quotes.	12907791
Fusion Client, Editing	A Measure was not editable when the base intersection of the measure was different from the worksheet base intersection. This issue is fixed	16485724
Fusion Client, Export to Excel	Fixed the scrolling issue in the export-to-excel dialog window.	16582216
Fusion Client, Export to Excel	Strip special characters from exported excel worksheet name	17348146

Table 1 (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Fusion Client, Fill	Selection size is restricted to 10000 as a default. It can changed in the rpasConfig.properties by adding the property named "ccp.max.selection.size".	16414143
Fusion Client, Fill/Clear	The spread method dialog box is now enabled even when the fill option is selected for a collapsed level.	16742502
Fusion Client, Grid Editing	Users should be able to enter more than 255 characters for text input in pivot table cells. The max limit for string measures is now set to 4096 characters.	17249575
Fusion Client, Level Splitting	Data formatting of attributes is now consistent with the cell data format.	14092354
Fusion Client, Locking	The Elapsed locks were not appropriately reflected when position names were not unique across levels within the calendar dimension. This is now resolved.	16445871
Fusion Client, Logging	The Default file name for the Fusion Client log file is now rpas_fc.log. It can be changed in the file log4jconfig.xml.	15917508
Fusion Client, Logging	A "rolling appender" is now a default for the Fusion Client logging.	16709218
Fusion Client, Measure profile	In certain cases, changing a measure profile was causing an exception. This is now fixed.	14786432
Fusion Client, Menus	The Revert menu option is enabled correctly after a lock/unlock action.	16020699
Fusion Client, Picklist	The Dynamic picklist now shows up correctly in a workbook.	16705727
Fusion Client, Picklist	The Server side exception for a picklist validation is now caught and a message is displayed to the user.	16858770
Fusion Client, Pivot	Addressed the handling of an auto position query with Find. Now correct positions should show up after using a Find on a pivot table	16920492
Fusion Client, Pivot Table	The Find implementation was incorrectly overriding the current pivot-table selection state to that from context-menu. This has been fixed.	15864100
Fusion Client, Pivot Table/Formatting	In IE9 the column/header resize settings were not being persisted, either in a workbook save or save to formatting. When the pivot table was refreshed the settings would revert. This issue is fixed.	17656305
Fusion Client, Session Management	Users were inadvertently getting logged out during a second session. This issue is fixed.	16935933
Fusion Client, Show/Hide measures	Fixed an issue with positions being hidden due to duplicate Calendar IDs.	17279233

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Fusion Client, Single Hierarchy Select	A Single Hierarchy Select measure now honors the formal only flag to display informal positions.	16492604
Fusion Client, Translation	The Date/time format for German is fixed in the rpasbundle properties file.	16841498
Fusion Client, UI	A user is now allowed to cancel out of a data validation error and quit the operation.	10065762
Fusion Client, Wizard	An exception does not occur anymore when cancelling a wizard in a multiuser scenario.	14844440
Fusion Client, Wizard	The User will see the search on 'Visible Attributes' processed sequentially as shown on the UI.	16785906
Fusion Client, Wizard	In certain situations, check marks on items in the available tree were not being removed after deselecting a previously selected item from the selected tree in a 2-tree pane. This issue is fixed	14829583
Fusion Client, Wizard	The Calendar position selection when viewed in the outline mode was not maintaining the sort order. This issue is fixed.	17265715
Fusion Client, Wizard	The Fusion client now closes the wizard when a server exception is thrown.	17504679
Fusion Client, Wizard	Fixed an exception in the Wizard, when "adding all attributes for both visible and sort attributes".	16760202
Fusion Client, Wizard	When the user makes a product selection in the workbook wizard and then removes positions, they still show in the workbook. With this fix, the removed positions do not show.	16311964
Fusion Client, Wizard	Fixed an issue with the sorting on column headers in the Wizard	15980162
Fusion Client, Wizard	Fixed an exception when canceling a wizard and no previous workbook was available.	15832977
Fusion Client, Wizard	Fixed the null pointer exception that was occurring when navigating away from a worksheet that had a validation exception on the pivot table.	17069012
Fusion Client, Wizard/Formatting	The dates are now correctly formatted for date data type wizard attributes in a Wizard page.	17331641

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Fusion Client, Workbook	When opening a saved workbook, a check on the server is performed to determine if the version of the dimension registry has been updated. If it has, the user is presented with a message stating that the Workbook and Domain DimRegistry versions are mismatched which will cause a likely delay in the opening of the workbook.	13510801
Fusion Client, Workbook	Fixed the exception that was happening on building a new admin workbook after navigating away from a dynamic workbook.	16230126
Fusion Client, Workbook	Fixed an issue with using 'cancel' in the select domain dialog while in the workbook page of an unsaved workbook.	14849885
Platform Specific - HP - UX	Some RPAS binaries were core dumping on HP-UX servers. PrintMeasureInfo utility was found to core dump occasionally on HP servers. The HP server makes a system call which sometimes was found to fail the first time for no exact reason. Ensuring the system call is triggered again when it fails resolved the issue.	17478281
RPAS	The argument -processes for the wbbatch utility is causing a success status message to be generated even if the wbbatch utility fails. When wbbatch was run without the -processes option, the utility returned an error status when workbook build failed. The same was not handled correctly when the processes option was used. Fixing the wbbatch code to properly return the error status if the workbook build fails resolved the issue.	16787207
RPAS Admin Guide Updates	At the time of measure registration, if comma separated negative numbers enclosed in single quotes were used to specify the range, then RegMeasure throws an invalid argument exception for range. When negative numbers are specified, the comma separated values must be enclosed in [] and not in single quotes. The RPAS Admin guide has been updated to reflect the above usage to resolve the issue.	16602564

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
RPASC	The Classic Client was throwing an invalid memory access exception when all the dimensions of a non-measure hierarchy were hidden and the user tried to select any of the context menu commands like 'Find', 'Range by Alerts', or 'Select display/sort'. The above context menu commands function only when a dimension exists. Since no dimension was available for selection, the client thrown an exception. Disabling those context menu commands which need a dimension to function properly (when all dimensions of a particularly hierarchy are hidden) resolved the issue.	16037389
RSC - Java Bridge API	The RPAS simulated client (RSC), which simulates Fusion Client, was ignoring command line parameters. Even when the input test file is passed in as a command line parameter, the RSC is looking for include directory and ignore scripts path. Enforcing proper validation checks to consider include directory and ignore script paths as optional when the input test file is passed in as a command line parameter resolved the issue.	16635827
Server - Aggregation & Spreading	While editing EOP measures at the aggregate level, the editing process is deleting other cells' data, which was not related. In some cases, a measure array was created at an aggregate level just before the calculation. Since the array changes at aggregate level do not exist, the change array gets created by copying the actual array which had to be created in full mode in this case, unlike the incremental mode. While spreading from aggregate to base level, a precision adjustment was performed, which was wiping out the date for other cells. Fixing the server code to bypass the precision adjustment check in this case resolved the issue.	17212475
Server - Alert Manager	The alert manager was throwing an exception while running findAlerts on an alert measure with a mixed case or upper case name. The alert manager utility was case sensitive, which was affecting the findAlerts functionality. Fixing the alert manager code to convert the alert name to lower case before findAlerts is run resolved the issue.	16873241
Server - Alert Manager	Alert Navigation does not start at the alert position navigated to when the workbook was saved and reopened. The navigation reverts back to the beginning. The current alert position was searched from the alert indices array at the wrong index. Fixing the server code to use a proper index resolved the issue.	17322252

Table 1 (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Server - Alert Manager	A batch run on a RDF domain fails with a position not found error. An alert name used as part of the batch run was found to be in mixed case string name instead of the expected lower case name. This caused the lookup to fail while looking up the alert_grp array for the mixed case alert. Converting the alert name to lower case before the lookup resolved the issue.	17206635
Server - Alert Manager	Even if an alert is 'new' in all sub domains, its status was still shown as 'resolved' in Master domain after running sumAlerts. The RPAS alert manager was not updating the alerts status with the sumAlerts option. Updating the alert status in the master domain with the sumAlerts option for the alerts which were having the same status across all the sub domains resolved the issue.	9216497
Server - AlertManager	Users were not able to build an AlertManager workbook on an RDF domain using the Forecast Approval template. There was a delay in ranging the hierarchy to filter non-alerted positions due to the fact that all the cells of the alert measure were impacted. This caused a time out while reading from the TCP/IP stream. Bypassing the ranging when the alert measure is fully populated resolved the issue.	17158249
Server - Alerts & Workbook Classic Client - Grid View	Alert Navigation functionality using the View / Find Next Alert menu was not working. The presence of excessive space between two dimensions caused an issue to parse the alert cell address. Removing the extra space between the dimensions resolved the issue.	17020698
Server - Auto Workbook Maintenance	The labels in the Auto Workbook Maintenance wizards were not translated. The Fusion Client was displaying the wizard ID in English. Also, the server was not sending the label to the client. Fixing the Auto workbook template code to send and translate the wizard label using the LanguageManager based on the language setting resolved the issue.	16514462

Table 1 (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Server - Bridge Transaction	The Fusion Client results in an exception when a user with a special character in their username performs a custom menu operation. When the username has special characters, the username and the user ID will be different. If the username has a special character like 'user.adm' then the userID will be a system generated one which will be like 'uid1'. This mapping occurs since we cannot have a user's workbook directory with special characters because of an OS restriction. The Server was making a username and userID comparison in one of the client / server client transactions which was causing this issue. Fixing the server to find the corresponding userID for the username with special characters resolved the issue.	15850686
Server - Commit ASAP	When the user was trying to commit values using Commit ASAP, the values were not getting committed to the domain. The server code was changed to log the resources during the commit process and that was causing an issue during commit in some situations. Removing the additional logging statements resolved the issue.	16631669
Server - Commit ASAP	When there was a pending commit ASAP request for a given workbook, any subsequent commit ASAP requests issued by the user for the same workbook were failing. Also, it was leaving the temporary Commit ASAP workbooks undeleted. Once an RPAS server moves a particular commit ASAP workbook entry to the pending queue, the RPAS workbook server scans the pending queue at regular intervals of time. It tries to restore the queue entry's workbook and if it fails to restore it, then the workbook was considered as invalid and the queue entry gets shifted to the failed queue. The Temporary Workbook restores or deletes operation failed because the RPAS workbook server could not find the workbook details in the workbook info array. The database cache was not refreshed and hence the workbook could not be found. Fixing the RPAS workbook server to refresh the database cache memory before restoring the workbook to ensure the process reads the latest updates to the database has prevented the restore operation from failing and resolved the issue.	16532143

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Server - Conditional Commit	Committing a zero value does not work for some measures although the commit goes successful. During a conditional commit in a particular situation, the server decides to loop over the populated cells in the source measure from the workbook and the destination measure from the domain. However, if the domain measure array does not conform with the condition measure, the loop fails without error skipping certain cells to be committed in the process. Fixing the server code resolved the issue.	16427042
Server - ConvertDomain	ConvertDomain failed while using absolute path with the "genUnlinkedList" option. The convertDomain was assuming the argument was a filename and passed it to the child processes multiple times to create multiple temp files. However, when it was a full path, all those temporary files pointed to the same file and caused the contention issue which caused the failure. Fixing convertDomain to properly handle absolute path while using the genUnlinkedList option resolved the issue.	14823069
Server - Copy and Paste	A server exception was thrown even if the range of the source measure was a subset of the range of the destination measure or if all the cells being pasted were within the destination range. When doing a server-side paste operation, the server checked if the measure ranges were equal. If not, the paste operation threw an exception stating that the ranges were incompatible. The server-side paste did not perform cell-by-cell range verification for measure ranges, although it does for dynamic upper and lower bounds. When performing a server-side paste, each cell is verified against the destination measure's range in addition to the dynamic upper and lower bounds. If any cell is out of bounds, then an exception is thrown and no cells are pasted. That fix resolved the issue.	9893822
Server - CopyDomain	The DPM process was not generating the next in sequence number when a DPM position was added to a workbook which was then saved, closed, and the domain converted to NT from Unix. When the user tries to create another DPM position, the DPM process does not come up with the next in sequence number. The issue was found to be in copyDomain which was not converting the auto sequence files. Fixing copyDomain resolved the issue.	14785907

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Server - CSV Parser	During the workbook build process, the server was throwing a CSV parser exception. The server side CSV parser constructor was not getting initialized properly with the correct set of arguments and hence the exception. Fixing the parser code resolved the issue.	16422828
Server - Custom Menu	Additional parameters need to be passed in to the custom menu script because the current workbook ID was not sufficient to uniquely identify it across local domains. With the introduction of the multi-solution task flow, the fusion client can initially log in to a global domain but can later shift to a local domain and conduct transactions. This has created an issue for Category Management, which requires a custom menu script to run on a particular workbook ID, which was not unique across all domains. Allowing the custom menu to pass in additional parameters such as domain path and user ID to the script resolved the issue.	17402370
Server - Custom Menu	When a custom menu triggers a server side script, the custom menu code was not passing on the workbook id as the first argument to the script. This was broken in the 13.4 RPAS version but found to be working in the 13.3.x version. In the cygwin environment, the workbook name (ID) was not passed to the custom menu script. Here the custom menu script was invoked through another "sh" shell using the "-c" option. The workbook id was passed to this shell instead of to the original script as shown: sh -c my_script.ksh workbook_id. Custom menu code is modified to enclose the script and the workbook Id in double quotes (sh -c "my_script.ksh workbook_id") to resolve the issue.	16921113
Server - Cut Copy & Paste	When non-elapsed cells were copied at the base level or at any level other than the All level and pasted at the All level, the values were getting pasted to the elapsed cells also. There was a check to verify whether a cell was elapsed or not when users performed a single row copy/paste. This check was missing when we were doing a multi row copy/paste. Fixing the server to do the check for elapsed cells when multi row copy/paste was used resolved the issue.	17300232

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Server - Dimension Attributes	Situations occurred where you could add a new hierarchy / dimension to the configuration and create measures with the baseint of the new dimension and use them as dimension attribute measures. If the user then patches the domain with these configuration changes, it results in an exception. When the user adds a new hierarchy with a dimension and then patch the domain, the dimension registry updates the new hierarchy and dimension in data/meta.db and in data/hmaint.db. When the user tries to add the dimension attribute, the dattmapping array which already exists was not getting updated with the new dimension that was getting patched. This is resolved by adding a check while registering the dimension attribute to determine that if the dimension does not exist in the dattmapping array but exists in the domain, then adding the dimension to the dattmapping array resolved the issue.	17274923
Server - Dimension Attributes	When changing a display attribute, the CC or the FC may throw an error indicating it was unable to convert the string to a date. The main cause was that when the display attribute includes a dynamic picklist measure, the RPAS server skips the attribute value, treating it as a not found value in the data array. Fixing the server to store the cell value into the data array resolved the issue.	16566822
Server - Dimension Attributes	Dimension attributes were not available to be selected in the 'Select Display and Sort Attributes' dialog box after a workbook was built and the product hierarchy was aggregated. Only label attributes were displayed in the Display and Sort Attributes dialog box and the other attributes of the roll up dimensions were not available for selection. The server side dimension attribute manager was not properly setting the flag for the rollup dimension attributes to be shown on the Display and Sort Attributes dialog box. Fixing the server code to set the flag correctly resolved the issue.	16279630

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Server - Dimension Attributes	The server was not allowing users other than owner to use the dynamic attributes they created when the workbook was initially saved with world permissions. When a user initially built the workbook and created a dynamic attribute and saved the workbook, any subsequent user was not able to make use of the dynamic attributes they created on the same workbook. The server was checking whether any subsequent user's dynamic attribute belongs to the owner of the workbook or not. Fixing the attribute manager code to bypass the check when the workbook has world privileges resolved the issue.	17084428
Server - Dimension Split	The logical dimension name was displayed instead of the logical dimension label when a dimension was split on a workbook, which was then saved and reopened. The logical dimension label was not being read from the dimension dictionary. Upon splitting a dimension, the logical hierarchy and logical dimension labels were set in the dimension dictionary. Reading the split label from the dimension dictionary resolved the issue.	16907193
Server - DPM	While using DPM to add placeholder positions for a particular dimension, the DPM functionality was not allowing modification of the DPM position rollup to another parent. This rollup change was not reflected in the hierarchy measure as it was still showing the old rollup name instead of the new one. The change was only reflected when adding a new DPM position. When modifying the rollup of a DPM position, the rollup aggregation for the measure was not recalculated. Placeholder positions aggregation was working only for adding or deleting a DPM position. Fixing the DPM code to update the rollup while modifying a DPM position resolved the issue.	16673055
Server - DPM Manager	The bulk add feature of DPM positions was affected when the user provides the base name for the positions and a count of positions to be added. The server generates a sequence of numbers which gets appended to the base name to generate a unique DPM position name. The server was sending an invalid prefix after the first position was added resulting in an exception. Changing the DPM manager to generate the correct name during bulk add resolved the issue.	16956324

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Server - Dynamic Attributes	A user connects to a domain through the client and creates dynamic dimension attributes on a workbook and logs off. When a second user logs in and tries to build the same workbook, a server exception is thrown. The second user was able to see the attributes created by the first user at the user level. Upon trying to use such attributes, a server exception gets generated. The function which filters user defined dynamic attributes based on the logged in user was not working properly. Modifying the dimension attribute manager to properly filter the attributes based on the username resolved the issue.	17247877
Server - Dynamic Hierarchies Formatting	When opening a workbook that contains dynamic hierarchies, if users save the format for a workbook only dimension, a dialog box gets displayed saying that the dimension was not found. When the saved format has a workbook only dimension that was not built with the current selection, the dimension in the format was not able to find the corresponding dimension in the workbook which leads to this error. Fixing the format to remove all workbook only dimensions that do not exist in the current workbook resolved the issue.	16856615
Server - Dynamic Template	The Fusion Client allows the domain selection at the time of the workbook build. When users try to build a workbook using the Fusion client, server was not updating partition dimension positions for the pre-range mask measure intersection, even if users try to build the workbook initially from a local domain and then without letting the workbook build to finish, cancel the build process and try to build the same template workbook on some other local domain. The dynamic template code was caching the pre-range mask measure intersection from the initial domain selection. That intersection's dimension space was later used to build subsequent pre-range mask measure which gets used to pre-range the wizard selections of the current build. This results in the same set of positions being displayed and used even when we switch domains for the build. Recreating the pre-range mask measure's intersection instead of using the cached one resolved the issue.	15829589

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Server - Elapsed Locks	Measures which were not editable became editable when rolled up to the all calendar level. Also elapsed measures became editable when aggregated. Elapsed locking functionality was broken at the all calendar level. The server passed the wrong dimname for the elapsed positions at the all calendar level. For the elapsed position allposclnd, an empty dimname was being sent. Fixing the dimname to alldimclnd resolved the issue.	17294168
Server - Fetch	During a server calculation, a fetch call was getting triggered for measures not currently visible on the client. These measures were part of the hidden windows. Because the results of the server calculation need to be fetched only for visible measures, this was causing a performance delay to display the results on the client. Fixing the server and client code to properly trigger the fetch resolved the issue.	17582209
Server - Formatting	Users were observing a server exception while trying to apply formatting to a workbook where the rollup dimension on a worksheet was a workbook only dimension and the workbook does not have that dimension built in to the workbook. The error occurs during the rollup on a worksheet or while applying the dimension styles. The workbook only dimension does not exist in the workbook, but the style format includes it as a rollup which was invalid. At the time of fetching the dimension styles the workbook only dimension was returned as null and hence the exception. Fixing the formatting on the server side, to detect the workbook-only dimension during a hierarchy rollup, so that if it is found it will replace it with the root of that hierarchy resolves the issue.	16874386

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Server - Hierarchy Maintenance Workbook	The hierarchy maintenance workbook was showing the measure name instead of the measure label after it was built, saved, closed and reopened. Register a user-defined dimension. Enable admin to modify that dimension and create a new hierarchy maintenance workbook on that dimension. Save the workbook, close it, and open the saved workbook and notice the measure name instead of measure label being displayed. During workbook build, the measure label was fetched from dim_ meas array. However, when the workbook was re-opened, the measure labels were searched in the translation table because these labels were getting translated. Translations do not exist for dynamic measures, and in such cases measure name gets returned. Fixing the server code to use the workbook version of the measure label if the measure label could not be found in the translation table resolved the issue.	17271478
Server - Hybrid Aggregation	Hybrid aggregation on a measure with 'ambg' as Defagg on 'clnd' and 'total' as Defagg on 'loc' and where the values at clnd level were not the same, does not result in a "?" at the AllClnd level. The 'ambg' aggregation initially performed on the 'clnd' produced the correct results and a "?" was observed. However, subsequent aggregation on the non-clnd dimension where the Defagg is other than 'ambg' was overwriting the previous aggregation results. Adding a check to prevent the 'ambg' results from getting overwritten if the src and dest dimensions are at the same level resolved the issue.	17269339
Server - In Context Launch	An RPAS In-context launch failed to save a workbook if a group was not specified in the save specs, even when the access privilege was not "group". The code checks both the label and group properties of the save specs. If either was empty, it skips saving the workbook. Removing the check for the group value in the save specs resolved the issue.	16485656
Server - Java Bridge	This issue is specific to AIX, where when a calculation involves multiplying two variables, which can take the values of -1 and 0, the result comes out as -0. On other platforms, the value returned was 0. Fixing the java bridge code to reset the value as 0 when it encounters a -0 resolved the issue.	17334392

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Server - Java Bridge	String interning speeds up string comparisons, which are sometimes a performance issue in applications (such as compilers and dynamic programming language runtimes) that rely heavily on hash tables with string keys. Without interning, checking that two different strings are equal involves examining every character of both strings. Fixing the Java bridge interface to use an intern during the above situations resolved the performance issue.	17300467
Server - Java Bridge	The Fusion Client was not displaying dates in the format configured by a user via the "Regional and Language Settings" There was a problem in the code which was hard coding the date format as %m%d%Y and setting the LocaleInfo date format to this pattern. Fixing the java bridge interface code to get the default date format for the current locale and use that to set the LocaleInfo's date format resolved the issue.	13795910
Server - Java Bridge Interface	A registered picklist measure does not display values and shows an empty drop down list on the Fusion Client. The Java Bridge Interface through which Fusion Client communicates with the RPAS server did not have the API to obtain information about picklist measures. Enhancing the Java Bridge API resolved the issue.	17311462
Server - Java Expression	Executing a Java expression (on a workbook) as part of a rule group using Mace causes a failure. If the base dimension in the workbook (say Week) was not the root dimension in the domain (say Day), a position calendar map gets created to map the base dimension position of the workbook to the root dimension position of the domain. Using the map, when Oracle Retail fetched a DateTime through workbook, the method invoked by the map, used the index on the domain root dimension which was Day here instead of using the index on the workbook base dimension, which was Week. Using the base dimension of the measure store (Workbook) to get the correct index resolved the issue.	17515944

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Server - Java Iterator	The Java expression API provides a Java Iterator which was not working as expected once the Iterator goes out of scope. The interface was designed to iterate over the data once and the use of the iterator beyond the end of loop was not properly defined. The behavior of the Java object using the iterator was undefined when the iterator goes out of scope. Fixing the iterator implementation to gracefully exit once it goes out of scope resolved the issue.	16514744
Server - Java Special Expression	The Java special expression ran out of memory when run from the command line. Setting the environment variable RPAS_ JAVA_MAXHEAPSIZE did not handle the memory issue. The Java special expression was creating a considerable number of cell accessor objects. These objects maintain a one to one mapping with the supporting C++ objects. It was these C++ objects that were causing the Java special expression to run out of memory. The Java special expression library has been modified to make use of new API which will cause the backend C++ objects related to the Java objects to be freed. This has resolved the memory issue. Now the Java special expression does not run out of memory.	16443519
Server - LoadHier	LoadHier was throwing an exception when the user tried to load data using the forceNAConsistency option. This option enforces the measure's NA value to be the cell value for newly added positions to the measure array when the measure array's NA value differs from the measure's NA value. The NA handling process while trying to enforce the NA consistency was not working correctly in loadHier. Fixing the loadHier to properly set the NA values for the newly added positions resolved the issue.	14736303
Server - Measure Analysis	Using a language other than English, the window labels on a measure analysis workbook were not getting translated. If users for example, set the client language to Portuguese and logged into the Fusion client to create a new measure analysis workbook, they found the window labels were not translated. Since the workbook was not saved yet, the server was not triggering the label translation properly. Measure analysis and workbook template code were modified to properly translate the labels to resolve the issue.	17156913

Table 1 (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Server - Measure Store	PrintArray on a fnhbi measure in a local domain results in an error after the local domain containing the fnhbi measures was moved out of the master domain directory. All the fnhbi measure arrays in the local domains contain the dimspace of the non-partition dimensions. Such arrays return the master domain dimregistry path which was set in the array options. Fixing the fnhbi measure arrays to use the local domain dimregistry path resolved the issue.	16054112
Server - Measure Store	Consider a global domain configured and built with some measures. Open the configuration through tools and remove all the measures and patch the domain. The <measure name>.db folders were getting removed from the master domain but were not getting removed from local domains even after all the measures were removed. The Master domain folder path was added to the top of a list of databases that need to be removed. Since the master domain path was removed first, the local domain paths were not getting removed. Fixing the server to remove the master domain path only after removing all the local domain paths resolved the issue.	14822082
Server - MultiSource Expression	When trying to perform an aggregation using multisource where the right hand side measure with nearest intersection was aggregated to the left hand side intersection, the result was coming out to be incorrect. When the option to perform aggregation was set to true, multisource tried to find the nearest right hand side (RHS) measure with base intx below the base intx of the left hand side (LHS) measure. However, the map used to find the nearest intersection had other intersections which were above LHS measure's intersection. This resulted in choosing the wrong measure's intersection by the multisource code. Fixing the multisource code to correctly choose the right hand side measure and aggregate its values resolved the issue.	17369110

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Server - MultiSource Expression	After adding or deleting adynamic position maintenance (DPM) position (on a DPM enabled dimension - part of the base intersection of the left hand side measure of a multisource expression), when the multisource expression was run, a server exception was getting thrown. MultiSource expression was expecting the intersections at aggregated levels which were not available because DPM operations were deleting the aggregated arrays. Regenerating the measure instance at aggregate levels as needed within the MultiSource expression resolved the issue.	17038160
Server - ODBC Driver	The AIP Dashboard uses an RPAS ODBC driver to execute SQL queries. One of the SQL queries was returning incorrect results when there was an OR clause. The bug was caused by the incorrect processing of specific filters. Changing the ODBC driver to process the filters correctly resolved the issue.	17423908
Server - ODBC Driver	Running an ODBC sql query against the dim_dim array resulted in an error. The dim_dim array does not contain the positions wbq, rule, and expr. While constructing the table for dim_dim, the ODBC driver needs to get the hier and hier_label columns for these positions, but fails because their rollups to the hier were empty. The dimension table code has been modified to make an exception for the dim_dim table to resolve the issue.	16382905
Server - ODBC Driver	The RPAS ODBC driver was returning internal position names instead of the expected labels for some SQL queries. When the query was in a pass-through mode (for table join), an old interface to obtain position labels was called which only accessed the master domain for label translation. If the position was on a dimension below the partition dimension, the label translation was only in the local domain and the old interface was not able to find it and hence was returning the internal position name which was the default behavior when a label was not found. Modifying the ODBC driver code to use a new interface to get the position label translation resolved the issue.	15868487

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Server - Spreading	In the RPAS fusion client, after locking some cells at the child level and then editing the parent cell value caused the parent value to be spread down to the child cells which were locked. If all the child cells were NA and some of them were locked, RPAS was spreading the value to the locked NA cells also. Spreading logic on the server is fixed to prevent the spreading of the parent value to child NA cells which are locked to resolve the issue.	16634662
Server - System Logs	System logs were getting filled up with unusual number of ReadLinks. The ReadLinks seen were meant for converting a file path that links to the real path. The ReadLinks were not cached, and because the server code tries to convert a domain path to a real path several times during the processing, the number of ReadLink calls appears to be quite significant. Fixing the code to cache the result of the ReadLink call resolved the issue.	16599570
Server - Transform Special Expression	While running Mace on a rule group which contains TransformProp special expression, Mace was throwing an exception. The special expression code was changing the database permissions to Write mode which was causing the exception to be thrown. Fixing the TransformProp special expression to set the right hand side measure's databases to Read mode resolved the issue.	16631818
Server - Translations	When attempting to input invalid values into a real measure outside of the configured measure range, the translated error message displayed on classic client in Russian was incorrect. It describes all values outside of the range as valid due to wrong translation. Fixing the Russian translation files resolved the issue.	17030187
Server - Translations	The Single hierarchy select error message was not properly translated. By making changes to the r_msglabel.ovr file, the issue was resolved.	11068813
Server - Translations	This issue was related to Portuguese translations as some of the existing translations were confusing when used with Portuguese. A translatable text is modified to make it sound meaningful for all the languages to resolve the issue.	9033513

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Server - Upgrade Module	While closing a Forecast Administration workbook, an RPAS server exception related to alerts hit count array stated that a workbook position cannot be deleted from the wb_hit_count array. The issue was that the wb_hit_count array in alert db was getting linked to the dimension registry which should not be the case. If the WB dimension in the hitcount array is the same as the WB dimension in the domain then the array is linked. Fixing the upgradeModule to recreate the hitcount array resolved the issue.	17248653
Server - User Administration Template	The User administration template was allowing users to be created even when no user group was selected. This was causing an empty group to be added resulting in the corruption of the security admin workbook. The default selection from the default groups list was not being sent from the server to client. Fixing the template code to select the first group in the default group list resolved the issue.	16329462
Server - User Management	When creating admin users with a mixed case name, the user manager fails with an exception. The domain configuration code was using user name instead of userID as a key while trying to look up the value in the array. Fixing the code to use the userID as a key instead of username while accessing the array resolved the issue.	16573769
Server - User Manager	The Admin user was unable to modify the Hierarchy Maintenance Workbook, until permission was granted explicitly via the Security Admin > Dimension Modification Rights workbook. The r_dim_mod measure keeps track of which dimensions the users can modify. For new admin users, the default rights were set to false in this measure. Fixing the usermgr to set a true value in measure r_dim_mod for the newly added admin users resolved the issue.	15949432
Server - Wbq Decentralization and DimRegistry	When the patchWbq script was run to decentralize the workbook queue, the script was leaving behind backup files in the dimregistry which interfered with the reindex operations causing the resulting dimregistry to be incomplete and corrupted. Fixing the patchWbq script and the DimRegistry code resolved the issue.	17288880

Table 1   (Cont.) Noteworthy Defect Fixes

Affected Component	Fixed Issue/Defect	Defect Number
Server - Wizard PQD Manager	The Position query definition name becomes ineligible when saved with a Chinese name. While creating the position query description file, the server was not recognizing the utf-8 multibyte characters and was replacing it with underscores. The issue was resolved by making sure the ASCII based character check was not adopted when the language was not English.	17390298
Server - WizardPage	In the Classic Client during wizard selections for a two tree wizard, rolling up to a higher level and deselecting the lower level positions did not work properly as the wizard was still displaying the lower level positions. The server created a range map with the dimension name and their positions for lookup during the wizard process. The map key was in upper case at the time of creation but at the time of the lookup, the key was provided in lower case and the map returned an empty set for the lower level dimension. Fixing the map and lookup to use a lower case dimension name resolved the issue.	17390954
Server - Workbook	For RDF, when a forecast delete was triggered through the client, the relevant arrays and databases were not getting removed from the domain. The master domain folder path was added to the top of a list of databases that need to be removed. Since the master domain database was removed first, the local domains database removal failed. Fixing the server to delete the master domain database after all the local domain databases are removed resolved the issue.	16310746
Server - workbook lock contention	During multi-user testing, users were experiencing longer wait times on the workbook while doing routine workbook operations such as modifying and calculating data. The log was showing delays to obtain write locks in order to write to certain RPAS arrays. When multiple processes were trying to request a WRITE lock at the same time, lock contentions were arising causing delays to finish the workbook operations. Server code is modified to remove the lock contentions to resolve the issue.	16540567

Known Issues

The Known Issues associated with this release are described below.

Table 2   Known Issues

Known Issue/Defect	Defect Number
Check marks disappear from selected and available items after a PQD save.	16713270
A message appears in the WebLogic console that adfc-12000: state id in request is invalid. This warning is benign and can be ignored.	16383140
The size of the pie charts becomes too small when there are many pie charts drawn on the chart view.	17670613
In the Fusion Client, users were observing traditional Chinese characters instead of simplified Chinese characters even when the language selected was simplified Chinese. The Oracle Retail translation team is researching this issue. It is possible that the proper translation labels are not provided in the OVR files for the simplified Chinese.	16552922
The IPCOE domain build fails on the HP-UX 64 bit platform. During the domain build, a Java expression was executed while loading the configured rules through RPAS ldrule domain utility and the java expression framework was failing to open the JVM. The issue was found to be a Java installation issue on the HP server. The Java patchset was found to be out of date (September 2010) and must be updated to March 2013 in order to meet the Java 7 requirements. Because this issue was detected late in the software development cycle, Oracle Retail could not make the update in time for the release without undue risk.	17436875
Users were observing a server exception when trying to do a dimension split on a platform configuration domain. The issue was traced to a hybrid aggregation measure being present on the worksheet where the dimension split was being applied. Without the hybrid aggregation measure present, there was no issue doing the split.	17671764

Related Documentation

For more information, see the following documents in the RPAS, Release 14.0 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 on My Oracle Support

The following documents are 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.

Supplemental Training on My Oracle Support

Transfer of Information (TOI) Material (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.

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