

Oracle® Retail Predictive Application Server

Release Notes

Release 13.1.2

January 2010

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

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

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

Important Steps to Address RMS-RPAS/RDF/MFP Integration

This section describes important steps to address the RMS-RPAS/RDF/MFP integration.

Change of Class and Subclass Naming

Oracle Retail Merchandising System (RMS) sends hierarchy files to Oracle Retail Demand Forecasting (RDF) and Oracle Retail Merchandise Financial Planning (MFP). RMS ensures that a class is unique to only its department and a subclass is unique to only its own class. In other words, Dept10 and Dept 20 both can contain Class 100. However, within RPAS, unless class names are unique across the domain, it results in a multi-parent problem. Until this release, RDF and MFP tried to ensure uniqueness by concatenation of positions as follows:

- RDF/MFP Class = RMS Dept + RMS Class
- RDF/MFP Subclass = RMS Dept + RMS Class + RMS Subclass

However, this can result in a multi-parent problem. For example:

RMS Department	RMS Class	RPAS Class
10	110	10110
101	10	10110

In this scenario, Clss10110 rolls into both Dept10 and Dept101. This is not acceptable in any RPAS application.

Resolution

Position names are made unique by adding an underscore. In the example above, the classes would be named Clss 10_110 and Clss101_10. However, when these position names are corrected and new hierarchy files are created, the existing class/subclass name no longer exists. Therefore, if the upgrade process is not specifically followed, any data that was stored at the class or subclass level (such as Clss10110 above) is erased.

Important: Failure to follow these upgrade instructions could result in data loss.

The following upgrade process needs to be followed only by the customers who:

- Use standard integration between RMS and RPAS based applications (other than AIP).
- Have stored data at class or subclass levels.
- Upgrade from a version prior to 13.0.4.18 to 13.0.4.18 or later. Those customers must apply the process described below. In the future, customers already on 13.0.4.18 or later do not need to use this process again.

Upgrade Process

1. Point the environment variable RPAS_HOME to the new RPAS_HOME.
2. Run the script \$RPAS_HOME/rfx/src/rmse_rpas_merchhier.ksh to generate the rmse_rpas_merchhier.dat file. This is how the new position names are generated.
3. Run repos.ksh with the -a n flag to produce the position rename file and run renamePositions **without** applying the changes. Examine the log file PRODrename.log for errors.
4. When ready, run the repos.ksh script without the -a y flag to apply the changes.

Change of Position Label Widths

Fields lengths for RDF and MFP hierarchies were increased to accept wider labels from RMS. These new field lengths are currently not patchable directly in any RPAS domain. Therefore, the following upgrade process must be followed:

Upgrade Process

All customers applying 13.0.4.18 and above should perform the steps below every time a new hot fix is applied.

1. Export the following environment variables in the environment before running the upgrade scripts.
 - UPGRADE_HOME: This variable should point to the path of upgrade scripts where environment.ksh, updateschemafiles.ksh, updatetoolsconfiguration.ksh, and other configuration files are present.
 - RDF_DOMAIN_PATH: The path of RDF domain which you are going to patch. The dimension field length of this RDF domain is taken and applied to the configuration and schema files.
 - RDF_SCHEMA_DIR: The RETL RDF schema files directory. This must be the latest release directory, which you use for patching. It points to the SCHEMA files location in the release, which you use for patching the RDF domain.
 - TOOLS_CONFIG_DIR: The Configuration Tools XML files directory. It points to the directory where the hierarchy.xml file is present. It must be the latest release directory which you use for patching.
 - UPGRADE_BACKUP_DIR: A backup of SCHEMA and hierarchy.xml files is kept in this directory.
2. Set up the following upgrade scripts:
 - updateschemafiles.ksh script updates the dimension field length of schema files to the length as available in the domain.
 - updatetoolsconfiguration.ksh script updates the dimension field length of configuration files to the length as available in the domain.
3. Change the directory to UpgradeScripts directory.

```
$ cd UpgradeScripts
```
4. Run updatetoolsconfiguration.ksh. This updates the hierarchy.xml file.

```
$ ./ updatetoolsconfiguration.ksh
```
5. Run updateschemafiles.ksh. This updates the RETL RDF schema files.

```
$ ./ updateschemafiles.ksh
```

Note: For added visibility for retailers, these instructions are included in the *RPAS Release Notes* and the *RDF Installation Guide*. In the future, see the *RDF Installation Guide* for more information.

Hardware and Software Requirements

See the *RPAS Installation Guide* for hardware and software requirements.

Functional Enhancements

RPAS 13.1.2 includes the following functional enhancements.

RPAS Configuration Manager

Many RPAS customers customize their configurations of RPAS solutions to be more aligned with their business needs. When these customers need to upgrade, they can use the RPAS configuration manager utility (*rpasConfiMgr*) to replicate their customizations on the new base release with as little manual configuration effort as possible. Customers can take advantage of new features of a configuration while maintaining their customized configuration.

The utility provides two different processes: diff and merge. Diffing is the identification of modifications between two versions of a configuration. Merging is the reconciliation between a base version and two modified versions of a configuration.

Taskflow Configuration

Note: The taskflow configuration enhancement is only for the RPAS Fusion Client. The RPAS Fusion Client is currently only available in RPAS 13.0.4.20 and is not available in this release.

Within the RPAS Configuration Tools, users can use the taskflow tool to configure a taskflow to be used within the RPAS Fusion Client. The taskflow directs users through various tasks and steps that have been setup to help them accomplish a business process. Taskflows contain activities that the user needs to complete. Each activity contains one or more tasks, which are mapped to a specific workbook. Within each task are one or more steps that are mapped to worksheets within the task's workbook. Users can create a default taskflow or create a customized taskflow to meet their specific business needs.

Technical Enhancement

RPAS 13.1.2 includes the following technical enhancement.

User Maintenance and Security Updates

The user manager utility has been updated to conform to Oracle security standards. The purpose of the changes is to protect the security of user and administrator accounts. In an effort to achieve this, the default accounts "adm" and "usr" are no longer created during a domain build.

The user manager utility converts user information from an XML file and vice versa. In addition to maintaining users, the utility also allows you to create and manage user groups. To create users, you must first create a database file called users.db from the XML file which contains the group and user information. This file is then imported into a domain. The database file can also be shared across multiple domains. To edit any user information, the database can be converted to XML and edited. This XML file contains all the user information except for the true passwords. When new users are added through the user manager utility, they are created with temporary passwords that need to be changed when first logging into the system.

A password policy administration workbook has been added to all RPAS domains. Using this workbook, administrators can configure password settings in order to ensure the account security of users and other administrators. Administrators can set password complexity, the number of allowable password attempts, the expiration time of the password, and the length of time a user is locked out of the system after a failed password attempt.

Noteworthy Defect Fixes

The following noteworthy defect fixes and enhancements are included in RPAS 13.1.2.

Fixed Issue/Defect	Defect Number
After a custom menu action, RPAS checks for an elapsed change. If an elapsed value changed, an action is passed to Client to update the elapsed lock.	8357123
^M characters were removed from the ODBC license file (oaserver.lic).	8465032
A warning message issued upon an empty position query was not properly translated. This was corrected in the translation mechanism in the client to display a properly translated message.	8527648
In outline view, if there were some measures with an aggstate of read-only, the user could not copy and paste since that created an "all measures must be writable for paste operation" error message. Now the user can copy and paste.	8554653
UpdateDpmPositionStatus utility is modified to handle the case of a missing DPM position and yet update the status of the remaining positions.	8563232

Fixed Issue/Defect	Defect Number
Workbook builds involving three or more chained templates (for example, an auto workbook build of alert manager for a SRP Eval workbook) would not properly range the hierarchies as desired by the final workbook (SRP Eval workbook in this example). The user can now see the correctly filtered hierarchy data for the specific template.	8563526
When dimension splits are used, cell locking and position locking did not function correctly and users received errors when edits were made at the aggregate levels. This occurred because once the cell was locked it was not being mapped correctly to the correct intersection. The problem is now resolved.	8564462
While setting up an auto workbook build for the Alert Manager, it was essential to have at least one alert hit before the user could setup the workbook. This condition is now removed and an alert workbook is auto-built for the alert hits within the selected hierarchy in the setup.	8567491
In the RPAS Client connected to a multi-lingual domain, when the user tries to open the Measure Rights worksheet of the Security Administration workbook, a code validation error occurred. This problem is now resolved.	8583960
When the measure displayed in the chart mode is scaled, changes made to the measure in the chart were not scaled appropriately, resulting in setting incorrect values. Now the scale factor is taken into account while changing the value in chart mode.	8591177
When a worksheet of a workbook was viewed at 200% zoom, the z-axis scroll bars disappeared. This problem has been corrected.	8723867
Workbooks based at a higher level than the root of a hierarchy could not be built in some cases. This has been corrected.	8752912
ExportMeasure did not consider that an array's naValue could differ from the measure's naValue; therefore, it skipped some export values. ExportMeasure now takes the array naValue into account.	8760059
loadmeasure was corrected to trim the trailing spaces while loading a string measure from fixed width load file.	8763253
In RMS and RDF integration scripts, the Domain_ID field length was modified to match that of the default value.	8772007
Commit ASAP process incorrectly held on to the available locks without releasing, until the other locks were made available. This caused a deadlock for the ODBC queries. This issue has been fixed so that the Commit ASAP process releases the locks immediately and tries to get all locked again after some time.	8776265
An exception formatting issue existed where a change made to the exception formats was not saved unless the measure itself has formatting changes. This has been corrected.	8777414
PrintMeasure previously printed the external position names for buffered positions but only internal names for other positions. This problem is now corrected. However, printArray is always supposed to print the internal names, and this behavior has not changed as part of this resolution.	8786716
A translations issue existed where the date input format was requested to be dd/mm/yyyy format but only a mm/dd/yyyy format was accepted. Now the date format is validated based on the system settings.	8788462

Fixed Issue/Defect	Defect Number
When "last" is used in an expression against an un-ordered dimension (in other words, a dimension from any hierarchy other than calendar), RPAS performed a coredump. Now, an error message appears and RPAS continues continue.	8804632
Worksheets with 15-character-long worksheet names were marked as invalid. However, only the names longer than 15 characters should have been marked as such. The validation rule is now corrected.	8816356
When exportData is used with the Wide option, often strange characters appear for naValues of string measures on AIX machines. These strings are now initialized properly on AIX machines so that no extraneous characters appear.	8826836
In the RPAS Client, window comes with no label. Also, the window uses the default hierarchy placement when the user tries to propagate a pre-existing window up to a higher saved format level without using "Include inherited user formatting". While the label part is corrected we will still have the default hierarchy placement because the user is trying to give incomplete window definition.	8837044
The pop-up window that shows the graph point information upon mouse-over is confused with regional settings. The format of chart data is now converted according to current locale.	8845341
The RPAS Client displayed the copyright symbol incorrectly in some southeast Asian languages; therefore, in those languages, this was changed to (c).	8849374
The RPAS Client did not display the translation for the words translation of the word "connection" properly in the login screen window. The translation resource file was corrected and this is now translated properly.	8849424
RPAS Client did not display the translation for the words "back" and "next" properly in the wizards. The translation resource file was corrected, and this is now translated properly.	8849862
The RPAS Client did not display the translation for the words "pending" and "failed" properly in the Commit ASAP window. The translation resource file was corrected, and this is now translated properly.	8850639
Users could not open several of the format menus (such as fill color, text, font, and border) within the client in any translated languages. The translation resource file was corrected, and the format menus can now be opened.	8850670
When a placeholder was created in a workbook, the placeholder is displayed in blue. Once the workbook was committed and the same placeholder was brought into a different workbook, it did not stay in blue to indicate that it was a real position as opposed to a placeholder position. This led to potential confusion. This has been corrected.	8850995
When using a tools distribution with RetekLabs plug-ins to load a configuration that does not contain grade plug-ins, users were getting an error message. Although it was only a non-destructive error message, it has been removed.	8855367
When errors in workbook configuration tool profiles are corrected, the task list does not get updated and the error is reported. This configuration tool problem has been corrected.	8856964

Fixed Issue/Defect	Defect Number
<p>There was a request to make F10/F11 traverse from the current cursor position. Current alert navigation is based on building a table of alert hits and navigating from one alert hit to another, rather than from any given position. Because the requested enhancement requires major rework of the alert functionality, a workaround has been provided. Users can hide/unhide positions and use F10/F11 to go to the next/previous alert from the current alert position. Each time a user hides/unhides positions, alerts are reset and a new alert hit table is generated. Users should unhide/show the positions and before navigating alerts. If the user already gone to an alert position and then decides to hide/unhide positions, F10 will return to the first alert and F11 will return to the last visible alert.</p>	8865310
<p>A problem with displaying Thai characters in the RPAS client wizard has been corrected.</p>	8879719
<p>While running multiple processes for loadHier, lock contention causes the "dimension dictionary copying" sub processes to time out. Because the lock was not released, dbbackupmanager could not revert the load, and database corruption occurred. Now, the meta databases are closed, ensuring that the contention or the failure does not happen.</p>	8884743
<p>Non-partition dimensions are no longer stored in local domain. As a result, loadHier has no mechanism to mark these dimensions as "changed" in the local domain. The ReshapeArray utility must look to the master domain to determine whether the non-partition dimension has been changed. The utility also must wait until postRun to reset the changed mask. But, because it looks for that information in the local domains, the users were seeing incorrect position names after each subsequent load of hierarchies. This problem is now resolved.</p>	8885361
<p>Connection-dropped problems were occurring during the formatting of custom workbooks (those containing sets of windows/worksheets, depending on wizard selections). This issue is now resolved.</p>	8885364
<p>When RPAS client users changed Z Axis selections by using the Show/Hide functionality, the other dimensions located in the Z Axis changed to the first position. Code modifications were made to cache the last shown nodes of all groups before hiding any positions.</p>	8890446
<p>In the Report Generator of the configuration tools, the report selection window had been cutting off the last few reports when there were a large number of entries. A scroll bar has since been added so that users can scroll down to see all of the reports.</p>	8895910
<p>In the Style tool of the Configuration tools, the border style selection popup dialog did not display correctly. This problem has been fixed.</p>	8896544
<p>While creating a domain on the Vista machine, the rpasInstall process errored out. This was a platform-specific bug and has been resolved.</p>	8917558
<p>In the Help About window, the domain_name property is set in the RPAS client only when the user logs into the first domain after opening the client. If the user logs off the first domain and logs into a new domain, the domain_name property is still displayed as the original name from the first domain. A method was added to clean up the domain name information upon logging off.</p>	8926039

Fixed Issue/Defect	Defect Number
Commit ASAP shows "successful" status, but after closing the workbook the status is changed to "unknown." This problem is not corrected.	8928293
When using Edit/Fill functionality for a picklist measure in RPAS client, a validation check is not done for the fill value. Also, the calculation process is not triggered once the value (valid or invalid) is filled. The edit control of the picklist measures in the edit/fill dialogue was modified to correct this problem.	8939135
Performance was very slow when many hierarchical positions are to expected for display in the two-tree wizard of the RPAS client. Several optimizations were made to improve the performance in this situation.	8976000
Although the configuration tools allowed for a special character in an attribute label, it was not displayed correctly in the RPAS client. Java does not supporting the passing of a Unicode character when spawning a Runtime.exec() subprocess. A new script is executed to circumvent this restriction.	8976399
Japanese characters were not being displayed correctly in the RPAS client, because the domain did not have the correct code-page information normally included in a new RPAS domain build. The domain build scripts were modified to correctly set code-page information.	8997510
The hierarchy maintenance workbook had displayed the measure's internal name rather than the label. The code has been changed to display the label instead of the measure name.	8997516
When RPAS builds an alert manager workbook through auto-workbook, only the alerted ITEM/STR combinations are brought into the workbook. However, if there are no alert hits, all the ITEM/STRs are included in the workbook, resulting in very large (and useless) workbooks. Now, if the workbook has no alerted Items, the building of the workbook is cancelled.	9013584
If there are only a few positions displayed in the two-tree wizard page of the RPAS Client, higher level dimensions sometimes put these newly displayed positions beyond the display area. But, because there are so few positions, the scroll bar is not displayed; so the user cannot scroll up to the new positions. This problem is now fixed.	9025643
The capability to add/remove user groups from the command line, using the usermgr command, has been added.	9032290
When doing a copy/paste into the date type measures in RPAS, dates in DD/MM/YYYY format are not accepted. Now, the date format is mapped to the date format current on the user's computer before it is validated.	9033652
When a range measure (a measure that is used to define the picklist options of a different measure) consists of ",," (two consecutive commas), the string was not considered a valid picklist options, and the client crashed as a result. Now, the string is parsed so that all empty elements are removed from being picklist options.	9036827
When a user tries to delete an informal position that should not be deleted, the user receives a valid error message that the position should not be deleted. However, upon clicking OK, further exceptions make the client unusable. This problem is now corrected.	9051732

Fixed Issue/Defect	Defect Number
When the edge of the right most cell is on the edge of the RPAS client window, pressing the right arrow will sometimes take the user to the left most column instead of displaying a new column to the right of the screen. This problem is now fixed.	9062497
In the RPAS client, if a parent cell is locked and all the child cells are changed through copy/paste-and if at least one cell is changed to the existing value-the results are unexpected. For example, if sales of 3 SKUs are 0, 2, 1 (adding up to 3) and the user wants to lock the parent cell at 3 but make the later two SKUs equal by copying and pasting 0,5,5, the result is -7,5,5. But the expected result is 0,1.5,1.5. The problem was corrected by marking every copied/pasted cell as a changed cell.	9081344
In the RPAS client, if the naValue of the parent level array of the Boolean measure differs from that of the base level array, incorrect results sometimes occur upon spreading. Now, the naValues are forced to be identical before replication begins, ensuring correct spread values.	9087191
Failures were occurring when the commit status of a workbook submitted for Commit ASAP is checked. For example, User 1 builds a new workbook, submits it for Commit ASAP, and closes out without saving. User 2 then initiates a new workbook build while User 1 is trying to check the commit status of his Commit ASAP. At this point, failures due to contention sometimes occurred. This problem is corrected.	9090907
When the user attempted to add an image to a dimension position, the RPAS client was crashing due to client server mismatch of calls. To resolve this problem, a minor modification was made to the way the client calls the server.	9092043
When copying to the clipboard from the RPAS client window, an extra empty row is being attached to the copied area. When the information is pasted into an Excel worksheet, that empty row wipes out any data that may have be in that row. The problem is now corrected.	9110047
A user with read-only access to a workbook template can delete a workbook of that template, provided the user is the owner of that workbook.	9112636
When accessing the non-partitioned hierarchy dimensions in local domains, the datacleaner portion of the loadHier operation fails. The failure occurs because the non-partitioned hierarchy information in the master domain is centralized. Datacleaner has been modified to access this information from the master domain.	9114483
When a dark color is selected for displaying a dimension, the color that is actually displayed is much lighter than the one selected. The reason is hierarchical shading is implemented as a standard feature. A modification was made to change the lightness from absolute to proportional, allowing the displayed color to be closer to selected color.	9124155
The Alert Manager window does not sort correctly when the header buttons are clicked. For example, clicking the date header should sort the data by date, but it does not sort at all. Also, clicking the Count header sorts the date column rather than the Count column. The index had been off by one, but columns sort properly now.	9128379

Fixed Issue/Defect	Defect Number
Dynamic hierarchies are built by accessing the rollup information from the first SKU included in the workbook. When a workbook is built using SKUs from different local domains, the system sometimes crashes from searching the wrong local domain for SKU information. The search now goes through all local domains.	9130078
In the wizard selection window, when the user attempted to display unpopulated attributes, any roll-up selection had generated an unexpected error. This problem is now corrected.	9138350
In the RPAS client, the Save Group Format menu was supposed to display all the user groups to which the user belonged. However, due to an incorrect resource ID mapping, this was not happening correctly in Portuguese client. The translation resource file is now corrected so that user groups display properly.	9145858
The RPAS client issues an error when the user attempts to paste the value of a formatted Excel worksheet cell into a workbook (for example, -\$2,500.00). The problem is now resolved.	9151536
In the RPAS workbook templates (such as administration templates), several strings were not translated correctly because they were not externalized. These strings are now translated properly.	9156602
When the user opened a configuration in Tools and attempted to add a security dimension, the Security Dimension field was not selectable. However, if the user clicked on a different cell, such as the User label, and returned to the Security Dimension field, it became selectable. This problem is now fixed.	9174890
New languages were added to the list of standard supported languages into which RPAS and RPAS-based applications are translated.	9183058
In the Workbook Tool of the Configuration Tools, if a user attempted to add a measure to the end of a profile, the tools would sometimes "hang" (with an hourglass cursor). This problem is now corrected.	9184210
The command line utility, wbmgr -wbList, does not provide correct output in local domains. The output is correct in the master domain or in a simple domain, but it is incomplete in a local domain. This problem is now corrected.	9184414
The hybridAggSpec measure property was not being recognized by the regmeasure utility. As a result, the property could neither be registered nor modified through regMeasure for a given measure. The regMeasure utility was modified to accept hybridAggSpec as an argument.	9185961
Due to an internal problem in the array iteration, the TransformAgg function performed incorrectly. The problem is now corrected; the calculation returns the correct values.	9193749
In the worksheet axis layouts, the Use Workbook Default Axis Layout attribute was not intended for use by the system. Problems resulted if the user inadvertently selected the default layout axis. Logging has been improved to send a clear message about the required change in configuration when default axis layout is accidentally selected.	9198059
Aggregating and sorting a measure with the ambig aggregation type had caused the system to crash. This problem is now fixed.	9198440

Fixed Issue/Defect	Defect Number
The loadHier process did not parse a .csv file with multi-byte characters and failed due to buffer overflow. The bufferspace is now dynamically reallocated whenever such overflow occurs, allowing the loadhier process to complete.	9202023
A workbook that required multiple arrays to be open crashed on Solaris 10 because it has a built in file descriptor limitation of 256 when using stdio functions such as fopen(). Solaris released a fix for this bug in the form of a function call that enables extended stdio, and this call is now in use.	9202150
A significant performance improvement was made to ensure the N/A consistency during loadhier operation.	9208536
When reshapeArrays was run in parallel across different local domains, the domains contended for the same meta database in the global domain. This problem is now resolved.	9211040
A comparison of releases 13.0.1 and 13.1.1 revealed a degradation in performance, so it has been fine tuned to get back on par with previous releases.	9212588
When moving from tab to tab in the RPAS client, screen images from the previous tab are seen in the new tab. The problem is now resolved.	9215910
When moving from one tab to the next in RPAS client, the window list is not updated unless one of the windows is maximized. This problem is now resolved.	9223774
In RPAS client, the following error occurred in the wizard after changing a rollup and moving back through the wizard pages: IllegalPositionName: 'DIMNAME1' not found in dimension 'DIM' for ArrayNamedKey. This problem is now resolved.	9224750
The User Label field in the Workbook Tab and Worksheet page within Workbook Designer Tool does not allow user to append to an existing name in the User label field. Any changes made will overwrite the entire field. This problem is now resolved.	9232629
In Configuration Tools, if the workbook group label is modified and the cursor remains in the field as the user closes the configuration, the user is not prompted to save. Also, if the user saves the configuration, the change is not picked up in the save. To fix this issue a call is made to the workbook tool to end the edit session before processing the close command.	9232972
The loadMeasure call crashes on positions that have to be indirected in theory (for example, a position name with special characters such as 1012:8:L). But the position does not exist in the domain. This problem is now fixed.	9255571
When making formatting changes in chart mode in RPAS client, the application crashes with an error ("unexpected exception has occurred"). The application shuts down and users lose everything they were working on. This is now resolved.	9266020

Related Documentation

For more information, see the following documents in the Oracle Retail Predictive Application Server 13.1.2 documentation set:

- *Oracle Retail Predictive Application Server Installation Guide*
- *Oracle Retail Predictive Application Server Licensing Information*
- *Oracle Retail Predictive Application Server Administration Guide*
- *Oracle Retail Predictive Application Server User Guide*
- *Oracle Retail Predictive Application Server Online Help*
- *Oracle Retail Predictive Application Server Configuration Tools Online Help*
- *Oracle Retail Predictive Application Server Configuration Tools User Guide*

Previous Releases

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

Supplemental Documentation at My Oracle Support

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

<https://support.oracle.com>

Oracle Retail Predictive Application Server 13.1.2 Cumulative Fixed Issues (Doc ID 973726.1)

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

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Value-Added Reseller (VAR) Language

Oracle Retail VAR Applications

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