

# Oracle® Retail Demand Forecasting

Release Notes

Release 13.3.3

December 2013

---

## Oracle Retail Demand Forecasting Overview

Oracle Retail Demand Forecasting (RDF) is a statistical and promotional forecasting solution. It uses state-of-the-art modeling techniques to produce high quality forecasts with minimal human intervention. Forecasts produced by the Demand Forecasting system enhance the retailer's supply chain planning, allocation, and replenishment processes, enabling a profitable and customer-oriented approach to predicting and meeting product demand.

All Oracle Retail Grade and Oracle Retail Curve documentation is included with the RDF documentation. The packaging and delivery of Curve and Grade remains the same.

---

**Note:** Because RDF, Curve, and Grade use the Oracle Retail Predictive Application Server (RPAS) platform, Oracle Retail recommends that you review the *Oracle Retail Predictive Application Server Release Notes* for fixed and known issues that may affect RDF.

In addition, RPAS 13.3 and later releases have significant technical enhancements related to hierarchy management (such as integer indexing) that have an effect on the configuration and maintenance of RDF, Curve, and Grade. You must upgrade to key RPAS versions and complete the upgrade process as described in the chapter, "Patch Installation" in the *Oracle Retail Demand Forecasting Installation Guide* before upgrading to a 13.3 RDF domain.

---

## Grade Overview

Grade is a clustering tool that provides insight into how various parts of a retailer's operations can be grouped together. Typically, a retailer may cluster stores over item sales to create logical groupings of stores based upon sales of particular products. This provides increased visibility to where products are selling, and it allows the retailer to make more accurate decisions in merchandising. Beyond this traditional use of clusters, Grade is flexible enough to cluster any business measure based on products, locations, time, promotions, customers, or any hierarchy configured in the solution.

Key Grade functionality includes:

- Two methods of creating Grades/Clusters:
- Breakpoints: the sorting of data points into groups based on user-defined indexes
- Clustering, or the BaNG Algorithm: the optimization of data points into clusters based on the user-defined number of clusters
- Group By capabilities: support the segmentation of clusters for more detailed and focused cluster generation
- Clustering statistics: provide insight into the relationship of members within a cluster and how all clusters relate to one another
- Cluster What-if: allows user changes to members assigned to clusters and the review of recalculated clustering statistics

Regardless of the method employed to create clusters, Grade is designed to support the decision-making process necessary to create effective and actionable groupings of data.

## Curve Overview

Curve is an optional automated predictive solution that can generate ratio arrays from historical data at user-specified intersections. The profiles generated by Curve can be used for various purposes; for example, they can be used to convert the organization level assortment plans into base level weekly sales forecasts and to generate seasonal forecasts, daily forecasts, or new product forecasts using lifecycle profiles.

## Important Steps to Address RMS/RPAS/RDF Integration

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

### Change of Class and Subclass Naming

Oracle Retail Merchandising System (RMS) sends hierarchy files to Oracle Retail Demand Forecasting (RDF). 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. Prior to Release 13.1.2, RDF tried to ensure uniqueness by concatenation of positions as follows:

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

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

RMS Department	RMS Class	RPAS/RDF 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 Clss10\_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 [Upgrade Process for Class and Subclass Naming](#). In the future, customers already on 13.0.4.18 or later do not need to use this process again.

### Upgrade Process for Class and Subclass Naming

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 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 for Field Lengths

All customers using 13.0.4.18 and earlier should perform the following steps 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 both the *Oracle Retail Demand Forecasting Release Notes* and the *Oracle Retail Demand Forecasting Installation Guide*. For more information, see the *Oracle Retail Demand Forecasting Installation Guide*.

---

## Upgrade Note

While not directly related to RDF, the 13.3 Release of Oracle Retail Predictive Application Server (RPAS) has undergone a major change to simplify hierarchy administration. Full details of these changes are outlined in the 13.3 *Oracle Retail Predictive Application Server Release Notes*. Due to these changes, configuration updates have been made to RDF, and you will need to perform additional steps to upgrade your RDF domain, such as setting dimension sizes. The upgrade to RPAS 13.3 or later for this application includes a conversion process in addition to the normal upgrade process. Details are provided in the chapter, “Patch Installation”, in the *Oracle Retail Demand Forecasting Installation Guide*.

## Hardware and Software Requirements

See the Oracle Retail Demand Forecasting Installation Guide for information about the following:

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

## Fixed Issues/Defects

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

Affected Component	Fixed Issue/Defect	Defect Number
Batch	The script, <code>exportRDFtoAPCRO.ksh</code> , cannot process relative domain path, therefore it fails to generate the forecast data file correctly. This issue is fixed to handle the relative domain path.	16324964
Batch	Unable to activate causal engine with user-specify promotion effect for items without promotion history. This issue is fixed to use the user-specify promotion effect during the forecast.	16538135
Batch	The Override from Higher Level in the Promotion Maintenance workbook does not work as documented. The <i>Oracle Retail Demand Forecasting User Guide</i> has been updated to correctly describe the function. Additionally, the issue is fixed to set the causal higher type promotion to auto type during the regression.	16629353
Batch	When overriding Product/Location to use Causal method with Causal not enabled, the forecast fails and hangs up. This issue is fixed by changing the code to alert an exception.	17602765
Clustering workbook	In Cluster, if a String type PointMembership is passed in, then the measure is set to an integer value and RPAS throws an exception. The issue is corrected.	16465493
Patching	The Forecast Administration settings changed by users are overwritten after patch. This issue is fixed.	17170941
Patching	An error occurs during batch registration when patching domain with the new Curve source level. The issue is fixed by adding CLVL to the list of Hierarchies for domain path.	17912365

## Related Documentation

For more information, see the following documents in the Oracle Retail Demand Forecasting 13.3.3 documentation set:

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

## Previous Releases

For additional information on previous Oracle Retail Demand Forecasting release enhancements and additional information, refer to the release notes and documentation that accompany the previous release.

## Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

### Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Copyright © 2013, Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this software or related documentation is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

**Licensing Note:** This media pack includes a Restricted Use license for Oracle Retail Predictive Application Server (RPAS) - Enterprise Engine to support Oracle® Retail Demand Forecasting only.

#### **Value-Added Reseller (VAR) Language**

##### **Oracle Retail VAR Applications**

The following restrictions and provisions only apply to the programs referred to in this section and licensed to you. You acknowledge that the programs may contain third party software (VAR applications) licensed to Oracle. Depending upon your product and its version number, the VAR applications may include:

- (i) the **MicroStrategy** Components developed and licensed by MicroStrategy Services Corporation (MicroStrategy) of McLean, Virginia to Oracle and imbedded in the MicroStrategy for Oracle Retail Data Warehouse and MicroStrategy for Oracle Retail Planning & Optimization applications.
- (ii) the **Wavelink** component developed and licensed by Wavelink Corporation (Wavelink) of Kirkland, Washington, to Oracle and imbedded in Oracle Retail Mobile Store Inventory Management.
- (iii) the software component known as **Access Via™** licensed by Access Via of Seattle, Washington, and imbedded in Oracle Retail Signs and Oracle Retail Labels and Tags.
- (iv) the software component known as **Adobe Flex™** licensed by Adobe Systems Incorporated of San Jose, California, and imbedded in Oracle Retail Promotion Planning & Optimization application.

You acknowledge and confirm that Oracle grants you use of only the object code of the VAR Applications. Oracle will not deliver source code to the VAR Applications to you. Notwithstanding any other term or condition of the agreement and this ordering document, you shall not cause or permit alteration of any VAR Applications. For purposes of this section, "alteration" refers to all alterations, translations, upgrades, enhancements, customizations or modifications of all or any portion of the VAR Applications including all reconfigurations, reassembly or reverse assembly, re-engineering or reverse engineering and recompilations or reverse compilations of the VAR Applications or any derivatives of the VAR Applications. You acknowledge that it shall be a breach of the agreement to utilize the relationship, and/or confidential information of the VAR Applications for purposes of competitive discovery.

The VAR Applications contain trade secrets of Oracle and Oracle's licensors and Customer shall not attempt, cause, or permit the alteration, decompilation, reverse engineering, disassembly or other reduction of the VAR Applications to a human perceivable form. Oracle reserves the right to replace, with functional equivalent software, any of the VAR Applications in future releases of the applicable program.

