

# Oracle® Retail Demand Forecasting

Release Notes

Release 14.1.1

May 2015

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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.

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**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 14.1.1 RDF domain.

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## 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 previous example, 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) is erased.

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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:
  - The `updateschemafiles.ksh` script updates the dimension field length of schema files to the length as available in the domain.
  - The `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
```

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**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*.

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## 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*.

## Performance Enhancements

RDF 14.1.1 includes the following performance enhancement.

### Runtime Improvements

The baseline and promotional forecasting runtime performance has been improved.

## Noteworthy Defect Fixes

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

<b>Affected Component</b>	<b>Fixed Issue/Defect</b>	<b>Defect Number</b>
Workbook	When building the Promo Maintenance workbook and selecting promotions, if the base intersection contains dimensions that are not on the main branch of the respective hierarchies, the build fails. Additionally, subsequent builds of the workbook fail. The work-around solution is to manually delete the selection file for the workbook.  This issue has been resolved.	18308110
Workbook	In an RDF domain using the RPAS Classic Client built using the Generally Available configuration, the Promotion Parameters worksheet is hidden after building a Promotion Maintenance workbook and selecting any level other than level 1.  This issue has been resolved.	18712982
Wizard	The Forecast Scorecard wizard allows you to select dimensions lower than the forecast level intersection.  This issue has been corrected.	19501711
Wizard	The wizard label, left label and right label have not been specified for the Extra Week Admin workbook. Hence the wizard name is being displayed. This issue has been corrected by displaying the wizard label.	19999110
Installer	When logging is on and the verbose setting is used for the new 3rd party approved version of Java Secure Channel (JSch), the following message displays: <i>"Caught an exception, leaving main loop due to Socket closed"</i> .  This message has no impact on the installer and should be ignored.  This issue has been resolved in RPAS.	20020194
Translation	Several of the translation files have the incorrect line endings.  This issue has been resolved.	20131255
Batch	Negative adjustments are made to sales values when the preprocessing method is Lost Sales Standard Exponential Smoothing (LS STD ES). This issue has been corrected, by making sure no negative adjustments are allowed.	20563882
Batch	The Apply Promotion Lift override is not working properly when the override is zero. This issue has been corrected, by applying the override, regardless of its value.	20602905
Batch	When using the Adjustable Approach to model Overlapping promotions, the Default Overlapping Promotion Adjustment Factor accepts real values, but the effect calculated is identical as if only the integer part of that value is taken into account. This issues has been corrected, by allowing, and using, real numbers.	20645250
Batch	If an exponential variable type has the <i>OVERRIDE FUTURE ONLY</i> option, the forecast is not calculated correctly. This issue has been resolved.	20799191

Affected Component	Fixed Issue/Defect	Defect Number
Workbook	The Forecast Scorecard error calculation works correctly only if all periods in the forecast horizon are included. This issue was resolved. The error is calculated correctly no matter which or how many forecast horizon periods are included.	20859760

## 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

## Known Issues

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

Known Issue/Defect	Defect Number
Currently, in Halo batch, the promotion variable (paggxlcirc) that calculates the system forecast is from the previous batch. If users change the promotion indicator between the previous batch and Halo batch, then the change does not occur.	17799032
When upgrading to version 14.1, if the current version is older than 14.0 and a lifecycle profile was configured in Curve, then the domains need to be rebuilt. Patching will not work.	Not applicable

## Related Documentation

For more information, see the following documents in the Oracle Retail Demand Forecasting Release 14.1.1 documentation set:

- *Oracle Retail Demand Forecasting Installation Guide*
- *Oracle Retail Demand Forecasting Release Notes*
- *Oracle Retail Demand Forecasting User Guide for the RPAS Classic Client*
- *Oracle Retail Demand Forecasting User Guide for the RPAS Fusion Client*
- Oracle Retail Predictive Application Server documentation

The following documentation may also be needed when implementing RDF:

- *Oracle Retail Planning Batch Script Architecture Implementation Guide*

## Supplemental Documentation

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

<https://support.oracle.com>

### **Oracle Retail Demand Forecasting 14.1.1 Cumulative Fixed Issues (Note ID 2000647.1)**

This document details the fixed issues and defects for all RDF, Curve, and Grade patch releases prior to and including the current release.

## **Supplemental Training on My Oracle Support**

The following document is available on the My Oracle Support Web site. Access My Oracle Support at the following URL:

<https://support.oracle.com>

## **Documentation Accessibility**

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