

**Oracle® Retail Replenishment Optimization**  
Administration Guide  
Release 13.0

April 2008

Copyright © 2008, Oracle. All rights reserved.

Primary Author: Gary O'Hara

The Programs (which include both the software and documentation) contain proprietary information; they are provided under a license agreement containing restrictions on use and disclosure and are also protected by copyright, patent, and other intellectual and industrial property laws. Reverse engineering, disassembly, or decompilation of the Programs, except to the extent required to obtain interoperability with other independently created software or as specified by law, is prohibited.

The information contained in this document is subject to change without notice. If you find any problems in the documentation, please report them to us in writing. This document is not warranted to be error-free. Except as may be expressly permitted in your license agreement for these Programs, no part of these Programs may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose.

If the Programs are delivered to the United States Government or anyone licensing or using the Programs on behalf of the United States Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the Programs, including documentation and technical data, shall be subject to the licensing restrictions set forth in the applicable Oracle license agreement, and, to the extent applicable, the additional rights set forth in FAR 52.227-19, Commercial Computer Software—Restricted Rights (June 1987). Oracle Corporation, 500 Oracle Parkway, Redwood City, CA 94065

The Programs are not intended for use in any nuclear, aviation, mass transit, medical, or other inherently dangerous applications. It shall be the licensee's responsibility to take all appropriate fail-safe, backup, redundancy and other measures to ensure the safe use of such applications if the Programs are used for such purposes, and we disclaim liability for any damages caused by such use of the Programs.

Oracle, JD Edwards, PeopleSoft, and Siebel are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

The Programs may provide links to Web sites and access to content, products, and services from third parties. Oracle is not responsible for the availability of, or any content provided on, third-party Web sites. You bear all risks associated with the use of such content. If you choose to purchase any products or services from a third party, the relationship is directly between you and the third party. Oracle is not responsible for: (a) the quality of third-party products or services; or (b) fulfilling any of the terms of the agreement with the third party, including delivery of products or services and warranty obligations related to purchased products or services. Oracle is not responsible for any loss or damage of any sort that you may incur from dealing with any third party.

## Value-Added Reseller (VAR) Language

- (i) the software component known as **ACUMATE** developed and licensed by Lucent Technologies Inc. of Murray Hill, New Jersey, to Oracle and imbedded in the Oracle Retail Predictive Application Server – Enterprise Engine, Oracle Retail Category Management, Oracle Retail Item Planning, Oracle Retail Merchandise Financial Planning, Oracle Retail Advanced Inventory Planning and Oracle Retail Demand Forecasting applications.
- (ii) 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.
- (iii) the **SeeBeyond** component developed and licensed by Sun Microsystems, Inc. (Sun) of Santa Clara, California, to Oracle and imbedded in the Oracle Retail Integration Bus application.
- (iv) the **Wavelink** component developed and licensed by Wavelink Corporation (Wavelink) of Kirkland, Washington, to Oracle and imbedded in Oracle Retail Store Inventory Management.
- (v) the software component known as **Crystal Enterprise Professional and/or Crystal Reports Professional** licensed by Business Objects Software Limited (“Business Objects”) and imbedded in Oracle Retail Store Inventory Management.
- (vi) the software component known as **Access Via**<sup>TM</sup> licensed by Access Via of Seattle, Washington, and imbedded in Oracle Retail Signs and Oracle Retail Labels and Tags.
- (vii) the software component known as **Adobe Flex**<sup>TM</sup> licensed by Adobe Systems Incorporated of San Jose, California, and imbedded in Oracle Retail Promotion Planning & Optimization application.
- (viii) the software component known as **Style Report**<sup>TM</sup> developed and licensed by InetSoft Technology Corp. of Piscataway, New Jersey, to Oracle and imbedded in the Oracle Retail Value Chain Collaboration application.
- (ix) the software component known as **WebLogic**<sup>TM</sup> developed and licensed by BEA Systems, Inc. of San Jose, California, to Oracle and imbedded in the Oracle Retail Value Chain Collaboration application.
- (x) the software component known as **DataBeacon**<sup>TM</sup> developed and licensed by Cognos Incorporated of Ottawa, Ontario, Canada, to Oracle and imbedded in the Oracle Retail Value Chain Collaboration application.

---

---

# Contents

<b>Preface .....</b>	<b>vii</b>
Audience .....	vii
Related Documents.....	vii
Customer Support.....	vii
Review Patch Documentation .....	vii
Oracle Retail Documentation on the Oracle Technology Network.....	vii
Conventions.....	viii
<b>1 Setting and Updating Replenishment Rule Groups .....</b>	<b>1</b>
Replenishment Rule Groups .....	1
Creating or Updating Replenishment Rule Hierarchy File.....	2
Creating or Updating rule_grp_def_file.txt File .....	3
<b>2 Setting and Updating Exception Groups .....</b>	<b>5</b>
Creating or Updating Exception Hierarchy File.....	5
Creating or Updating exp_def_file.txt File .....	5
<b>A Appendix: Flat File Interface Syntax.....</b>	<b>7</b>

---

---

# Preface

Oracle Retail Administration Guides are designed so that you can view and understand the application's 'behind-the-scenes' processing, including such information as the following:

- Key system administration configuration settings
- Technical architecture
- Functional integration dataflow across the enterprise
- Batch processing

## Audience

This document is intended for the users and administrators of Oracle Retail Replenishment Optimization (RO). This may include merchandisers, buyers, and business analysts.

## Related Documents

For more information, see the following documents in the Oracle Retail Replenishment Optimization 13.0 documentation set:

- *Oracle Retail Replenishment Optimization Release Notes*
- *Oracle Retail Replenishment Optimization Installation Guide*
- *Oracle Retail Replenishment Optimization User Guide*

## Customer Support

- <https://metalink.oracle.com>

When contacting Customer Support, please provide:

- Product version and program/module name.
- Functional and technical description of the problem (include business impact).
- Detailed step-by-step instructions to recreate.
- Exact error message received.
- Screen shots of each step you take.

## Review Patch Documentation

For a base release ("0" release, such as 13.0), Oracle Retail strongly recommends that you read all patch documentation before you begin installation procedures. Patch documentation can contain critical information related to the base release, based on new information and code changes that have been made since the base release.

## Oracle Retail Documentation on the Oracle Technology Network

In addition to being packaged with each product release (on the base or patch level), all Oracle Retail documentation is available on the following Web site:

[http://www.oracle.com/technology/documentation/oracle\\_retail.html](http://www.oracle.com/technology/documentation/oracle_retail.html)

Documentation should be available on this Web site within a month after a product release. Note that documentation is always available with the packaged code on the release date.

---

## Conventions

**Navigate:** This is a navigate statement. It tells you how to get to the start of the procedure and ends with a screen shot of the starting point and the statement “the Window Name window opens.”

---

**Note:** This is a note. It is used to call out information that is important, but not necessarily part of the procedure.

---

This is a code sample  
It is used to display examples of code

A [hyperlink](#) appears like this.

# Setting and Updating Replenishment Rule Groups

## Replenishment Rule Groups

Replenishment Optimization (RO) allows users to specify Replenishment rules based on business needs. For example, high selling SKUs in a certain Department in a Region might need to have special Replenishment Rules to meet business goals. User can specify these business rules through a flat file interface that is parsed by RO batch scripts. (Please refer to Appendix: Flat File Interface Syntax for more information.) This is called Replenishment Rule Group Definition.

Once Replenishment Rule groups are defined, Replenishment thresholds are entered for each Replenishment Rule group through the Replenishment Admin Workbook. Thus the Replenishment Rule Groups allow for the grouping item/Locations based on business criteria. The Replenishment Thresholds are then assigned to Replenishment Rules or Replenishment Rule IDs. A Replenishment Rule (ID) uniquely identifies a combination of Replenishment Method and its parameters.

The Replenishment Rule Groups, Replenishment Thresholds and the Replenishment Rule IDs (Replenishment Method and Parameters) are based on best practices developed by Oracle Retail Consulting. These are fed into the RO system via a combination of the Replenishment Rule Group Definition File (flat file interface) and the Replenishment Admin Workbook. For more details, please refer to the *RO User Guide*.

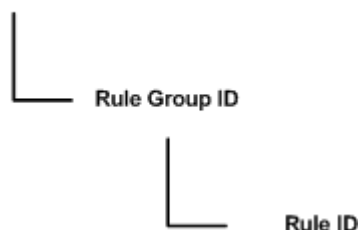
Creating and updating Replenishment Rule Groups is currently a three-step process:

1. Creating or updating the Replenishment Rule Hierarchy file and loading the hierarchy
2. Updating the flat file: rule\_grp\_def\_file.txt with necessary business constraints
3. Running "run\_create\_rule\_grps.sh" batch script

Note that the Replenishment Rule group criteria essentially consist of combination of hierarchy and measure values. Since these values must reflect changes in position names/reclassification of Items, the specification for these criteria is kept outside of the configuration using a flat file interface.

The Replenishment Rule Hierarchy is implemented in RO as a separate RPAS hierarchy with two dimensions. The Replenishment Rule ID dimension which rolls up to the Replenishment Rule Group dimension.

### Rule Hierarchy



## Creating or Updating Replenishment Rule Hierarchy File

This entails the Administrator defining a Replenishment Rule Group and Replenishment Rule ID roll ups. The number of Replenishment Rule Groups and Replenishment Rule IDs within each Replenishment Rule Group are a result of the best practices developed by the Oracle Retail Consulting group and are unique to each Client's business.

Once the number of Replenishment Rule Groups and Replenishment Rule IDs are established, the Replenishment hierarchy file (repl.dat) needs to be updated or created accordingly:

The number of Replenishment Groups is determined by the number of special sets of Replenishment Rules that need to be applied. For example, if there are two sets of special Replenishment Rules: one for High Selling SKUs in Dept A with average weekly sales > 800 and another for high cost Items in Dept B with average unit cost > \$400 then there will exist **three** Replenishment Rule Groups. One each for the 2 business criteria above and a third "Default" Replenishment Rule Group for all other item/locations that don't meet the above criteria.

The Replenishment Rule Group IDs are assigned based on the order in which the business criteria are entered in the flat file interface (rule\_grp\_def\_file.txt). It is therefore important that they align correctly with the hierarchy file (repl.dat). The Default Replenishment Rule group will automatically get assigned to the first Replenishment Rule Group ID (i.e., the first position in the Replenishment Rule Group dimension). Each subsequent business criteria or rule specified in the rule\_grp\_def\_file.txt will get assigned to the next position in the Replenishment Rule Group dimension.

In our example, we have established that we need three Replenishment Rule Group IDs. We now need to assign corresponding Replenishment Rule for each Replenishment Rule Group (this number can be different for different Replenishment Rule Groups).

Thus to summarize, first identify the number of distinct Replenishment Rule Groups are needed. This number should equal the number of special Replenishment Rule sets plus one for the Default set of Replenishment Rules. Next, identify the number of distinct Replenishment Rule IDs that need to exist within each Replenishment Rule Group.

---

---

**Note:** It is useful to enter descriptive hierarchy labels to make the Replenishment Rule groups and IDs more intuitive.

---

---



Below is an example repl.dat hierarchy file:

1_1	LowVolume/LowVariability-Default Group	1	Repl Grp 1-Default
1_2	LowVolume/HighVariability-Default Group	1	Repl Grp 1-Default
1_3	HighVolume/LowVariability-Default Group	1	Repl Grp 1-Default
1_4	HighVolume/HighVariability-Default Group	1	Repl Grp 1-Default
2_1	LowVolume/LowVariability-Repl Group 2	1	Repl Grp 2-Dept1310 Or
Dept1110 and Average Revenue>800			
2_2	LowVolume/HighVariability- Repl Group 2	1	Repl Grp 2-Dept1310 Or
Dept1110 and Average Revenue>800			
2_3	HighVolume/LowVariability- Repl Group 2	1	Repl Grp 2-Dept1310 Or
Dept1110 and Average Revenue>800			
2_4	HighVolume/HighVariability- Repl Group 2	1	Repl Grp 2-Dept1310 Or
Dept1110 and Average Revenue>800			

## Creating or Updating rule\_grp\_def\_file.txt File

The rule\_grp\_def\_file.txt is the flat file interface for Administrators to enter business criteria for special Replenishment Rule sets. This flat file is parsed by the run\_create\_rule\_grps.sh batch script, which processes these criteria and assigns corresponding Replenishment Rule IDs to item/locations.

In our example above, we have two special business criteria: one for High Selling SKUs in Dept A with average weekly sales > 800 and another for high cost Items in Dept B with average unit cost > \$400.

Say the Average Weekly Sales are stored in the measure: AvgSalesU

Average Unit Cost is stored in the measure: GCost\_

This would translate to the following two criteria that need to be entered by user:

deptDIM=="A"&& AvgSalesU > 800

deptDIM=="B" && GCost\_ > 400

Please refer to Appendix: Flat File Interface Syntax for more information.

---

## Setting and Updating Exception Groups

RO allows users to input different Exception or Alert thresholds for item/locations that meet specific business criteria. For example, if it is important to watch the out of stock rate for high revenue items of Dept A more closely, it can be done so by specifying lower Alert thresholds for this group of items. This grouping of item/locations to specify alert thresholds can be considered analogous to the Replenishment Rule Groups definition. In fact, both of these functionalities are implemented in the same way with in RO.

The exception grouping is implemented in RO as a separate, single dimension hierarchy with in RPAS (similar to the Replenishment Rule hierarchy).

### Creating or Updating Exception Hierarchy File

This entails specifying the pre-determined number of exception groups. For example, if high revenue Items ( $\text{AvgDemandR} > 400$ ) of Dept A are to be treated specially:

The exception dimension consists of two positions: the Default Exception group and the special group of item/locations that meet the above business criteria.

An example of the excp.dat hierarchy file would be as follows:

```
1           Default
2           DeptA and AvgDemand Revenue > 400
```

Note that this hierarchy only consists of one dimension.

### Creating or Updating exp\_def\_file.txt File

Creating or updating this file is similar to updating the rule\_grp\_def\_file.txt file. For our example above, the entry in the exp\_def\_file.txt would be as follows:

```
DeptDIM=="A" && AvgDemandR > 400
```

This file is parsed by the run\_create\_exp\_grps.sh batch script which assigns a Default Excp ID (first position in the excp.dat hierarchy file) for all item/locations that don't meet the above criteria and assigns the special excp ID (second position in the excp.dat hierarchy file) for all item/locations that meet the above criteria.

---

## Appendix: Flat File Interface Syntax

As noted previously, the Replenishment Rule group and Exception group criteria essentially consist of combination of hierarchy and measure values. Below is the syntax for specifying these criteria in the flat file interface. Note that the same syntax applies for both the rule\_grp\_def\_file.txt and exp\_def\_file.txt.

1. Each business criteria is entered as a single line and delimited by end of line.
2. Hierarchy dimension criteria are entered followed by the keyword "DIM". For example, Dept is entered as deptDIM and Subclass is entered as sclsDIM.
3. Measure values are entered as is.
4. AND is entered as keyword: &&.
5. OR is entered as keyword: ||.
6. Braces: () help identify the precedence of expressions.

**Example:**

```
(deptDIM== "1310" || deptDIM == "1110") && avgdemandr > 800
```

7. RHS character values are to be entered in double quotes: " ".
8. The default grouping is implicit and is applied to all item/locations that do not meet any of the specified criteria. This criteria does not need to be specified.
9. If the same item/location meets more than one business criteria, it is assigned the first criteria that it meets. The precedence is based on the order in which this criterion is entered in the flat file. This logic was put in place to avoid accidentally overriding assignment.