

Oracle® Profitability Manager

User's Guide

Release 12

Part No. B31407-03

March 2008

Oracle Profitability Manager User's Guide, Release 12

Part No. B31407-03

Copyright © 2005, 2008, Oracle. All rights reserved.

Primary Author: Rita Aberbach, Hugh Mason

Contributing Author: Mike Casey, Joseph Stolz

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.

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.

Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

Contents

Send Us Your Comments

Preface

1 Introduction to Profitability Manager

About Profitability Manager.....	1-1
Profitability Manager Features.....	1-2
High Level Architecture.....	1-2
Reporting and Data Analysis.....	1-3
The Profitability Manager Environment.....	1-3
Overview: Defining a Profitability Model.....	1-6
Overview: Customer Profitability Analysis.....	1-7

2 Setting Up Profitability Manager

About Setting Up Profitability Manager.....	2-1
Pre-Implementation Considerations	2-2
Installation.....	2-3
Set Signage Methodology.....	2-4
Set Track Event Chain Profile Option.....	2-5
Set Up Responsibilities and Users.....	2-5
Set Up Security Folders.....	2-6
Set Up Datasets and Dataset Groups.....	2-6
Create Global Valueset Combination.....	2-7
Register Tables and Columns.....	2-8
Specify Input and Output Columns for Mapping.....	2-9
Populate Dimensions.....	2-12

Populate Data Tables.....	2-12
Set Application Preferences.....	2-12
Set Up Statistics.....	2-13
Set Up Oracle Workflow.....	2-13
Apply EPF-Core Business Area.....	2-14

3 Profitability Manager Administration

About Profitability Manager Administration.....	3-1
Summary: Profitability Manager Administration Functions.....	3-1
Working with Composite Dimensions (Activity and Cost Object).....	3-3
Working with Statistic Definitions.....	3-5
Working with Column Population Templates.....	3-8
Working with Factor Tables.....	3-13

4 Working with Mapping Rules

About Mapping Rules.....	4-2
Uses for Mapping Rules.....	4-3
Mapping Rule Prerequisites.....	4-3
Mapping Rule Processing.....	4-4
Creating a Mapping Rule.....	4-5
Mapping Rule Formula Types.....	4-8
Rule Version Tab.....	4-16
Building a Formula — The Formula Tab.....	4-17
Debit and Credit — The Target Tab.....	4-17
Rule Validations.....	4-20
The Review Tab.....	4-20
Track Contributions Option.....	4-21
Mapping Rule Examples.....	4-21
Using Mapping Rules for Cost Object Calculations.....	4-23
Specifying a Condition for a Mapping Rule.....	4-24
Submitting a Mapping Rule for Approval.....	4-24
Running a Mapping Rule.....	4-24
Viewing Results for a Mapping Rule.....	4-26
Updating a Mapping Rule.....	4-27
Reverting a Mapping Rule.....	4-28
Duplicating a Mapping Rule.....	4-28
Deleting a Mapping Rule	4-29
Viewing a Mapping Rule.....	4-30

5 Working with Customer Profitability Rules

About Customer Profitability Rules.....	5-1
About Customer Profitability Analysis.....	5-2
Customer Profitability Process Overview.....	5-3
Prerequisites for Customer Profitability Rules.....	5-4
Account Consolidation Rule.....	5-5
Profit Aggregation Rule.....	5-7
Value Index Formula.....	5-10
Profit Calculation Rule.....	5-12
Specifying a Condition for a Customer Profitability Rule.....	5-14
Submitting a Customer Profitability Rule for Approval.....	5-14
Running a Customer Profitability Rule.....	5-15
Viewing Results for a Customer Profitability Rule	5-16
Updating a Customer Profitability Rule	5-17
Reverting a Customer Profitability Rule.....	5-18
Duplicating a Customer Profitability Rule.....	5-18
Deleting a Customer Profitability Rule.....	5-19
Viewing a Customer Profitability Rule.....	5-20

6 Working with Activity Rules

About Activity Rules.....	6-1
Prerequisites for Activity Rules.....	6-2
Activity Cost Rollup Rule.....	6-4
Activity Statistic Rollup Rule.....	6-6
Activity Rate Rule.....	6-8
Cost Object Unit Cost Rollup Rule.....	6-13
Specifying a Condition for an Activity Rule.....	6-15
Submitting an Activity Rule for Approval.....	6-16
Running an Activity Rule.....	6-16
Viewing Results for an Activity Rule.....	6-18
Updating an Activity Rule.....	6-18
Reverting an Activity Rule.....	6-19
Duplicating an Activity Rule.....	6-19
Deleting an Activity Rule.....	6-20
Viewing an Activity Rule.....	6-21
Using Mapping for Additional Cost Object Calculations.....	6-22

7 Profitability Manager Reporting

About Reports.....	7-1
--------------------	-----

Reporting Prerequisite.....	7-1
Running Seeded Workbooks.....	7-2
Seeded Workbook: Multi Dimensional Cost and Statistics.....	7-2
Seeded Workbook: Customer Profitability by Level and Decile.....	7-3

A Workflow Notifications

About Workflow Notifications.....	A-1
Subscribing to Notifications.....	A-1

Index

Send Us Your Comments

Oracle Profitability Manager User's Guide, Release 12

Part No. B31407-03

Oracle welcomes customers' comments and suggestions on the quality and usefulness of this document. Your feedback is important, and helps us to best meet your needs as a user of our products. For example:

- Are the implementation steps correct and complete?
- Did you understand the context of the procedures?
- Did you find any errors in the information?
- Does the structure of the information help you with your tasks?
- Do you need different information or graphics? If so, where, and in what format?
- Are the examples correct? Do you need more examples?

If you find any errors or have any other suggestions for improvement, then please tell us your name, the name of the company who has licensed our products, the title and part number of the documentation and the chapter, section, and page number (if available).

Note: Before sending us your comments, you might like to check that you have the latest version of the document and if any concerns are already addressed. To do this, access the new Applications Release Online Documentation CD available on Oracle MetaLink and www.oracle.com. It contains the most current Documentation Library plus all documents revised or released recently.

Send your comments to us using the electronic mail address: appsdoc_us@oracle.com

Please give your name, address, electronic mail address, and telephone number (optional).

If you need assistance with Oracle software, then please contact your support representative or Oracle Support Services.

If you require training or instruction in using Oracle software, then please contact your Oracle local office and inquire about our Oracle University offerings. A list of Oracle offices is available on our Web site at www.oracle.com.

Preface

Intended Audience

Welcome to Release 12 of the *Oracle Profitability Manager User's Guide*.

This guide assumes you have a working knowledge of the following:

- The principles and customary practices of your business area.
- Oracle Profitability Manager

If you have never used Oracle Profitability Manager, Oracle suggests you attend one or more of the Oracle Applications training classes available through Oracle University.

- The Oracle Applications graphical user interface

To learn more about the Oracle Applications graphical user interface, read the *Oracle Applications User's Guide*.

See Related Information Sources on page x for more Oracle Applications product information.

TTY Access to Oracle Support Services

Oracle provides dedicated Text Telephone (TTY) access to Oracle Support Services within the United States of America 24 hours a day, seven days a week. For TTY support, call 800.446.2398.

Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive

technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Accessibility standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For more information, visit the Oracle Accessibility Program Web site at <http://www.oracle.com/accessibility/>.

Accessibility of Code Examples in Documentation

Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

Accessibility of Links to External Web Sites in Documentation

This documentation may contain links to Web sites of other companies or organizations that Oracle does not own or control. Oracle neither evaluates nor makes any representations regarding the accessibility of these Web sites.

Structure

- 1 Introduction to Profitability Manager**
- 2 Setting Up Profitability Manager**
- 3 Profitability Manager Administration**
- 4 Working with Mapping Rules**
- 5 Working with Customer Profitability Rules**
- 6 Working with Activity Rules**
- 7 Profitability Manager Reporting**
- A Workflow Notifications**

Related Information Sources

This document is included on the Oracle Applications Document Library, which is supplied in the Release 12 DVD Pack. You can download soft-copy documentation as PDF files from the Oracle Technology Network at <http://otn.oracle.com/documentation>, or you can purchase hard-copy documentation from the Oracle Store at <http://oraclestore.oracle.com>. The Oracle E-Business Suite Documentation Library Release 12 contains the latest information, including any documents that have changed significantly between releases. If substantial changes to this book are necessary, a revised version will be made available on the online documentation CD on Oracle *MetaLink*.

If this guide refers you to other Oracle Applications documentation, use only the Release 12 versions of those guides.

For a full list of documentation resources for Oracle Applications Release 12, see Oracle

Applications Documentation Resources, Release 12, Oracle*MetaLink* Document 394692.1.

Online Documentation

All Oracle Applications documentation is available online (HTML or PDF).

- **PDF** - PDF documentation is available for download from the Oracle Technology Network at <http://otn.oracle.com/documentation>.
- **Online Help** - Online help patches (HTML) are available on Oracle*MetaLink*.
- **Oracle MetaLink Knowledge Browser** - The Oracle*MetaLink* Knowledge Browser lets you browse the knowledge base, from a single product page, to find all documents for that product area. Use the Knowledge Browser to search for release-specific information, such as FAQs, recent patches, alerts, white papers, troubleshooting tips, and other archived documents.
- **Oracle eBusiness Suite Electronic Technical Reference Manuals** - Each Electronic Technical Reference Manual (eTRM) contains database diagrams and a detailed description of database tables, forms, reports, and programs for a specific Oracle Applications product. This information helps you convert data from your existing applications and integrate Oracle Applications data with non-Oracle applications, and write custom reports for Oracle Applications products. Oracle eTRM is available on Oracle *MetaLink*.

Integration Repository

The Oracle Integration Repository is a compilation of information about the service endpoints exposed by the Oracle E-Business Suite of applications. It provides a complete catalog of Oracle E-Business Suite's business service interfaces. The tool lets users easily discover and deploy the appropriate business service interface for integration with any system, application, or business partner.

The Oracle Integration Repository is shipped as part of the E-Business Suite. As your instance is patched, the repository is automatically updated with content appropriate for the precise revisions of interfaces in your environment.

Oracle Enterprise Performance Foundation User's Guide

This guide describes Oracle Enterprise Performance Foundation, an open and shared repository of data and business rules that provides the framework for all of the applications in the Corporate Performance Management set of products. It describes the product features that allow you to manage repository metadata and enable you to generate management reports and perform analyses.

Oracle Applications User's Guide

This guide explains how to enter data, query, run reports, and navigate using the graphical user interface (GUI). This guide also includes information on setting user profiles, as well as running and reviewing reports and concurrent processes.

Oracle Applications Concepts

This book is intended for all those planning to deploy Oracle E-Business Suite Release 12, or contemplating significant changes to a configuration. After describing the Oracle Applications architecture and technology stack, it focuses on strategic topics, giving a broad outline of the actions needed to achieve a particular goal, plus the installation and configuration choices that may be available.

Installing Oracle Applications: A Guide to Using Rapid Install

This guide provides information about using the Rapid Install utility to install Oracle Applications Release 12, or as a part of an upgrade from Release 11i to Release 12. Discusses Standard and Express installations, fresh or Vision Demo database installations, as well as techstack and product upgrades.

Oracle Applications Upgrade Guide: Release 11i to Release 12

This guide provides information for DBAs and Applications Specialists who are responsible for upgrading a Release 11i Oracle Applications system (techstack and products) to Release 12. In addition to information about applying the upgrade driver, it outlines pre-upgrade steps and post-upgrade steps, and provides descriptions of product-specific functional changes and suggestions for verifying the upgrade and reducing downtime.

Maintaining Oracle Applications

Use this guide to help you run the various AD utilities, such as AutoUpgrade, AutoPatch, AD Administration, AD Controller, AD Relink, License Manager, and others. It contains how-to steps, screenshots, and other information that you need to run the AD utilities. This guide also provides information on maintaining the Oracle applications file system and database.

Oracle Applications System Administrator's Documentation Set

The guides contained in this set provide planning and reference information for the Oracle Applications System Administrator. They contain information on how to define security, customize menus and online help, and manage concurrent processing.

Oracle Alert User's Guide

This guide explains how to define periodic and event alerts to monitor the status of your Oracle Applications data.

Oracle Applications Developer's Guide

This guide contains the coding standards followed by the Oracle Applications development staff and describes the Oracle Application Object Library components that are needed to implement the Oracle Applications user interface described in the *Oracle Applications User Interface Standards for Forms-Based Products*. This manual also provides information to help you build your custom Oracle Forms Developer forms so that the forms integrate with Oracle Applications.

Oracle Workflow Administrator's Guide

This guide explains how to complete the setup steps necessary for any Oracle Applications product that includes workflow-enabled processes, as well as how to monitor the progress of runtime workflow processes.

Oracle Workflow Developer's Guide

This guide explains how to define new workflow business processes and customize existing Oracle Applications-embedded workflow processes. It also describes how to define and customize business events and event subscriptions.

Oracle Workflow User's Guide

This guide describes how Oracle Applications users can view and respond to workflow notifications and monitor the progress of their workflow processes.

Oracle Workflow API Reference

This guide describes the APIs provided for developers and administrators to access Oracle Workflow.

Oracle eTechnical Reference Manuals

Each eTechnical Reference Manual (eTRM) contains database diagrams and a detailed description of database tables, forms, reports, and programs for a specific Oracle Applications product. This information helps you convert data from your existing applications, integrate Oracle Applications data with non-Oracle applications, and write custom reports for Oracle Applications products. Oracle eTRM is available on OracleMetalink

Oracle Applications Message Manual

This manual describes all Oracle Applications messages. This manual is available in HTML format on the documentation CD-ROM for Release 12.0.

Do Not Use Database Tools to Modify Oracle Applications Data

Oracle **STRONGLY RECOMMENDS** that you never use SQL*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle Applications data unless otherwise instructed.

Oracle provides powerful tools you can use to create, store, change, retrieve, and maintain information in an Oracle database. But if you use Oracle tools such as SQL*Plus to modify Oracle Applications data, you risk destroying the integrity of your data and you lose the ability to audit changes to your data.

Because Oracle Applications tables are interrelated, any change you make using an Oracle Applications form can update many tables at once. But when you modify Oracle Applications data using anything other than Oracle Applications, you may change a row in one table without making corresponding changes in related tables. If your tables get out of synchronization with each other, you risk retrieving erroneous information and you risk unpredictable results throughout Oracle Applications.

When you use Oracle Applications to modify your data, Oracle Applications automatically checks that your changes are valid. Oracle Applications also keeps track of who changes information. If you enter information into database tables using database tools, you may store invalid information. You also lose the ability to track who has changed your information because SQL*Plus and other database tools do not keep a record of changes.

Introduction to Profitability Manager

This chapter covers the following topics:

- About Profitability Manager
- Profitability Manager Features
- High Level Architecture
- Reporting and Data Analysis
- The Profitability Manager Environment
- Overview: Defining a Profitability Model
- Overview: Customer Profitability Analysis

About Profitability Manager

What is the true cost to produce a product, or provide a service? Which customers are profitable? Which sales channels make the most money? What products should be outsourced, and what service lines should be dropped? These are basic questions, but traditional accounting systems fail to provide the answers. Answers become a reality through Profitability Manager's powerful modeling techniques, enterprise-wide availability of information and reports, and integration with the Oracle E-Business Suite for true one-to-one customer profitability analysis.

- Profitability Manager Features, page 1-2
- High Level Architecture, page 1-2
- Reporting and Data Analysis, page 1-3
- The Profitability Manager Environment, page 1-3
- Overview: Defining a Profitability Model, page 1-6

- Overview: Customer Profitability Analysis, page 1-7

Profitability Manager Features

Profitability Manager provides a rich set of features that support complex models to analyze your business. These features include the following:

- Integration with Oracle Enterprise Performance Foundation's data and metadata model.
- A powerful allocation engine that supports many allocation methodologies.
- Activity-Based Management calculations that provide activity costs, rolled up costs and statistics, activity rates, and cost object unit costs.
- Customer profitability calculations to consolidate customer accounts, aggregate customer data, and determine profitability results.
- Integration with all features and utilities of the Enterprise Performance Foundation including administration, rule selectors, conditions, data inspector, dataset groups, rule sets, executed rules, and so forth.
- Utilization of the Oracle Workflow system to facilitate a rule approval process that controls access to production data.
- A predefined Discoverer business area and workbooks that facilitate data analysis.
- Integration with Oracle General Ledger data or external data sources.

These features provide an industry leading solution for profitability management and analysis.

High Level Architecture

Profitability Manager is a component of the Corporate Performance Management set of products, and is built on the Enterprise Performance Foundation (EPF).

The Enterprise Performance Foundation integrates financial and operational data from any source, and serves as the single source of truth for an organization's profitability analysis. Since Profitability Manager uses the Enterprise Performance Foundation, data and metadata used in the other CPM products are also available within Profitability Manager, and it is easy to reconcile between the source systems and other CPM applications.

This open environment accepts data from sources such as data warehouses, GL systems, transactional systems, and spreadsheets. Powerful EPF tools enable you to dynamically maintain business rules, dimensions (including members, hierarchies, and

attributes), and conditions.

Reporting and Data Analysis

The Oracle Enterprise Performance Foundation provides a Discoverer Business Area that can be imported into the end user layer. This business area forms the basis for reporting against the Enterprise Performance Foundation and the results from the Profitability Manager calculations. A set of predefined workbooks is provided with Profitability Manager.

The Profitability Manager Environment

Profitability Manager provides functions that are specific to analyzing profitability and costs. The environment also provides access to Enterprise Performance Foundation data management tools.

The Profitability Manager user interface is comprised of the following areas:

- Home Tab
- Business Rule Tab
- Process Management Tab
- Documents Tab
- Administration Tab

Home Tab

The Home tab is the default page that users see when they log into the application. The Home page has the following areas:

- **Ownership area** — Displays the application and other information about Profitability Manager.
- **Notifications area** — For each user, displays notifications directed to or posted by the user.
- **Shortcuts area** — For each user, provides the functionality to add headings and create shortcuts to external web sites.

Business Rule Tab

The Business Rule tab includes the following subtabs:

- **Mapping subtab** — Create and manage rules that perform allocation of income

statement and balance sheet items and enable cost object mapping to activity rates, direct expenses, and activity costs. For more information, see "About Mapping Rules", page 4-2.

- **Activity subtab** — Create and manage rules that calculate activity rates, rolled up activity costs and statistics, and rolled up cost object unit costs. For more information, see "About Activity Rules", page 6-1.
- **Customer subtab** — Create and manage rules that determine customer profitability. For more information, see "About Customer Profitability Rules", page 5-1.
- **Dimension subtab** — Work with dimension members, attributes, and hierarchies. For more information about these functions, see the *Enterprise Performance Foundation User's Guide* or online Help.
- **Condition subtab** — Create and manage rules that specify how to limit data. For more information, see the *Enterprise Performance Foundation User's Guide* or online Help.
- **Data Inspector subtab** — Create and manage rules that define how to view or update data in a specific table. For more information, see the *Enterprise Performance Foundation User's Guide* or online Help.
- **Statistic subtab** — Create and manage mapping rule statistics. For more information, see "About Mapping Rules", page 4-2 and "Working with Statistic Definitions", page 3-5
- **Factor Table subtab** — Create and manage mapping rule factor tables. For more information, see "About Mapping Rules", page 4-2 and "Working with Factor Tables", page 3-13

Process Management Tab

The Process Management tab includes the following subtabs:

- **Rule Set subtab** — Combine rules of the same type to achieve economies of scale when running rules.
- **Data Set Groups subtab** — Define the inputs for calculations.
- **Requests subtab** — Schedule and manage concurrent requests.
- **Execute Rules subtab** — View executed rules and remove results and process locks.

For information about these functions, see the *Enterprise Performance Foundation User's Guide* or online Help.

Documents Tab

The Documents tab provides access to seeded Profitability Manager workbooks. The workbooks are displayed in Oracle Discoverer or Oracle Discoverer Viewer.

For more information, see "About Reports", page 7-1.

Administration Tab

The Administration tab includes the following subtabs:

- **Tuning Options subtab** — Create sets of multiprocessing options or rules that affect the manner in which the processing engines function. For more information, see the *Enterprise Performance Foundation User's Guide* or online Help.
- **Registration subtab** — Define objects and columns, value sets, and Global Valueset Combinations. For more information see the *Enterprise Performance Foundation User's Guide* or online Help. For a user with an Administrator responsibility, the Registration subtab enables maintenance of Statistics and Column Population templates. For a user with the Profitability Manager with Activity-Based Management Administrator responsibility, the Registration subtab also supports setup of the multi-dimensional Activity and Cost Object dimensions. For more information, see "About Profitability Manager Administration", page 3-1.
- **Security subtab** — Create folders that will be used to store business rules and specify user access. For more information, see the *Enterprise Performance Foundation User's Guide* or online Help.
- **Setup subtab** — Customize the Profitability Manager Home page. For more information, see the *Enterprise Performance Foundation User's Guide* or online Help.

Common Components

The following hyperlinks are displayed in the Header area and are available from all tabs and subtabs.

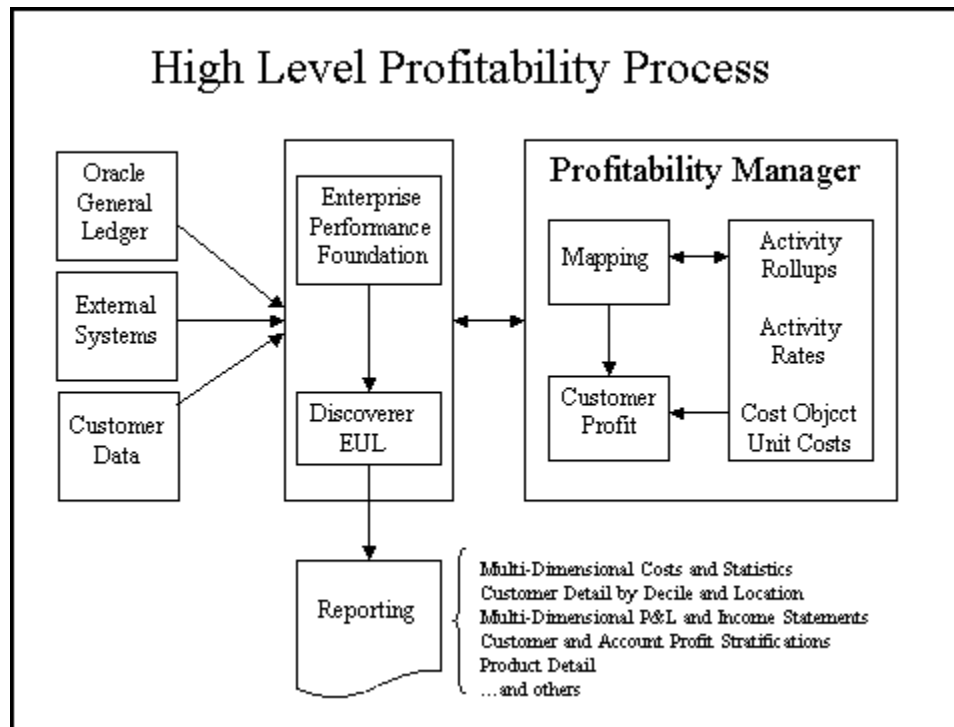
- **Home** — Returns you to the Profitability Manager Home page.
- **Logout** — Exits Profitability Manager
- **Application Preferences** — Opens the Application Preferences page where you can specify settings for default folder, default ledger, and other settings. For more information, see "Set Application Preferences", page 2-12.
- **Help** — Provides information about performing specific tasks in Profitability Manager. Click the Help link at the top of any page to access online Help.

Overview: Defining a Profitability Model

The general process that you follow to define a profitability model with the Profitability Manager application is as follows:

1. Analyze the organization to determine the required outputs from the profitability model and the dimensions necessary to define the business environment.
2. Select source systems for dimensional data and fact data.
3. Create metadata to represent dimension domains, dimension attributes, and dimension hierarchies.
4. Create business rules that will be used to allocate data between the required dimensions in your model.
5. Integrate data from source systems.
6. Execute business rules against source data.
7. Report results from the model calculations.

The following diagram illustrates how the various parts of the Profitability Manager application work together.



As indicated on the left side of the diagram, users integrate the necessary data from the appropriate source systems. Once this data has been integrated into the Enterprise Performance Foundation, business rules for mapping, activity-based costing methodologies, and customer profitability can be run against the data. The results can then be analyzed with the Discoverer workbooks that utilize the predefined Discoverer Business Area.

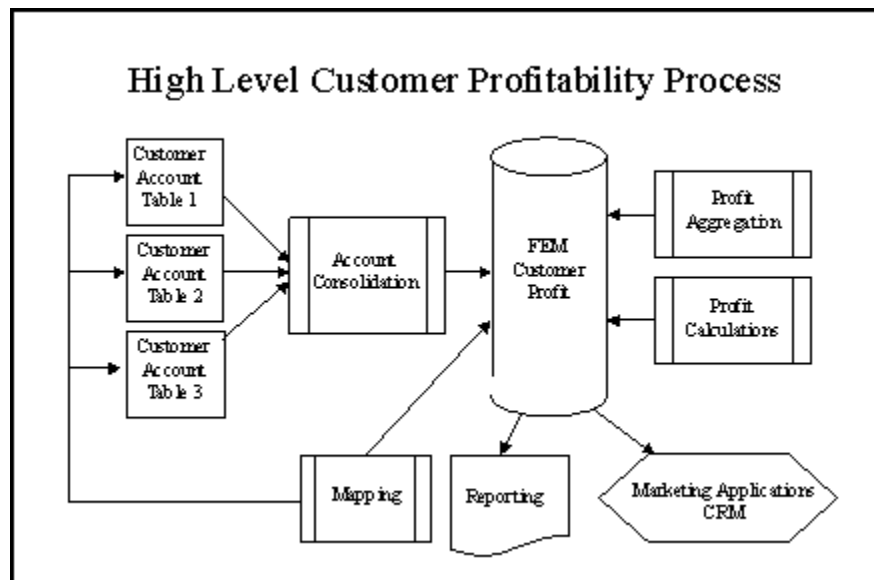
Overview: Customer Profitability Analysis

The general process that you follow to analyze customer profitability is as follows:

1. Account consolidation. This step combines customer accounts from many different sources into a single repository: the FEM_CUSTOMER_PROFIT table.
2. Profit aggregation. This step aggregates individual customer accounts into a single customer account record or consolidates customer account records in relation to a customer hierarchy.
3. Profit calculation. This step computes profitability information that includes a value index score and a profit percentile and decile ranking. The value index score utilizes a user defined formula to assign points based on account, customer, and geographic region attributes.

In addition, users have the option to use the mapping process to assign additional overhead to individual customer account table records or to specific customer profitability records.

This process is illustrated in the following diagram.



Setting Up Profitability Manager

This chapter covers the following topics:

- About Setting Up Profitability Manager
- Pre-Implementation Considerations
- Installation
- Set Signage Methodology
- Set Track Event Chain Profile Option
- Set Up Responsibilities and Users
- Set Up Security Folders
- Set Up Datasets and Dataset Groups
- Create Global Valueset Combination
- Register Tables and Columns
- Specify Input and Output Columns for Mapping
- Populate Dimensions
- Populate Data Tables
- Set Application Preferences
- Set Up Statistics
- Set Up Oracle Workflow
- Apply EPF-Core Business Area

About Setting Up Profitability Manager

This section summarizes the procedures you perform to set up Profitability Manager.

- Pre-Implementation Considerations, page 2-2

- Installation, page 2-3
- Set Signage Methodology, page 2-4
- Set Track Event Chain Profile Option, page 2-5
- Set Up Responsibilities and Users, page 2-5
- Set Up Security Folders, page 2-6
- Set Up Datasets and Dataset Groups, page 2-6
- Create Global Valueset Combination, page 2-7
- Register Tables and Columns, page 2-8
- Specify Input and Output Columns for Mapping, page 2-9
- Populate Dimensions, page 2-12
- Populate Data Tables, page 2-12
- Set Application Preferences, page 2-12
- Set Up Statistics, page 2-13
- Set Up Oracle Workflow, page 2-13
- Apply EPF-Core Business Area, page 2-14

Pre-Implementation Considerations

Prior to implementing Profitability Manager, give careful consideration to the following:

- Data sources (both Oracle and non-Oracle).
- Dimensions to be used. The application comes with a set of predefined dimensions and 10 user-defined dimensions. Note that if you intend to use Activity-Based Management functions, certain dimensions are required. For more information, see "Working with Composite Dimensions (Activity and Cost Object)", page 3-3.

Note: Profitability Manager no longer requires the same dimensionality or processing keys on all user data tables. This means that it is possible that Transaction tables or Account tables may have dimension columns that are not populated with a value.

Be mindful of this fact when designing processing keys for tables. When a user maps data from an Account table to the FEM_BALANCES table, he or she is responsible for supplying dimension values for dimension columns that are NULL in the source table but are part of the processing key in the target table and are designated NOT NULL.

- Tables to be used. Profitability Manager leverages fact tables seeded in the Enterprise Performance Foundation, including a seeded ledger and other tables to support profitability analysis, activity-based management functions, and data loading. Some examples follow:
 - Ledger: FEM_BALANCES
 - Account: FEM_MORTGAGES, FEM_CONSUMER_LOANS
 - Transaction: FEM_TRANS_CREDIT_CARDS, FEM_TRANS_MORTGAGES
 - Lookup Statistic: FEM_ORG_STATS, FEM_CRNCY_STATS
 - Data Loading: FEM_BAL_INTEFACE_T, FEM_MORTGAGES_T

You can also define your own tables. Note that all tables must be properly registered. For more information, see "Register Tables and Columns", page 2-8.

- Naming conventions. Users will be selecting objects such as folders, conditions, and business rules in the Profitability Manager interface. They must be able to clearly identify available options.
- Processing frequency.
- Calendar periods needed.
- Financial reporting conventions.
- Financial reporting requirements.

Installation

Install Profitability Manager. Ensure that you have applied all required patches and performed specified prerequisite steps. Also ensure that you have followed any instructions for assembling messages for mapping. Refer to the *MetaLink* Knowledge Browser page for Profitability Manager for more information.

Set Signage Methodology

Profitability Manager calculations write data based on a defined signage methodology. The signage methodology indicates if the data represents absolute values, GAAP, or reverse GAAP signage.

- Absolute value: Value is naturally positive
- Standard General Accounting Principles (GAAP)
 - Assets — positive (debit)
 - Liability — negative (credit)
 - Equity — negative (credit)
 - Revenue — negative (credit)
 - Expense — positive (debit)
 - Statistical — positive
- Reverse General Accounting Principles (Reverse GAAP): Standard GAAP * -1

Before using Profitability Manager, you must assign a signage methodology and run the Sign Extended Account Types concurrent program. The signage methodology is specified in the FEM: Signage Methodology Profile option; the related account type signage is represented by the Extended Account Type Sign attribute on the Extended Account Type dimension member. You should run the concurrent program, calculate results, and verify that you have assigned the signage option correctly. Following this, you should never change the profile options.

Note: If users attempt to process data before the FEM: Signage Methodology" profile option has been set, or if the signage attribute is not set on the Extended Account Type member, any processing engine that requires this data will halt processing. The profile must then be set and the Sign Extended Account Types concurrent program run before processing can continue.

Follow these steps to set the FEM: Signage Methodology Profile option.

1. Log in with the System Administrator responsibility.
2. Navigate to Profile > System.
3. Query on FEM%.

4. Scroll through the list of FEM Profile options.
5. Select **FEM: Signage Methodology**.
6. Choose the desired value.

Follow these steps to run the Sign Extended Account Type concurrent program.

1. Log in with the Enterprise Performance Foundation Administrator responsibility.
2. Navigate to Process Management > Requests.
3. Choose **Submit Request**.
4. Select the program "Sign Extended Account Types."
5. Click **Next** and complete the other parameters for the request.
6. Choose **Submit**.

Set Track Event Chain Profile Option

In Profitability Manager, the results of one calculation can be used as source data for additional calculations. In some cases you might want to remove results for an entire chain of calculations, start over, and recalculate the results.

In order to be do this, you must set the FEM: Track Event Chains profile option to "Yes" at Site Level. This will allow you to undo the related rules in an event chain by removing the execution results for any one of the rules in the chain.

Note that if you set the profile option to "Yes," you will not be able to undo individual calculations that are "chained," since the process will pick up everything that is related. In addition, the time it takes to perform the undo operation will increase with the complexity of the specified chaining. If you are in the process of building and testing your individual model calculations, be aware of the impact that chaining might have on the processing and model building experience.

Set Up Responsibilities and Users

You must set up Profitability Manager responsibilities and users in System Administration. You use the System Administration responsibility to create users and assign them to Profitability Manager as users or Administrators.

Profitability Manager comes with the following predefined responsibilities:

- **Enterprise Performance Foundation Administrator** — This responsibility comes with the EPF application and is available within Profitability Manager to perform system administration tasks. This is the responsibility that must be used when

defining and running the business rules that move data, dimensions, and hierarchies from Oracle General Ledger into the Enterprise Performance Foundation.

- **Profitability Manager** — This responsibility should be assigned to users who will be using the product to create models and run calculations. A user with this responsibility has access to mapping and customer rule functions, but no access to administrative functions or activity-based management functions.
- **Profitability Manager Administrator** — This responsibility should be assigned to users who will perform administrative functions as well as rule creation and execution. A user with this responsibility can perform all the tasks of a Profitability Manager. In addition, he or she can perform administration functions.
- **Profitability Manager with Activity-Based Management** — This responsibility is the same as the Profitability Manager responsibility, except that it provides access to activity-based management functions.
- **Profitability Manager with Activity Based Management Administrator** — This responsibility should be assigned to a user who will be maintaining the metadata necessary for all calculation types. A user with this responsibility can perform all the functions that are available to the Profitability Manager with Activity-Based Management responsibility. In addition, he or she can perform administration functions, including the ability to set up the Activity and Cost Object dimensions.

Set Up Security Folders

Profitability Manager Administration includes a function to create Security folders and grant users access to them. Folders provide security by hiding rules from users who lack access, or blocking edit from users with read-only rights. The application is seeded with two folders: Default and Data Integration. You can define additional folders.

You must give access to both of the seeded folders to Database Administrators who will be using dimension loader and hierarchy loader concurrent programs. The administrators must be added to the folders before they submit the concurrent programs.

You must also give all Profitability Manager users access to the Default folder, as well as to other folders that they will share.

For information about working with security folders, see the section on Security Folders in the *Enterprise Performance Foundation User's Guide*.

Set Up Datasets and Dataset Groups

Individual members of the Dataset Code dimension are referred to as Datasets, which enable classification of data such as but not limited to budget, actual or model statistics

All data is assigned to a dataset. A dataset group consists of at least one dataset that plays the role of output dataset as well as input dataset. A dataset group can have multiple input datasets. The input dataset must be defined in a dataset group with a specific calendar period, or use a period offset.

In order to process a Business Rule in the 12.0 Release, users define the combination of input and output Dataset Code dimension values to be used when the process is run. A single business rule can use multiple input datasets as inputs to calculations, and write calculation results to a single output dataset.

Dataset groups provide a single definition of one or more input datasets and the desired single output dataset to be used. This feature permits the creation of processing results using any combination of actual results or forecast (budgeted) amounts as inputs to the calculations.

Monthly processing against a dataset group is accomplished by setting the offset Period Type to "Same as Output Calendar Period" (or something like Month) and assigning a Period Offset of 0 (zero). This allows the processing engines to pickup the target calendar period from the engine processing parameters at run time, keeping the dataset group Calendar Period independent. Each time the Dataset Group is used in processing, the target Calendar Period is set by the user in the runtime parameters and applied against the source table.

Input datasets may use a specific calendar period for statistics values. For example, if statistics are gathered yearly, the same statistics will be used all year in processing, independent of the current processing Calendar Period. Assigning statistics to a specific dataset and calendar period within a single Dataset Group allows calculation engines to locate the statistic rows and combine them with data rows in a different dataset.

The Dataset dimension includes an attribute for Production Flag. Production and Non-Production datasets are handled differently. Production datasets are "real" data, and rules that are run against them require submission and approval by an Administrator. Non-production datasets are test-like sets that do not force approval.

You use Business Rule > Dimensions > Datasets to create Datasets and Dataset groups. For more information, see the *Enterprise Performance Foundation User's Guide*.

Create Global Valueset Combination

The Global Valueset Combination (GVSC) combines value sets from all dimensions into a workable combined single set.

Profitability Manager provides a seeded value set for Financial Element. Use this value set when you create your GVSC.

For more information about value sets, see the *Enterprise Performance Foundation User's Guide*.

Register Tables and Columns

You must register all tables and columns, including lookup tables that will be used as statistic sources in mapping formulas. Some tables are pre-registered, but if you change an index key or add columns, you must synchronize and re-register the table.

Some considerations for table registration are as follows:

- The FEM_BALANCES table must be classified as Profitability Manager Ledger type, and — if you are using Activity-Based Management features — as Activity Management Ledger. Account or Transaction tables must be registered with one of the following valid classifications: Customer Account Profitability Tables or Transaction Profitability Tables. Account and Transaction tables must also be classified as Client Data Tables to enable data loading.
- Table indexes must include the set of dimensions for processing. All index changes must be made prior to registration, and certain columns are required for each table type.
 1. Review the index on the FEM Balances table.
 2. Choose the new index as the basis of your processing key.

Transaction tables are delivered without a unique index. The index on Transaction tables must include the four columns in an account table index (CAL_PERIOD_ID, DATASET_CODE, SOURCE_SYSTEM_CODE, ID_NUMBER) as well as one or more transaction type dimensions, as dictated by your requirements.
 3. Create the new unique index and register the table, choosing the index as the basis of your processing key

For detailed information, see the *Enterprise Performance Foundation User's Guide*

- Processing key columns must be set to NOT NULL in both data tables and loader tables.
- Input/Output columns must be specified for mapping. Output columns must also be included in the processing key. For more information, see "Specify Input and Output Columns for Mapping", page 2-9.
- Tables that contain statistic drivers and are used in Retrieve Statistic mapping rules must be registered with a Statistic classification type. FEM_BALANCES can be registered with a Statistic classification as well as a PFT Ledger classification.

Navigate to Administration > Registration to register tables and columns. For more information, see the *Enterprise Performance Foundation User's Guide*.

Specify Input and Output Columns for Mapping

Mapping rules perform calculations for allocation of income statement and balance sheet items and enable cost object mapping to activity rates, direct expenses, and activity costs. As part of table registration, you must specify Input/Output columns for tables selected for mapping.

Input columns are used by mapping rules to identify which columns act as sources for dimension values. Output columns are used to identify which columns can act as targets for dimension values. Output columns must also appear in the processing key (The processing key is also the primary key for the table. Requiring output columns to be in the processing key guarantees that all rows written by the Common Calculation Engine capture all dimension values written for any output column).

When a column is defined as a Mapping Output column on a table, a line for that column will appear on any mapping rule Debit or Credit which uses that table (the column description is used, which normally corresponds to the name of the dimension attached to the column). That line minimally allows a user to set a specific dimension value for that column on output. If a column which corresponds to the same dimension is defined as a Input column on a table used in either a Source or Percentage mapping formula type, then the mapping rule Debit or Credit will also contain a *Same As* entry for the dimension.

For more information about mapping rules, see "About Mapping Rules", page 4-2.

General Rules for Defining Mapping Input and Output Columns

Mapping input columns are columns which:

- Exist on the registered table.
- Are value set enabled (with the exception of currency code).
- Are active and have not been disabled.
- Are not special handling columns.

Mapping Input columns do not have to be included in the processing key for the table.

Special handling columns and non-value set enabled columns include the following:

- Cal Period ID
- Dataset Code
- Ledger ID
- Source System Code

- ID Number
- Created by Object ID
- Activity ID
- Cost Object ID
- Created by Request ID
- Creation row sequence
- Currency type code
- Last updated by object ID
- Last updated by request ID
- All balance or rate columns (You select the input column as part of the mapping rule.)

These rules are valid for Balance, Transaction and Account tables.

Mapping Output columns are columns which:

- Exist on the registered table.
- Are included in the processing key.
- Are active.
- Are not a special handling column, as previously defined.

All columns in the processing key for FEM_BALANCES must be defined as mapping output columns.

Mapping output columns are not applicable for Customer Account Profitability tables.

The additional columns in the processing key for Customer Transaction Profitability tables (i.e. the "Transaction" dimension) are also required to be a mapping output column.

Examples: Mapping Input and Output Columns

Following are examples for mapping Input and Output columns.

Example 1: Financial Element, Simple Source On Allocation Mapping Rule

Assume the following mappings for Input and Output columns:

- Financial Element is defined as an Output column on FEM_BALANCES.

- Financial Element is not defined as an Input column on Mortgages.
- A Mapping rule is defined which specifies Mortgages in the Source and FEM_BALANCES in the Debit.

You would expect to see the following in the Debit of the Mapping rule:

- A line for Financial Element.
- The drop-down for Financial Element only allows the user to specify a specific dimension value for Financial Element.

Example 2: Product, Simple Source On Allocation Mapping Rule

Assume the following mappings for Input and Output columns:

- Product is defined as an Output column on FEM_BALANCES.
- Product is defined as an Input column on Mortgages.
- A Mapping Rule is defined which specifies Mortgages in the Source, and FEM_BALANCES in the Debit.

You would expect to see this in the Debit of the Mapping rule:

- A line for Product.
- The drop-down for Product allows the user to specify either a specific dimension value for Product, or Same As Source for Product.

Example 3: Financial Element, Percentage Distribution Mapping Rule

Assume the following mappings for Input and Output columns:

- Financial Element is defined as an Output Column on FEM_BALANCES.
- Financial Element is defined as an Input Column on FEM_BALANCES.
- Financial Element is not defined as an Input Column on Mortgages.
- A Mapping Rule is defined which specifies FEM_BALANCES in the Driver and Debit, and Mortgages in the Source.

You would expect to see this in the Debit of the Mapping Rule:

- A line for Financial Element.
- The drop-down for Financial Element allows the user to specify either a specific dimension value for Financial Element, or Same As Pct for Financial Element.

Populate Dimensions

You populate Profitability Manager dimensions using one or more of the following methods:

- Load data directly from Oracle General Ledger.
- Load data from external systems into loader tables.
- Use dimension management functions to add dimension members and define attributes, levels, and hierarchies.

Note: Several profitability and Activity-Based management calculations have specific requirements for dimension members or hierarchies. For more information, see "Prerequisites for Activity Rules", page 6-2 and "Prerequisites for Customer Profitability Rules", page 5-4.

For information about populating dimensions, see the *Enterprise Performance Foundation User's Guide*.

Populate Data Tables

You populate Profitability Manager data tables using the Detail Client Data Loader.

For more information, see the *Enterprise Performance Foundation User's Guide*.

Set Application Preferences

Application Preferences determine operational parameters and certain processing defaults. For example, the Ledger setting drives the Global Valueset Combination and the Calendar Periods available for processing during the user's session.

Application Preferences for Profitability Manager are as follows:

- **Security Folder** (Required) — Determines the default folder that is displayed when the user works with business rules.
- **Ledger** (Required) — Drives the Global Valueset Combination and dimension value sets during the user's session.
- **Calendar Period** (Highly recommended) — Acts as a default parameter when the user submits a rule version for processing.
- **Dataset Group** — Acts as a default parameter when the user submits a rule version for processing.

- **Consumption Quantity Dataset** — Sets the dataset that is used in Cost Object hierarchies and calculations.
- **Effective Date** — Sets the default effective date to determine which version of a rule to run.

Each user sets and modifies his or her own Application Preferences. The settings are maintained from session to session. At minimum, each user must set up preferences for Security Folder and Ledger.

Follow these steps to set or change Application Preferences.

1. Log into Profitability Manager with any responsibility.
2. Choose any function.
3. Observe the Application Preferences link at the top of the page.
4. Click **Application Preferences**.

The Application Preferences page opens.

5. Change an existing setting or specify a new setting.

Set Up Statistics

The Profitability Manager mapping function includes a Retrieve Statistic formula type. This formula multiplies source data by reference values sourced from a statistic table. You must set up the statistics that will be used in this formula.

You define a statistic by designating a table as a lookup or statistics table, then designating the columns to be used as lookup fields. One or more dimensions from a FEM data table can be used in the lookup process, providing single or multiple dimension lookups.

For more information, see "Working with Statistic Definitions", page 3-5.

Set Up Oracle Workflow

Profitability Manager uses Oracle Workflow for notifications. Workflow can be used to notify users about changes to system parameters such as modifications made to processing keys. For a list of notifications to which users can subscribe, see "About Workflow Notifications", page A-1.

For more information, see the *Oracle Approvals Management Implementation Guide* and the *Oracle Workflow Administrator's Guide*.

Apply EPF-Core Business Area

In order for users to install or open Profitability Manager workbooks, the EPF-Core Business Area must be applied to the database.

For more information, see the *Oracle Financial Services Reporting Administration Guide*. Also refer to the *MetaLink* Knowledge Browser pages for Enterprise Performance Foundation and Profitability Manager.

Profitability Manager Administration

This chapter covers the following topics:

- About Profitability Manager Administration
- Summary: Profitability Manager Administration Functions
- Working with Composite Dimensions (Activity and Cost Object)
- Working with Statistic Definitions
- Working with Column Population Templates
- Working with Factor Tables

About Profitability Manager Administration

When you log in and select the Profitability Manager Administrator or the Profitability Manager with Activity-Based Management - Administrator responsibility and choose the Administration tab, you have access to administrative functions for all Corporate Performance Management (CPM) applications. You also have access to functions that are unique to Profitability Manager.

- Summary: Profitability Manager Administration Functions, page 3-1
- Working with Composite Dimensions (Activity and Cost Object), page 3-3
- Working with Statistic Definitions, page 3-5
- Working with Column Population Templates, page 3-8

Summary: Profitability Manager Administration Functions

The following table presents the menu structure for Profitability Manager Administration functions. For information about functions that are relevant only to Profitability Manager, the table refers to a section where you can find more detail. For

information about functions that are common to all CPM applications, the table refers you to the *Enterprise Performance Foundation User's Guide* or online Help.

Subtab	Function	Description	For more information
Registration	Tables and Columns	Register table and columns	<i>Enterprise Performance Foundation User's Guide</i> or online Help
	Dimension	Change display names for dimensions and columns	<i>Enterprise Performance Foundation User's Guide</i> or online Help
	Value Sets	Define and manage value sets	<i>Enterprise Performance Foundation User's Guide</i> or online Help
	Global Valueset Combinations	Define Global Valueset Combinations	<i>Enterprise Performance Foundation User's Guide</i> or online Help
	Database Link	Set up a database link	<i>Enterprise Performance Foundation User's Guide</i> or online Help
	Activity and Cost Object Definition	Define component dimensions for the Activity and Cost Object dimensions	"Working with Composite Dimensions (Activity and Cost Object)", page 3-3
	Column Population Template	Specify how to populate the FEM_CUSTOMER_P ROFIT table from Account tables	"Working with Column Population Templates", page 3-8
Tuning Options	Mapping Rule Defaults	Define default templates used in creating each mapping rule type.	"Working with Mapping Rules, page 4-2
	Process Tuning Options	Tune the performance of loaders and business rules	<i>Enterprise Performance Foundation User's Guide</i> or online Help

Security	Folders	Create folders and set user access	<i>Enterprise Performance Foundation User's Guide</i> or online Help
Setup	Customize Home Page	Customize text and links on Home page	<i>Enterprise Performance Foundation User's Guide</i> or online Help

Working with Composite Dimensions (Activity and Cost Object)

Activity and Cost Object are composite dimensions, comprised of other dimensions. If your organization will be using Activity-Based Management functions, you must set up these dimensions.

You must have the Profitability Manager with Activity-Based Management - Administrator responsibility to set up composite dimensions.

Give careful thought to composite dimension definitions. Once set up, they are frozen and cannot be edited.

Setting Up the Activity Dimension

The Activity dimension holds repeatable tasks in relation to other dimensions such as Organization, Channel, Customer, and so forth. For example, the activity of "depositing a check" is the act of "depositing" applied to an acted upon item — in this case, a check.

You set up the Activity dimension by specifying its component dimensions. Task is a required component. You can optionally include any of the other dimensions in the FEM_BALANCES table. For example, if a company performs the same task across many departments, you would specify the Task and Company Cost Center Organization dimensions as the definition for the Activity dimension.

Note: Ensure that the processing key of the FEM_BALANCES table includes all of the component dimensions that you specify for the Activity dimension definition. If they are not included, then Activity rules will fail.

Follow these steps to set up the Activity dimension.

1. Access Profitability Manager with the Profitability Manager with Activity-Based Management - Administrator responsibility.
2. Navigate to Administration > Registration.
3. On the Registration tab, choose **Activity and Cost Object Definition**.

The Composite Dimension Definition page opens.

4. Click the **Activity** link.

The Activity Dimension Definition page opens. Available component dimensions are listed in the Available box.

5. Click **Update** to enable dimension selection.
6. Select dimensions from the Available box and move them to the Selected box. At minimum, you must choose the Task dimension.
7. Click **Freeze** to finalize the dimension definition.

Setting Up the Cost Object Dimension

Cost Objects are multi-dimensional entities that describe a cost. The intersection of component dimensions such as Organization, Product, and Customer results in the creation of a composite dimension that uniquely identifies a Cost Object.

You define the Cost Object dimension by specifying its component dimensions. Financial Element and Ledger are required components. A third dimension of your choice is also required. For example, if you want to define cost objects based on your product master, you would include Financial Element, Ledger, and Product as the definition for the Cost Object dimension.

Once you are satisfied with the dimension definition, you freeze it. Thereafter, you can only view the definition.

Note: Ensure that the processing key of the FEM_BALANCES table includes all of the component dimensions that you specify for the Cost Object dimension definition. If they are not included, then the Cost Object Unit Cost rule will fail.

Follow these steps to set up the Cost Object dimension.

1. Access Profitability Manager with the Profitability Manager with Activity-Based Management - Administrator responsibility.
2. Navigate to Administration > Registration.
3. On the Registration tab, choose **Activity and Cost Object Definition**.

The Composite Dimension Definition page opens.

4. Click the **Cost Object** link.

The Cost Object Dimension Definition page opens. Available component dimensions are listed in the Available box.

5. Click **Update** to enable dimension selection.
6. Select dimensions from the Available box and move them to the Selected box. You must choose Financial Element, Ledger, and at least one other dimension.
7. To finalize the dimension definition, click **Freeze**.

Working with Statistic Definitions

When users define a Retrieve Statistic formula type for a mapping rule, they choose a Statistic. The Statistic definition is composed of a lookup table selection and a specification that joins the table's columns to columns in a Profitability table. The lookup columns can be joined directly. Alternatively, they can be set to a constant value to provide a way to define the lookup rows relevant to the statistic.

When the mapping rule runs, rows from the initial data source that match the lookup key columns will be processed, and the value in the row that is designated as the Lookup Return Column will be used as the Retrieve Statistic value.

About Creating a Statistic

To create a Statistic, you choose the source table, specify a Statistic lookup table, and join the source table to it.

Note: The source table must correspond to the Input Data Source for the mapping rule that will use the statistic (See "Mapping Rule Formula Type: Retrieve Statistic", page 4-14). The lookup table must be classified as a Statistic classification type using the Administration > Table Registration function.

You then specify how the columns in the lookup table will be used in the lookup. If a lookup table column is part of the lookup key, the Join With column is set to Source Table Column and the Value column contains the source table dimension that will be included in the lookup key. If a lookup table column is not part of the lookup key, you set the Join With column to Constant Value and enter the constant value that is common for all lookup rows in the lookup set within the lookup table.

Designate the Lookup Column name in the list of values. You can apply a condition to filter the rows in the lookup table that will be available to the Statistic lookup set. For example, if you want to match rows in the source table to rows in the lookup table by Ledger and by Company Cost Center Organization, you would set those two lookup table columns to join with the matching columns in the source table (Dataset and Company Cost Center Organization). Assuming that you gather statistics yearly, you would not want to look up Calendar Period, so you would set the Calendar Period lookup table column to the Constant Value that equals the date that the statistic rows were gathered in the lookup table.

Note: The lookup column on the statistic table must be classified as a CPM data type of Statistic, Monetary Balance or Rate.

Creating a Statistic

Follow these steps to create a Statistic.

1. Access Profitability Manager with the Activity-Based Management responsibility or the Profitability Manager responsibility.
2. Navigate to Business Rules > Statistics.
The Statistics page opens.
3. Click **Create**.
4. In the Create Statistic area, identify the statistic.
 - Enter a name.
 - Choose the Lookup Table. Only tables that have been registered as Statistic classification type are available.
 - Choose the Source Table. Your selection should depend on the mapping rule that will use this statistic. Note that when a user chooses a Statistic, only those Statistics that have been defined for the initial data source selected for the rule will be available.
5. In the Join Tables area, specify how to join to each column in the lookup table to the source. Select a join option: Source Table Column or Constant Value.
 - **Source Table Column** — Specifies the source column that is part of the lookup key.
 - **Constant Value** — Specifies a value that is a constant and that helps define the lookup set.
Populate the Value field with either the Source Table Column name or the Constant Value.
6. In the Lookup Return column, choose the column that contains the value that will be returned to the mapping rule when the lookup key is found.
7. (Optional) Apply a condition to filter the data.
8. Click **Apply**.

Updating a Statistic

Once a rule version that uses a Statistic has been run, the Statistic is locked for that rule. However, the Statistic can be used in new rules and versions. Note that you can also add data to the underlying lookup table. However, if the non-lookup columns were to change, you would have to duplicate the Statistic before you could include it in the new rule version.

Follow these steps to update a Statistic for a rule that has not been run.

1. Navigate to Administration > Registration > Statistics.
The Statistics page opens.
2. Search for a Statistic. You can search by Name, Source Table, Lookup Table, and Source column. Use % as a wildcard.
The list displays Statistics that match your criteria.
3. Identify the Statistic to update and click its **Update** icon.
4. You can modify the name and description. You can also modify information for join columns, lookup return columns, and condition.
5. Click **Apply**.

Duplicating a Statistic

Duplicating a Statistic allows you to quickly create a Statistic definition based on an existing definition.

Follow these steps to duplicate a Statistic.

1. Navigate to Administration > Registration > Statistics.
The Statistics page opens.
2. Search for a Statistic. You can search by Name, Source Table, Lookup Table, and Source column. Use % as a wildcard.
The list displays Statistics that match your criteria.
3. Identify the Statistic to duplicate and click its **Duplicate** icon.
4. Enter a name and description for the new Statistic.
5. Click **Apply**.

Deleting a Statistic

You can delete a Statistic before a Retrieve Statistic mapping rule that contains the Statistic has run. Once a rule has run, the Statistic is locked and cannot be deleted.

Follow these steps to delete a Statistic.

1. Navigate to Administration > Registration > Statistics.

The Statistics page opens.

2. Search for a Statistic. You can search by Name, Source Table, Lookup Table, and Source column. Use % as a wildcard.

The list displays Statistics that match your criteria.

3. Identify the Statistic to delete and click its **Delete** icon.

You are prompted to confirm the deletion.

Working with Column Population Templates

When users run an Account Consolidation rule or a Profit Aggregation rule, they select a Column Population template. For account consolidation, the Column Population template specifies how the columns in the source Account table will map to the target FEM_CUSTOMER_PROFIT table. For a Profit Aggregation rule, the Column Population template specifies how balance columns will aggregate; it is run from the FEM_CUSTOMER_PROFIT table to the FEM_CUSTOMER_PROFIT table itself.

You must define a Column Population template for each Account table. Provide a name and description that will make it clear to users which template they are choosing when building Account Consolidation and Profit Aggregation rules.

Some columns are assigned automatically and are designated as System Reserved Column Mappings. Other columns may be added as User Defined Column Mappings. You must populate all required columns in the template.

When specifying a Column Population template for account consolidation, you must include the Business Relationship column, which should be mapped as an Attribute Lookup. (Business Relationship is a required attribute for the Customer dimension.)

Note: Each table and column that you specify in the Column Population Template must be registered.

Creating a Column Population Template

Follow these steps to create a Column Population template.

1. Access Profitability Manager with the Profitability Manager Administrator or the Profitability Manager with Activity-Based Management - Administrator responsibility.
2. Navigate to Administration > Registration.
3. On the Registration tab, choose **Column Population Template**.
The Column Population Template Rules selector opens.
4. On the Column Population Template Rules page, click **Create**.
A new Column Population Template Rule page opens.
5. Name and describe the Column Population template and specify the source table.
 - Choose a folder.
 - Enter a name.
 - (Recommended) Enter a description.
 - Specify the source table. If the template will be used within an Account Consolidation rule, this is an Account table. If the template will be used within a Profit Aggregation rule, this is the FEM_CUSTOMER_PROFIT table.
 - Specify the target table. This is always FEM_CUSTOMER_PROFIT.
6. Click **Continue**.
The Column Template Version page opens.
7. On the Column Population Template Version page, identify the template version.
 - Enter a version name.
 - Specify Effective Start Date.
 - Specify Effective End Date.
 - (Recommended) Enter a description.
8. Click **Continue**.
The Column Population Template Details page opens.
9. In the User Defined Column Mappings section, map source to target columns.
In the Population Method field, choose the population method for a column. Source columns and Lookup columns must match. You can choose one of the following:

- **Constant VARCHAR** — Enables you to set a specific character value in the Target column. Selecting this option activates the Constant column where you enter the value you want to use in all rows transferred from the source table.
- **Constant Date** — Enables you to set a specific date value in the Target column. Selecting this option activates the Constant column where you enter the value to use in all rows transferred from the source table.
- **Constant Number** — Enables you to enter a specific numeric value in the Target column. Selecting this option activates the Constant column where you enter the value to use in all rows transferred from the source table.
- **Source Column** — Enables you to identify the column that contains data to move to the Target column and specify an aggregation method (see Step 10).
- **Attribute Lookup** — Enables you to identify a dimension attribute that contains the data to move to the Target column. Selecting this option activates three columns: Source Column, Attribute Name and Attribute Version. Choose the Source Column from the list of dimension columns in the source table. Then use the list of values to choose the attribute that contains the value that you want to migrate to the Target column. Choose the Attribute Version from the third list of values.
- **Unassigned** — Designates a column that you do not want to map.

Note: When specifying a Column Population template for account consolidation, you must include the Business Relationship column, which is listed under Target column, and should be mapped as an Attribute Lookup. Choose **Attribute Lookup** as the Population Method.

10. If you chose Source Column (Step 9) and the template will be used for a Profit Aggregation rule, specify an aggregation method. Choose one of the following:

- **Min** — Returns the lowest amount for a customer
- **Max** — Returns the highest amount for a customer
- **Sum** — Sums up all records for a customer
- **None** — Does not aggregate

Note: The aggregation methods Average balance, Average Net Rate Over a Period, Average by Days Weighted, Beginning, and Last are not currently supported.

If the template will be used for an Account Consolidation Rule, choose **None** as the aggregation method.

11. Click **Preview Population** to view results.
12. Click **Finish**.

Updating a Column Population Template

You can update a Column Population template. Follow these steps.

1. Navigate to Administration > Registration > Column Population Template.
2. Search for the Column Population Template to update. Choose a folder, then enter % to see all templates or enter text and use % as a wildcard. You can also search using Effective Date.

The list displays templates that match your criteria.

3. To modify the template name or description, click its **Update** icon.
4. To update a rule version, proceed as follows:
 - Display versions by clicking the + icon in the Rule Name column.
 - Identify the version to update and click its **Update** icon.
 - You can modify version details (Version Name, Effective Start Date, Effective End Date, description).
 - You can modify rule details.
5. To update a template version, proceed as follows:
 - Display versions by clicking the + icon in the Name column.
 - Identify the version to update and click its **Update** icon.
 - You can modify version details (Version Name, Effective Start Date, Effective End Date, description).
 - You can modify population information for one or more columns.
6. Click **Apply**.

Duplicating a Column Population Template

Duplicating a Column Population Template allows you to quickly create a new template or template version.

When you duplicate a version, it is added to the list of versions for the template. When you duplicate the template and version, the template and version are displayed as new entities in the list of templates.

Note: When duplicating a version, you must specify an effective date range that does not conflict with the existing version.

Follow these steps to duplicate a template or template and template version.

1. Navigate to Administration > Registration > Column Population Template.
2. Search for the Column Population Template to duplicate. Choose a folder, then enter % to see all templates or enter text and use % as a wildcard. You can also search using Effective Date.

The list displays templates that match your criteria.
3. Search for the template to duplicate. Choose a folder, then enter % to see all rules or enter text and use % as a wildcard.

The list displays templates that match your criteria.
4. Display template versions by clicking the + icon in the Rule Name column.
5. Click the **Duplicate** icon for a version.

The Duplicate Options page opens.
6. Choose a duplication option.
 - **Rule and Version** – Enables you to create a new template and version based on the template that you chose in Step 3.
 - **Version** – Enables you to create a new version of the template that you chose in Step 3.
7. Click **Continue**.
8. If you chose Rule and Version as the duplication option (Step 6), identify the template and the version. For rule enter a unique name and description. For version, enter a unique name, specify the Effective Start Date, and Effective End Date. You can also enter a description.

If you chose Version as the duplication option (Step 6), identify the new version.

Enter a unique name, specify the Effective Start Date, and Effective End Date. You can also enter a description.

9. Click **Finish**.

Deleting a Column Population Template

You can delete a Column Population template. Follow these steps.

1. Navigate to Administration > Registration > Column Population Template.
2. Search for the Column Population Template to delete. Choose a folder, then enter % to see all templates or enter text and use % as a wildcard. You can also search using Effective Date.

The list displays templates that match your criteria.

3. Display versions by clicking the + icon in the Name column.
4. Identify the version to delete and click its **Delete** icon.

You are prompted to confirm the deletion.

Viewing a Column Population Template

You can view a Column Population template. Follow these steps.

1. Navigate to Administration > Registration > Column Population Templates.

The Column Population Template page opens.

2. Search for Column Population templates. Choose a folder, then enter % to see all templates or enter text and use % as a wildcard. You can also search using Effective Date.

The list displays templates that match your criteria.

3. Proceed as follows:

- Click the + icon for a rule to see rule versions.
- Click the **Update** icon for a version to view template details.

Working with Factor Tables

Factor table rules provide a flexible way to create lookup tables as well as to manually define distribution type rules. Factor tables are created in a system table rather than in a user defined table, as is done with Statistic rules. New Factor Tables can be populated

with a spreadsheet interface during the creation process. Factor tables support up to three levels of dimension matching in lookup type rules. In addition, lookup columns can refer to dimensions hierarchy nodes rather than to dimensions member values directly, another distinguishing factor between Factor Tables and Statistics. Distribution type Factor Tables distribute a balance across a set of dimension members given the set of factors that you enter.

About Factor Tables and Factor Table Types

There are three types of Factor Table rules that can be used in Factor Table type mapping rules. These are:

- **Matching Dimensions only** – source rows are matched against a table of dimension values in one, two or three dimensions. When a match is found, the specified table factor is applied as an operand in the mapping rule formula.
- **Distribution Dimension only** – source row balances are distributed across the dimension values specified in the factor table. Distributions can be performed as a set of factors or on a percent to total basis. The factor table is an operand in the mapping rule formula.
- **Matching with Distribution** – a combination of the previous two types – source rows are matched against a table of dimension values. When a match is found, the balance is distributed across the distribution dimensions in the factor table as factors or on a percent to total basis. The factor table is an operand in the mapping rule formula.

Source rows that find no match in the factor table are not processed by the rule. The FEM Balances table must be the target of Distribution only and Matching with Distribution rule types. You will specify that the distribution applies to the Debit or the Credit in the mapping rule that uses the factor table.

Tip: Matching with Distribution type factor tables allow the distribution dimension to be used as a matching dimension as well. This provides a way to build a dimension reclassification factor table. Create a table of source dimension values with the target dimension value below it as a distribution dimension. For example source rows in Organization A1 are matched and the balance is distributed to Organization A5.

Creating Factor Tables

Follow these steps to create a Factor Table:

1. Access Profitability Manager with the Activity-Based Management responsibility or the Profitability Manager responsibility.

2. Navigate to Business Rule > Factor Table
The Factor Table Rules page opens
3. Click **Create**
4. In the Create Factor Table Rule area identify the rule as follows
 1. Enter a name
 2. Enter a description of the rule
 3. Choose the access level of the rule
 4. Click **Next**
5. In the Create Factor Table Version page (step 1) supply the following information
 - The version name
 - A description of the version
6. Edit the start and end dates of the version
7. Choose the Factor table type
 - Matching Dimensions only
 - Distribution Dimension only
 - Matching with Distribution
8. Fill in the Matching Dimension section. (If the rule does Distribution only, there will be no Matching Dimension section. Proceed to the Distribution dimension.)
9. Click the Plus icon (+) to add the first matching dimension
The add matching dimension screen opens
10. Enter or look up a dimension value.
11. If the Dimension lookup will be based on a dimension hierarchy, enter or look up the hierarchy name.

Note: The hierarchy must be of type (must have been created as) Sequence Enforced or Sequence Enforced, Skip Level. This means that all members of dimensions used in the hierarchy were assigned a dimension level and that the hierarchy enforces the

progression of members in the hierarchy from level to level. For more information on hierarchies and levels see EPF user guide – dimensions hierarchies p.x-x

12. Choose the hierarchy version name.
13. Choose the Hierarchy Level on which to focus as well as the Hierarchy relationship.

Choose a hierarchy level that contains the nodes or members from which you will choose the lookup values in the next step of the Factor Table creation. The level you choose depends on the Hierarchy Relationship that you will use. For example, if you choose "Node Only", you will be able to see only the nodes at the specified level when you go to step two. You will not be able to match members below the chosen Node to factors in your factor table lookup. However, if you choose "Node and Descendants Of", you will see dimension members at the current hierarchy level but your factor table lookup will include all dimension members at and below the chosen node in your hierarchy. For information about defining conditions and using hierarchies in condition components, see the section on Conditions in the Enterprise Performance Foundation User's Guide. To view online help, navigate to Business Rule > Condition and click the Help link at the top of the page.

The Hierarchy Relationship options are:

- Descendants Of
- Last Descendants Of
- Node Only
- **Node and Descendants Of.**

14. Click **Apply**.
15. To add another Matching dimension, click the **Add** icon. There are also icons to Update and Remove the matching dimension.
16. If your factor table has a Distribution dimension, enter or look up that dimension in the list of values.
17. Check **Force to 100** to utilize your entered distribution factors as percent to total, similar to the way that Percent Distribution mapping rules provide percent to total factor calculations. For more information, see "Percent Distribution Rules".
18. When you have completed the setup of the Factor Table dimensions, click **Next**.

Tip: You can also enter the factors to your factor table by clicking

Create from spreadsheet. This opens an Excel spreadsheet that facilitates factor data entry. Data can also be copied and pasted into the spreadsheet from a different source. This is called a WebADI interface.

On the second step of Create Factor Table factors you will see a description of the dimension setup of your factor table at the top of the page.

19. Enter dimension members and factors in the Factors section. Click the **Add** icon to add the dimension member or factor.

For matching dimension type tables note the dimension name at the top of the page, for example "Add Company Cost Center Organization Members." Click the Go button to see a list of members or search for a specific member.

20. Click the **Add** plus sign icon to add another dimension member or a distribution member or factor.

You may need to click the plus sign just preceding the dimension member name to see rest of the Factor Tree. You can also click Expand All at the top of the grid.

21. When you are done entering factors, click **Apply** to save the rule.

Factor tables are used in Factor Table type mapping rules. For more information see "Working with Mapping Rules", page 4-2.

Copying Factor Tables

Duplicating a Factor Table allows you to quickly create a Factor Table definition based on an existing definition.

Follow these steps to duplicate a Factor Table.

1. Navigate to Business Rule > Factor Table.
The Factor Table page opens.
2. Search for a Factor Table rule. You can search by Folder name, Name, and Effective date. Use % as a wildcard.
The list displays Factor Tables that match your criteria.
3. Identify the Factor Tables to duplicate and click **Duplicate**.
4. Choose whether to create a new version or a new rule and version.
5. Enter a name and description for the new Factor Table, or a new name and version name.

6. Click **Apply**.

Updating Factor Tables

Once a rule version that uses a Factor Table has been run, the Factor Table is locked from updates. However, the Factor Table can be used in other rules. You can also create a new version of a locked rule and version and update the new version.

Follow these steps to update a Factor Table that has not been run and locked.

1. Navigate to Business Rule > Factor Table.
The Factor Table page opens.
2. Search for a Factor Table rule. You can search by Folder name, Name, and Effective date. Use % as a wildcard.
The list displays Factor Tables that match your criteria.
3. Identify the Factor Table to update and click its **Update** icon.
4. You can modify the name and description.
5. Click **Apply**.

You can update the version details of a Factor Table if the rule has not been run. If the Factor Table was locked you can edit the version's effective date range.

To edit a Factor Table version that is not locked, expand the rule to show the versions.

1. Click the update icon of the version you want to edit.
2. You can change the matching and distribution dimensions on Step 1. Note that this may delete factor table details in Step 2.
3. Click **Continue** to edit Factor Table details such as adding or subtracting matching dimension values, distribution dimensions and factor values.
4. Click **Apply** to exit and save your rule.

Deleting Factor Tables

You can delete a Factor Table before a mapping rule that contains the

Factor Table has run. Once a rule has run, the Factor Table is locked and cannot be deleted.

Follow these steps to delete a Factor Table.

1. Navigate to Business Rule > Factor Table.

The Factor Table page opens.

2. Search for a Factor Table rule. You can search by Folder name, Name, and Effective date. Use % as a wildcard.

The list displays Factor Tables that match your criteria.

3. Identify the Factor Table to delete and click **Delete**.

You are prompted to confirm the deletion.

Working with Mapping Rules

This chapter covers the following topics:

- About Mapping Rules
- Uses for Mapping Rules
- Mapping Rule Prerequisites
- Mapping Rule Processing
- Creating a Mapping Rule
- Mapping Rule Formula Types
- Rule Version Tab
- Building a Formula — The Formula Tab
- Debit and Credit — The Target Tab
- Rule Validations
- The Review Tab
- Track Contributions Option
- Mapping Rule Examples
- Using Mapping Rules for Cost Object Calculations
- Specifying a Condition for a Mapping Rule
- Submitting a Mapping Rule for Approval
- Running a Mapping Rule
- Viewing Results for a Mapping Rule
- Updating a Mapping Rule
- Reverting a Mapping Rule
- Duplicating a Mapping Rule
- Deleting a Mapping Rule

- Viewing a Mapping Rule

About Mapping Rules

Mapping rules perform calculations for allocation of income statement and balance sheet items and enable cost object mapping to activity rates, direct expenses, and activity costs.

- Uses for Mapping Rules, page 4-3
- Mapping Rule Prerequisites, page 4-3
- Mapping Rule Processing, page 4-4
- Creating a Mapping Rule, page 4-5
- Mapping Rule Formula Types, page 4-8
- Building a Formula – The Formula Tab, page 4-17
- Debit and Credit – The Target Tab, page 4-17
- Track Contributions Option, page 4-21
- Mapping Rule Examples, page 4-21
- Using Mapping Rules for Cost Object Calculations, page 4-23
- Specifying a Condition for a Mapping Rule, page 4-24
- Submitting a Mapping Rule for Approval, page 4-24
- Running a Mapping Rule, page 4-24
- Viewing Results for a Mapping Rule, page 4-27
- Updating a Mapping Rule, page 4-27
- Reverting a Mapping Rule, page 4-28
- Duplicating a Mapping Rule, page 4-28
- Deleting a Mapping Rule, page 4-29
- Viewing a Mapping Rule, page 4-30

Uses for Mapping Rules

You use mapping rules to accomplish the following:

- Move data between different cost centers, chart of accounts, or products.
- Generate interim data points that will be used for further analysis.
- Associate activities with cost objects.
- Associate expenses with cost objects.
- Spread costs to cost centers based on a statistical driver.
- Look up rates and update balances based on the lookup value.
- Reclassify balances to different dimension values.

Mapping Rule Prerequisites

Before you define mapping rules, you must perform the following tasks:

- Ensure that the FEM_BALANCES table is classified as Profitability Manager Ledger type. If you will be using Activity-Based Management features, the FEM_BALANCES table must also be classified as Activity Management Ledger type.
- Ensure that Account or Transaction tables that will be used in mapping rules are registered with one of the following valid classifications: Customer Account Profitability Tables or Transaction Profitability Tables. Account and Transaction tables must also be classified as Client Data Tables to enable data loading. For information about how classification affects processing, see "Mapping Rule Processing", page 4-4.
- Ensure that, as part of table registration, Mapping Input/Output columns have been specified for each table. Note that once registration has been completed and these columns have been used in mapping rules, you cannot change them as the existing rules may no longer reference the columns that you removed or will not show columns you added. Verify that all required mapping columns are in place before you begin to create your processing rules.

Important: Be sure to review the rules for mapping input and output columns in Specify Input and Output Columns for Mapping, page 2-9 before specifying the mapping input/output columns..

- The Retrieve Statistic mapping rule formula type uses a lookup table that has been joined to the source table. You must setup the appropriate statistics prior to creating a Retrieve Statistic type mapping rule. For more information, see "Mapping Rule Formula Type: Retrieve Statistic", page 4-14 and "Working with Statistic Definitions", page 3-5.
- The Factor Table mapping rule formula type uses a factor table that permits dimension lookups (called *matching dimensions*), lookup and distribution (called *matching with distribution*), or distribution dimension only. You can set up the appropriate Factor Table prior to creating a Factor Table type mapping rule, or from within the mapping rule itself using the **Create Factor Table** button. For more information, see "Mapping Rule Formula Type: Factor Table", page 4-13 and "Working with Factor Tables", page 3-13

For general setup information, see "About Setting Up Profitability Manager", page 2-1.

Mapping Rule Processing

This section discusses how the Mapping engine processes mapping rules.

Processing Different Table Classification Types

Mapping rules are processed differently for different table classification types.

- Rules that have FEM_BALANCES as source and target will take all rows that match the source criteria and pass them through the rule formula, creating new rows in FEM_BALANCES as specified by dimension considerations in the Debit/Credit sections. The new rows will have a CREATED_BY_REQUEST_ID value equal to the Request ID of the Concurrent Manager process assigned to the rule when it was submitted. The Mapping engine processes the FEM_BALANCES table in a row-by-row manner.
- When the source and target are both Account or Transaction types, mapping rules are processed differently, depending on the selected formula type. Simple and Field type formulas update across the row in Account tables. No new rows are created. These operations can be processed by the Mapping engine using bulk SQL statements in many cases. If the Post to Balance option is applied to a Debit/Credit (see "Debit and Credit – The Target Tab", page 4-17), bulk SQL operations cannot be applied to the target table. When a row is updated, the LAST_UPDATED_BY_REQUEST_ID column is updated with the Request ID of the Concurrent Manager process assigned to the Mapping rule when it was submitted.
- When the source and target for Account and Transaction types are different, only source rows that match the target table in all of the following columns will be processed: ID_NUMBER, DATASET_CODE, CALENDAR_PERIOD_ID and LEDGER_ID. You can map from an Account table to its corresponding Transaction

table if these columns match up as well; however, transaction rows are coded further by a Transaction ID column. Thus you may need to specify a Transaction ID value in the Debit (or Credit) of a target row when an Account table updates a Transaction table.

For Transaction table setup considerations see Register Tables and Columns, page 2-8.

Writing Balance Values

The Mapping engine writes balance values to one or two columns in FEM_BALANCES, depending on a Ledger ID attribute setting.

- If the Ledger ID Entered Currency Enabled Flag has a Yes or True value, the balance value for new rows is written into both the Entered and Functional balance columns (XTD_BALANCE_E and XTD_BALANCE_F).
- If the Ledger ID Entered Currency has a No or False value, the engine writes into the Functional balance column only (XTD_BALANCE_F).

The engine ignores rows that are designated CURRENCY_TYPE_CODE = Translated. It processes rows for which CURRENCY_TYPE_CODE = Entered or Total.

For details about FEM_BALANCES columns, see the *Enterprise Performance Foundation User Guide*.

Rule Set Processing

Groups of mapping rules can be run in a specified order by creating a Rule Set. Rules can be ordered using the sequence number of the rules.

For information, see Updating Rule Set Definition Settings, *Oracle enterprise Performance Foundation User's Guide* in the *Enterprise Performance Foundation User's Guide*.

If you set the sequence numbers of two or more rules to the same value, then the Mapping engine attempts to run the rules using a more efficient method (this method is known as "Single Pass" in Oracle Financial Services Applications Release 4.5). Under these circumstances the Mapping engine compares the source tables in the rules to the applied selection conditions. If the "WHERE" clause of the rules is identical, then the Mapping engine reads the source data once and applies the rule formulas to the target data sets at the same time, speeding up processing. If the conditions applied to the rules differ, then the engine will run the rules sequentially.

Creating a Mapping Rule

Follow these steps to create a Mapping rule.

1. Navigate to Business Rule > Mapping.

2. The Mapping Rules page opens.
3. Click **Create**.
The Create Mapping Rule page opens.
4. Identify the rule and specify user access.
 1. Choose a folder.
 2. Enter a name.
 3. (Recommended) Enter a description.
 4. Choose the type of access that other users will have to this rule: Read and Write or Read Only.
 5. Select the Mapping rule type from the following list:
 - Percent Distribution
 - Simple Source on Allocation
 - Factor Table
 - Retrieve Statistic
 - Field
 - By Dimension
 - Adjustment

Click the Example icon to see an expanded explanation of the rule types.
5. Click **Continue**.
The Mapping Wizard page opens to the Rule Version tab.
6. Identify the rule version.
 1. Enter a version name.
 2. Specify Effective Start Date.
 3. Specify Effective End Date.
 4. (Recommended) Enter a description.
 5. To enable visual trace for a rule for which FEM_BALANCES is the target table,

click **Track Contributions**. For more information, see "Track Contributions Option", page 4-21 and "Viewing Results for Track Contributions", page 4-27.

7. Click the Source tab.
8. In the Initial Data Source area, specify the table and column for the source data. Available sources depend on the formula type that you chose (Step 4). You can include all rows or select a filter condition. Click **Create Condition** button to create a new condition rule.

For information about formula types, see "Mapping Rule Formula Types", page 4-8. For information about conditions, see "Specifying a Condition for a Mapping Rule", page 4-24.
9. Choose the Driver tab if your rule is of type Percent Distribution, Factor Table, Retrieve Statistic, or By Dimension. The options available on the Driver tab depend on the rule type chosen.
10. If you chose Percent Distribution as the formula method, on the Driver tab specify the Driver table and driver column. A Driver condition can also be applied to the driver table. For more information, see "Mapping Rule Formula Type: Percent Distribution", page 4-11.
11. If you chose Retrieve Statistic as the rule type, then select the Statistic from the list of values provided.

For more information see "Mapping Rule Formula Type: Retrieve Statistic", page 4-14.
12. For rule type By Dimension specify the Dimension and the member value to be used in the formula of the rule.

For more information see "Mapping Rule Formula Type: By Dimension", page 4-15.
13. If you chose the Factor Table rule type choose the Factor Table on the driver tab or create a new one by clicking **Create Factor Table**.

For more information see "Mapping Rule Formula Type: Factor Table", page 4-13.
14. Build the formula. You can insert mathematical operators and components. Available components depend on the formula type that you chose (Step 4). Use parentheses as needed to set operational precedence. Click **Refresh Formula** to update the text representation of the formula.

For more information, see "Building a Formula – The Formula Tab", page 4-17.
15. Click on the Target tab to specify how records will be posted or updated to the FEM_BALANCES table when the rule is processed. If the target of the rule is an Account or Transaction table, you can use the Post to Balances feature to provide an

audit trail.

Note: If the Debit or Credit boxes are unchecked, the associated Debit or Credit will not be output by the mapping rule.

For more information, see "Debit and Credit", page 4-17.

16. Click on the Review tab to see a consolidated view of all sections of the rule. For most rule types you can click the Preview button test out the results of the rule.

For more information see "The Review Tab", page 4-20.

17. Click **Save** to save and continue editing your rule. Save initiates a validation process that will identify and display errors or warnings about the current mapping rule definition. You can click **Validate** to just run the validations without saving any changes. When you are ready to exit and save all changes click **Apply** to exit the rule and return to the rule selector.
18. If you chose Percent Distribution or By Dimension as the formula method, use the Final Operand In Formula area to specify the target table and rows across which data will be distributed. Click the **Update** icon to specify dimension components and an optional condition to filter the data. If you chose the Percent Distribution method, also specify Percent Distribution details for each dimension.

If you chose Retrieve Statistic as the formula method, use this area to select the Statistic.

For more information, see "Mapping Rule Formula Type: Percent Distribution", page 4-11 and "Mapping Rule Formula Type: Retrieve Statistic", page 4-14.

19. Use the Debit Credit section to specify how records will be posted or updated to the FEM_BALANCES table when the rule is processed. If the rule is on an Account or Transaction table, you can use the Post to Balances feature to provide an audit trail.

Note: If the Debit or Credit 'Select' box is unchecked, the associated Debit or Credit will not be output by the mapping rule.

For more information, see "Debit and Credit", page 4-17.

20. Click **Apply**.

Mapping Rule Formula Types

When you define a mapping rule, you specify the formula type. Following is a summary of mapping rule formula types. For more information, click the link in the "Comment" column. Also see the key following the summary which relates the referenced tables to valid EPF table classifications.

Formula Method	Initial Data Source	Driver/Final Operand	Debit/Credit Target	Comment
Percent Distribution	FEM_BALANCE S	FEM_BALANCE S	FEM_BALANCE S	Driver and Target must be the same table
	Account table	Account table	Account table	See "Mapping Rule Formula Type: Percent Distribution", page 4-11
	Transaction table	Transaction table	Transaction table	
Simple Source on Allocation	FEM_BALANCE S		FEM_BALANCE S	See "Mapping Rule Formula Type: Simple Source on Allocation", page 4-12
	Account table		Account table	
	Transaction table		Transaction table	
Factor Table	FEM_BALANCE S	Factor Table	FEM_BALANCE S	Factor Tables that distribute can only target FEM_BALANCE S. See "Mapping Rule Formula Type: Factor Table", page 4-13.
	Account table		Account table	
	Transaction table		Transaction table	
Retrieve Statistic	FEM_BALANCE S	FEM_BALANCE S Statistic Table	FEM_BALANCE S	Driver must be classified as Statistic See "Mapping Rule Formula Type: Retrieve Statistic", page 4-14
	Account table		Account table	
	Transaction table		Transaction table	

Field	Account table Transaction table	Account table Transaction table	Account table Transaction table	Source and Field/Driver must be the same table See "Mapping Rule Formula Type: Field", page 4-15
By Dimension	FEM_BALANCE S	FEM_BALANCE S	FEM_BALANCE S	Source and Field/Driver must be the same table See "Mapping Rule Formula Type: By Dimension", page 4-15
Adjustment			FEM_BALANCE S	Source is a constant value See "Mapping Rule Formula Type: Adjustment", page 4-16

Table key

The following list shows the names that appear in the summary table and the related official EPF table classification.

Designation used in summary table	EPF Table Classification
FEM_BALANCES table	Profitability Manager Ledger Activity Management Ledger
Account table	Customer Account Profitability Tables
Transaction table	Transaction Profitability Tables

Mapping Rule Formula Type: Percent Distribution

The Percent Distribution method distributes a balance amount specified by the Initial Data Source condition to a set of specified target rows on a percent or percent to total basis. For example, you might use this formula type to distribute an expense in a ledger's "Support Department" to operational departments based a statistic such as the number of calls made to support.

A Percent Distribution rule can perform mathematical operations between the Initial Data Source and the Percent Set when the Initial Data Source and the Percent Distribution sets are both in the FEM_BALANCES table. This makes a Percent Distribution rule behave like a flexible By Dimension type rule. However, the By Dimension rule can vary only by one dimension value, whereas the Percent Distribution set does not have a restriction on the dimensionality of the data it can contain.

Note: In Version 4.5 of Performance Analyzer, the functionality of the Percent Distribution method was accomplished by "Percent Distribution." Percent Distribution with Matching Dimensions was accomplished by Distribution by Leaf." Also, in Activity-Based Management (ABM) a one-to-one relationship between source account and a mapping rule was required. This is no longer the case: a single mapping rule can select a set of accounts and, using Matching Dimensions, allow for the automated distribution of balances to the appropriate target accounts.

The source for the Percent Distribution formula type can be rows in the FEM_BALANCES table, an Account table, or a Transaction table. Proceed as follows:

1. On the Source tab, choose the table and column and optionally specify a condition to filter the data.
2. On the Driver tab you specify the details of the percent set.
 1. Choose the table and column and optionally, a condition to filter the data.
 2. Determine whether to apply the Percent Distribution to the Debit or Credit and select the appropriate radio button.
3. Specify the percent distribution criteria.
 1. Select **Percent set as percent of total (force to 100)** if you want to use the percent set as a percent to total where each row is a percentage factor. For example, (n/sum(n for all percent rows).
 2. Select **Percent set as factors** if you do not want to calculate a percent distribution. Instead, a simple multiplication will be performed using the

percent set as a factor (instead of a percent to total). It is calculated using all of the records that meet the criteria.

4. In the Percent Dimensions section, choose one or more of the following for Percent Dimension Details:
 - **Percent Distribution** — Choose one or more dimensions that will be used to distribute the source amount across to the target rows.
 - **Matching Dimensions** — Choose one or more matching dimensions to match the dimension value from the source to the target set and distribute to the target rows across the Percent Distribution dimension's set. The matching dimensions' values will be matched from the source to the percent set and carried across to the Debit/Credit.
 - **Matching Dimensions with Reclass** — This is similar to the functionality of Matching Dimensions, with the exception that the matching dimensions' value can be reclassified in the Debit/Credit.
 - **Not Applicable** — Indicates that the dimension will not be used in determining the percent set.

Note: At least one dimension must be set to **Percent Distribution**.

5. On the Formula tab set up the rule formula.

For more information, see *Building a Formula – The Formula Tab*, page 4-17

Note: The target set for the distribution can be rows in the FEM_BALANCES table, an Account table, or a Transaction table, but must match the table designated on the Driver tab.

6. On the Target tab set up the Debit and Credit.

For more information, see *"Debit and Credit – The Target Tab"*, page 4-17

Mapping Rule Formula Type: Simple Source on Allocation

The Simple Source on Allocation method enables you to perform simple factor calculations. For example, you might use Simple Source on Allocation to accumulate balances from an Account table to the FEM_BALANCES table or from a Transaction table to an Account table. You can also create calculations across the row in an Account table.

The source for the Simple Source on Allocation method can be a column in the FEM_BALANCES table, an Account table, or a Transaction table. Proceed as follows:

1. On the Source tab, choose the table and column and optionally specify a condition to filter the data.
2. On the Formula tab set up the rule formula.
For more information, see Building a Formula – The Formula Tab, page 4-17
3. On the Target tab set up the Debit and Credit.
For more information, see "Debit and Credit – The Target Tab", page 4-17

Mapping Rule Formula Type: Factor Tables

The Factor Table rule type allows you to process source data by means of lookup values stored in a system table. Factor table rules can be one of three types:

1. **Matching dimensions only** – Functions as a lookup table, much like a Retrieve Statistics rule
2. **Distribution dimension only** – Function like a percent distribution rule, spreading a source balance across designated target rows on a percent to total (Force to 100 %) or factor only basis.
3. **Matching with distribution** – Functions as a combination of the two methods, source rows that match the lookup values are distributed to new rows given the specified distribution factors.

Note: Distribution and Matching with Distribution Factor Table rules can only target the FEM Balances table.

Note: The functionality of the Factor Table method is similar to "Table ID (Factor Lookup)" in Version 4.5 of Performance Analyzer.

The source for the Factor Table rule type can be a column in the FEM_BALANCES table, an Account table, or a Transaction table. Factors are stored in a Factor Table rule.

For more information, see "Working with Factor Table", page 3-13.

Proceed as follows:

1. On the Source tab, choose the table and column and optionally specify a condition to filter the data.
2. On the Driver tab, choose a Factor Table. Factor Tables can be created prior to using them in a mapping rule.

For more information, see "Creating Factor Tables", page 3-14

3. On the Formula tab, specify the math operators to use.
4. On the Target tab set up the Debit and Credit.

Rows in the source set that match a lookup value in the factor table will be updated, but rows that find no lookup will be skipped. For more information, see "Debit and Credit – The Target Tab", page 4-17

Mapping Rule Formula Type: Retrieve Statistic

The Retrieve Statistic rule type enables you to process source data by adding, multiplying, subtracting, or dividing by one or more statistics or lookup values stored in a Statistic lookup table. For example, you might use this method to use capital allocation factors to assign capital to products within the organization.

Note: The functionality of the Retrieve Statistic method is similar to "Table ID (Factor Lookup)" and "Lookup Table ID" in Version 4.5 of Performance Analyzer. For more information, see "Working with Factor Tables", page 3-13

The source for the Retrieve Statistic rule type can be a column in the FEM_BALANCES table, an Account table, or a Transaction table. Statistics are stored in Statistic table columns that have been mapped to a target table in a Statistic rule.

For more information, see "Creating a Statistic", page 2-13.

Proceed as follows:

1. On the Source tab, choose the table and column and optionally specify a condition to filter the data.
2. On the Driver tab, choose one or more statistic rules. Statistics must be created prior to using them in a mapping rule.

For more information, see ""Working with Statistic Definitions", page 3-5.

3. On the Formula tab, specify the math operators to use.
4. On the Target tab set up the Debit and Credit Rows in the source set that match a lookup value in the statistic table will be updated, but rows that find no lookup will be skipped.

For more information, see "Debit and Credit – The Target Tab", page 4-17

In the Final Operand In Formula area, proceed as follows:

- Specify the math operator to use.
- Click **Update** to select the statistic. Available statistics are those that have been

mapped to the table specified in the Initial Data Source.

- Click **View Driver** to see join details.

Set up the Debit and Credit. Rows in the source set that find a lookup in the statistic table will be updated, but rows that find no lookup will be skipped. For more information, see "Debit and Credit – The Target Tab", page 4-17.

Mapping Rule Formula Type: Field

The Field method enables you perform a mathematical operation across a row between two or more columns in Account or Transaction tables. This method is typically used for detail account and transaction calculations. For example, you might use it to define calculations between balance or rate columns on accounts.

The source for the Field formula type is a column in an Account or Transaction table. Proceed as follows:

1. On the Source tab, choose the table and column and optionally specify a condition to filter the data.

Note: Changing the source table removes an existing field operand in the rule formula. A warning will be issued in this case.

2. On the Formula tab click **Add Operand** button to add an operand and select Field for the operand type.

For more information on setting up the rule formula, see Building a Formula – The Formula Tab, page 4-17

3. On the Target tab, set up the Debit and Credit.

For more information, see "Debit and Credit – The Target Tab", page 4-17

Mapping Rule Formula Type: By Dimension

The By Dimension method enables you perform calculations between balances and a rate in the FEM_BALANCES table. Typically, the dimensionality for a balance and a rate differ only by the Financial Element value. The By Dimension method matches up all the other dimensions and allows you to specify the two Financial Element ID values to match. For example, you might use this method to perform standard weighted transfer charge credit calculations, or to generate cost of funds.

Note: In Version 4.5 of Performance Analyzer, the By Dimension method was called "By Leaf."

The source for the By Dimension formula type is the FEM_BALANCES table. Proceed

as follows:

1. On the Source tab, choose the table and column and optionally specify a condition to filter the data.

The driver set for the By Dimension formula type is specified by a dimension column and a member value in the FEM_BALANCES table.

2. On the Driver tab choose the dimension column and specify a value.

3. On the Formula tab set up the rule formula.

For more information, see Building a Formula – The Formula Tab, page 4-17.

4. On the Target tab set up the Debit and Credit.

For more information, see "Debit and Credit - the Target Tab", page 4-17.

Set up the Debit and Credit. For more information, see "Debit and Credit – The Target Tab", page 4-17.

Mapping Rule Formula Type: Adjustment

The Adjustment method enables you post a balance to the FEM_BALANCES table. The adjustment type creates a single row in the FEM_BALANCES table for each rule that is run. It does not create multiple rows on output, and is used when adjustments need to be made and an audit trail is required. Typically, you would use this method to create reconciling balances or to adjust data for other business reasons.

The Formula of the Adjustment method is a balance value or constant. You must specify all dimension member values on the Target tab. There is no "Same As Source" option. Typically, the adjustment value is applied to either the Credit or the Debit only.

For more information, see "Debit and Credit - the Target Tab", page 4-17.

Rule Version Tab

On the Version tab specify the version name and optionally a description. Also specify version start and end dates.

Even after a rule version has been run and is locked from editing, the version start and end dates can be modified, as long as they do not overlap an existing rule version. This is especially useful for the last version in a rule.

Tip: When a new version is required, edit the last existing version and give an end date that ends just prior to the new version's start date.

For more information, refer to Track Contributions Option, page 4-21.

Building a Formula — The Formula Tab

The formula tab always has one section: Beginning Operands. If the rule type has a Driver tab, a second section exists on the Formula tab called Operator and Last Operand section.

The formula can be modified in the Beginning Operands section, and the Final Operator can also be modified.

As you build the formula, you add rows and insert operators and components. Available math operators are addition (+), multiplication (*), subtraction (-), and division (/). Available components depend on the rule type and on the table type in the Source and Target tabs.

Operands available can include the following:

- **Constant** — Specifies a constant value that can be used in a formula built from the source rows.
- **Field** — Specifies one or more fields to include in a formula for which an Account or Transaction Table is the source in Field type rules.
- **Accrual Basis** — Specifies an accrual basis to include in a formula applied against the source rows.

Use parentheses to explicitly order operations within the formula.

Click **Refresh** to update the complete formula displayed at the top of the tab.

Debit and Credit — The Target Tab

The Target tab includes Debit and Credit sections, which define the records that will be posted or updated when the rule runs.

Mapping rules that run on the FEM_BALANCES table follow standard accounting rules for increasing or decreasing account balances. Signage on generated balance values is determined by a combination of the Signage setting in the FEM: Signage Methodology set in System Profile Options, in conjunction with the Natural Account dimension Extended Account Type attribute of the source data.

For example, if the Account type of a row is Revenue and you want to increase a target balance, you would update the Credit portion of the rule and set the dimensions of the target rows. The offset would occur in the Debit portion of the rule. However, the actual sign of the balance in the FEM_BALANCES table depends on the Signage methodology that has been set. Thus:

- For the Absolute method, a revenue type account balance of 100 increased by 10 would be credited to 110.

- In the GAAP Standard method, an equivalent revenue type balance of -100 would be increased by -10 and credited to -110. Account and Transaction targeted tables are treated like 'Assets' by the Mapping engine.

Note: For information about setting the Signage methodology, see "Set Signage Methodology", page 2-4.

The ability to reclassify the target row Credit/Debit dimension values is dependent on table type. For the FEM_BALANCES table, all dimensions can be specified or left "Same as Source." For Account and Transaction tables, you cannot specify dimensions at all.

Transaction table Credit/Debit rows allow specification of specific processing key columns only, for the purpose of targeting specific rows for update. This provides a way to apply a condition to the target on the transaction specific dimension.

This is important in Percent Distribution formulas that allocate from FEM_BALANCES or Account tables to Transaction table rows because the higher level aggregated tables do not preserve transaction dimension values. It allows you to target specific transaction dimension values in the target data set by specifying the filter in the Debit or Credit for these dimensions.

The Target tab has a separate section for Debit and Credit. Use the Debit and Credit check boxes to enable or disable these sections. In each section you need to set the target table (e.g. Debit into) and the target column (Debit Column) Click the plus sign (+) before the Debit Dimensions section to open it

Options for each dimension are as follows:

- **Same as Source** — Retain the dimensionality of the source rows.
- **Value** — Look up and specify the new member value for the dimension.

For Currency you can choose Same as Source, Functional (the default currency), or a specific currency value. If your ledger only has functional currency, the currency specification will be ignored.

Note: For information on entering currency exchange rates and the Currency Rates Manager, refer to the "Multi Currency" chapter in the *Oracle General Ledger User's Guide*.

Note: For a Percent Distribution rule, at least one dimension must be identified as "Percent Distribution" and its dimension value cannot be modified in the Credit/Debit area. For a Percent Distribution with Matching Dimensions formula type, the matched dimension will be identified as "Matched Dimensions" unless you chose **Matching Dimension with Reclass** in which case you choose a specific dimension value for the reclassified dimension.

Note: For a Factor Table rule that does distribution, the distribution dimension will be set to Same as Table. If the same dimension is mapped to a second dimension (for example Company Cost Center Org ID is mapped also to User Dim 3) you will need to specify only one of the target columns to **Same as Table** and the other to either **Value** or **Same as Source**.

If the target table is an Account table or a Transaction table, you can choose the **Post to Balances** option. Post to Balances provides a way to mirror the updates to Account or Transaction tables into the FEM_BALANCES table, thereby providing an audit trail. The sum total of all updates to a target set of rows is accumulated by dimensionality and then posted back to FEM_BALANCES. When you click the Post to Balances checkbox, all of the Balances Mapping Output columns will show below.

Note: You must specify a value for every dimension column that is included in the processing key of the FEM_BALANCES table. The value can be Same as Source or a specified value. Note also that the processing keys for FEM_BALANCES and Account tables are different. For example, the Financial Element ID column is not populated in Account tables. In that case you will need to supply a Financial Element ID Value in the Debit when you target the Balance table — you cannot rely on Same as Source.

When implementing Post to Balances, keep in mind that the additional processing that is required to post additional data will increase the rule run time.

Tuning Option Settings for Post to Balances

Mapping rules that use Post to Balances require special Tuning Option settings. A user with access to Administration functions must define the following settings:

- Commit Frequency — Any value greater than 0
- Array Size Rows — Equal to 1

Tuning Options should be defined after the mapping rule has been created, but before it is run.

Follow these steps to set the Tuning Option for a mapping rule that uses the Post to Balances option.

1. Navigate to Administration > Tuning Options.
2. On the Process Tuning Options page click **Create**.

The Tuning Options Assignment Level page opens.

3. In the Rule Type box, choose **Mapping Rule**.
4. In the Rule Name box, select the rule for which you will set tuning options.
5. Click **Continue**.
The Update Tuning Options page opens.
6. In the Multi-Processing section, click **Update**.
7. Set the Commit Frequency to a value greater than 0 (the default is 25000).
8. Set Array Size Rows to equal 1.
9. Click **Next**.
10. Retain or modify the Data Slicing column settings.
11. Click **Apply**.

For more information, see the *Enterprise Performance Foundation User's Guide* or online help.

Rule Validations

When you have completed setup of your new rule you can run a validation process on the rule components by clicking **Validate**. This enables a series of cross tab validations to verify that the requirements of each rule type are fulfilled by your rule's setup. If errors are found you are directed to the mapping rule validation rule results page. Errors and warnings are displayed in a grid that indicates the tab location of the problem, a description of the problem and a troubleshooting tip. You can jump to the problem by clicking on the troubleshooting tip link. If the rule has no errors you are placed on the Review tab.

Clicking **Save** initiates the validation process as well. If no errors or warnings are found, the rule version is saved and you can continue on the tab. When you are ready to exit click the Apply button. A final validation is performed, the rule is saved and you return to the rule selector.

The Review Tab

The Review tab provides a consolidated view of the mapping rule. All the rule tab components are combined to a single, read only page view. Some sections display collapsed – click the plus sign (+) to expand them.

Most rule types display a **Preview Results** button. Click this button to test your rule with all or a subset of your data. On the Preview Rule Results page you must supply a set of parameters for the rule run. Results are posted to a temporary table and you can

repeatedly run the preview using different run parameters and against different dimension values without updating the target tables.

Clicking **Go** launches a process to generate temporary results. Clicking the Refresh button when the process is complete, loads the results in the bottom grid. Click the Preview icons to review Source, Driver, Debit and Credit sets.

Track Contributions Option

If the source and target of a mapping rule is the FEM_BALANCES table, the Track Contributions option enables you to trace data back to the source of the balance after the rule has run. The results are visible on the Processing Management tab's Executed Rule subtab. For more information, see "Viewing Results for Track Contributions", page 4-27.

Note: The following must be met in order for Track Contribution to be fully supported:

- Both input and output tables are LEDGER tables
- The mapping rule type is either Percent Distribution or Simple Source on Allocation
- For Percent Distribution, the formula must be **Source * PCT** and for Simple Source on Allocation, the formula must be **Source * or / Constant**

To track contributions, check the **Track Contributions** option checkbox on the Version tab of the rule. The checkbox is available only if the source and target of the rule is the Balance table.

For more information, see "Viewing Results for Track Contributions", page 4-27.

Mapping Rule Examples

This section presents examples for working with the Percent Distribution formula type.

Example: Defining a Percent Distribution Rule

The following example describes the general steps that you would follow to allocate expenses for a hypothetical department to three business units that the department services, based on the square footage occupied by the business units. The example assumes a predefined condition rule, which uses a hierarchy filter on Department: Facilities, which includes the three business units.

1. Create and name the mapping rule and choose **Percent Distribution** as the formula

type.

2. On the Version tab, name the version.
3. On the Source tab, choose the FEM_BALANCES table and the Current_Period_Amount column.
4. Under Source Condition click **Select Filter Condition** and search for a condition rule.

You can also create a new condition rule, click **Create condition** and choose a set of dimensions that limit the source rows. For example:

- Organization: Operations
- Department: Facilities
- Financial Element: Expense

5. On the Driver tab, proceed as follows:
 1. In the Driver Condition section specify the predefined global condition that filters data to the three business units that will get the charge. The condition also selects a statistic value of square footage for each of the departments.

For example:
Example
Organization: Operations, Line Item: Square Feet, Department: Departments for Facilities Charge
 2. Set the **Distribution target** to direct the distribution to the Debit.
 3. Set the **Distribution Criteria** to Percent set as a percent of total (force to 100).
 4. Open the Percent Dimensions section by clicking the plus sign (+) and set the usage of the Organization and Department dimensions to **Percent Distribution**.
6. On the Formula tab, click the Add Operand button, choose the multiplication operator (*), and type in a value (for example, 100).
7. On the Target tab and in the Debit section choose the FEM_BALANCES table and the Current_Period_Amount column. Open the Debit Dimensions section by clicking on the plus sign and specify a dimension value as follows:

Example

Line Item: Change from Same as Source to Value, and choose a value that represents the allocated expenses

Note: Organization and Department dimensions are listed at the top as the Percent Distribution dimensions.

8. In the Credit section, choose FEM_BALANCES and the Current_Period_Amount column. Verify that the Credit Dimension values are all set to Same as Source.

Example: Using Matching Dimensions

The following example illustrates how to use the Matching Dimensions option for Percent Distribution. In this example, the driver for the distribution is a balance, but it could be a statistic such as square footage or headcount.

In Cost Center 1600 there are four products which have a total balance of \$1000, and in Cost Center 1700 there are five products with a total balance of \$1500. The sum of all products regardless of these two cost centers and all other cost centers is \$100,000. You want to distribute balances across products according to the costs that each cost center has generated. If you were to do a straight distribution across products, the total balance of \$100,000 would be used as the denominator for calculating the percent to total calculation (performed when **Percent set as percent of total** is selected on the Driver tab). However, you want to match balances from each cost center and distribute this to the particular cost center's products only. You do this by setting Cost Center as a Matched Dimension so that balances for Cost Center 1600 will be distributed to the four products of that cost center. The Product dimension is set as the Percent Distribution dimension.

The Mapping engine matches cost center balances and distributes to rows that match in the percent distribution (driver) set, distributing across the product rows that exist.

If you want the resultant rows created by the distribution to be assigned to a different cost center (that is, reclassified) you would change the Matched Dimension designation applied to cost center to Matched Dimension with Reclass. If the distribution is applied to the Debit, this allows you to assign a specific dimension value to the Cost Center dimension in the Debit.

Using Mapping Rules for Cost Object Calculations

The Activity subtab enables users with access to Activity-Based Management functions to define calculations for Activity Cost Rollup, Activity Statistic Rollup, Activity Rates, and Cost Object Unit Cost Rollup.

To extend this functionality, you can use mapping rules to create additional cost object calculations. For example, you can map activity rates to cost object unit costs, calculate cost object extended costs, cost object mapped costs, and cost object total costs. For more information, see "Using Mapping for Additional Cost Object Calculations", page 6-22.

Specifying a Condition for a Mapping Rule

Within most mapping rule types, you can optionally specify a condition to filter the data. The condition is applied when the rule runs: only data that meets the condition will be processed in conjunction with your Application Preferences settings. The condition version to be used is determined by the effective date specified at run time.

Mapping rules allow conditions to be attached to the Initial Data Source rows as well as to Percent Distribution sets.

For information about defining conditions, see the section on Conditions in the *Enterprise Performance Foundation User's Guide*. To view online help, navigate to Business Rule > Condition and click the Help link at the top of the page.

Submitting a Mapping Rule for Approval

You must submit a new rule version for approval before you can run it against a production data set. Submitting a rule generates a notification to the designated approver. The approval hierarchy is set up in Oracle Approvals Management (AME). Oracle Workflow routes approval requests to the appropriate individuals.

For more information, see the section on Rule Approval in the *Enterprise Performance Foundation User's Guide*.

Running a Mapping Rule

When you run a Mapping rule, data is written to the specified table and column in the Debit/Credit as specified in the formula for the rule. Rules where FEM_BALANCES is the target table create new rows in the table. Rules that target an Account or Transaction table overwrite values in the target columns in the existing rows in the table. For additional details, see "Mapping Rule Processing", page 4-4.

If the target table for a Mapping rule is an Account or Transaction table, the **Accumulate Results** checkbox is active at the top of the Target tab. This option directs the Mapping engine to accumulate the results of the rule with an existing value in the target column. The default value is disabled (do not accumulate).

Rule execution is driven by the parameters for Ledger, Dataset Group, Calendar Period, and Effective Date in your Application Preferences settings. The Effective Date parameter determines which version of the rule will be run. (See "Duplicating a Mapping Rule", page 4-28 for information about creating rule versions with different effective date ranges). When you submit a rule or rule set to be run you are shown the parameters, copied from the corresponding Application Preferences settings. Adjust the values as needed. For more information, see ", page 2-12.

Mapping rules can be run in a specific sequence in a Rule Set. For details on sequencing rules, nesting rule sets and running rules "Single Pass.", see Updating Rule Set

Definition Settings, *Oracle enterprise Performance Foundation User's Guide* in the *Enterprise Performance Foundation User's Guide*.

Once a rule has run (successfully or not), it is locked. This means that it cannot be run again for the same Dataset Group, Ledger, and Calendar Period combination. If you need to rerun the rule you will have to undo it in the Executed Rule interface.

For more information, see the section on Removing Rule Execution Results in the *Enterprise Performance Foundation User's Guide*. Or navigate to Process Management > Executed Rules and click the Help link at the top of the page.

Methods for Running a Mapping Rule

You can run a Mapping rule from the Mapping tab as a single rule submission. Alternatively, you can include the rule along with others in a Rule Set and run the entire Rule Set.

For information about Rule Sets, see the section on Rule Sets in the *Enterprise Performance Foundation User's Guide*. To view online help, navigate to Process Management > Rule Sets and click the Help link at the top of the page.

Running a Rule from the Mapping Tab

Follow these steps to run a Mapping rule from the Mapping tab.

1. Navigate to Business Rule > Mapping.

The Mapping Rules page opens.

2. In the Search area, identify the rule to run. Choose a folder, enter % and click **Go** to see all rules, or enter text and use % as a wildcard. You can also search using Effective Date.

The list displays rules that match your search criteria.

3. Display rule versions by clicking the + icon in the Rule Name column.

4. Identify the version to run and click its **Run** icon.

The Execute Rule page opens.

5. Specify the parameters for running the rule. The default parameters reflect your current Application Preferences settings.

- **Effective Date** — Specify the effective date.
- **Ledger** — Choose the ledger against which to run the rule.
- **Calendar Period** — Specify the calendar period against which to run the rule. (Data is generally loaded monthly and run against a period that represents the

current target data that will be processed.)

- **Dataset Group** — Choose the Dataset group.

6. Click **Submit**.

Monitoring a Run

When you run a rule, the interface switches to the Concurrent Manager View Requests page where you can monitor the progress of the run. The output file for the request contains messages relevant to the progress of the run.

You can set a FEM Profile option to display detail level SQL debugging information. For more information, see the section in the *Enterprise Performance Foundation User's Guide* that describes FEM Profile options.

For information about submitting and monitoring requests, see the *Oracle Applications User's Guide*.

Important: If the mapping rule runs, but does not produce any output, the user may still rerun the rule for the same calendar period and output dataset if desired. However, the rule will be locked for updates. To unlock the rule, the user must first undo the rule, and then update the rule. If the rule produces output, the user will be prohibited from re-running that rule for the same calendar period and dataset until they undo the results. In both cases, the rule definition will be locked, and updates are not allowed.

Viewing Results for a Mapping Rule

Once a mapping rule has run, you can view results in several ways.

- Use the Executed Rules function (Process Management > Executed Rules). If the rule writes to FEM_BALANCES, click the **View** icon (a pair of glasses) for the rule in the Rule Results column. This opens the Rule Audit Ledger page where you can view generated rows in the FEM_BALANCES table.
- Use Data Inspector. Query the target table and specify a condition to view the updated column. For more information about Data Inspector, see the *Enterprise Performance Foundation User's Guide*.
- Run the Multi Dimensional Cost and Statistics workbook from the Documents tab.

Additional reporting solutions using Discoverer are also available.

Viewing Results for Track Contributions

If you enabled the Track Contributions option and FEM_BALANCES is the target table, you can trace back to the source of the balance after the rule has been run.

If the target table is not FEM_BALANCES but you chose the Post to Balances option in the Debit Credit Section, you can track contributions on the generated balance rows.

Follow these steps to view results for Track Contributions.

1. Navigate to Process Management > Executed rules.
2. Locate the rule and click **View Results**.
The resultant rows are shown as links.
3. Click the links to trace back to the source of the balance.

If the row resulted from a previous mapping rule you can continue to trace it back.

Updating a Mapping Rule

You can update a Mapping rule to which you have read and write access. You can change the rule name and description. If a rule version has not been run you can update the version name and effective date range. Although you cannot change the formula type, you can update components of the formula such as conditions, math operators, and constant values. The rule version is locked after it has been run, except for the start and ending effective dates. These may be changed after the rule has been run.

Note: Generally, updates to locked rules are handled through the creation of a new version for the rule with an effective date range which follows that of the initial version. See "Duplicating a Mapping Rule", page 4-28.

Follow these steps to update a Mapping rule.

1. Navigate to Business Rule > Mapping.
The Mapping Rules page opens.
2. In the Search area, identify the rule to update. Choose a folder, enter % and click **Go** to see all rules, or enter text and use % as a wildcard. You can also search using Effective Date.
The list displays rules that match your search criteria.
3. To modify the rule name or description, click its **Update** icon.
4. To update a rule version (for a version that has not been run), proceed as follows:

- Display rule versions by clicking the + icon in the Rule Name column.
- Identify the version to update and click its **Update** icon.
- Make the desired changes. You can modify name, description, date, source details, formula components, driver, final operand in formula, and debit and credit details.

5. Click **Apply**.

Reverting a Mapping Rule

The Revert icon becomes active when an approved rule is updated.

Click **Revert** to restore the rule to its previous state. You can also use Revert to revert changes when an approved rule has been updated, but the update has been rejected by the approver.

Duplicating a Mapping Rule

Duplicating a Mapping rule allows you quickly create a new version of an existing rule or a new rule and version.

When you duplicate a version, it is added to the list of versions for the rule. When you duplicate the rule and version, the rule and version are displayed as new entities in the list of rules.

Note: When duplicating a version, you must specify an effective date range that does not overlap with another version. Plan effective dates for versions so that, as business needs change, you can implement new rule versions beginning with the Effective Start Date of the versions.

Follow these steps to duplicate a Mapping rule.

1. Navigate to Business Rule > Mapping.

The Mapping Rules page opens.

2. In the Search area, identify the rule to duplicate. Choose a folder, enter % and click **Go** to see all rules, or enter text and use % as a wildcard. You can also search using Effective Date.

The list displays rules that match your search criteria.

3. Display rule versions by clicking the + icon in the Rule Name column.
4. Click the **Duplicate** icon of the version to duplicate.

The Duplicate Options page opens.

5. Choose a duplication option.
 - **Rule and Version** — Enables you to create a new rule and version.
 - **Version** — Enables you to create a new version.
6. Click **Continue**.
7. If you chose Rule and Version as the duplication option (Step 5), identify the rule and the version. For rule, enter a unique name and description. For version, enter a unique name and specify the Effective Start Date and Effective End Date. You can also enter a description.

If you chose Version as the duplication option (Step 5), identify the new version. Enter a unique name and specify the Effective Start Date and Effective End Date. You can also enter a description.

Note: The effective date range for the version must fall before or after the range of the existing version.

8. Click **Finish**.

Deleting a Mapping Rule

You can delete a Mapping rule to which you have read and write access if the rule version has not been run.

If a rule version has been run, you cannot delete it because data has been moved between tables or within a table, and the rule is locked.

If rule is locked, you can use the Rule Execution Undo function to restore (undo) the data. Undoing a rule on the FEM_BALANCES table deletes rule-generated rows; undoing a rule on an Account or Transaction table zeros out the target column in the table and unlocks the rule. Note however, that if there have been multiple updates to the same row in a table, undo will not be possible except on the last rule run.

For more information, see the section on Removing Rule Execution Results in the *Enterprise Performance Foundation User Guide*.

Follow these steps to delete a Mapping rule that has not been run.

1. Navigate to Business Rule > Mapping.

The Mapping Rules page opens.
2. In the Search area, identify the rule to delete. Choose a folder, enter % and click **Go** to see all rules, or enter text and use % as a wildcard. You can also search using

Effective Date.

The list displays rules that match your search criteria.

3. Display rule versions by clicking the + icon in the Rule Name column.
4. Identify the version to delete and click its **Delete** icon.

You are prompted to confirm the deletion.

Viewing a Mapping Rule

Follow these steps to view a Mapping rule.

1. Navigate to Business Rule > Mapping.

The Mapping Rules page opens.

2. In the Search area, identify the rule to view. Choose a folder, enter % and click **Go** to see all rules, or enter text and use % as a wildcard. You can also search using Effective Date.

The list displays rules that match your search criteria.

3. Proceed as follows:

- Click the + icon for a rule to see rule versions.
- Click the Version name to access the View Formula page. You can print the formula by clicking on the Printable Page button.

Working with Customer Profitability Rules

This chapter covers the following topics:

- About Customer Profitability Rules
- About Customer Profitability Analysis
- Customer Profitability Process Overview
- Prerequisites for Customer Profitability Rules
- Account Consolidation Rule
- Profit Aggregation Rule
- Value Index Formula
- Profit Calculation Rule
- Specifying a Condition for a Customer Profitability Rule
- Submitting a Customer Profitability Rule for Approval
- Running a Customer Profitability Rule
- Viewing Results for a Customer Profitability Rule
- Updating a Customer Profitability Rule
- Reverting a Customer Profitability Rule
- Duplicating a Customer Profitability Rule
- Deleting a Customer Profitability Rule
- Viewing a Customer Profitability Rule

About Customer Profitability Rules

Profitability Manager's Customer Profitability rules offer a complete customer profitability solution. You can use these rules to define assumptions for both profitability measures and profitability reporting for customers and any user defined

customer hierarchy.

- About Customer Profitability Analysis, page 5-2
- Customer Profitability Process Overview, page 5-3
- Prerequisites for Customer Profitability Rules, page 5-4
- Account Consolidation Rule, page 5-5
- Profit Aggregation Rule, page 5-7
- Value Index Formula, page 5-10
- Profit Calculation Rule, page 5-12
- Specifying a Condition for a Customer Profitability Rule, page 5-14
- Submitting a Customer Profitability Rule for Approval, page 5-14
- Running a Customer Profitability Rule, page 5-15
- Viewing Results for a Customer Profitability Rule, page 5-16
- Updating a Customer Profitability Rule, page 5-17
- Reverting a Customer Profitability Rule, page 5-18
- Duplicating a Customer Profitability Rule, page 5-18
- Deleting a Customer Profitability Rule, page 5-19
- Viewing a Customer Profitability Rule, page 5-20

About Customer Profitability Analysis

To survive in today's intensely competitive business environments, companies are devoting increased attention to the broad area of customer service and customer satisfaction. Key success factors are considered to be product quality, service levels, delivery lead times, product flexibility, and diversity. In this lies the paradox of modern management. Many firms often claim that they are *customer focused* or *customer driven*, yet their underlying management accounting systems are not. Thus, there has been considerable criticism of the applicability and use of traditional management accounting practices in today's environment. These traditional systems fail to:

- Report information about what matters to the customer.
- Measure the profitability of customers and the products they buy.

- Encourage actions that improve the company's ability to profitably serve customers.

Customer profitability analysis gives organizations of all sizes essential information for choosing what to do with whom, when, and how by answering the following questions:

- How many of your customers are profitable?
- How dependent are you on the most profitable customers?
- Which customers are unprofitable?
- Why are they unprofitable?
- What proportion of your resources do these customers consume?

Customer Profitability Process Overview

The customer profitability process consists of three steps: account consolidation, profit aggregation, and profitability calculations. The data model that supports this process includes customer Account tables and a main processing table:

FEM_CUSTOMER_PROFIT. All of these calculations process data from the FEM_CUSTOMER_PROFIT table and use customer Account table records or externally loaded data as the basis for processing.

The process that you follow to analyze customer profitability is as follows:

- **Account Consolidation.** The first step in the profitability process is to load detailed customer account records into the FEM_CUSTOMER_PROFIT table. There are two ways to do this: records can be directly loaded into the table with the interface table loader, or they can be consolidated from the specific customer Account tables using the Account Consolidation rule. When consolidating records from Account tables, a component called a Column Population template is required to specify how the source columns in each Account table map to the target columns in the FEM_CUSTOMER_PROFIT table. The template can include a condition to filter the rows that are pulled. For more information, see "Account Consolidation Rule", page 5-5.
- **Profit Aggregation.** The next step in the process is to aggregate the individual account records to the specific customer, and then optionally roll the aggregated customer records up a selected customer hierarchy. This process also requires a Column Population template to specify how the source columns map to the target columns when performing the aggregation. The most common methodology is to aggregate account records to the related customer and then perform profit calculations. Rolling customer records up a customer hierarchy is a more advanced methodology. For more information, see "Profit Aggregation Rule", page 5-7.
- **Profit Calculations.** Customer profit calculations can be executed once customer

account data has been consolidated and aggregated. Profit calculations provide options to perform customer profit percentile and decile determination and the calculation of a value index score based on a Value Index formula that can incorporate customer location information. For more information, see "Value Index Formula", page 5-10 and "Profit Calculation Rule", page 5-12.

Prerequisites for Customer Profitability Rules

Before you define Customer Profitability rules, you (or another authorized user) must complete the following tasks:

- Load all customer details into the FEM_CUSTOMER_DETAIL table.
- Load any secondary customer information into the FEM_SECONDARY_OWNERS table. The FEM_SECONDARY_OWNERS table is referenced in the Account Consolidation rule when a user chooses "secondary" as a relationship type when defining the rule. This loads all customers from the FEM_SECONDARY_OWNERS table where the account ID matches the account ID from the Account table specified in the Account Consolidation rule. This data is only used for reporting purposes and does not include any balance data.
- Confirm that the FEM_CUSTOMER_PROFIT table is registered with the classifications "Customer Result Profitability Tables."
- Define each customer that will be included in profitability analysis as a member of the Customer dimension. Ensure that the Business Relationship Code attribute is set for the customer, in addition to the other required attributes. If you intend to use the Region Counting feature, also ensure that the Postal Code/Region Code is set.
- Define customer hierarchies and ensure that each customer is assigned a level. If you intend to use Product as part of the Value Index formula (see "Value Index Formula", page 5-10), ensure that the Product attribute on customers is set correctly. The Value Index formula uses the Product attribute from the customer rather than the Product dimension associated with any of the underlying data. This means that each customer may only have a single product that is used by the Value Index formula in the profit calculation step.
- Define Column Population templates for the account consolidation step and the profit aggregation step. You must define a Column Population template for *each* Account table that will be consolidated into the FEM_CUSTOMER_PROFIT table. You must also define Column Population templates for the Profit Aggregation rule. For more information, see "Working with Column Population Templates", page 3-8.
- Prior to running customer profitability calculations, you may want to use mapping rules to distribute data to customer Account tables. For more information, see "About Mapping Rules", page 4-2.

For general setup information, see "About Setting Up Profitability Manager", page 2-1.

Account Consolidation Rule

The Account Consolidation rule moves individual account rows into the FEM_CUSTOMER_PROFIT table. Each rule is specific to one Account table. You must have at least one Account Consolidation rule for each customer Account table that you want to move into the FEM_CUSTOMER_PROFIT table. The account consolidation process will convert any foreign currencies from the Account tables to the functional currency for the specified ledger in FEM_CUSTOMER_PROFIT. This ensures that the profit aggregation and profit calculations use the same basis for their results.

In many cases, the columns on the customer Account table do not match the columns on the FEM_CUSTOMER_PROFIT table in a one-to-one manner. Because of this, there must be a way to specify the mapping between the source customer Account table and the target FEM_CUSTOMER_PROFIT table. The Column Population template provides this functionality. For more information, see "Working with Column Population Templates", page 3-8.

A feature of the Account Consolidation rule is the ability to specify primary and secondary account relationships.

- When a rule that specifies a primary relationship runs, the Account Consolidation engine moves all of the detail records from the customer Account table into the FEM_CUSTOMER_PROFIT table and populates the target columns based on the selected Column Population template. The data will be included in Profit calculations.
- When a rule that specifies a secondary relationship runs, account IDs are joined from the FEM_SECONDARY_OWNERS table with the customers in the Account table and the FEM_CUSTOMER_PROFIT table is loaded with those customer records only — balance data is not included and the results are informational only. The data will not be included in Profit calculations.

Records are not aggregated or consolidated. They may be filtered by a condition specified in the template.

Creating an Account Consolidation Rule

Follow these steps to create an Account Consolidation rule.

1. Navigate to Business Rule > Customer.
2. On the Customer tab, choose **Account Consolidation**.
3. Click **Create**.

The Create Account Consolidation Rule page opens.

4. Identify the rule and specify user access.
 - Choose a folder.
 - Enter a name.
 - (Recommended) Enter a description.
 - Choose the type of access that other users will have to this rule: Read and Write or Read Only.
5. Click **Continue**.

The Create Rule Version page opens.
6. In the Version Details area, identify the version.
 - Enter a version name.
 - Specify Effective Start Date.
 - Specify Effective End Date.
 - (Recommended) Enter a description.
7. In the Formula Details area, specify formula parameters. You can optionally specify a condition.
 - Choose the Processing table. Only tables that have been registered as "Customer Account Profitability Tables" will be available.
 - Choose the Column Population template that has been defined to map columns from the specified Account table to the FEM_CUSTOMER_PROFIT table. Click **Details** to view column mappings for the selected template.
 - (Optional) Specify a condition to filter the rows that will be pulled from the customer Account table. Click **Details** to view components of the selected condition. For more information, see "Specifying a Condition for a Customer Profitability Rule", page 5-14.
 - Choose the customer relationship: Primary or Secondary. For information about this selection, see the section in "Account Consolidation Rule", page 5-5 that describes these options.
8. Click **Finish**.

Related Topics

- About Customer Profitability Analysis, page 5-2
- Customer Profitability Process Overview, page 5-3
- Customer Profitability Rules Prerequisites, page 5-4
- Submitting a Customer Profitability Rule, page 5-14
- Running a Customer Profitability Rule, page 5-15
- Viewing Results for a Customer Profitability Rule, page 5-16
- Updating an Account Consolidation Rule, Profit Aggregation Rule, or Profit Calculation Rule, page 5-17
- Reverting a Customer Profitability Rule, page 5-18
- Duplicating a Customer Profitability Rule, page 5-18
- Deleting an Account Consolidation, Profit Aggregation, or Profit Calculation Rule, page 5-20
- Viewing a Customer Profitability Rule, page 5-20

Profit Aggregation Rule

The Profit Aggregation rule aggregates individual customer accounts stored in the FEM_CUSTOMER_PROFIT table into a single customer account record, or consolidates customer account records in relation to a customer hierarchy. Results are stored in the FEM_CUSTOMER_PROFIT table. This enables you to get a profitability definition for each individual customer. You can also consolidate individual customers to a household or any other customer relationship as defined by a customer hierarchy.

The Profit Aggregation rule requires a special Column Population template. The template specifies how the source columns of individual customer account rows in the FEM_CUSTOMER_PROFIT table will be mapped to the target columns in the FEM_CUSTOMER_PROFIT table when aggregation is performed.

A feature of the Profit Aggregation rule is the ability to specify primary and secondary account relationships. You use the **Aggregate to Customer** checkbox to specify whether to aggregate the data to a customer, or to consolidate customers as defined by a customer hierarchy.

- When you run the rule with the Aggregate to Customer option turned on, records that have the data aggregation type code Account_Relationship are aggregated to

the individual customer and then written out as a single record to the FEM_CUSTOMER_PROFIT table with the account consolidation type code of Customer Aggregation.

- When you run the rule with the Aggregate to Customer option turned off, choose a customer hierarchy, and specify a level for aggregation top and bottom, rows with the Account Consolidation Type code Customer Aggregation are aggregated from the bottom level to the top level of the hierarchy.

Thus, if you want to consolidate individual customers as defined by a customer hierarchy, you must run *two* rules: the first to aggregate to customer and the second to roll up a customer hierarchy. It is mandatory to aggregate records to the customer first. Only after this is done can you roll the aggregated customer records up a selected customer hierarchy.

You can apply a condition to filter customers and households (nodes in the hierarchy). For more information, see "Specifying a Condition for a Customer Profitability Rule", page 5-14.

Creating a Profit Aggregation Rule

Follow these steps to create a Profit Aggregation rule.

1. Navigate to Business Rule > Customer.
2. On the Customer tab, choose **Profit Aggregation**.
3. Click **Create**.

The Create Profit Aggregation Rule page opens.

4. Identify the rule and specify user access.
 - Choose a folder.
 - Enter a name.
 - (Recommended) Enter a description.
 - Choose the type of access that other users will have to this rule: Read and Write or Read Only.

5. Click **Continue**.

The Create Rule Version page opens.

6. In the Version Details area, identify the rule version.
 - Enter a version name.

- Specify Effective Start Date.
 - Specify Effective End Date.
 - (Recommended) Enter a description.
7. In the Formula Details area, specify formula parameters. You can optionally specify a condition.
- Select the Processing table. This is always FEM_CUSTOMER_PROFIT.
 - Choose a Column Population template that has been defined to map source columns to target columns within the FEM_CUSTOMER_PROFIT table. Click **Details** to view column mapping details for the selected template. At least one column in the Column Population template will have Aggregation method set to something other than None (e.g. Average or Add.)
 - (Optional) Specify a condition to filter the customers and households that will be aggregated. Click **Details** to view condition components.
 - If the rule will aggregate up a Customer hierarchy, choose a hierarchy. Click **Details** to view Customer hierarchies.
If the rule will aggregate to customers only, you do not need to specify a hierarchy.
 - Specify how to aggregate data.
 - To aggregate data to customers only, check the **Aggregate to Customer** box.
 - To aggregate data through the selected customer hierarchy, uncheck the **Aggregate to Customer** box and select levels for Aggregation Top and Aggregation Bottom. Ensure that you also select a Customer hierarchy.
For information about Aggregate to Customer, see the section in "Profit Aggregation Rule", page 5-7 that describes this option.
8. Click **Finish**.

Related Topics

- About Customer Profitability Analysis, page 5-2
- Customer Profitability Process Overview, page 5-3
- Customer Profitability Rules Prerequisites, page 5-4

- Submitting a Customer Profitability Rule, page 5-14
- Running a Customer Profitability Rule, page 5-15
- Viewing Results for a Customer Profitability Rule, page 5-16
- Updating an Account Consolidation Rule, Profit Aggregation Rule, or Profit Calculation Rule, page 5-17
- Reverting a Customer Profitability Rule, page 5-18
- Duplicating a Customer Profitability Rule, page 5-18
- Deleting an Account Consolidation, Profit Aggregation, or Profit Calculation Rule, page 5-20
- Viewing a Customer Profitability Rule, page 5-20

Value Index Formula

The Value Index formula is used in conjunction with the Profit Calculation rule to assign a ranking to each customer. The Value Index formula provides three components: a Region Counting formula, a Profit Percentile formula, and a Product formula.

- **Region Counting** — Region Counting is an optional process that enhances the value index scoring process. It counts the number of customers within each unique postal code to determine the postal codes with a saturation rate of 10 percent or more. Customers and households belonging to those regions receive points towards their score during the value index scoring process. Note that successful use of this option requires that the attribute for Postal Code/Region Code has been set for Customer dimension members.
- **Profit Percentile** — The Profit Percentile formula is similar to the Region Counting formula. It assigns a value for each customer that falls into a specific profit percentile.
- **Product Formula** — The Product formula allows the definition of an index value when customers have an account for a specific product. It uses the Product attribute from the Customer dimension when determining the appropriate value to assign based on the product rule. If you intend to use the Product formula, it is important to ensure that the Product attribute on the Customer dimension has been correctly assigned.

When the Profit Calculation rule runs, it references the Value Index formula and adds up the values for each related formula component for Region Counting, Profit Percentile, and Product formulas. The end result is written to the

FEM_CUSTOMER_PROFIT table. For more information, see "Profit Calculation Rule", page 5-12.

Creating a Value Index Formula

Follow these steps to create a Value Index formula.

1. Navigate to Business Rule > Customer.
2. On the Customer tab, choose **Value Index Formula**.
3. Click **Create**.

The Create Value Index Formula page opens.

4. In the Region Counting and Profit Percentile area, specify the value index measures to use. Proceed as follows:
 - Click **Add Row**.
 - In the Measure Type column, choose **Profit Percentile** or **Region Counting**.
 - In the Low and Range columns enter values between 0 and 100.
 - In the Value Index Factor column, enter the value index factor to apply. This must be a whole number between 1 and 10.
5. Repeat Step 4 for each measure type that you want to use. You can also assign a value index based on a different range.
6. (Optional) In the Product area, specify one or more products and their related value index factors. Proceed as follows:
 - Click **Add Row**.
 - In the Product Type column select a product type.
 - In the Value Index Factor column, enter the value index factor to apply. This must be a whole number between 1 and 10.
7. (Optional) Repeat Step 6 for each product type that you want to use.
8. Click **Apply**.

Related Topics

- Updating a Value Index Formula, page 5-18

- Deleting a Value Index Formula, page 5-20

Profit Calculation Rule

The Profit Calculation rule computes profitability information that may include a value index score and a profit percentile and decile ranking. The calculation uses the Value Index formula definition to determine the score for each customer.

You can only run the Profit Calculation rule once for a period, ledger and dataset. If you need to rerun, you must undo previous results and then run it again.

The Profit Calculation rule includes one or more of the following calculations:

- **Region Counting** — Counts the number of customers within each unique postal code to determine the postal codes with a saturation rate of 10 percent or more. Customers belonging to these regions receive points toward their score based on their Value Index formula score.
- **Customer Profit Percentile** — Generates a percentage ranking that represents the level of relative customer profitability. Customers are sorted by their calculated profit contribution and divided into 100 buckets, with the same number of customers in each bucket. Each customer is assigned a profit percentile based on its bucket. The customers ranking in the highest 1 percent range are assigned a percentile value of 100; those in the lowest 1 percent range are assigned a percentile value of 1. In addition to profit percentile, a profit decile is also computed (10 groups of 10).
- **Customer Value Index** — Assigns a value based on the definition of the Value Index formula (the higher the index, the higher the assumed value) to each customer based on demographics, account relationships, and profitability characteristics.

Within the rule definition, you specify the output columns (Value Index column, Profit Percentile column, and the Profit Decile column) in the FEM_CUSTOMER_PROFIT table to which results will be written. When the rule runs, results are written to the specified columns. Note that you can run multiple calculations that use different Value Index formulas and write out to different columns for each result set. This allows you to compare results for the same customer.

Creating a Profit Calculation Rule

Follow these steps to create a Profit Calculation rule.

1. Navigate to Business Rule > Customer.
2. On the Customer tab, choose **Profit Calculation**.

3. Click **Create**.

The Create Account Consolidation Rule page opens.

4. Identify the rule and specify user access.

- Choose a folder.
- Enter a name.
- (Recommended) Enter a description.
- Choose the type of access that other users will have to this rule: Read and Write or Read Only.

5. Click **Continue**.

The Create Rule Version page opens.

6. In the Version Details area, identify the version.

- Enter a version name.
- Specify Effective Start Date
- Specify Effective End Date.
- (Recommended) Enter a description.

7. In the Formula Details area, specify formula parameters.

- Select a Value Index Formula. Click **Details** to view the Value Index formula definition.
- (Optional) Specify a condition. Click **Details** to view components of the selected condition.
- Choose Output Result Column. For more information, see the section in "Profit Calculation Rule", page 5-12 that describes column options.

8. In the Calculation Options area, check a box for each calculation that you want to execute: Perform Region Counting, Create Customer Value Index, Create Customer Profit Percentile. For more information, see the section in "Profit Calculation Rule", page 5-12 that describes these options.

9. Click **Finish**.

Related Topics

- About Customer Profitability Analysis, page 5-2
- Customer Profitability Process Overview, page 5-3
- Customer Profitability Rules Prerequisites, page 5-4
- Submitting a Customer Profitability Rule, page 5-14
- Running a Customer Profitability Rule, page 5-15
- Viewing Results for a Customer Profitability Rule, page 5-16
- Updating an Account Consolidation Rule, Profit Aggregation Rule, or Profit Calculation Rule, page 5-17
- Reverting a Customer Profitability Rule, page 5-18
- Duplicating a Customer Profitability Rule, page 5-18
- Deleting an Account Consolidation, Profit Aggregation, or Profit Calculation Rule, page 5-20
- Viewing a Customer Profitability Rule, page 5-20

Specifying a Condition for a Customer Profitability Rule

You can optionally specify a condition within an Account Consolidation rule, Profit Aggregation rule, or Profit Calculation rule definition. The condition filters input rows for the calculation based on the condition definition.

The condition is applied when the rule runs: only data that meets the condition will be processed in conjunction with your Application Preferences settings. The condition version to be used is determined by the effective date specified at run time.

For information about defining a condition, see the section on Conditions in the *Enterprise Performance Foundation User's Guide*. To view online help, navigate to Business Rule > Condition and click the Help link at the top of the page.

Submitting a Customer Profitability Rule for Approval

You must submit a new rule version for approval before you can run it against a production data set. Submitting a rule generates a notification to the designated approver. The approval hierarchy is set up in Oracle Approvals Management (AME). Oracle Workflow routes approval requests to the appropriate individuals. Submitting a

rule generates a notification to the designated approver.

For more information, see the section on Rule Approval in the *Enterprise Performance Foundation User's Guide*.

Running a Customer Profitability Rule

When you run an Account Consolidation rule, Profit Aggregation rule, or Profit Calculation rule, data is written to the FEM_CUSTOMER_PROFIT table.

Rule execution is driven by parameters for Ledger, Dataset Group, Calendar Period, and Effective Date as set in your Application Preferences. The Effective Date parameter determines which version of the rule will be run. (See "Duplicating a Customer Rule", page 5-18 for information about creating rule versions with different Effective Date ranges). When you submit a rule or rule set to be run you are shown these parameters in the submission interface, copied from the corresponding Application Preferences settings. Adjust the values as needed.

Once a rule has run (successfully or not), it is locked. This means that it cannot be run again for the same Dataset Group, Ledger, and Calendar Period combination. If you need to rerun the rule you will have to undo it in the Executed Rule interface. For more information, see the section on Process Management: Executed Rules in the *Enterprise Performance Foundation User's Guide*. Or navigate to Process Management > Executed Rules and click the Help link at the top of the page.

Methods for Running a Customer Profitability Rule

You can run a Customer Profitability rule from the Customer tab as a single rule submission. Alternatively, you can include the rule along with others in a Rule Set and run the entire Rule set. For more information, see the section on Rule Sets in the *Enterprise Performance Foundation User's Guide*. Or navigate to Process Management > Rule Sets and click the Help link at the top of the page.

Running a Rule from the Customer Tab

Follow these steps to run an Account Consolidation rule, Profit Aggregation rule, or Profit Calculation rule from the Customer tab.

1. Navigate to Business Rule > Customer.
2. On the Customer tab, choose the rule type: Account Consolidation, Profit Aggregation, or Profit Calculation.

The appropriate page opens. For example if you chose Account Consolidation, the Account Consolidation page opens.

3. In the Search area, identify the rule to run. Choose a folder, enter % and click **Go** to see all rules, or enter text and use % as a wildcard. You can also search using

Effective date.

A list displays rules that match your search criteria.

4. To display rule versions, click the + icon in the Rule Name column.

5. Identify the version to run and click its **Run** icon.

The Execute Rule page opens.

6. Specify parameters for running the rule. Defaults reflect your current Application Preferences settings.
 - **Effective Date** — Specify the effective date.
 - **Ledger** — Choose the ledger.
 - **CalendarPeriod** — Specify the calendar period against which to run the rule. (Data is generally loaded monthly and run against a period that represents the current target data that will be processed.)
 - **Dataset Group** — Choose the Dataset group.
7. Click **Submit**.

Monitoring a Run

When you run a rule, the interface switches to the Concurrent Manager View Requests page where you can monitor the progress of the run. The output file for the request contains messages relevant to the progress of the run.

You can set a FEM Profile option to display detail level SQL debugging information. For more information, see the section in the *Enterprise Performance Foundation User's Guide* that describes FEM Profile options.

For information about submitting and monitoring requests, see the *Oracle Applications User's Guide*.

Viewing Results for a Customer Profitability Rule

Once an Account Consolidation rule, Profit Aggregation rule, or Profit Calculation rule has run, you can view results in several ways.

- Use the Executed Rules function (Process Management > Executed Rules). Click the View icon for the rule in the Rule Results column.
- Use Data Inspector. Query the FEM_CUSTOMER_PROFIT table.

Additional reporting solutions using Discoverer are also available.

Updating a Customer Profitability Rule

You can update an Account Consolidation rule, Profit Aggregation rule, or Profit Calculation rule to which you have read and write access. You can change the rule name and description. If a rule version has not been run you can update the version. The rule version is locked after it has been run, except for the start and ending effective dates. These may be changed after the rule has been run.

Note: Generally, updates to locked rules are handled through the creation of a new version for the rule, with an effective date range which follows that of the initial version. See also "Duplicating a Customer Rule", page 5-18.

You can also update a Value Index formula.

Updating an Account Consolidation rule, Profit Aggregation rule, or Profit Calculation Rule

Follow these steps to update an Account Consolidation rule, Profit Aggregation rule, or Profit Calculation rule.

1. Navigate to Business Rule > Customer.
2. On the Customer tab, choose the rule type: Account Consolidation, Profit Aggregation, or Profit Calculation.

The appropriate page opens. For example if you chose Account Consolidation, the Account Consolidation page opens.
3. In the Search area, identify the rule to update. Choose a folder, enter % and click **Go** to see all rules, or enter text and use % as a wildcard. You can also search using Effective Date.

The list displays result that match your search criteria.
4. To modify the rule name or description, click its **Update** icon.
5. To update a rule version (for a version that has not been run), proceed as follows:
 - Display versions by clicking the + icon in the Rule Name column.
 - Identify the version to update and click its **Update** icon.
 - You can modify version details (Version Name, Effective Start Date, Effective End Date, description).
 - You can modify rule details.

6. Click **Apply**.

Updating a Value Index Formula

Follow these steps to update a Value Index formula.

1. Navigate to Business Rule > Customer.
2. On the Customer tab, choose **Value Index Formula**.
3. Enter your modifications.
4. Click **Apply**.

Reverting a Customer Profitability Rule

The Revert icon becomes active when an approved Account Consolidation rule, Profit Aggregation rule, or Profit Calculation rule is updated.

Click **Revert** to restore the rule to its previous state. You can also use Revert to revert changes when an approved rule has been updated, but the update has been rejected by the approver.

Duplicating a Customer Profitability Rule

You can duplicate an Account Consolidation rule, Profit Aggregation rule, or Profit Calculation rule. Duplication allows you to quickly create a new version, or rule and version.

When you duplicate a version, it is added to the list of versions for the rule. When you duplicate the rule *and* version, the rule and version are displayed as new entities in the list of rules.

Note: When duplicating a version, you must specify an effective date range that does not overlap with another version. Plan effective dates for versions so that, as business needs change, you can implement new rule versions beginning with the Effective Start Date of the versions.

Follow these steps to duplicate a Customer rule or rule version.

1. Navigate to Business Rule > Customer.
2. On the Customer tab, choose the rule type: Account Consolidation, Profit Aggregation, or Profit Calculation.

The appropriate page opens. For example if you chose Account Consolidation, the Account Consolidation page opens.

3. In the Search area, identify the rule to duplicate. Choose a folder, enter % and click **Go** to see all rules, or enter text and use % as a wildcard. You can also search using Effective Date.

The list displays rules that match your criteria.

4. Display rule versions by clicking the + icon in the Rule Name column.
5. Click the **Duplicate** icon for a version.

The Duplicate Options page opens.

6. Choose a duplication option.
 - **Rule and Version** — Enables you to create a new rule and version.
 - **Version** — Enables you to create a new version.
7. Click **Continue**.

8. If you chose **Rule and Version** as the duplication option (Step 6), identify the rule and the version. For rule enter a unique name and description. For version, enter a unique name, specify the Effective Start Date and Effective End Date. You can also enter a description.

If you chose **Version** as the duplication option (Step 6), identify the new version. Enter a unique name, specify the Effective Start Date and Effective End Date. You can also enter a description.

Note: The effective date range for the version must fall before or after the range of the existing version.

9. Click **Finish**.

Deleting a Customer Profitability Rule

You can delete an Account Consolidation, Profit Aggregation, or Profit Calculation rule version to which you have read and write access if the version has not yet been run.

If the rule version has been run, you cannot delete it because data has been written to the FEM_CUSTOMER_PROFIT table and the rule is locked. In this case, you can use the Rule Execution Undo function to undo the data. Undoing a rule removes the results from the calculation, and removes the process lock from the selected rule version, allowing you to rerun the rule. Note however, that if there have been multiple updates to the same row in a table, undo will not be possible except on the last rule run. For more information, see the section on Rule Execution Results in the *Enterprise Performance Foundation User Guide*.

You can also delete a Value Index formula.

Deleting an Account Consolidation, Profit Aggregation, or Profit Calculation Rule

Follow these steps to delete an Account Consolidation, Profit Aggregation, or Profit Calculation rule.

1. Navigate to Business Rule > Customer.
2. On the Customer tab, choose the rule type: Account Consolidation, Profit Aggregation, or Profit Calculation.

The appropriate page opens. For example if you chose Account Consolidation, the Account Consolidation page opens.
3. In the Search area, identify the rule to delete. Choose a folder, enter % and click **Go** to see all rules, or enter text and use % as a wildcard. You can also search using Effective Date.

A table displays rules that match your criteria.
4. To display versions for Account Consolidation, Profit Aggregation, or Profit Calculation, click the + icon in the Rule Name column.
5. Identify the version to delete and click its **Delete** icon.

You are prompted to confirm the deletion.

Deleting a Value Index Formula

Follow these steps to delete a Value Index formula.

1. Navigate to Business Rule > Customer.
2. On the Customer tab, choose **Value Index Formula**.

The Value Index Formula page opens.
3. In the Search area, search for formulas. Choose a folder, enter % and click **Go** to see all rules, or enter text and use % as a wildcard.
4. Identify the formula to delete and click the **Delete** icon.

You are prompted to confirm the deletion.

Viewing a Customer Profitability Rule

Navigate to Business Rule > Customer.

1. Follow these steps to view a Customer Profitability rule.
2. On the Customer tab, choose the Customer Profitability rule type: Account Consolidation, Profit Aggregation, Profit Calculation. Or choose Value Index Formula.

The appropriate page opens. For example if you chose Account Consolidation, the Account Consolidation page opens.

3. In the Search area, identify the rule to view. Choose a folder, enter % and click **Go**, or enter text and use % as a wildcard. You can also search using Effective Date.

The list displays rules that match your criteria.

4. For an Account Consolidation, Profit Aggregation, or Profit Calculation rule, proceed as follows:

- Click the + icon for a rule to see rule versions.
- Click a version name to view details.
- Click **Printable Page** to print the results.

For a Value Index Formula, click the rule name.

Working with Activity Rules

This chapter covers the following topics:

- About Activity Rules
- Prerequisites for Activity Rules
- Activity Cost Rollup Rule
- Activity Statistic Rollup Rule
- Activity Rate Rule
- Cost Object Unit Cost Rollup Rule
- Specifying a Condition for an Activity Rule
- Submitting an Activity Rule for Approval
- Running an Activity Rule
- Viewing Results for an Activity Rule
- Updating an Activity Rule
- Reverting an Activity Rule
- Duplicating an Activity Rule
- Deleting an Activity Rule
- Viewing an Activity Rule
- Using Mapping for Additional Cost Object Calculations

About Activity Rules

Profitability Manager supports cost assignment methods based on Activity-Based Management methodologies. These functions are available to users with the Profitability Manager with Activity-Based Management or the Profitability Manager with Activity-Based Management - Administrator responsibility. Results of Activity calculations can be used by other CPM products that utilize the EPF data model, for

other calculations, or as the basis for business decisions.

- Prerequisites for Activity Rules, page 6-2
- Activity Cost Rollup Rule, page 6-4
- Activity Statistic Rollup Rule, page 6-6
- Activity Rate Rule, page 6-8
- Cost Object Unit Cost Rollup Rule, page 6-13
- Specifying a Condition for an Activity Rule, page 6-15
- Submitting an Activity Rule for Approval, page 6-16
- Running an Activity Rule, page 6-16
- Viewing Results for an Activity Rule, page 6-18
- Updating an Activity Rule, page 6-18
- Reverting an Activity Rule, page 6-19
- Duplicating an Activity Rule, page 6-19
- Deleting an Activity Rule, page 6-20
- Viewing an Activity Rule, page 6-21
- Using Mapping for Additional Cost Object Calculations, page 6-22

Prerequisites for Activity Rules

Before you create or run rules from the Activity subtab of the Business Rule tab, you must make a number of model design decisions and complete required setup steps. These include the following:

- Determine Dimensionality for the Activity and Cost Object Dimensions, page 6-3
- Set Processing Key on FEM_BALANCES, page 6-3
- Create Activity and Cost Object Members and Hierarchies, page 6-3

For general setup information, also see "About Setting Up Profitability Manager", page 2-1.

Determine Dimensionality for the Activity and Cost Object Dimensions

Before you can create and run Activity or Cost Object rules, a user with the Profitability Manager with Activity-Based Management Administrator responsibility must define the dimensionality for the Activity and Cost Object dimensions.

For information about requirements for these dimensions, see "Working with Composite Dimensions (Activity and Cost Object)", page 3-3.

Set Processing Key on FEM_BALANCES

When designing the profitability model for your organization, a determination should be made as to which pieces of the activity features will be included in the ultimate solution. If the Activity Cost Rollup, Activity Statistic Rollup, or Activity Rate calculations will be used, then you must include the Task dimension in the processing key of the FEM_BALANCES table. If you are going to use the Cost Object Unit Cost Rollup calculation, the only required dimensions are Financial Element and Ledger which are already included in the processing key as required columns.

Oracle strongly recommends that you incorporate design requirements for Activity and Cost Object when performing the initial system implementation, so that all required dimensions are available in the processing key. If the processing key on FEM_BALANCES has already been defined and results have been created in FEM_BALANCES, adding dimensions to the processing key to support the definition of Activity or Cost Object requires the creation of a new index on the FEM_BALANCES table, an update to the registration for the table, and a data conversion to include dimension values for the newly added dimensions for existing data.

Create Activity and Cost Object Members and Hierarchies

Once the definition of the Activity and Cost Object is complete, you (or another authorized user) must create multi-dimensional members and hierarchies for the dimensions.

You can use the Dimension > Members feature on the Business Rule tab to create dimension members, or you can import members using the Dimension Loader concurrent program. Ensure that you specify a member value for each of the dimensions in the Activity or Cost Object definition.

You then define Activity and Cost Object hierarchies. Activity hierarchies are used in the Activity Cost Rollup, Activity Statistic Rollup, and Activity Rate calculations. Cost Object hierarchies are used in the Cost Object Rollup calculation. (Note that the multi-dimensional Activity or Cost object is only referenced by the related hierarchies; when referencing the related cost data, it is referenced by the base dimensions only.)

You can use the Dimension > Hierarchy feature within the Business Rule tab to define hierarchies, or you can use the Hierarchy loader concurrent program. The Cost Object hierarchy has a number of special properties, as described in "Special Considerations for

Cost Object Hierarchies and Members", page 6-3.

Note: The Activity Rate rule enables you to calculate activity rates for all nodes of a hierarchy, or for top nodes only. To effectively utilize the top nodes only calculation feature, create multi-top hierarchies.

For more information about dimension member and hierarchy management, see the *Enterprise Performance Foundation Users Guide*.

Special Considerations for Cost Object Hierarchies and Members

The Cost Object dimension has some special requirements for dimension hierarchies and members. These are as follows:

- Every parent-child relationship in the hierarchy definition has a consumption quantity governed by the following equation:
$$\text{unit quantity} = (\text{child quantity} / \text{parent quantity}) * (1 / \text{yield})$$
- Consumption Quantities are stored within a Dataset and Calendar Period.
- A member can have one or more parents in a hierarchy definition.
- A member can have one or more children in a hierarchy definition, including duplicate parent-child relationships (each parent-child relationship will still have its own consumption quantity).
- Since the Cost Object dimension definition must always include Ledger as a component, Cost Object hierarchies can span more than one ledger. These hierarchies are referred to as cross-ledger hierarchies. Only ledgers with the same GVSC can be used in cross-ledger hierarchies.
- The Cost Object dimension must always include the Financial Element dimension as a component. The Financial Element dimension identifies the Unit Cost Type. Only Financial Elements with the attribute Cost Object Unit Cost Flag = Yes can be used when creating Cost Object members that can participate in a hierarchy.
- Another Financial Element attribute, Cost Object Unit Cost Mixed Flag, is used to identify mixed and non-mixed parent-child relationships. A mixed Cost Object parent-child relationship is one that allows a parent Cost Object to have a child Cost Object of a different Financial Element (that is, different Unit Cost Types). A non-mixed Cost Object parent-child relationship requires the parent and child Cost Objects to have the same Financial Element (that is, same Unit Cost Type).

Activity Cost Rollup Rule

An Activity Cost Rollup rule rolls up costs along an Activity hierarchy version. The rule

runs on data maintained in the FEM_BALANCES table.

The calculation picks up members defined in the specified Activity hierarchy for all Financial Elements except Activity Rate (5005) and Statistic (10000). All other Financial Elements are included if they exist for nodes in the hierarchy. This means that the rollup will pick up any data that has been mapped or loaded to the intersection of dimensions as defined by the node in the hierarchy. It is thus extremely important that your model be designed so that you only pick up the desired data.

You typically specify a condition to filter members in the Activity hierarchy. For information about the effect of conditions on Activity rules, see "Specifying a Condition for an Activity Rule", page 6-15 and "Special Requirement for Activity Rule Conditions", page 6-15.

When the rule runs, the Activity Cost Rollup engine rolls up costs from the bottom of the specified Activity hierarchy, summing the values for all child nodes but excluding the parent's own activity cost. The rolled up cost for each node at each level is written out as a new row to the FEM_BALANCES table.

Results from the Activity Cost Rollup rule can be used as the basis for computing activity rates, for analysis of aggregated activity costs, benchmarking activity costs across departments, as a source of additional mapping rules, or whatever the business analysis calls for. Since results are stored in the FEM_BALANCES table, the data is available for use by the other CPM products that utilize the EPF data model.

Creating an Activity Cost Rollup Rule

Follow these steps to create an Activity Cost Rollup rule.

1. Navigate to Business Rule > Activity.
2. On the Activity tab, choose **Cost Rollup**.
3. Click **Create**.

The Create Activity Cost Rollup page opens.

4. Identify the rule and specify user access.
 - Choose a folder.
 - Enter a name.
 - (Recommended) Enter a description.
 - Choose the type of access that other users will have to this rule: Read and Write or Read Only.
5. Click **Continue**.

The Create Rule Version page opens.

6. In the Version Details area, identify the rule version.
 - Enter a version name.
 - Specify Effective Start Date.
 - Specify Effective End Date.
 - (Recommended) Enter a description.
7. In the Formula Details area, specify other parameters.
 - Select an Activity hierarchy version. Click **Details** to view a list of activity hierarchies.
 - Select the Output Currency.
 - (Optional) Specify a condition. Click **Details** to view components of the selected condition.
8. Click **Finish**.

Related Topics

- Prerequisites for Activity Rules, page 6-2
- Submitting an Activity Rule for Approval, page 6-16
- Running an Activity Rule, page 6-16
- Viewing Results for an Activity Rule, page 6-18
- Updating an Activity Rule, page 6-18
- Reverting an Activity Rule, page 6-19
- Duplicating an Activity Rule, page 6-19
- Deleting an Activity Rule, page 6-20
- Viewing an Activity Rule, page 6-21

Activity Statistic Rollup Rule

An Activity Statistic Rollup rule rolls up a specified statistic along an Activity hierarchy

version. The rule runs on data maintained in the FEM_BALANCES table.

The statistic is defined in the FEM_BALANCES table based on the Financial Element and the Line Item dimensions. The calculation picks up rows where Financial Element = 10000 and the Line Item specified in the rule matches the Line Item in the data. (The Line Item is used to identify the specific statistic such as headcount, square feet, percentage of time, and so forth).

You typically specify a condition to filter members in the Activity hierarchy. For information about the effect of conditions on Activity rules, see "Specifying a Condition for an Activity Rule, page 6-15" and "Special Requirement for Activity Rule Conditions", page 6-15.

When the rule runs, the Activity Statistic Rollup engine rolls up the statistic from the bottom of the hierarchy, summing the value for all child nodes but excluding the parent's own value. The hierarchy version used is based on the effective date provided by the run time parameter. The rolled up statistic for each node at each level is written out as a new row to the FEM_BALANCES table.

Results from the Activity Statistic Rollup rule can be used to understand the aggregate values for statistics stored in the FEM_BALANCES tables. Results can also be used in Activity Rate calculations if you are computing activity rates based on rolled up activity cost data. Since they reside in the FEM_BALANCES table, rolled up statistics can also be used as drivers for other calculations.

Creating an Activity Statistic Rollup Rule

Follow these steps to create an Activity Statistic Rollup rule.

1. Navigate to Business Rule > Activity.
2. On the Activity tab, choose **Statistic Rollup**.
3. Click **Create**.

The Create Activity Statistic Rollup page opens.

4. Identify the rule and specify user access.
 - Choose a folder.
 - Enter a name.
 - (Recommended) Enter a description.
 - Choose the type of access that other users will have to this rule: Read and Write or Read Only.
5. Click **Continue**.

The Create Rule Version page opens.

6. In the Version Details area, identify the rule version.
 - Enter a version name.
 - Specify Effective Start Date.
 - Specify Effective End Date.
 - (Recommended) Enter a description.
7. In the Formula Details area, specify other parameters for the version.
 - Select an Activity hierarchy version. Click **Details** to view a list of Activity hierarchies.
 - Select a Statistic Basis.
 - (Recommended) Specify a condition. Click **Details** to view components of the selected condition.
8. Click **Finish**.

Related Topics

- Prerequisites for Activity Rules, page 6-2
- Submitting an Activity Rule for Approval, page 6-16
- Running an Activity Rule, page 6-16
- Viewing Results for an Activity Rule, page 6-18
- Updating an Activity Rule, page 6-18
- Reverting an Activity Rule, page 6-19
- Duplicating an Activity Rule, page 6-19
- Deleting an Activity Rule, page 6-20
- Viewing an Activity Rule, page 6-21

Activity Rate Rule

The Activity Rate calculation takes an activity cost and divides it by a driver to produce

the rate for that cost for the related driver. For example, given the total cost to receive phone calls and the total number of phone calls, you could calculate the activity rate for answering phone calls by dividing the cost to answer the phone (the activity cost) by the number of phone calls (driver).

All activity costs must be in the FEM_BALANCES table. Drivers can be stored in the FEM_BALANCES table or the FEM_DATA1-20 tables. The F column in all tables holds the activity cost data and the driver data. The statistic is defined by Financial Element =10000 and the Line Item dimension. A single driver can be shared by many rates.

Note: Tables that contain drivers must be registered as ABM Ledger, PFT Ledger, or Statistic tables.

When building the Activity Rate rule, you choose an Activity hierarchy version and then assign drivers to specific nodes in the hierarchy. The universe of activity rates to calculate is based on the selected Activity hierarchy. The hierarchy node defines the numerator for the calculation and the selected driver is the denominator. When the calculation runs, the total cost for the node in the hierarchy is divided by the assigned driver to get the activity rate for that node. You can calculate activity rate for all nodes of an Activity hierarchy, or you can limit the calculation to top nodes only. This enables you to control the scope of the calculation and manage output so that lower level rates do not get confused with top level rates.

At run time, the calculation selects the version of the hierarchy to use based on the effective date provided by the run time parameter. You can thus assign different drivers to different versions of the hierarchy and, at run time, pick up drivers based on the entered effective date for the calculation. The hierarchy selected in the rule is used to store the node and driver assignment. The entered effective date is used to reference the related hierarchy version, and then the nodes from the hierarchy version are referenced in relation to the assigned driver.

You typically specify a condition to filter members in the Activity hierarchy selected for the rule. You can also specify a condition for an Activity driver. For information about the effect of conditions on Activity rules, see "Specifying a Condition for an Activity Rule", page 6-15 and "Special Requirement for Activity Rule Conditions", page 6-15.

When the rule runs, the Activity Rate engine writes results to the FEM_BALANCES table with the Financial Element of 5005 (Activity Rate).

In all cases, the Natural Account dimension is required on your data to define the "account type" of the entry. (The account type corresponds to a basic account type or revenue, expense, asset, liability or owner's equity.) For the driver to make sense, all of the rows that contribute to the driver amount need to be of the same account type. A way to enforce this rule is to include a condition on the driver for natural account, and select only those natural accounts for the selected account type. This can be done with a dimension component on the attribute on the natural account.

Depending on the account type of the driver, the displayed value may be (-) or (+). When calculating the rate, the absolute value will be used, and the signage of the

activity cost will be preserved on output. So if the signage of the numerator and denominator are different, the signage of the numerator will be preserved on output, and the signage of the denominator will not effect the signage of the resultant rate.

Creating an Activity Rate Rule

Follow these steps to create an Activity Rate rule.

1. Navigate to Business Rule > Activity.

2. On the Activity tab, choose **Rate**.

3. Click **Create**.

The Create Activity Rate Rules page opens.

4. Specify details for the rule.

- Choose a folder.
- Enter a name.
- (Recommended) Enter a description.
- Choose the type of access that other users will have to this rule: Read and Write or Read Only.
- Specify the hierarchy nodes to include. Choose **All Nodes** to calculate activity rates for all nodes of the hierarchy; choose **Top Nodes Only** to use top nodes only.

5. Click **Continue**.

The Create Activity Rate Definition page opens.

6. In the Version Details area, identify the version.

- Enter a version name.
- Specify Effective Start Date.
- Specify Effective End Date.
- (Recommended) Enter a description.

7. In the Formula Details area, specify parameters for the rate calculation.

- Select an Activity hierarchy version. Click **Details** to view a list of Activity hierarchies.

- Select the Output Currency.
 - (Optional) Specify a condition. Click **Details** to view components of the selected condition.
8. In the Driver Assignments area, ensure that a driver is assigned to each of the hierarchy nodes for which rates will be calculated. You can view existing driver assignments, define driver assignments, and update driver assignments.
- To view assigned drivers, choose **Task** in the Search by box, enter % and click **Go** to see all drivers or enter text and use % as a wildcard.

The list displays drivers that meet your search criteria.

- To see the rows that comprise the driver data, click the **View Driver** icon for a driver. All rows that will be used as the driver for the selected activity will be displayed. This can be one or more rows.
- To see the activity cost for the selected node, table name, value column statistic basis, and condition for a driver, click the **View Source** icon for the driver.
- To change the driver definition, click the **Update Driver Definition** icon for the driver.
- To assign drivers to nodes that do not have driver assignments, click **Create Driver Assignment**.

The Create Driver Assignment page opens where you can define a driver. For more information, see "About Activity Rate Drivers", page 6-11 and "Creating an Activity Rate Driver", page 6-12.

9. Click **Finish**.

About Activity Rate Drivers

The driver used in the activity rate calculation is the sum of all rows that meet the criteria specified when selecting the driver. If the driver specification results in multiple rows, those rows will be summed and used as the denominator in the Activity Rate calculation. If no condition is specified, then all rows in the table will be summed. If the driver has both a local and a rolled up value, the two values will be aggregated first and then used to calculate the rate. Even if the rows are of different signage or account type, they will still be summed for the determination of the driver. You should be aware of this when selecting drivers.

When an Activity Rate rule runs, the system looks at the hierarchy version and the condition version. The condition version to be used is determined by the effective date specified at run time. If there is a non-zero numerator and a non-zero denominator,

then the rate will be calculated.

For information about defining conditions, see the section on Conditions in the *Enterprise Performance Foundation User's Guide*. To view online help, navigate to Business Rule > Condition and click the Help link at the top of the page.

Creating an Activity Rate Driver

Follow these steps to create an Activity Rate driver.

1. On the Create Activity Rate Definition page, scroll down to the Drivers Assignment area.

2. Click **Create Driver Assignment**.

The Create Driver Assignment: Select Activities page opens.

3. Specify the Activity hierarchy version.

4. Search for and select hierarchy nodes to associate with the driver. Each node in the hierarchy is an activity.

- To choose all nodes, click **Select All**.
- To choose specific nodes, click the **Select** column for each node

5. Click **Continue**.

The Create Driver Assignment: Create Driver page opens.

6. Specify the table, column and statistic basis for the driver. You can also specify an optional condition.

- **Source Table** — Select the table that contains the driver. This can be FEM_BALANCES or FEM DATA 1-20.
- **Value Column** — Select the column that contains the driver.
- **Statistic Basis** — Select the Statistic Basis. Available statistics are defined by FE=10000 and the Line Item dimension.
- **Condition** — (Optional) Select or define a condition.

7. Click **Finish**.

Related Topics

- Prerequisites for Activity Rules, page 6-2

- Submitting an Activity Rule for Approval, page 6-16
- Running an Activity Rule, page 6-16
- Viewing Results for an Activity Rule, page 6-18
- Updating an Activity Rule, page 6-18
- Reverting an Activity Rule, page 6-19
- Duplicating an Activity Rule, page 6-19
- Deleting an Activity Rule, page 6-20
- Viewing an Activity Rule, page 6-21

Cost Object Unit Cost Rollup Rule

A Cost Object Unit Cost Rollup rule rolls up Cost Object Unit Costs through a Cost Object hierarchy version. The rule runs on data maintained in the FEM_BALANCES table.

Note: For a description of Cost Object Unit Costs, see "Cost Object Terminology", page 6-22.

The Cost Object Unit Cost Rollup engine processes the Cost Object Unit Cost Rollup rule as follows:

- Only Cost Object Unit Cost data with a Currency Type = Entered is processed.
- The Rollup engine does not automatically exclude data with a certain Financial Element because Financial Element is a required component of the Cost Object dimension definition. (This is not the case for Activity Cost and Activity Statistic Rollups).
- The Rollup engine only processes within a single ledger for each calculation run. Whenever there is a cross-ledger parent-child relationship, the engine assumes that the cross-ledger child has already been costed in a prior calculation run. To fully process a cross-ledger hierarchy, multiple calculation runs in the appropriate execution order are necessary.

You typically specify a condition to filter the data. The condition filters members in the Cost Object hierarchy. For information about the effect of conditions on Activity rules, see "Specifying a Condition for an Activity Rule", page 6-15 and "Special Requirement for Activity Rule Conditions", page 6-15.

When the rule runs, results are written to the FEM_BALANCES table.

Creating a Cost Object Unit Cost Rollup Rule

Follow these steps to create a Cost Object Unit Cost Rollup rule.

1. Navigate to Business Rule > Activity.
2. On the Activity tab, choose **Cost Object Unit Cost**.
3. Click **Create**.

The Create Cost Object Unit Cost Rollup Rule page opens.

4. Identify the rule and specify user access.
 - Choose a folder.
 - Enter a name.
 - (Recommended) Enter a description.
 - Choose the type of access that other users will have to this rule: Read and Write or Read Only.
5. Click **Continue**.

The Create Rule Version page opens.
6. In the Version Details area, identify the version.
 - Enter a version name.
 - Specify Effective Start Date.
 - Specify Effective End Date.
 - (Recommended) Enter a description.
7. In the Version Attributes area, specify version details.
 - Select the Cost Object hierarchy version. Click **Details** to view a list of Cost Object hierarchies.
 - Select the Output Currency.
 - (Optional) Specify a condition for the rule. Click **Details** to view components for the selected condition.
8. Click **Finish**.

Specifying a Condition for an Activity Rule

You can optionally specify a condition within an Activity rule definition. The condition filters dimension members in the Activity or Cost Object hierarchy version for the rule. The condition is applied to the components of the dimension members and their descendents in the hierarchy. The exception to this is the Activity Rate rule, in which you can opt to calculate the rate for Top Nodes Only. If you choose this option and the condition excludes the top level, then lower level children will not be included in the result set.

The condition is applied when the rule runs: only data that meets the condition will be processed in conjunction with your Application Preferences settings. The condition version to be used is determined at run time.

If an Activity Cost Rollup rule Activity Statistic Rollup rule, or Cost Object Unit Cost Rollup rule includes a condition such that the result set includes only leaf nodes (nodes with no children), then there will be nothing to roll up for the result set. The Rollup engine will finish processing with an error status and the following error message will be displayed in the log file:

```
Only leaf nodes were found for the specified hierarchy and condition
versions. At least one non-leaf node must match the condition for rollup
processing.
```

However, if at least one or more middle level or top level nodes are in the result set for the rollup, then the Rollup engine will process successfully.

For information about defining a condition, see the section on Conditions in the *Enterprise Performance Foundation User's Guide*. To view online help, navigate to Business Rule > Condition and click the Help link at the top of the page.

Special Requirement for Activity Rule Conditions

In order to filter the result set, the condition that you specify for an Activity Cost Rollup rule, Activity Statistic Rollup rule, or Activity Rate rule must be based on a component of the Activity dimension. For a Cost Object Unit Cost Rollup rule, the condition must be based on a component of the Cost Object dimension.

A condition that does not meet this requirement will be ignored. For example, if you define a condition for an Activity Cost Rollup rule that filters on the Channel dimension but Channel is not a component of the Activity dimension definition, the condition will be ignored.

Note: Oracle recommends that you do not define a condition that filters on both the composite dimension (Activity or Cost Object) *and* components of these dimensions. This could create a situation where no members will be part of the result set.

Submitting an Activity Rule for Approval

You must submit a new rule version for approval before you can run it against a production data set. Submitting a rule generates a notification to the designated approver. The approval hierarchy is set up in Oracle Approvals Management (AME). Oracle Workflow routes approval requests to the appropriate individuals. Submitting a rule generates a notification to the designated approver.

For more information, see the section on Rule Approval in the *Enterprise Performance Foundation User's Guide*.

Running an Activity Rule

When you run an Activity rule version, data is written to the FEM_BALANCES table. The calculations write out data to the financial elements as follows:

- Activity Cost Rollup — Writes a row for each unique input Financial Element. If you have child rows with Financial Elements 10,100 and 457, it will write the rolled up output with the same Financial Elements used on input. When looking at the output, you will need to summarize across Financial Elements.
- Activity Statistic Rollup — 10000
- Activity Rate — 5005

Rule execution is driven by parameters for Ledger, Dataset Group, Calendar Period, and Effective Date as set in your Application Preferences. The Effective Date parameter determines which version of the rule will be run. (See "Duplicating an Activity Rule", page 6-19 for information about creating rule versions with different Effective Date ranges). When you submit a rule or rule set to be run you are shown the parameters, copied from the corresponding Application Preferences settings. Adjust the values as needed.

Once a rule has run (successfully or not), it is locked. This means that it cannot be run again for the same Dataset Group, Ledger, and Calendar Period combination. If you need to rerun the rule you will have to undo it in the Executed Rule interface. For more information, see the section on Process Management: Executed Rules in the *Enterprise Performance Foundation User's Guide*. Or navigate to Process Management > Executed Rules and click the Help link at the top of the page.

Methods for Running an Activity Rule

You can run an Activity rule from the Activity tab as a single rule submission. Alternatively, you can include the rule along with others in a Rule Set and run the entire Rule set. For information about Rule Sets, see the section on Rule Sets in the *Enterprise Performance Foundation User's Guide*. To view online help, navigate to Process Management > Rule Sets and click the Help link at the top of the page.

Running a Rule from the Activity Tab

Follow these steps to run an Activity rule from the Activity tab.

1. Navigate to Business Rule > Activity.
2. On the Activity tab, choose the rule type: Cost Rollup, Statistic Rollup, Rate, or Cost Object Unit Cost.

The appropriate page opens. For example if you chose Cost Rollup, the Activity Cost Rollup page opens.

3. In the Search area, identify the rule to run. Choose a folder, enter % and click **Go** to see all rules, or enter text and use % as a wildcard. You can also search using Effective Date.

The list displays rules that match your search criteria.

4. Display rule versions by clicking the + icon in the Rule Name column.
5. Identify the version to run and click its **Run** icon.

The Execute Rule page opens.

6. Specify parameters for the rule. Defaults reflect your current Application Preferences settings.

- **Effective Date** – Specify the effective date.
- **Ledger** – Choose the ledger.
- **Calendar Period** – Specify the calendar period against which to run the rule. (Data is generally loaded monthly and run against a period that represents the current target data that will be processed.)
- **Dataset Group** – Choose the Dataset group.

7. Click **Submit**.

Monitoring a Run

When you run a rule, the interface switches to the Concurrent Manager View Requests page where you can monitor the progress of the run. The output file for the request contains messages relevant to the progress of the run.

You can set a FEM Profile option to display detail level SQL debugging information. For more information, see the section in the *Enterprise Performance Foundation User's Guide* that describes FEM Profile options.

For information about submitting and monitoring requests, see the *Oracle Applications User's Guide*.

Viewing Results for an Activity Rule

Once an Activity rule has been run, you can view results in several ways.

- Use the Executed Rules function (Process Management > Executed Rules). Click the **View** icon (a pair of glasses) for the rule in the Rule Results column. This opens the Rule Audit Ledger page where you can view generated rows in the FEM_BALANCES table.
- Use Data Inspector. Query the target table and apply a condition to view the updated column.

Additional reporting solutions using Discoverer are also available.

Updating an Activity Rule

You can update a rule to which you have read and write access by changing the rule name and description.

If a rule version has not been run you can update the version. Some special restrictions apply:

- For an Activity Rate rule, you cannot change the hierarchy or condition.
- For an Activity Cost Rollup rule, you cannot change the formula type.

The rule version is locked after it has been run, except for the start and ending effective dates. These may be changed after the rule has been run.

Note: Generally, updates to locked rules are handled through the creation of a new version for the rule with an effective date range which follows that of the initial version. See "Duplicating an Activity Rule", page 6-19.

Follow these steps to update an Activity rule.

1. Navigate to Business Rule > Activity.
2. On the Activity tab, choose the rule type: Cost Rollup, Statistic Rollup, Rate, or Cost Object Unit Cost.

The appropriate page opens. For example if you chose Cost Rollup, the Activity Cost Rollup page opens.

3. In the Search area, identify the rule to update. Choose a folder, enter % and click **Go**

to see all rules, or enter text and use % as a wildcard. You can also search using Effective Date.

The list displays rules that match your search criteria.

4. To modify the rule name or description, click its **Update** icon.
5. To update a rule version (for a version that has not been run), proceed as follows:
 - Display versions by clicking the + icon in the Rule Name column.
 - Identify the version to update and click its **Update** icon.
 - You can modify version details (Version Name, Effective Start Date, Effective End Date, Description).
 - You can modify rule details.
6. Click **Apply**.

Reverting an Activity Rule

The Revert icon becomes active when an approved rule is updated.

Click **Revert** to restore the rule to its previous state. You can also use Revert to revert changes when an approved rule has been updated, but the update has been rejected by the approver.

Duplicating an Activity Rule

Duplicating an Activity rule allows you quickly create a new version or rule and version.

When you duplicate a version, it is added to the list of versions for the rule. When you duplicate the rule *and* version, the rule and version are displayed as new entities in the list of rules.

Note: When duplicating a version, you must specify an effective date range that does not overlap with another version. Plan effective dates for rule versions so that, as business needs change, you can implement new rule versions beginning with the Effective Start Date of the versions.

Follow these steps to duplicate an Activity rule.

1. Navigate to Business Rule > Activity.

2. On the Activity tab, choose the rule type: Cost Rollup, Statistic Rollup, Rate, or Cost Object Unit Cost.

The appropriate page opens. For example if you chose Cost Rollup, the Activity Cost Rollup page opens.

3. In the Search area, identify the rule to duplicate. Choose a folder, enter % and click **Go** to see all rules, or enter text and use % as a wildcard. You can also search using Effective Date.

The list displays rules that match your search criteria.

4. Display rule versions by clicking the + icon in the Rule Name column.

5. Click the **Duplicate** icon for a version.

The Duplicate Options page opens.

6. Choose a duplication option.

- **Rule and Version** — Enables you to create a new rule and version.
- **Version** — Enables you to create a new version.

7. Click **Continue**.

8. If you chose Rule and Version as the duplication option (Step 6), identify the rule and the version. For rule, enter a unique name and description. For version, enter a unique name, specify the Effective Start Date, and Effective End Date. You can also enter a description.

If you chose Version as the duplication option (Step 6), identify the new version. Enter a unique name, specify the Effective Start Date, and Effective End Date. You can also enter a description.

Note: The effective date range for the version must fall before or after the range of the existing version.

9. Click **Finish**.

Deleting an Activity Rule

You can delete an Activity rule to which you have read and write access if the rule version has not yet been run.

If the rule version has been run, you cannot delete it because data has been written to the FEM_BALANCES table and the rule is locked. In this case, you can use the Rule Execution Undo function to undo the data. Note however, that if there have been

multiple updates to the same row in a table, undo will not be possible except on the last rule run. For more information, see the section on Rule Execution Results in the *Enterprise Performance Foundation User Guide*.

Follow these steps to delete an Activity rule that has not been run.

1. Navigate to Business Rule > Activity.
2. On the Activity tab, choose the rule type: Cost Rollup, Statistic Rollup, Rate, or Cost Object Unit Cost.

The appropriate page opens. For example if you chose Cost Rollup, the Activity Cost Rollup page opens.

3. In the Search area, identify the rule to delete. Choose a folder, enter % and click **Go** to see all rules, or enter text and use % as a wildcard. You can also search using Effective Date.

The list displays rules that match your search criteria.

4. Display versions by clicking the + icon in the Rule Name column.
5. Identify the version to delete and click its **Delete** icon.

You are prompted to confirm the deletion.

Viewing an Activity Rule

Follow these steps to view an Activity rule.

1. Navigate to Business Rule > Activity.
2. On the Activity tab, choose the rule type: Cost Rollup, Statistic Rollup, Rate, or Cost Object Unit Cost.

The appropriate page opens. For example if you chose Cost Rollup, the Activity Cost Rollup page opens.

3. In the Search area, identify the rule to view. Choose a folder, enter % and click **Go** to see all rules, or enter text and use % as a wildcard. You can also search using Effective Date.

The list displays rules that match your search criteria.

4. Proceed as follows:
 - Click the + icon for a rule to see rule versions.
 - Click the version name to access the View Formula page. Click **Printable Page** to print the formula.

Using Mapping for Additional Cost Object Calculations

The Activity subtab enables you to define calculations for Activity Cost Rollup, Activity Statistic Rollup, Activity Rates, and Cost Object Unit Cost Rollup. To extend this functionality and enable strategic decision making for resource use, you can define mapping rules to generate additional cost object calculations. See the following topics:

- "Cost Object Terminology", page 6-22
- "Mapping Activity Rates to Cost Object Unit Costs", page 6-23
- "Calculating Cost Object Extended Costs", page 6-24
- "Calculating Cost Object Mapped Costs", page 6-24
- "Calculating Cost Object Total Costs", page 6-25

Note: In order to define the cost calculations described in this section, all Cost Object costs must be stored in the FEM_BALANCES table.

Cost Object Terminology

Cost Object costs can be classified into two different groups: unit costs and absolute costs.

Unit Costs

Cost Object Unit Cost — The aggregation of Cost Object Unit Costs that results from running mapping rules and Cost Object Unit Cost Rollup rules. The former multiplies Activity Rates with the corresponding Cost Object Statistics to obtain Cost Object Unit Costs; the latter rolls up Cost Object Unit Costs based on the parent-child relationships in a Cost Object hierarchy version. If you want to roll the activity cost up the Cost Object hierarchy, ensure that you map activity rates to the cost objects before performing the rollup calculation. The output of the activity rate mapping process must debit the dimensions that are contained in the Cost Object hierarchy that has been specified for the rollup calculation.

Absolute costs

Cost Object Extended Cost — The resulting value after a mapping rule is run on a Cost Object to multiply its Cost Object Unit Cost with a Cost Object Statistic. This is basically a unit cost times volume calculation to get the absolute cost of a cost object.

Cost Object Mapped Cost — The resulting value after a mapping rule is run to transfer General Ledger balance data to a Cost Object. This calculation is generally used when there is overhead that should be applied to a Cost Object or direct costs associated with

a Cost Object.

Cost Object Total Cost — The resulting value after a mapping rule is run on a Cost Object to add its Cost Object Mapped Cost with its Cost Object Extended Cost. The total cost is only valid if you add these types together. It will give you the total cost for the extended amount and anything else that you map to the Cost Object.

Mapping Activity Rates to Cost Object Unit Costs

You can define a mapping rule to map Activity Rates to Cost Object Unit Costs.

Note: To prevent double counting, only Activity Rate data generated by Activity Rate rule definitions with the Top Node Only attribute should be used when creating the mapping calculation.

Following are the mapping specifications:

- **Formula Type:** Percent Distribution.
- **Source:** Select the source table where Cost Object Statistics are stored (for example, FEM_BALANCES, FEM_ORG_PROD_CRNCY_STAT, and so forth). Then create a local condition or choose a global condition to select the appropriate Cost Object Statistics that will participate in the multiplication.
- **Operator:** Multiply.
- **Percent Distribution:** Select the table where Activity Rates are stored (FEM_BALANCES). Apply the distribution only to Debit and leave the Force To 100 checkbox unchecked. In Percent Dimension Details, select the Line Item dimension (Statistic Basis) as Matching Dimensions or Matching Dimensions with Reclass, so that they are matched with the corresponding Cost Object Statistics when calculating Cost Object Unit Costs. To preserve other Activity Rate dimensions, select them as Percent Distribution. All other dimensions, particularly Financial Element and those corresponding to the source Cost Object Statistics, should be left as Not Applicable. Create a local condition or choose a global condition to select the appropriate Activity Rates that will participate in the multiplication. The only requirement is that the seeded Financial Element member Activity Rate is selected.
- **Debit:** Select the debit table where the resulting Cost Object Unit Cost values will be stored (FEM_BALANCES). Then specify the necessary dimension details for properly storing the Cost Object Unit Cost value with the correct dimensionality. This requires that you explicitly specify the desired Financial Element member for identifying Cost Object Unit Cost data (seeded Cost Object Unit Cost or user-defined). The other Cost Object Unit Cost dimensions will either be Same as Source if they come from the Cost Object Statistic, or Same as Percent if they come from the Activity Rate.

- **Credit:** Leave unchecked.

Calculating Cost Object Extended Costs

You can define a mapping rule to calculate Cost Object Extended Costs. Following are mapping specifications:

- **Formula type:** Percent Distribution.
- **Source:** Select the source table where Cost Object Statistics are stored (for example, FEM_BALANCES, FEM_ORG_PROD_CRNCY_STAT, etc.). Then create a local condition or choose a global condition to select the appropriate Cost Object Statistics that will participate in the multiplication.
- **Operator:** Multiply.
- **Percent Distribution:** Select the table where Cost Object Unit Costs are stored (FEM_BALANCES). Apply the distribution only to Debit and leave the Force To 100 checkbox unchecked. In Percent Dimension Details, select all common Cost Object dimensions as Matching Dimensions or Matching Dimensions with Reclass, so that these common dimensions are matched with the corresponding Cost Object Statistics when calculating Cost Object Extended Costs. To preserve other Cost Object Unit Cost dimensions, select them as Percent Distribution. Leave all other dimensions, particularly Financial Element, as Not Applicable. Then create a local condition or choose a global condition to select the appropriate Cost Object Unit Costs that will participate in the multiplication. The only requirement for selecting Cost Object Unit Costs in the condition is that the correct Financial Element member be selected (seeded Cost Object Unit Cost or user-defined).
- **Debit:** Select the debit table where the resulting Cost Object Extended Cost values will be stored (FEM_BALANCES). Then specify the necessary dimension details for storing the Cost Object Extended Cost value with the correct dimensionality. This requires that you explicitly specify the seeded Financial Element member Cost Object Extended Cost. The other Cost Object Extended Cost dimensions will be Same as Source if they come from the Cost Object Statistic, or Same as Percent if they come from the Cost Object Unit Cost.
- **Credit:** Leave unchecked.

Calculating Cost Object Mapped Costs

You can use the Percent Distribution mapping formula type to map General Ledger Account or Activity costs to Cost Objects. You can also use the Percent Distribution mapping rule formula type to map Cost Object costs to other Cost Objects.

Note that it is possible to use other types of mapping rule formulas to map costs to Cost Objects. The only requirement is that you specify the seeded Financial Element member

Cost Object Mapped Cost in the Debit section of the mapping rule.

Calculating Cost Object Total Costs

You can define a mapping rule to calculate Cost Object Extended Costs. Following are mapping specifications:

- **Mapping Rule Formula Type:** By Dimension.
- **Source:** Select the Source table where Cost Object Mapped Cost values are stored (FEM_BALANCES). Create a local condition or choose a global condition to select the appropriate Cost Object Mapped Costs that will participate in the multiplication. The only requirement for selecting Activity Rates in the condition is that the seeded Financial Element member Cost Object Mapped Cost is selected.
- **Operator:** Add.
- **Dimension:** Select the Financial Element dimension, and specify the seeded Financial Element member Cost Object Extended Cost. FEM_BALANCES will already be selected as the Dimension table for retrieving Cost Object Extended Cost values.
- **Debit:** Select the debit table where the resulting Cost Object Total Cost values will be stored (FEM_BALANCES). Then specify the necessary dimension details for storing the Cost Object Total Cost value with the correct dimensionality. This requires that you explicitly specify the seeded Financial Element member Cost Object Total Cost. All the other dimensions should be Same as Source.
- **Credit:** Leave unchecked.

Profitability Manager Reporting

This chapter covers the following topics:

- About Reports
- Reporting Prerequisite
- Running Seeded Workbooks
- Seeded Workbook: Multi Dimensional Cost and Statistics
- Seeded Workbook: Customer Profitability by Level and Decile

About Reports

Profitability Manager includes a set of seeded workbooks that are displayed in Discoverer or Discoverer Viewer. You can also use the output generated by Mapping calculations, Activity calculations, and Customer calculations to design custom reports in Discoverer.

- Reporting Prerequisite, page 7-1
- Running Seeded Workbooks, page 7-2
- Seeded Workbook: Multi Dimensional Cost and Statistics, page 7-2
- Seeded Workbook: Customer Profitability by Level and Decile, page 7-3

Reporting Prerequisite

Before Profitability Manager workbooks can be installed or opened, the EPF-Core Business Area must be applied to the database. The EPF-Core Business area supports a reporting solution based on a Discoverer-based architecture that presents processed data stored in Enterprise Performance Foundation (EPF) tables.

For information about implementing the EPF-Core Business area, see the *Oracle*

Financial Services Reporting Administration Guide, Also refer to the *MetaLink* Knowledge Browser pages for Enterprise Performance Foundation and Profitability Manager.

Running Seeded Workbooks

Follow these steps to run a seeded workbook.

1. Navigate to the Documents tab.
2. Choose a workbook.
3. Specify parameters. Available parameters depend on the selected workbook.
4. Click **Apply Parameters**.
5. Specify layout and presentation options. For details, see the online Help for Discoverer.

Seeded Workbook: Multi Dimensional Cost and Statistics

The Multi Dimensional Cost and Statistics workbook shows the distribution of costs to Company Cost Center Organizations and Natural Accounts for a specified ledger, calendar period, and comparison calendar period.

By default, the workbook includes the Company Cost Center Organization and Natural Account dimensions because these are common ways in which to view cost and statistics information. However, you can modify the workbook to include additional dimensions that are specific to your implementation.

Page items are as follows:

- Dataset
- Currency
- Financial Element
- Working Calendar Period
- Compare Calendar Period
- Created by request ID

Left axis columns are as follows:

- Company Cost Center Organization Name
- Natural Account Name

Data items are as follows:

- Working Calendar Period
- Compare Calendar Period
- Computed Variance

Seeded Workbook: Customer Profitability by Level and Decile

The Customer Profitability by Level and Decile workbook shows the profit contribution and period to date balance for all customers assigned to a specific level, decile, and Customer Cost Center Organization.

Before you can generate this workbook, the following prerequisites must be met:

- The Profit Calculation must be run. This is the third customer profitability calculation, run after the Account Consolidation and the Profit Aggregation calculations. Note that the profit aggregation step will consolidate all records for a customer into a single record, and multiple products for a customer will not be reflected. For more information, see "Profit Aggregation Rule", page 5-7 and "Profit Calculation Rule", page 5-12 .
- In the FEM_CUSTOMER_DETAIL table, the fields for full customer name, home phone, and business phone must be populated.

Page items are as follows:

- Level
- Profit Decile
- Company Cost Center Organization

Table columns are as follows:

- Full Name
- Home Phone
- Business Phone
- Record Count
- Product
- Profit Contribution
- PTD Balance

Workflow Notifications

This appendix covers the following topics:

- About Workflow Notifications
- Subscribing to Notifications

About Workflow Notifications

The following list describes Workflow notifications that are available for Enterprise Performance Foundation and Profitability Manager.

- **dhm.dimension.event** — Triggered when a dimension member is created by the Dimension Hierarchy Manager or loaded with the loader program.
- **dhm.hierarchy.event** — Reserved for future use.
- **admin.prockey.updated** — Triggered when a registered table's processing key is changed in Administration: Tables and Columns.
- **ud.complete** — Triggered when an Undo process is completed.
- **ud.submit** — Triggered when an Undo process is submitted.
- **oglintg.balrule.execute** — Triggered when an OGL integration balance rule is submitted.
- **xgl** — Triggered when an XGL rule is submitted.

Subscribing to Notifications

For information about subscribing to notifications, see the *Oracle Workflow Administrator's Guide*.

Index

A

- absolute costs, 6-22
- Account Consolidation rules
 - creating, 5-5
 - description of, 5-5
- Accumulate Results checkbox, 4-24
- Activity Cost Rollup rules
 - creating, 6-5
 - description of, 6-4
- Activity dimension
 - description of, 3-3
 - hierarchies, 6-3
 - setting up, 3-3
- Activity Rate drivers
 - condition, 6-11
 - creating, 6-12
 - description of, 6-11
- Activity Rate rules
 - creating, 6-10
 - description of, 6-8
- activity rules
 - Activity Cost Rollup rule, 6-4
 - Activity Rate rule, 6-8
 - Activity Statistic Rollup rule, 6-6
 - condition, 6-15, 6-15
 - Cost Object Unit Cost Rollup rule, 6-13
 - deleting, 6-20
 - description of, 6-1
 - duplicating, 6-19
 - prerequisites, 6-2
 - reverting, 6-19

- running, 6-16
 - submitting for approval, 6-16
 - updating, 6-18
 - viewing results, 6-18
- Activity Statistic Rollup rules
 - creating, 6-7
 - description of, 6-6
- Adjustment, mapping formula type, 4-16
- Administration, 3-1
- aggregate to customer option, 5-7
- aggregation method, 3-10
- application preferences, 2-12
- assemble messages for mapping, 2-3
- attribute lookup, in column population template, 3-10

B

- business relationship attribute, 3-10
- By Dimension, mapping formula type, 4-15

C

- column population templates
 - creating, 3-8
 - deleting, 3-13
 - description of, 3-8
 - duplicating, 3-12
 - for Account Consolidation rule, 5-5
 - for Profit Aggregation rule, 5-7
 - updating, 3-11
- conditions
 - Activity Rate driver, 6-11
 - activity rule, 6-15, 6-15

- customer profitability rule, 5-14
- mapping rule, 4-24
- See also global condition, local condition, 4-24
- constant date, 3-10
- constant number, 3-10
- constant VARCHAR, 3-10
- Cost Object dimension
 - description of, 3-4
 - hierarchies, 6-3, 6-4
 - setting up, 3-4
- cost object extended cost, 6-22, 6-24
- cost object mapped cost, 6-22, 6-24
- cost object total cost, 6-23, 6-25
- cost object unit cost, 6-22
- Cost Object Unit Cost Flag, 6-4
- Cost Object Unit Cost Mixed Flag, 6-4
- Cost Object Unit Cost Rollup rules
 - creating, 6-14
 - description of, 6-13
- Credit, in mapping rule, 4-17
- Currency Enabled Flag, 4-5
- Customer dimension, 5-4
- Customer Profitability by Level and Decile workbook, 7-3
- customer profitability process overview, 5-3
- customer profitability rules
 - Account Consolidation rule, 5-5
 - condition, 5-14
 - deleting, 5-19
 - description of, 5-1
 - duplicating, 5-18
 - prerequisites, 5-4
 - Profit Aggregation rule, 5-7
 - Profit Calculation rule, 5-12
 - reverting, 5-18
 - running, 5-15
 - submitting, 5-14
 - updating, 5-17
 - Value Index formula, 5-10
 - viewing results, 5-16
- customer profit percentile, 5-12
- customer value index, 5-12

D

- dataset groups, 2-6, 2-7
- datasets, 2-6, 2-7

- Debit, in mapping rule, 4-17
- deleting
 - activity rule, 6-20
 - column population template, 3-13
 - customer profitability rule, 5-19
 - mapping rule, 4-29
- Discoverer, 7-1
- drivers, Activity Rate, 6-11
- duplicating
 - activity rule, 6-19
 - column population template, 3-12
 - customer profitability rule, 5-18
 - mapping rules, 4-28

E

- Enterprise Performance Foundation
 - Administrator responsibility, 2-5
 - EPF-Core Business Area, 2-14, 7-1

F

- factor tables
 - copying, 3-17
 - creating, 3-14
 - deleting, 3-18
 - description of, 3-13
 - updating, 3-18
- Factor Tables, mapping formula type, 4-13
- FEM Profile options
 - Signage Methodology, 2-4
 - Track Event Chain, 2-5
- Field, mapping formula type, 4-15
- Final Operand in Formula. See Percent Distribution, Retrieve Statistic, By Dimension, 4-8
- formula types for mapping, description of, 4-8

G

- GVSC, 2-7

I

- Initial Data Source. See Simple Source on Allocation, By Dimension, Field, Percent Distribution, Retrieve Statistic, 4-7
- input columns for mapping, 2-9
- installation, 2-3

M

- mapping formula types
 - Adjustment, 4-16
 - By Dimension, 4-15
 - factor tables, 4-13
 - Field, 4-15
 - Percent Distribution, 4-11, 4-21
 - Retrieve Statistic, 4-14
 - Simple Source on Allocation, 4-12
- mapping rule
 - duplicating, 4-28
 - version tab, 4-16
- mapping rules
 - Accumulate Results checkbox, 4-24
 - condition, 4-24
 - Debit and Credit, 4-17
 - deleting, 4-29
 - description of, 4-2
 - examples, 4-21, 6-23, 6-24, 6-24, 6-25
 - formula types, 4-8
 - Post to Balances, 4-19
 - prerequisites, 4-3
 - processing, 4-4
 - reverting, 4-28
 - Review tab, 4-20
 - running, 4-24
 - submitting for approval, 4-24
 - Target tab, 4-17
 - tracking contributions, 4-21, 4-27
 - updating, 4-27
 - validation, 4-20
 - viewing results, 4-26
- mapping setup
 - prerequisites, 4-3
 - specifying input columns, 2-9
 - specifying output columns, 2-9
- Multi- Dimensional Cost and Statistics workbook, 7-2

O

- output columns for mapping, 2-9

P

- Percent Distribution, mapping formula type, 4-11

- , 4-21

- Post to Balances, 4-19
- primary relationship, 5-5
- processing key, 2-2, 3-3, 3-4, 4-19, 6-3, 6-3
- product formula, 5-10
- production datasets, 2-7
- Profitability Manager Administrator responsibility, 2-5
- Profitability Manager responsibility, 2-5
- Profitability Manager with Activity Based Management Administrator responsibility, 2-5
- Profitability Manager with Activity Based Management responsibility, 2-5
- profitability rules. See customer profitability rules, 5-1
- Profit Aggregation rules
 - aggregate to customer, 5-7
 - creating, 5-8
 - description of, 5-7
- Profit Calculation rules
 - creating, 5-12
 - description of, 5-12
- profit percentile, 5-10

R

- region counting, 5-10, 5-12
- registration, tables and columns, 2-8
- reports. See workbooks, 7-1
- Retrieve Statistic, mapping formula type, 4-14
- reverting
 - activity rule, 6-19
 - customer profitability rule, 5-18
 - mapping rule, 4-28
- Review tab
 - for mapping rules, 4-20
- rule locking, 4-25, 4-29
- Rule Validation, 4-20
- rule version tab, 4-16
- running
 - activity rule, 6-16
 - customer profitability rule, 5-15
 - mapping rule, 4-24

S

- secondary relationship, 5-5
- security folders, 2-6

- signage methodology, 2-4
- Simple Source on Allocation, mapping formula type, 4-12
- statistics
 - creating, 3-5
 - deleting, 3-8
 - description of, 3-5
 - duplicating, 3-7
 - updating, 3-7
- submitting
 - activity rule, 6-16
 - customer profitability rule, 5-14
 - mapping rule, 4-24

T

- table registration, 2-8, 2-9, 6-9
- Target tab
 - for mapaping rules, 4-17
- track event chain, 2-5
- tracking contributions, in mapping rule, 4-21, 4-27
- tuning option settings, 4-19

U

- unit costs, 6-22
- updating
 - activity rule, 6-18
 - column copulation template, 3-11
 - customer profitability rule, 5-17
 - mapping rule, 4-27
- user responsibilities, 2-5

V

- Value Index formula
 - creating, 5-11
 - description of, 5-10
- viewing results
 - activity rule, 6-18
 - customer profitability rule, 5-16
 - mapping rule, 4-26
- visual trace, 4-6

W

- workbooks
 - Customer Profitability by Level and Decile, 7-

- 3
 - description of, 7-1
 - Multi Dimensional Cost and Statistics, 7-2
 - running, 7-2
- Workflow, 2-13
- Workflow notifications, A-1