

**Oracle® Process Manufacturing**

Cost Management User's Guide

Release 12.2

**Part No. E49061-02**

November 2013

Oracle Process Manufacturing Cost Management User's Guide, Release 12.2

Part No. E49061-02

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## **Oracle Process Manufacturing Cost Management User's Guide, Release 12.2**

### **Part No. E49061-02**

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 Oracle E-Business Suite Release Online Documentation CD available on My Oracle Support and [www.oracle.com](http://www.oracle.com). It contains the most current Documentation Library plus all documents revised or released recently.

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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](http://www.oracle.com).



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# Preface

## Intended Audience

Welcome to Release 12.2 of the *Oracle Process Manufacturing Cost Management User's Guide*.

This guide assumes that you have working knowledge of your business area's processes, tools, principles, and customary practices. It also assumes that you are familiar with Oracle Process Manufacturing. If you have never used Oracle Process Manufacturing, we suggest you attend one or more of the Oracle Process Manufacturing training classes available through Oracle University.

See Related Information Sources on page xiii for more Oracle E-Business Suite product information.

## Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

## Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

## Structure

### 1 Overview

This topic provides an overview of Oracle Process Manufacturing (OPM) Cost Management.

### 2 Setting Up

This topic includes procedures and values that you must define before using the application. These basic setups are required regardless of whether you want to use the standard, actual, or lot cost methods. This topic includes setting up in other applications, profile options, and setting the cost calendar and costing periods, cost analysis codes, cost type codes, and cost component classes.

A detailed description on setting up and calculating standard, actual, and lot costs are provided in their topic discussions.

### **3 Using Standard Costing**

This topic describes how to define and use standard costs for production items. These costs include raw materials, overheads, and other costs associated with production. Once defined, you can propagate those costs for use by other organizations within your legal entity and determine the appropriate costs to use for accounting.

Individual ingredient and resource costs must be rolled-up to reflect the total standard cost of the item that is produced. This procedure is detailed in the Standard Cost Rollup discussion.

### **4 Using Actual Costing**

This topic describes how to setup and use actual cost.

### **5 Using Lot Costing**

This topic describes how to set up and use lot costing.

### **6 OPM - Landed Cost Management Integration**

#### **7 Copying Costs**

This topic describes copying item, overhead, and resource costs set up for one organization, calendar and period, and category to another period and inventory organization or to all periods and inventory organizations. You can use the copy processes to quickly replicate the cost data setup across several periods and several organizations rather than creating them one at a time in each periods and organizations that can be very time consuming. The copy programs let you copy the costs for a set of items or set of items belonging to a range of Item Categories or automatically modify the copied costs by a percentage or flat value providing additional flexibility in establishing your costs.

#### **8 Period-End Cost Processing**

This topic explain how to update (book) item component costs in preparation for export to the proper general ledger accounts. The actual export to the general ledger requires an interface with Oracle General Ledger. This topic provides an outline for period-end processing of standard component costs and actual component costs.

#### **9 Cost Management Reports**

This topic describes the available costing reports. Reports are available through the Application's Standard Report Submission window.

#### **10 Accounting Setup**

The following chapter describes the accounting setup done in Oracle Subledger Architecture.

#### **11 Accounting Processes and Distributions**

This chapter describes the subledger account distribution.

## **A Navigator Paths**

This topic provides the default navigation path for Accounting Setup and the cost management profile options.

## **Glossary**

# **Related Information Sources**

## **Online Documentation**

All Oracle E-Business Suite documentation is available online (HTML or PDF).

- **Online Help** - Online help patches (HTML) are available on My Oracle Support.
- **PDF Documentation** - See the Oracle E-Business Suite Documentation Library for current PDF documentation for your product with each release.
- **Release Notes** - For information about changes in this release, including new features, known issues, and other details, see the release notes for the relevant product, available on My Oracle Support.
- **Oracle Electronic Technical Reference Manual** - The Oracle Electronic Technical Reference Manual (eTRM) contains database diagrams and a detailed description of database tables, forms, reports, and programs for each Oracle E-Business Suite product. This information helps you convert data from your existing applications and integrate Oracle E-Business Suite data with non-Oracle applications, and write custom reports for Oracle E-Business Suite products. The Oracle eTRM is available on My Oracle Support.

## **Related Guides**

### **Guides Related to This Product**

#### **Oracle Process Manufacturing Cost Management User's Guide**

The Oracle Process Manufacturing Cost Management application is used by cost accountants to capture and review the manufacturing costs incurred in their process manufacturing businesses. The guide describes how to set up and use this application.

#### **Oracle Process Manufacturing Process Execution User's Guide**

The Oracle Process Manufacturing Process Execution application lets you track firm planned orders and production batches from incoming materials through finished goods. Seamlessly integrated to the Product Development application, Process Execution lets you convert firm planned orders to single or multiple production batches, allocate ingredients, record actual ingredient usage, and then complete and close production batches. Production inquiries and preformatted reports help you optimize inventory costs while maintaining a high level of customer satisfaction with on-time delivery of high quality products. The *Oracle Process Manufacturing Process Execution User's Guide* presents overviews of the tasks and responsibilities for the Production Supervisor and the Production Operator. It provides prerequisite setup in

other applications, and details the windows, features, and functionality of the application.

### **Oracle Process Manufacturing Product Development User's Guide**

The Oracle Process Manufacturing Product Development application provides features to manage formula, routing, recipe, and validity rule development within process manufacturing operations. Use it to manage multiple laboratory organizations and support varying product lines throughout the enterprise. Characterize and simulate the technical properties of ingredients and their effects on formula performance and cost. Simulate and optimize formulations before beginning expensive laboratory test batches. Product Development coordinates each development function to provide a rapid, enterprise-wide implementation of new products in your plants. The guide describes how to set up and use this application.

### **Oracle Process Manufacturing Quality Management User's Guide**

The Oracle Process Manufacturing Quality Management application provides features to test material sampled from inventory, production, or receipts from external suppliers. The application lets you enter specifications and control their use throughout the enterprise. Customized workflows and electronic recordkeeping automate plans for sampling, testing, and result processing. Compare specifications to assist in regrading items, and match customer specifications. Aggregate test results and print statistical assessments on quality certificates. Run stability testing with unrivaled ease. Several preformatted reports and inquiries help manage quality testing and reporting. The guide describes how to set up and use this application.

### **System Administration User's Guide**

Much of the System Administration duties are performed at the Oracle Applications level, and are therefore described in the *Oracle E-Business Suite Guides*. The *Oracle Process Manufacturing System Administration User's Guide* provides information on the few tasks that are specific to Oracle Process Manufacturing. It offers information on performing Oracle Process Manufacturing file purge and archive, and maintaining such things as responsibilities, units of measure, and organizations.

### **Regulatory Management User's Guide**

Oracle Process Manufacturing Regulatory Management provides solutions for document management that help meet the FDA 21 CFR Part 11 and other international regulatory compliance requirements. Regulatory information management is facilitated by use of electronic signatures. Manage hazard communications by collaborating with Oracle partners to dispatch safety documents, attached printed documentation sets such as the MSDS to shipments, and set up workflows to manage documentation revisions, approvals, and transmittals. The *Oracle Process Manufacturing Regulatory Management User's Guide* provides the information to set up and use the application.

### **Oracle Manufacturing Execution System for Process Manufacturing**

Oracle Manufacturing Execution System (MES) for Process Manufacturing provides a seamless integration to product development and process execution applications for rapid deployment and tracking of procedures, work instruction tasks, and batch

records. Set up and manage material dispensing operations and produce electronic batch records interactively with full electronic signature control, nonconformance management, and label printing routines. The *Oracle Manufacturing Execution System for Process Manufacturing User's Guide* delivers the information to set up and use the application.

### **API User's Guides**

Public Application Programming Interfaces (APIs) are available for use with different Oracle Process Manufacturing applications. APIs pass information into and out of the application tables, thereby bypassing the user interface. Use of these APIs is documented in separately available documentation.

### **Oracle Engineering User's Guide**

This guide enables your engineers to utilize the features of Oracle Engineering to quickly introduce and manage new designs into production. Specifically, this guide details how to quickly and accurately define the resources, materials and processes necessary to implement changes in product design.

### **Oracle Inventory User's Guide**

This guide describes how to define items and item information, perform receiving and inventory transactions, maintain cost control, plan items, perform cycle counting and physical inventories, and set up Oracle Inventory.

### **Oracle Bills of Material User's Guide**

This guide describes how to create various bills of material to maximize efficiency, improve quality and lower cost for the most sophisticated manufacturing environments. By detailing integrated product structures and processes, flexible product and process definition, and configuration management, this guide enables you to manage product details within and across multiple manufacturing sites.

### **Oracle Work in Process User's Guide**

This guide describes how Oracle Work in Process provides a complete production management system. Specifically this guide describes how discrete, repetitive, assemble-to-order, project, flow, and mixed manufacturing environments are supported.

### **Oracle Quality User's Guide**

This guide describes how Oracle Quality can be used to meet your quality data collection and analysis needs. This guide also explains how Oracle Quality interfaces with other Oracle Manufacturing applications to provide a closed loop quality control system.

### **Oracle Shipping Execution User's Guide**

This guide describes how to set up Oracle Shipping to process and plan your trips, stops and deliveries, ship confirmation, query shipments, determine freight cost and charges to meet your business needs.

### **Oracle Purchasing User's Guide**

This guide describes how to create and approve purchasing documents, including requisitions, different types of purchase orders, quotations, RFQs, and receipts. This guide also describes how to manage your supply base through agreements, sourcing rules and approved supplier lists. In addition, this guide explains how you can automatically create purchasing documents based on business rules through integration with Oracle Workflow technology, which automates many of the key procurement processes.

### **Oracle interMedia User's Guide and Reference**

This user guide and reference provides information about Oracle interMedia. This product enables Oracle9i to store, manage, and retrieve geographic location information, images, audio, video, or other heterogeneous media data in an integrated fashion with other enterprise information. Oracle Trading Community Architecture Data Quality Management uses interMedia indexes to facilitate search and matching.

### **Oracle Self-Service Web Applications Implementation Guide**

This manual contains detailed information about the overview and architecture and setup of Oracle Self-Service Web Applications. It also contains an overview of and procedures for using the Web Applications Dictionary.

### **Installation and System Administration**

#### **Oracle Alert User's Guide**

This guide explains how to define periodic and event alerts to monitor the status of your Oracle E-Business Suite data.

#### **Oracle Application Framework Developer's Guide**

This guide contains the coding standards followed by the Oracle E-Business Suite development staff to produce applications built with Oracle Application Framework. This guide is available in PDF format on My Oracle Support and as online documentation in JDeveloper 10g with Oracle Application Extension.

#### **Oracle Application Framework Personalization Guide**

This guide covers the design-time and run-time aspects of personalizing applications built with Oracle Application Framework.

#### **Oracle Diagnostics Framework User's Guide**

This manual contains information on implementing and administering diagnostics tests for Oracle E-Business Suite using the Oracle Diagnostics Framework.

#### **Oracle E-Business Suite Concepts**

This book is intended for all those planning to deploy Oracle E-Business Suite Release 12.2, or contemplating significant changes to a configuration. After describing the Oracle E-Business Suite 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.

#### **Oracle E-Business Suite CRM System Administrator's Guide**

This manual describes how to implement the CRM Technology Foundation (JTT) and use its System Administrator Console.

### **Oracle E-Business Suite Desktop Integration Framework Developer's Guide**

Oracle E-Business Suite Desktop Integration Framework is a development tool that lets you define custom integrators for use with Oracle Web Applications Desktop Integrator. This guide describes how to define and manage integrators and all associated supporting objects, as well as how to download and upload integrator definitions.

### **Oracle E-Business Suite Developer's Guide**

This guide contains the coding standards followed by the Oracle E-Business Suite development staff. It describes the Oracle Application Object Library components needed to implement the Oracle E-Business Suite user interface described in the *Oracle E-Business Suite User Interface Standards for Forms-Based Products*. It provides information to help you build your custom Oracle Forms Developer forms so that they integrate with Oracle E-Business Suite. In addition, this guide has information for customizations in features such as concurrent programs, flexfields, messages, and logging.

### **Oracle E-Business Suite Flexfields Guide**

This guide provides flexfields planning, setup, and reference information for the Oracle E-Business Suite implementation team, as well as for users responsible for the ongoing maintenance of Oracle E-Business Suite product data. This guide also provides information on creating custom reports on flexfields data.

### **Oracle E-Business Suite Installation Guide: Using Rapid Install**

This book is intended for use by anyone who is responsible for installing or upgrading Oracle E-Business Suite. It provides instructions for running Rapid Install either to carry out a fresh installation of Oracle E-Business Suite Release 12.2, or as part of an upgrade to Release 12.2.

### **Oracle E-Business Suite Maintenance Guide**

This guide contains information about the strategies, tasks, and troubleshooting activities that can be used to help ensure an Oracle E-Business Suite system keeps running smoothly, together with a comprehensive description of the relevant tools and utilities. It also describes how to patch a system, with recommendations for optimizing typical patching operations and reducing downtime.

### **Oracle E-Business Suite Security Guide**

This guide contains information on a comprehensive range of security-related topics, including access control, user management, function security, data security, and auditing. It also describes how Oracle E-Business Suite can be integrated into a single sign-on environment.

### **Oracle E-Business Suite Setup Guide**

This guide contains information on system configuration tasks that are carried out either after installation or whenever there is a significant change to the system. The

activities described include defining concurrent programs and managers, enabling Oracle Applications Manager features, and setting up printers and online help.

### **Oracle E-Business Suite User's Guide**

This guide explains how to navigate, enter data, query, and run reports using the user interface (UI) of Oracle E-Business Suite. This guide also includes information on setting user profiles, as well as running and reviewing concurrent requests.

### **Oracle E-Business Suite User Interface Standards for Forms-Based Products**

This guide contains the user interface (UI) standards followed by the Oracle E-Business Suite development staff. It describes the UI for the Oracle E-Business Suite products and how to apply this UI to the design of an application built by using Oracle Forms.

### **Oracle E-Business Suite Integrated SOA Gateway User's Guide**

This guide describes the high level service enablement process, explaining how users can browse and view the integration interface definitions and services residing in Oracle Integration Repository.

### **Oracle E-Business Suite Integrated SOA Gateway Implementation Guide**

This guide explains how integration repository administrators can manage and administer the Web service activities for integration interfaces including native packaged integration interfaces, composite services (BPEL type), and custom integration interfaces. It also describes how to invoke Web services from Oracle E-Business Suite by employing the Oracle Workflow Business Event System, and how to manage Web service security, configure logs, and monitor SOAP messages.

### **Oracle E-Business Suite Integrated SOA Gateway Developer's Guide**

This guide describes how system integration developers can perform end-to-end service integration activities. These include orchestrating discrete Web services into meaningful end-to-end business processes using business process execution language (BPEL), and deploying BPEL processes at run time.

This guide also explains how to invoke Web services using the Service Invocation Framework. This includes defining Web service invocation metadata, invoking Web services, and testing the Web service invocation.

### **Oracle e-Commerce Gateway User's Guide**

This guide describes the functionality of Oracle e-Commerce Gateway and the necessary setup steps in order for Oracle E-Business Suite to conduct business with trading partners through Electronic Data Interchange (EDI). It also describes how to run extract programs for outbound transactions, import programs for inbound transactions, and the relevant reports.

### **Oracle e-Commerce Gateway Implementation Guide**

This guide describes implementation details, highlighting additional setup steps needed for trading partners, code conversion, and Oracle E-Business Suite. It also provides architecture guidelines for transaction interface files, troubleshooting information, and a description of how to customize EDI transactions.

## **Oracle iSetup Developer's Guide**

This manual describes how to build, test, and deploy Oracle iSetup Framework interfaces.

## **Oracle iSetup User's Guide**

This guide describes how to use Oracle iSetup to migrate data between different instances of the Oracle E-Business Suite and generate reports. It also includes configuration information, instance mapping, and seeded templates used for data migration.

## **Oracle Report Manager User's Guide**

Oracle Report Manager is an online report distribution system that provides a secure and centralized location to produce and manage point-in-time reports. Oracle Report Manager users can be either report producers or report consumers. Use this guide for information on setting up and using Oracle Report Manager.

## **Oracle Web Applications Desktop Integrator Implementation and Administration Guide**

Oracle Web Applications Desktop Integrator brings Oracle E-Business Suite functionality to a spreadsheet, where familiar data entry and modeling techniques can be used to complete Oracle E-Business Suite tasks. You can create formatted spreadsheets on your desktop that allow you to download, view, edit, and create Oracle E-Business Suite data, which you can then upload. This guide describes how to implement Oracle Web Applications Desktop Integrator and how to define mappings, layouts, style sheets, and other setup options.

## **Oracle Workflow Administrator's Guide**

This guide explains how to complete the setup steps necessary for any product that includes workflow-enabled processes. It also describes how to manage workflow processes and business events using Oracle Applications Manager, how to monitor the progress of runtime workflow processes, and how to administer notifications sent to workflow users.

## **Oracle Workflow Developer's Guide**

This guide explains how to define new workflow business processes and customize existing Oracle E-Business Suite-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 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 Workflow Client Installation Guide**

This guide describes how to install the Oracle Workflow Builder and Oracle XML Gateway Message Designer client components for Oracle E-Business Suite.

### **Oracle XML Gateway User's Guide**

This guide describes Oracle XML Gateway functionality and each component of the Oracle XML Gateway architecture, including Message Designer, Oracle XML Gateway Setup, Execution Engine, Message Queues, and Oracle Transport Agent. It also explains how to use Collaboration History that records all business transactions and messages exchanged with trading partners.

The integrations with Oracle Workflow Business Event System, and the Business-to-Business transactions are also addressed in this guide.

### **Oracle XML Publisher Report Designer's Guide**

Oracle XML Publisher is a template-based reporting solution that merges XML data with templates in RTF or PDF format to produce a variety of outputs to meet a variety of business needs. Using Microsoft Word or Adobe Acrobat as the design tool, you can create pixel-perfect reports from the Oracle E-Business Suite. Use this guide to design your report layouts.

This guide is available through the Oracle E-Business Suite online help.

### **Oracle XML Publisher Administration and Developer's Guide**

Oracle XML Publisher is a template-based reporting solution that merges XML data with templates in RTF or PDF format to produce a variety of outputs to meet a variety of business needs. Outputs include: PDF, HTML, Excel, RTF, and eText (for EDI and EFT transactions). Oracle XML Publisher can be used to generate reports based on existing Oracle E-Business Suite report data, or you can use Oracle XML Publisher's data extraction engine to build your own queries. Oracle XML Publisher also provides a robust set of APIs to manage delivery of your reports via e-mail, fax, secure FTP, printer, WebDav, and more. This guide describes how to set up and administer Oracle XML Publisher as well as how to use the Application Programming Interface to build custom solutions.

This guide is available through the Oracle E-Business Suite online help.

### **Oracle E-Business Suite Upgrade Guide, Release 11i to 12.2**

Refer to this guide if you are upgrading your Oracle E-Business Suite Release 11 products to Release 12. This guide describes the upgrade process and lists database and product-specific upgrade tasks.

### **Oracle E-Business Suite Upgrade Guide, Release 12.0 and 12.1 to 12.2**

Refer to this guide if you are upgrading your Oracle E-Business Suite Release 12.0 and 12.1 products to Release 12.2. This guide describes the upgrade process and lists database and product-specific upgrade tasks.

## 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.

You can navigate to the Oracle Integration Repository through Oracle E-Business Suite Integrated SOA Gateway.

## Do Not Use Database Tools to Modify Oracle E-Business Suite Data

Oracle **STRONGLY RECOMMENDS** that you never use SQL\*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle E-Business Suite 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 E-Business Suite data, you risk destroying the integrity of your data and you lose the ability to audit changes to your data.

Because Oracle E-Business Suite tables are interrelated, any change you make using an Oracle E-Business Suite form can update many tables at once. But when you modify Oracle E-Business Suite data using anything other than Oracle E-Business Suite, 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 E-Business Suite.

When you use Oracle E-Business Suite to modify your data, Oracle E-Business Suite automatically checks that your changes are valid. Oracle E-Business Suite 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.



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## Overview

This topic provides an overview of Oracle Process Manufacturing (OPM) Cost Management.

This chapter covers the following topics:

- OPM Cost Development Area
- Cost Management Process Flow
- Defining Costs
- Establishing Standard Costing
- Establishing Actual Costing
- Establishing Lot Costing
- Retroactive Pricing
- Valuing Inventory and Resource Transactions
- Monitoring and Simulating Costs

### OPM Cost Development Area

All material and resource transactions in a "process enabled" Inventory Organization are costed using OPM Costing. The primary functions of OPM Costing are:

- Develop and Maintain costs using the following cost methods:
  - Standard Costs
  - Actual Costs
  - Lot Costs
- Valuing material and resource transactions in

- Production
- Shipping
- Inventory
  - Purchasing
  - Inventory Valuation
- Create journals in OPM Subledger using Oracle Subledger Accounting
- Monitor and simulate costs using reports and inquiries

**Note:** Item and inventory transaction information are maintained in Oracle Inventory.

## Cost Management Process Flow

The Cost Management Process flow is as follows:

- Complete the basic setup
- Use standard, actual, or lot cost calculation methods to develop costs.
- After reviewing and finalizing costs, perform period-end processing (month-end close) to value inventory and transfer journals to General Ledger.

The graphic describes the Cost Management process as explained below:

### Standard Cost

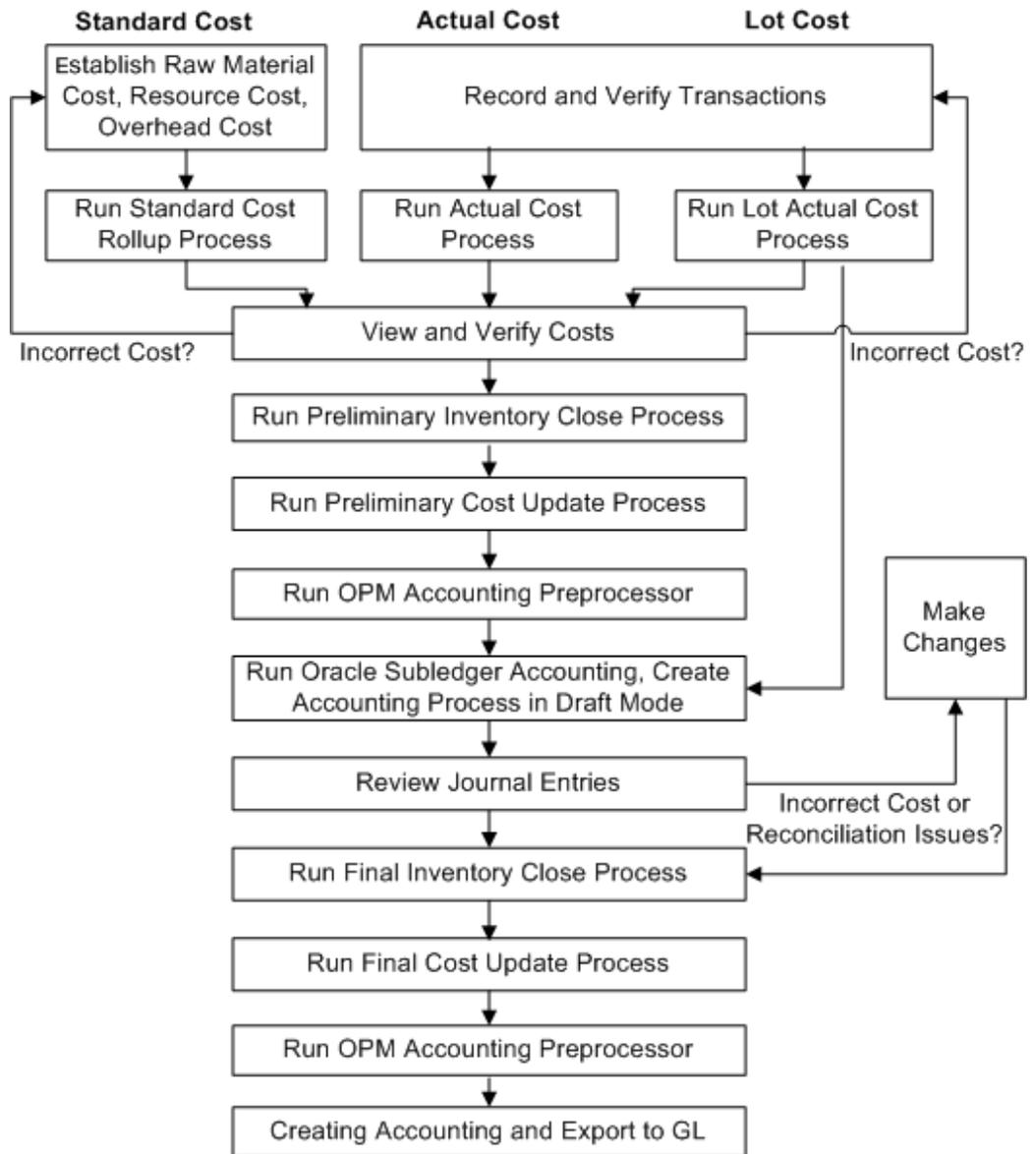
Establish raw material, resource, and overhead costs and run the Standard Cost Rollup process. View and verify the costs. If the costs are correct, then complete all inventory transactions for the period and run the Inventory Close and Cost Update processes in the final mode. Run the OPM Accounting Preprocessor and Create Accounting process to create accounting entries in the OPM Subledger. Use the Create Accounting process again to export the Subledger Journals to Oracle General Ledger.

### Actual Cost

Record and verify transactions. Run the Actual Cost process, view, and verify the costs. If the costs are correct, then run the Inventory Close and Cost Update processes in the final mode. Run the OPM Accounting Preprocessor and Create Accounting process to create accounting entries in the OPM Subledger. Use the Create Accounting process again to export the Subledger Journals to Oracle General Ledger.

### Lot Cost

Record and verify transactions. If the costs are correct, then run the Lot Cost process in the final mode. View and verify the costs. Run the Create Accounting process to create accounting entries in the OPM Subledger. Use the Create Accounting process again to export the Subledger Journals to Oracle General Ledger.



## Defining Costs

OPM Cost Management lets you define costs by:

- Inventory Organization
- Item

- Cost Calendar and Period
- Cost Types
- Cost Component Class
- Analysis Code

## Inventory Organization

Using OPM Costing, you can maintain different costs for an item at different Inventory Organizations. If several organizations have the same cost, the Cost Organization Association can be used to share the same cost across these organizations, by eliminating the need for maintaining duplicate data.

## Item

Define costs for individual items

## Cost Calendar and Period

Define costs for each period in the cost calendar.

## Multiple Cost Types (previously referred to as Cost Methods)

OPM Costing supports different Cost Types that can be used to monitor and analyze costs. It has the ability to store cost of a single item in multiple cost types at any given point of time, though only one is used for inventory valuation in OPM Subledger.

The cost methods supported are:

- Standard Cost
- Actual Cost
- Lot Cost

## Cost Component

The unit cost of an item is usually broken down into several buckets that are attributed to various sources that form the basis of the cost, for detailed tracking and analysis purposes. Cost Component Classes identify individual buckets or component costs that make up the total cost, for example, direct material costs, freight costs, labor costs, production or conversion costs and so on. Any number of cost component classes can be defined and used to break down item costs. The cost component classes are classified into 5 different elements or usages: Material, Resource, Overhead, Expense Allocation, and Standard Cost Adjustment types.

## Analysis Code

An individual component cost identified by a particular cost component class can be further broken down using cost analysis codes for more granular tracking of costs. The cost analysis codes are used to group component costs from multiple cost component class types to provide an alternate view of the total cost.

## Establishing Standard Costing

When you select the standard cost calculation, you define the cost of ingredients in each inventory organization during a specific period of time. The cost information remains static during each defined time period. OPM Costing calculates the standard costs of items using the Standard Cost Rollup, based on recipes, formulas, and routings defined in the OPM Product Development application. The cost of ingredients, by-products, and resources are apportioned to the co-products based on the cost allocation factor set up for the co-products in the formula details in the OPM Product Development application. With standard costs, you can enter a cost directly in the cost details. For by-products, the costs are not calculated by Standard Cost Rollup or Actual Cost process.

A positive cost of by-product means that you either sell or dispose it at a profit. A positive cost for a by-product reduces the cost of the co-products. The cost of the by-product is apportioned using the cost allocation factors that are defined in recipe and are applicable to co-products also.

A negative cost of by-product means that you spend money to dispose off the by-product. For example, waste treatment costs for any toxic by-product. In this case the cost of the co-products are increased appropriately.

Standard cost lets you define the costs for items, formulas, formula ingredients, recipes, and resources used during the production process.

For standard costs:

- Establish the formulas, routings, and recipes
- Run the Cost Rollup process

The cost of a product is based on:

- Formulas, recipes, and routings
- Resource costs
- Overheads

## Establishing Actual Costing

This is a more dynamic method of calculating Item costs based on actual inventory and resource transaction data. The following are the business transactions that are used to calculate the actual costs:

- Purchasing receipts including Freight and Special Charges estimated on the PO, returns, and corrections of receipts
- Paid Invoices
- Batch ingredient consumption and resource usage
- Opening inventory balances
- Cost overheads
- Cost adjustments
- General Ledger Expense allocations for indirect overheads
- All material transactions including internal order receipts

The cost allocation factors are determined from those set up in batch details in OPM Process Execution. When a batch is created, the cost allocation factors are defaulted from those set up in the formula, but you can edit them for the batch. With actual costs, as you cannot enter a cost directly using cost details, you can enter an actual cost adjustment entry to get a cost created for a by-product.

OPM also captures freight and special charges on a purchase order.

Allocating General Ledger expense is a method by which you can distribute the indirect expenses of manufacturing (such as administrative and general expenses) to item costs. The balances in the expense accounts are distributed to item(s) based on either fixed percentages or dynamically derived using other General Ledger account balances, for example, statistical balances that track the item quantities or resource usages.

## Establishing Lot Costing

Lot costing, also known as Specific Identification Type costing, lets you calculate and store costs at the lot level. That is, each lot has a unique cost associated with it and it retains this cost until the entire lot is consumed. The lot costs are computed on a perpetual basis.

- Lot costing lets you store unique costs for each lot.
- You can track the cost of a lot from its creation through all consumptions.

## Retroactive Pricing

Oracle Process Cost Management uses retroactive prices in creating sub ledger postings. Prices can change over the life of purchasing documents. The Retroactive Price Update on Purchasing Documents concurrent program automatically updates purchase orders and blanket releases retroactively with price changes. When this occurs, the accounting is adjusted for the following:

- For purchase orders with a destination type of Inventory, the adjustment account is posted to the Retroactive Price Adjustment account. This account is defined at the organization level in the Receiving Options window in Oracle Purchasing. The following accounts are not adjusted:
  - Inventory and Work in Process valuation accounts
  - Lot Cost types (costs are not recalculated)
  - Purchase price variance

Consider an example, where the price of an item has changed from an original price of 1000 \$ to 1300\$ i.e, a price increase of 300\$. When the price change is approved, adjustments for prior receipts are created as following when the Event Type is Adjust Receive:

<b>Account</b>	<b>Debit</b>	<b>Credit</b>
Receiving Inspection	300\$	
Accrued Accounts Payable		300\$

When the price change is approved, adjustments for prior receipts are created as below when the Event Type is Adjust Deliver:

<b>Account</b>	<b>Debit</b>	<b>Credit</b>
Retroactive Price Adjustment	300\$	
Receiving Inspection		300\$

- For purchase orders with a destination type of Expense, the adjustment amount is

posted to the Charge account specified on the purchase order. When a price change is approved, adjustments are created in the following accounts:

Account	Debit	Credit
Charge	XX	
Inventory AP Accrual		XX

- Transfer of ownership transactions, created for consigned goods, are also adjusted when the price on the associated blanket agreement is changed and approved.

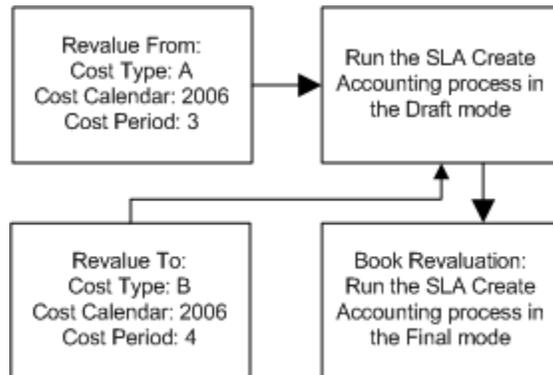
## Valuing Inventory and Resource Transactions

You assign values to inventory and resource transactions.

Transactions in OPM are mapped to the general ledger accounts you define in Subledger Architecture (SLA) application. Costs of inventory organization items are frozen for update to the subsidiary ledger.

## Revaluing Inventory Cost

OPM lets you revalue your inventory based on a different cost value (cost type) within the same period. You can also revalue inventory from one period to the next.



## Valuing Inventory in Production

OPM Cost management calculates the cost of inventory during each stage of production:

- Captures actual materials

- Generates variances

## Valuing the Material Purchased

If you flag OPM to calculate purchase price variance (PPV) on purchase orders, OPM calculates the variance and generates a general ledger account distribution for it.

## Generating Cost of Sales

Costs of items shipped are also frozen prior to update of the transactions to the OPM subsidiary ledger.

## Monitoring and Simulating Costs

### Monitoring Costs

OPM Cost Management provides several reports and inquiries to monitor and analyze costs:

- Item Cost report
- Allocation report
- Subledger reports
- Lot Cost History report

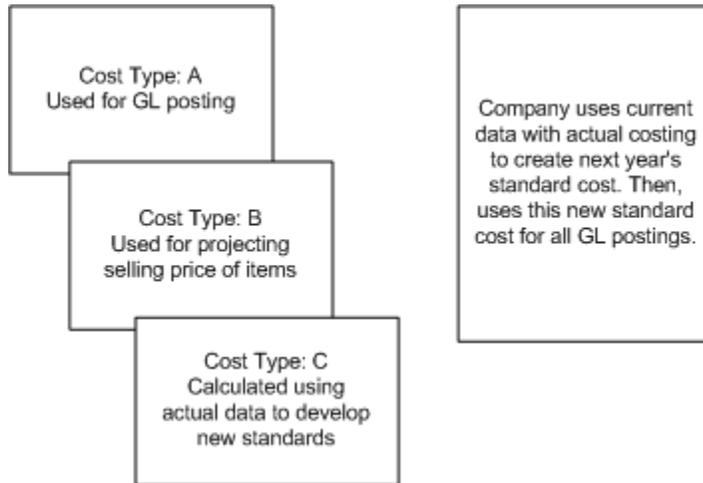
### Simulating Costs

OPM Cost Management provides the following simulations, and lets you establish "what if" scenarios:

- Cost Type and Elements
- Cost Formulas, Recipes, and Routings
  - Indicate the affect a change in a formula or production routing has on your costs
- Prices, Labor Rates, and Overheads
  - Indicate what impact new labor rates, raw material prices, and overheads have on your standard costs
- Cost Rollups

- Determine the proposed cost of a new product
- Weighted Average Costing

The following diagram illustrates using multiple cost types, where cost type A is used for general ledger posting, cost type B is being used to project the selling price for items, and cost type C is calculated using actual data to develop new cost standards.



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## Setting Up

This topic includes procedures and values that you must define before using the application. These basic setups are required regardless of whether you want to use the standard, actual, or lot cost methods. This topic includes setting up in other applications, profile options, and setting the cost calendar and costing periods, cost analysis codes, cost type codes, and cost component classes.

A detailed description on setting up and calculating standard, actual, and lot costs are provided in their topic discussions.

This chapter covers the following topics:

- Setting Up in Other Applications
- Setting Profile Options
- Understanding Cost Types
- Defining Cost Types
- Defining Cost Calendars
- Assigning Calendar to Legal Entity
- Setting the Period Status
- Defining Component Groups
- Defining Cost Component Classes
- Defining Cost Analysis Codes
- Defining Costing Organization Associations
- Defining Fiscal Policies
- Defining Event Fiscal Policies
- Assigning Ledgers
- Defining Percentage Overhead Codes
- Defining Overhead Priorities

- Defining Overhead Percentage
- Defining Source and Target Variable Overhead Components Associations
- Defining Cost Factors
- Defining Resource Costs
- Defining Fixed Overheads

## Setting Up in Other Applications

Set up these prerequisites prior to running the application. Refer to the details for setting up these requirements provided in the individual application user's guides indicated. Depending on your individual requirements, there may be additional setup required.

## Setting Up in Oracle General Ledger

Set up the following in the Oracle General Ledger application. Refer to the Oracle General Ledger User's Guide for details.

- Ledger
- Legal Entities
- Accounting Setup
- Currencies
- Currency Conversion Rates

## Setting Up in Oracle Inventory

Set up the following in the Oracle Inventory application. Refer to the *Oracle Inventory User's Guide* for details.

- Inventory Organizations  
Required.
- Organization Parameters  
Required.
- Subinventories  
Required.
- Locators

- Units of Measure Classes  
Required.
- Units of Measure  
Required.
- Unit of Measure Conversions
- Master Items
- Organization Items

The following item attributes need to be set up for the items to be recognized and costed in OPM Cost Management:

- Inventory Asset Flag  
Enable the Inventory Asset Flag on the Costing tab to track an asset item.
- Select the Recipe Enabled, Process Costing Enabled, Process Execution Enabled attributes on the Process Manufacturing tab to use organization items in formulas and recipes as well as in OPM Cost Management.

## Setting Up in OPM Product Development

Set up the following in the Oracle Process Manufacturing Product Development application. Refer to the *Oracle Process Manufacturing Product Development User's Guide* for details.

- Formulas
- Routings
- Recipes
- Validity rules

## Setting Up in OPM Process Planning

Set up the following in the Oracle Process Manufacturing Process Planning application. Refer to the *Oracle Process Manufacturing Process Planning User's Guide* for details.

- Resources

## Setting Up in Oracle Pricing

Set up the following in the Oracle Pricing application. Refer to the *Oracle Pricing User's*

Guide for details.

- Price List (for Transfer Price)

The price list is used to retrieve the Transfer Price for Process to Discrete Transfers and Intercompany Internal Orders.

## Setting Up in Oracle Sourcing

Set up the following in the Oracle Sourcing application. Refer to the *Oracle Sourcing User's Guide* for details.

- Cost Factors

The Cost Factors window is available directly from the OPM Cost Management and also accessible from Oracle Purchasing applications.

## Setting Up in Oracle Purchasing

Set up the following in the Oracle Purchasing application. Refer to the *Oracle Purchasing User's Guide* for details:

- Receiving Options
- Purchasing Options

## Setting Profile Options

The following table lists and describes various profile options and their recommended change level.

Profile Option Name	Description	Default	Options	Recommended Change Level
GMF: Actual Costing Maximum Iteration Limit for Circular Reference	This profile option sets the maximum number of iterations.	200	200	Site, Applications

<b>Profile Option Name</b>	<b>Description</b>	<b>Default</b>	<b>Options</b>	<b>Recommended Change Level</b>
GMF: Actual Cost Process Error Limit	This profile option defines the number of AC Process generated errors at which the system aborts.	1000	Any valid number	Site, Applications, Responsibility, User
GMF: Commit Count in Accounting Pre-Processor	This profile option lets you indicate the frequency of database commits within the Pre-Processor program. A very large value requires a large Rollback Segment space but performs a little faster. A small value requires less Rollback Segment space, but performs a little slower because of frequent commits and memory allocations. The default value of 1000 suffices for normal processing.	1000	Any valid number	Site

<b>Profile Option Name</b>	<b>Description</b>	<b>Default</b>	<b>Options</b>	<b>Recommended Change Level</b>
GMF: Copy Item Costs - Copy Recipe Information to Target	Use this profile option to copy over recipe validity rule information to the target periods using the copy item costs program. The profile option can have a value of either Yes or No. If the value is set to Yes, then only the recipe validity rules are copied. The profile value is set to No at the site level.	N	Y = Copy item costs and recipe information to target  N = Do not copy item costs and recipe information to target	Site, Application, Responsibility, User

<b>Profile Option Name</b>	<b>Description</b>	<b>Default</b>	<b>Options</b>	<b>Recommended Change Level</b>
GMF: Cost Allocation Factor Calculation	This profile option lets you specify the method for the calculation of batch cost allocation. If you select Static, then the application calculates the batch cost allocations based on the cost allocation factor defined for each product in the production batch. This is how the costs were allocated before this enhancement. If you select Dynamic, then the application calculates the batch cost allocations as a ratio of actual quantity of each product produced to the total production batch output quantity.	NA	Static Dynamic	Site, Application, Responsibility

<b>Profile Option Name</b>	<b>Description</b>	<b>Default</b>	<b>Options</b>	<b>Recommended Change Level</b>
GMF: Cost Process Message Level Threshold	The Actual Cost process generates a lot of error and warning messages during processing and in a high volume of data environment. The threshold value indicates the type of error messages to log by the process. The valid values are Diagnostic Messages, Warnings, Data Setup Errors, Errors impacting Cost, and Fatal or Internal System errors. It is recommended that you set this to Warnings so that any mistakes can be corrected before further processing.	Diagnostic Messages	Diagnostic Messages Warnings Data Setup Errors Errors impacting Cost Fatal or Internal System Errors	Site

<b>Profile Option Name</b>	<b>Description</b>	<b>Default</b>	<b>Options</b>	<b>Recommended Change Level</b>
GMF: Costing Tolerance Percent	This profile option is used to specify tolerance percentage for circular reference batches in Actual Costing. It fixes the percentage of the difference in cost between iterations whether or not the costs are converged. For example, if the tolerance percent is set as 0.01%, then during the iterative calculation, if the prior iteration and current iteration produce results that are within 0.01%, then costs are considered as converged. This profile option is relevant for item costing in circular reference batches and inter-organization transfers (For example, when a finished product is being transferred across organizations.)	0.000001	Tolerance percent value	Site, Application, Responsibility, User

<b>Profile Option Name</b>	<b>Description</b>	<b>Default</b>	<b>Options</b>	<b>Recommended Change Level</b>
GMF: Delete Ingredient Cost When No Effectivity Found	This profile option lets you specify whether the Cost Rollup process must delete or not delete the ingredient costs if no valid validity rules are found.	Yes	No = Does not delete the ingredient costs.  Yes = Deletes the ingredient costs when no effectivity is found.	Site
GMF: Exclude Invoices Which Have No Receipts	If this profile option is set to 1, then the Actual Cost process ignores invoices that do not have receipts in the period for which the cost is being calculated. If set to 0, then the Actual Cost process does not exclude invoices that have no receipts.	0	1  0	Site, Application, Responsibility, User

<b>Profile Option Name</b>	<b>Description</b>	<b>Default</b>	<b>Options</b>	<b>Recommended Change Level</b>
GMF: Exclude Negative Inventory Balance	Use this profile option to ignore zero or negative beginning on-hand inventory during PMAC cost calculations. If the profile value is set to 0, then the actual cost process includes negative or zero onhand quantity in PMAC cost calculations. If the profile value is set to 1, then during the raw material and product cost calculations, the previous period balance and previous period component costs are considered zero for items having zero or negative beginning on-hand inventory quantity.	0	1  0	Site, Application, Responsibility, User

<b>Profile Option Name</b>	<b>Description</b>	<b>Default</b>	<b>Options</b>	<b>Recommended Change Level</b>
GMF: Include Drop Shipments in Actual Cost	This profile option determines whether drop shipments are included in Actual Cost calculations. The default is Yes. Set the profile to No to ignore drop shipments and only include other transactions in actual cost. It is recommended that you set this profile to Yes.	Yes	Yes No	Site
GMF: Include Inventory Movements in Actual Cost	This profile option lets you control the inclusion of inventory movements in the Actual Cost calculation process. It can be set to Yes or No. The default is No. If it is set to Yes, then the Actual Cost process includes inventory movements in the cost calculation. If it is set to No, then inventory movements are not considered in the cost calculation.	No	Yes No	Site, Applications, Responsibility

<b>Profile Option Name</b>	<b>Description</b>	<b>Default</b>	<b>Options</b>	<b>Recommended Change Level</b>
GMF: Include Inventory Transfers in Actual Cost	This profile option determines whether Inventory Transfers are included in Actual Cost calculations. The default value is Yes. Set the profile to No, if you want to ignore transfers and only include other transactions in actual cost. It is recommended that you set this profile to Yes.	Yes	Yes No	Site

<b>Profile Option Name</b>	<b>Description</b>	<b>Default</b>	<b>Options</b>	<b>Recommended Change Level</b>
GMF: Include Invoices in Actual Cost	This profile option controls the inclusion of invoice transactions in the Actual Cost calculation process. This profile option can have a value of either 1 or 0. The default value is 1. If the profile value is set to 1, then the Actual Cost process includes invoice transactions in cost calculations. If the profile value is set to 0, then the invoice transactions are not considered in the cost calculations.	1	1 = Include invoices in cost calculation  0 = Exclude invoices in cost calculation	Site

<b>Profile Option Name</b>	<b>Description</b>	<b>Default</b>	<b>Options</b>	<b>Recommended Change Level</b>
GMF: Include Production Batches in Actual Cost	This profile option indicates whether production batches are considered in actual cost calculations. The default value is Yes. The profile is for troubleshooting and debugging purposes only. Set to No only if requested by the Oracle Support. It is recommended that you set this profile to Yes.	Yes	Yes No	Site
GMF: Include Receipts in Actual Cost	This profile option determines whether Receipts are included in Actual Cost calculations. The default value is Yes. Set the value to No, only if you want to use invoices and transfers for actual costs. It is recommended that you set this value to Yes.	Yes	Yes No	Site

<b>Profile Option Name</b>	<b>Description</b>	<b>Default</b>	<b>Options</b>	<b>Recommended Change Level</b>
GMF: Log All Subledger Variances	This profile option calculates variances for all of the three variance types (Scale to Plan, Scale to Actual, Aggregate) and stores them in a separate table for analysis. Refer to "Accounting Setup and Account Processes and Distribution" topics in this guide for more details.	No	No = The subledger variances are not logged to the separate table and only one variance type is calculated as specified in the profile option, GMF: Subledger Variance Type.  Yes = The Subledger process calculates variances for all of the three variance types (Scale to Plan, Scale to Actual, Aggregate) and stores them in a separate table.	Site

<b>Profile Option Name</b>	<b>Description</b>	<b>Default</b>	<b>Options</b>	<b>Recommended Change Level</b>
GMF: Log Frozen Error Messages in Cost Rollup	If an Item's cost is already frozen by a final cost update, then Cost Rollup does not rollup the cost of this item if run again, even if any of the ingredients or routing costs have changed. If you set the profile to Yes, then the application logs a message that an item's cost was not recalculated when it is frozen. The default value is No.	No	No Yes	Site
GMF: Standard Cost Rollup Error Limit	Defines the number of Rollup generated errors at which the system aborts.	1000	Any valid number	Site, Applications, Responsibility, User

<b>Profile Option Name</b>	<b>Description</b>	<b>Default</b>	<b>Options</b>	<b>Recommended Change Level</b>
GMF: Subledger Variance Type	This profile option contains the variance type which the Subledger process uses to calculate and post variances for the production transactions. Specify any of the above mentioned variance types as a value. Refer to "Accounting Setup and Account Processes and Distribution" topics in this guide for more details.	Scale to Plan	Scale to Plan = Scale the costing formula to planned quantity of the primary product in the batch and compare with the actual batch.  Scale to Actual = Scale the costing formula to actual quantity of the primary product in the batch and compare with the actual batch.  Aggregate = Calculates Aggregate type variances.	Site
GMF: Use Cost Alloc Factor in Lot Costing	The Lot Cost Process uses the actual quantities yielded or transferred at each production setup to arrive at the cost allocations for co-products. Set this profile to Yes, if you want to use the default cost allocation factor set up for the batch products. The default value is No.	No	No  Yes	Site

<b>Profile Option Name</b>	<b>Description</b>	<b>Default</b>	<b>Options</b>	<b>Recommended Change Level</b>
GMF: Use Only Costing Validity Rules for Cost Rollup	Determines what validity rules to use during the Cost Rollup process. This affects cost calculations. If the profile value is set to 0, then costing validity rules are used if available. Otherwise, the Cost Rollup process uses production validity rules. If the profile value is set to 1, then only costing validity rules are used.	0	0 or 1	Site

<b>Profile Option Name</b>	<b>Description</b>	<b>Default</b>	<b>Options</b>	<b>Recommended Change Level</b>
GMF: Use PO Acquisition Costs for Invoice	It is not possible to enter the actual freight and other costs at the time of invoicing. If the profile is set to Yes, then Actual Cost picks up the estimated freight and other charges entered at the time of creating a purchase order as applicable to the invoice as well. The default value is No. If the value is set to No, then the Actual Cost does not include these charges.	No	No Yes	Site

<b>Profile Option Name</b>	<b>Description</b>	<b>Default</b>	<b>Options</b>	<b>Recommended Change Level</b>
GMF: Use Substitute Items in Standard Costing	This profile option lets you specify whether to use the original formula item or the substitute item in the product cost calculations. If you select No, then the application uses the original item for cost calculations. This is the default value. If you select Yes, use period start date as effective date, then the application uses the substitute item. The most appropriate substitute item is determined using the costing period start date as the effective date. The costing period start date must be within the item substitution's effective start and end date as set up in the OPM Product Development application. If you select Yes, use period end date as effective date, then the	No	No  Yes, use period start date as effective date  Yes, use period end date as effective date	Site, Application, Responsibility

Profile Option Name	Description	Default	Options	Recommended Change Level
	<p>application uses the substitute item. The most appropriate substitute item is determined using the costing period end date as the effective date. The costing period end date must be within the item substitution's effective start and end date as set up in the OPM Product Development application.</p>			

Profile Option Name	Description	Default	Options	Recommended Change Level
GMF: Landed Cost Adjustments Transfer Method to Inventory in Actual Costing	This profile option lets you specify the method in which you want to transfer the landed cost adjustments to inventory in Actual costing.	None	<p>You can set the profile option to:</p> <ul style="list-style-type: none"> <li>Apply whole LC adjustments to Inventory to consider adjustment as in period adjustment and apply the whole adjustment amount to calculate average cost calculation.</li> <li>Apply LC Adjustments based on the Period Opening Balance if you want to derive the prorated amount and include it in cost calculations.</li> </ul>	Site, Responsibility

Profile Option Name	Description	Default	Options	Recommended Change Level
GMF: Compute Ingredient Cost in Target Organization Based on Sourcing Rules	This profile option lets you determine if the ingredient cost has to be created in a Target Organization. If the profile value is set to Yes , the ingredient item cost is created in Target Organization , provided there is no pre-existing cost and the cost origin is stamped as Sourcing Rule.	Yes	Yes No	Site

## Understanding Cost Types

OPM supports Actual, Standard, and Lot costing calculation types for items. Define a cost type as one of the following:

- Standard
- Actual Cost
- Lot Cost

Cost type codes identify specific groups of cost data according to their purpose. You can define unlimited number of cost types in OPM to differentiate the cost type used for inventory valuation versus simulated costs developed for Sales or Management purposes.

### Standard Costing

If you select this costing type, then you enter the costs of raw materials, for example, based on estimates. OPM calculates product costs based on formula, routings, recipe details, and other indirect costs such as standard overheads.

The item costs are established for a specific costing period and remain the same during

the period. Calculations are based on these standard values, regardless of real costs (that is, actual transaction costs) of items. The standards can be established based on estimates derived from historical information or actual costs calculated in prior costing periods or years.

When inventory is valued in the OPM Subledger, appropriate variances are generated between the standard cost and the actual consumptions and usages recorded on the transactions.

### **Standard Cost Data**

OPM uses the following data to calculate standard costs:

- Formulas
- Routings
- Recipes
- Validity Rules
- Overheads

### **Actual Costing**

Actual Costs of items are developed using the actual business transactions. The product costs are not based on the formula, routing and recipe details but rather based on actual consumptions of materials and resource usage recorded in the production batches

The costs are calculated using one of several weighted average or last cost methods by aggregating transactions recorded over a cost period.

The cost calculation method selected for raw materials need not have to be the same as the one selected for products. You can mix and match various methods and decide on a combination that best suits your needs.

### **Actual Cost Methods Supported**

The following are the Actual Cost Types Methods that are supported:

- Period moving average cost (PMAC)
- Period weighted average cost (PWAC)
- Perpetual weighted average (PPAC)
- Last transaction (LSTT)
- Last invoice (LSTI)

Last Transaction and Last Invoice methods are supported only for Raw Materials.

## Cost Calculations

You can use three different time frames to develop actual Cost averages:

- Current period data only
- Current period data with the beginning inventory balance
- Current period data averaged with actual cost data from the beginning of the cost calendar

For example, assume you have a steady level of production for 10 straight periods in a cost calendar. If production skyrockets in the 11th period, then production costs for that period skyrocket as well.

OPM uses one of the following types to figure raw material cost so that those costs are redistributed and leveled, over a greater period of time:

- Period Moving Average Cost (PMAC)
- Period Weighted Average Cost (PWAC)
- Perpetual Average Cost (PPAC)

**Note:** With actual costing, items for which there are no transactions in a calendar period will have cost components moved and carried over from the previous period to the current period. This insures that all cost items have an actual cost within the period processed.

You can have raw materials calculated based on Period Weighted Average Cost (PWAC) and products based on Period Moving Average Cost (PMAC).

## Actual Costing Basis

The following paragraph describes transactions that are used as basis for actual cost calculations:

### Purchase Order Receipts

The raw material estimate price established on a PO is used as the price for receipts

### Invoices Recorded in Accounts Payable

The estimated price on a PO can be different from the actual amount paid to the Supplier when an invoice is received. OPM captures the actual, final prices paid for raw materials on the invoices and the price on the invoice overrides the price recorded on the receipt.

## Production Batches

OPM calculates the actual cost for a finished product based on actual ingredient consumption and resource usages recorded in production batches.

The product material costs are based on the actual raw material usages in batches and the cost calculated for the raw materials. The product resource costs are calculated based on resource usages and the nominal cost established using resource costs setup.

## Expense Allocations

Expenses accrued in General Ledger can be allocated to specific items as indirect overhead costs.

## Overheads

You can assign and apply overhead costs to either raw materials or finished goods. The overhead cost calculation for actual cost rollups is identical to that used for standard cost rollups.

## Actual Cost Adjustments

Actual Cost Adjustments let you fine tune the final component cost of an item, based on individual business situations.

## Options for Smoothing

You can use three different time frames to develop average actual costs:

- Current period data only
- Current period data average with the ending inventory valuation from the last period
- Current period data averaged with actual cost data from the beginning of the cost calendar

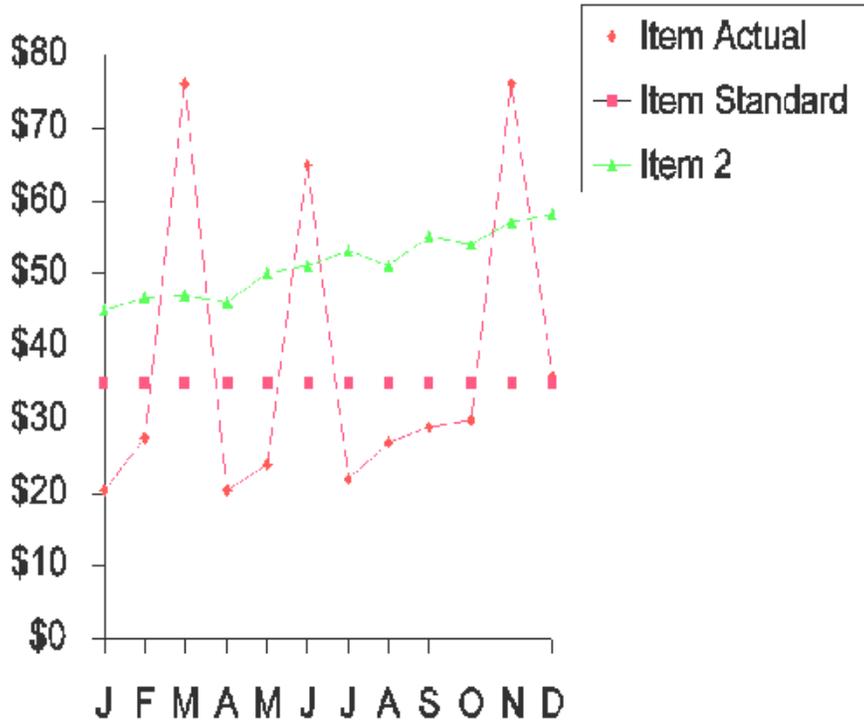
For example, assume you have a steady level of production for 10 straight periods in a cost calendar. If production soars in the eleventh period, then production costs for that period also soars.

OPM uses one of the following types to calculate raw material cost so that these costs are redistributed and leveled over a greater time frame:

- Period Moving Average Cost (PMAC)
- Period Weighted Average Cost (PWAC)
- Perpetual Average Cost (PPAC).

**Note:** With actual costing, items for which there are no transactions in a calendar period will have cost components moved from the previous period to the current period. This insures that all cost items have an actual cost within the period processed.

The raw material calculation and product calculation types can be different. For example, raw materials can be calculated based on Period Weighted Average Cost (PWAC) and products based on Period Moving Average Cost (PMAC).



### Inventory Transfers

Inventory can be transferred from one organization to another using a simple Inter-Organization Transfer or using Internal Orders where necessary supporting documents are required. Actual Cost will consider the inventory transfers between process inventory organizations within the same Legal Entity at the source organization cost. For transfers that go across Legal Entities, transfer price is used. For transfers that originate from a discrete inventory organization to a process inventory organization, transfer price is used regardless of whether the transfer is within or across Legal Entities.

## Lot Cost Type

The Lot Costing, also known as Specific Identification Type costing, lets you calculate and store costs at the lot level. Each lot has a unique cost associated with it and it retains this cost until the entire lot is consumed. The lot costs are computed on a perpetual basis, in other words, there is no concept of a cost period as in standard or actual cost methods.

The transactions that are used as basis for lot cost calculations are:

- Purchase order receipts
- Production batch
- Overheads
- Lot Cost adjustments
- Inventory Transfers

OPM also supports Lot Split, Lot Merge, and Lot Translate.

## Defining Cost Types

The subsequent paragraphs describe setting up cost types.

### To enter a cost type:

1. Navigate to the **Cost Types** window.
2. Enter the **Cost Type** to represent code that identifies the costing method to be used in cost calculations. For example, enter STND for standard costing. Required.
3. Enter a brief **Description** of the cost type. For example, enter Standard Costing for the standard cost type. Required.
4. Indicate the **Cost Method** you are defining:
  - Standard Cost
  - Actual Cost
  - Lot Cost

If Lot Cost is selected then the Raw Material Calculation type and Product Calculation type are not applicable and they are disabled.
5. **Usage** indicates if the cost type is for general or lab use. The general usage type is

set by default. If you set the usage to general use, then the cost rollup considers only Production and Costing Recipes with Validity Rules at Status 'Approved for General Use' or 'Frozen' for processing. If you set the usage to lab use, then the cost rollup considers recipes with validity rules with the "Approved for General Use" status and preferred to the production or costing recipes if they exist. The usage field is valid only for the standard cost method only. If you are using the actual or lot cost type, then this field is disabled.

6. **Raw Material Calculation Type** is available only if you are defining the Actual Costing type in the Cost Type field. Indicate the type of raw material cost calculations that occur for this actual costing type. The valid options are:

- Period moving average cost (PMAC)
- Period weighted average cost (PWAC)
- Perpetual weighted average (PPAC)
- Last transaction (LSTT)
- Last invoice (LSTI)

The type descriptions (shown in parentheses) are abbreviations for these calculation types. The lookup displays both the calculation type and the abbreviation. Required.

7. **Product Calculation Type** is available only if you are defining the Actual Costing type in the Cost Type field. If you want OPM to derive actual costs for product components, indicate the type of calculations to perform. The valid options are:

- Period moving average cost (PMAC)
- Period weighted average cost (PWAC)
- Perpetual weighted average (PPAC)

The type descriptions (shown in parentheses) are industry standard abbreviations for these calculation types; the lookup displays both the calculation type and the abbreviation.

### **Lot Cost Type**

8. **Start Date** is only available for Lot Cost types. Enter a start date. The start date is used to collect all transactions that happened after the specified date for lot cost calculation purposes.

If this field is left blank, then the Lot Cost process uses all transactions in the system for the legal entity for which the Lot Cost process is run. If you have several years worth of transaction data, a large number of transactions may be processed

resulting in poor performance of the Lot Cost process. It is recommended that you set a past date that sufficiently covers most of the lots that are active and have current onhand balances. This way you can have the process ignore lots that have been used long ago and are not currently in use. For example, if the current period is January 2004, then you can specify January 1st, 2003, to ensure all transactions from the prior year are considered.

**9. Enter the Alternate Cost Type.**

Only Standard and Actual cost types are allowed. Under Lot Costing, you can have a subset of lot controlled items costed at the lot level. For other lot controlled items and non-lot controlled items, the alternate cost type is used to determine the cost the items.

## Defining Cost Calendars

You maintain costs by defining the costing calendars. A cost calendar can be shared across multiple cost types and legal entities. A cost calendar can span multiple years. For each costing calendar, you can define an unlimited number of costing periods. Each period is assigned a period status to indicate costing activity that is permitted.

- Never Opened - the period was never opened. You cannot establish costs or run any cost processes in a never opened period.
- Open - all activity is allowed.
- Frozen - no updates can be made for existing items (however, new item costs can be entered or calculated and their costs updated).
- Closed - no activity is performed in a closed period. Periods cannot be reopened for costing activity once they are closed.

The costing calendar is completely separate from the fiscal calendar and the periods therein. Cost Calendars support multiple legal entities and cost type. You cannot assign two calendars to the same legal entity and cost type combination for the same time period. For example, if you define a cost calendar called FY06 - monthly calendar for the year 2006 and assign to a Legal Entity and cost type, you cannot assign another cost calendar, Q06 - quarterly calendar for year 2006, to the same Legal Entity and cost type combination.

If you are using the Period Moving Average Cost, then use the same start and end dates for the period as the fiscal financial calendar defined for your Legal Entity's Primary Ledger in GL.

The Cost Calendars window supports multiple languages (MLS enabled). When you call this window, the Globe icon is enabled. If you have multiple languages installed, then use the option to add the calendar description in any of the installed languages.

## To define a cost calendar:

1. Navigate to the **Cost Calendars** window.
2. Enter the name of the cost **Calendar** (for example, enter 2007). Required.
3. Enter a brief **Description** of the cost calendar. For example, enter Fiscal Year 2007.
4. Enter the date on which this calendar becomes effective in **Start Date**. Required.

### Cost Calendar Details Panel

5. Enter a code to identify the **Period** which can be any code you wish. If the cost calendar represents a 12-period fiscal year, you might want to enter 1 through 12. Required.
6. Enter a brief **Description** of this calendar period. For example, if this is the first period of a fiscal calendar, enter **January**. Required.
7. Enter the **Start Date** of this calendar period.
8. Enter the last date of this calendar period in **End Date**.

## Cost Calendar - Additional Menu Features - Actions Menu

**Close Period** - Select this option when you are sure that there are no more cost changes to be made. Select Close Period from the Actions menu to close a costing period and assign it Closed status.

Close all the previous periods before closing the current period.

## Assigning Calendar to Legal Entity

### To assign calendar to a legal entity:

1. Select **Assignments** from the Cost Calendars window.

The Calendar and Description are default from the Cost Calendar window.

### Assignments Details Panel

2. Enter the **Legal Entity** to which you want.
3. Enter the **Cost Type** code to be used as a default for this cost calendar. The cost type default is used as a typing aid to speed data entry on OPM Costing forms. Required.

4. Enter the **Description**.

## Setting the Period Status

1. Select **Period Status** from the Assign Cost Calendars window.  
The specified Legal Entity and Cost Type display.

### Period Status Details Panel

2. Enter the **Period**.
3. Enter the **Description**.
4. Enter the date on which this calendar becomes effective in **Start Date**. Required.
5. Enter the date until which this calendar is effective in **End Date**. Required.
  - Never Opened
  - Open
  - Frozen
  - Closed
6. **Period Status** displays the status of each period in the cost calendar.

## Flexibility in Restricting Cost Updates

Transactions (regardless of cost type) can be made to Open calendar periods. OPM gives you the capability to Freeze existing costs from further modifications (such as cost rollups, actual cost processing, and cost updates) in a specific calendar period. However, new item cost transactions may be added. You can also Close a period, which prevents any further costing changes to be made within the specified period.

- **Never Opened** - Indicates that the period is not opened for transactions yet. You cannot establish costs or run any cost processes in a never opened period.
- **Open Periods** - The status of each new period you define defaults to Open, which means that all daily transactions can be updated to the period. Each period remains open until the Final Cost Update (see "Cost Update") is run successfully.
- **Frozen Periods** - When you do not anticipate further changes to transactions, you can automatically Freeze the period by running the Final Cost Update. In a frozen calendar period, no further modifications (such as cost rollups, actual cost processing, and cost updates) can be made to existing, updated costs.

However, newly-created component cost details can be entered, (selectively) rolled up, then updated and included without affecting those costs already frozen.

**Note:** You cannot delete the frozen cost periods.

- **Closed Periods** - You should consider closing a costing period only when you are sure that there are no more cost changes to be made. Select Close from the Actions menu to close a costing period.

Closing a period prevents any modifications to be made to the costs within the period, effectively locking them from further changes. No new item costs may be entered, no rollups may be performed, and no cost updates may be performed for the period. You cannot reopen an already closed period for a transaction.

## Defining Component Groups

Component groups lets you collect specific material and or resource component costs for category groupings (for example, material costs and resource costs). Components groups can be used for custom reporting and analysis.

### To define component group:

1. Navigate to the **Component Group** window.
2. Enter the **Component Group** into which material and/or resource costs are collected for reporting purposes. Required.
3. Enter a brief **Description** of the component group you are adding. Required.

## Defining Cost Component Classes

The unit cost of an item is usually broken down into several buckets that can be attributed to the various sources that form the basis of the cost, for detailed tracking and analysis purposes. Cost Component Classes are used to identify the individual buckets or component costs that make up the total cost, for example, direct material costs, freight costs, labor costs, production or conversion costs and so on. Any number of cost component classes can be defined and used to break down the item costs. The cost component classes are classified into 5 different elements or usages: Material, Resource, Overhead, Expense Allocation and Standard Cost Adjustment types

Costs from several ingredients, routings, overheads, and allocations can be summarized into one or more component classes.

The Cost Component Classes window supports multiple languages (MLS enabled). When you call this window, the Globe icon is enabled. If you have multiple languages

installation, then you can select this option to enter the cost component class description in any of the installed languages.

### **Cost Component Class Examples**

In a particular formula, you have two ingredients: one is a dry raw material (assigned a component class code called DRYMAT) and the other is a solution (assigned component class SOLMATL2). When you view the product costs, the Item Cost window shows DRYMAT and SOLMAT as the cost components, each with its respective cost.

You can associate the component class to multiple raw materials. For example, you can assign all dry raw materials to component class DRYMAT and all solutions to class SOLMAT. However, if a formula contains more than one raw material with the same component class, then the costs for each material is summarized and appears once under the component class on the Item Cost window.

For example, a formula containing two raw materials (class RAWMAT) appears as having only one raw material component class on the Item Cost window. The costs for both raw materials are summarized in the total for component class RAWMAT.

### **To define cost component classes:**

1. Navigate to the Cost Component Classes window.
2. Enter the code to identify the Component Class. For example, enter DRYMAT for raw materials, or SOLMAT for solutions. Required.
3. Enter a Description for the component class. For example, enter Raw Materials or Solutions. Required.
4. You have the option of building component class association hierarchies for reference and reporting purposes. The Primary Component Class indicates the primary cost component class with which the component class you are defining now is associated. The default is the class code you specified in the Component Class. You can change the entry.
5. Component Group is an optional entry that lets you further group the component classes for analysis and reporting purposes.
6. Usage indicates if this cost component classification is being entered for use as a material, overhead, resource, or expense detail from routings. Select one of the following values (Required):
  - Material
  - Resource
  - Overhead

- Expense Allocations
- Std Cost Adjustment

Once you set the usage indicator for a component class, it cannot be changed after costs have been defined using this component class.

Once costs have been created or calculated using a component class, the usage cannot be changed.

7. Enter the Sort Sequence for the component class. It indicates the order in which component classes displays on forms and reports. 1 is the first or top line and 2 indicates the second line, and so on. A zero (0) lets the application to determine the sort order. Required.
8. The double brackets ([ ]) identify a descriptive flexfield. You can use these descriptive flexfields to enter more information for each cost component class.
9. Product Cost Calculation indicator lets you flag those component costs to be excluded from the Cost Rollup process. Certain identifiable costs (for example, transfer costs) are for specific ingredient items, and are not required to be rolled up into the products. The valid values are:
  - Include in Product Cost Calculation
  - Exclude From Product Cost Calculation
10. Valuation Option indicator lets you identify whether the component class must be used for valuing inventory or not. The valid values are:
  - Will be used for inventory valuation
  - Will not be used for inventory valuation
11. The valid values for Purchase Price Variance are:
  - Include in Purchase Price Variance Calculation
  - Exclude from Purchase Price Variance Calculation

Select Exclude From Product Cost Calculation if this is a non-product cost component class. The default, Include in Product Cost Calculation, applies if the component class must be included. This flag is not applicable for Lot Cost.

Select the Include in Purchase Price Variance Calculation option (default), if the cost for this component class is used in calculating the inventory valuation for purchase price variance (PPV). Select the Exclude from Purchase Price Variance Calculation option, if the component class must not be used in PPV calculations.

**To process indirect component for standard costing:**

1. Navigate to the Component Classes window.
2. Choose Standard Cost Adjustment for Usage.
3. After completing the Cost Component Classes window, open the Item Costs window by selecting Item Costs from the Inquiries menu.
4. Complete the Item Costs window. Enter the unit cost reflecting the revision or adjustment indicated on the Cost Component Classes window. See: Item Costs.
5. When you add a new cost, it is recommended that you perform a cost rollup and cost update to calculate the revised unit cost and process the GL financial cost, respectively. See: Cost Rollup and Cost Update.

**Indirect Component Processing for Standard Costing**

When standard costs are used, you can update adjustments or indirect components of standard product costs separately without defining formula routings and/or overhead details. You can identify the standard indirect cost component, update non-direct materials and resources within production batches, and reconcile "batch close" variance at the close of a production batch.

## Defining Cost Analysis Codes

An individual component cost identified by a particular cost component class can be further broken down using cost analysis codes for more granular tracking of costs. The cost analysis codes are used to group component costs from multiple cost component class types to provide an alternate view of the total cost. For example, you can define direct or indirect analysis codes for each cost component. Consider the following example:

- Item: ABC
- Inventory organization: A
- Cost Calendar/Period: June, 2001

Component	Analysis	Value
MATERIAL	DIR	\$18.765948788
LABOR	DIR	\$22.150682432

Component	Analysis	Value
INDIRECT EXPENSE	IND	\$13.502400000
PACKAGING	DIR	\$ 5.765980654
Total Item Cost	n/a	\$60.185011874

**DIR** = Direct Costs

**IND** = Indirect Costs

As shown in the example, you can assign the same analysis code to multiple cost components.

### To define cost analysis code:

1. Navigate to the **Cost Analysis Code** window.
2. Enter the **Code** to identify the cost analysis type. For example, DIR for Direct Costs, or IND for Indirect Costs. Required.
3. Enter a **Description** for the analysis code. For example, enter Value Added or Non-value Added. Required.

## Defining Costing Organization Associations

OPM maintains separate item costs for each inventory organization. However, you can have a situation in which multiple inventory organizations transact the item, but the item costs in all of those organizations are the same. In such cases, OPM lets you create a costing organization and share it with other inventory organizations.

OPM lets you associate a single costing organization with multiple inventory organizations through costing organization associations. Each association is assigned a date effectivity range which dictates when the association is valid. OPM uses these associations to determine the organization to which actual cost calculations is updated.

You can establish organization associations for standard or actual costing. Organization associations are not mandatory. Costing organization costs are only effective for items in those inventory organization linked to it.

**Note:** The start and end dates should encompass a complete Costing Period for which the association needs to be effective. For example, if the Costing Period start on 01-Jan-2006 and ends on 31-Jan-2006, the

association effective dates must be 01-Jan-2006 and 01-Feb-2006 to completely include the last day of costing period.

### To define costing organization:

1. Navigate to the **Cost Organization Associations** window.
2. Enter a valid organization code that is the costing organization in **Cost Organization**. You define organizations on the Organization window. The organization description from the Organization window displays automatically. Required.
3. The **Legal Entity** linked to the organization displays. You cannot edit this field.

### Associated Organizations

4. Enter the **Inventory Organization** that you are linking to this costing organization. You can link an inventory organization to one costing organization for a date range. Required.
5. The organization description from the Organizations window displays automatically in **Name**. You cannot edit this field.
6. The cost or inventory organization association is effective only during the date range that you enter. Indicate the opening date in the effectivity range in **Start Date**. Required
7. The cost or inventory organization association is effective only during the date range that you enter. Indicate the closing date in the effectivity range in **End Date**. Required.

## Defining Fiscal Policies

The Fiscal Policy options define the Legal Entity-wide parameters that determine the cost type that will be used for inventory valuation, the default material and overhead cost components and analysis codes for actual cost processing, additional cost types used for costing simulations

Following are the procedures to establish fiscal policy options. The "Event Fiscal Policies" and "Assign Additional Ledger Valuation Methods" topics provide more details on setting up additional details for a Legal Entity.

### To define fiscal policies:

1. Navigate to the **Fiscal Policies** window.

2. Enter the **Legal Entity** name for which you are defining fiscal policy options. Required.
3. Enter the name of the default **Ledger** for this fiscal policy company.
4. Displays the **Base Currency** code for this company.
5. Enter the cost type to use for inventory valuation in **Valuation Method**.
6. Indicate if the fiscal policy is based on costs from the previous cost period or the current period in **Cost Basis**.

#### **Default Material Component**

7. Enter the default material component that identifies the cost component to be applied to the fiscal policy in **Component Class**. Required
8. Enter the code that identifies the cost **Analysis Code** to be applied to the fiscal policy.

#### **Default Overhead Component:**

1. Enter the default overhead component that identifies the cost component to be applied to the fiscal policy in **Component Class**. Required
2. Enter the default overhead **Analysis Code** that identifies the cost analysis code to be applied to the fiscal policy.

### **Fiscal Policies Actions Menu**

- **Event Fiscal Policy** - The Event Fiscal Policy lets you customize certain features of the Subledger and Journal Update process.

### **Defining Event Fiscal Policies**

This topic describes event fiscal policy.

1. Navigate to the **Event Fiscal Policies** by clicking the option or selecting it from the Actions menu.
2. Enter the **Legal Entity** for which you are defining the event fiscal policy. Required.
3. Enter the predefined **Event Entity**.
4. Enter predefined event class assigned to the event entity in **Event Class**.

5. Indicate whether purchase price variance is to be recognized for booking inventory at standard cost or at the PO Unit Price in **Purchase Price Variance-Purchase Orders**. The valid options are:

- Book INV at Item Cost (PPV)
- Book INV at Receipt Price (no PPV)
- Book INV at Invoice Price

**Note:** If you use standard costing, you can set the PPV option to either book at Item Cost (PPV is generated) or Book at Receipt Price (no PPV is generated for Receipts). If you use Actual Costing, it is recommended that you set the option to Book at Receipt Price for easier reconciliation at month end.

6. Indicate whether purchase price variance is to be recognized for booking inventory at standard cost or at the PO Unit Price in **Purchase Price Variance-Internal Orders**. The valid options are:

- Book INV at Item cost (PPV)
- Book INV at transfer price (no PPV)

7. Set **Landed Cost Charges** to:

- **Accrued to Item A/P Account** to indicate that freight, storage, taxes, and special charges accrue to the item's AP account.
- **Accrued to Accrual Account** indicate that freight, storage, taxes, and special charges accrue to the item's own accrual account.

## Assigning Ledgers

You assign valuation methods to ledgers.

### To assign valuation methods or ledgers:

1. Select **Assign Valuation Methods** from the **Fiscal Policies** window.

The selected Legal Entity displays.

The primary ledger and cost type selected in the fiscal policy for inventory valuation display in this window but you cannot change the cost type here.

2. Enter the secondary ledger in **Ledger Code**.

3. The ledger **Description** displays.
4. Enter a different **Cost Type** to use for simulation.
5. The cost type **Description** displays.

## Defining Percentage Overhead Codes

This window helps you maintain percentage overhead codes, descriptions, usage levels, basis level, and optional descriptive flexfield information. The percentage overhead code contributes to the cost of an item.

The usage level (listed below) specifies at what level cost is affected by the percentage overhead code:

- Applied to Ingredient but added to Product (that is, Consumption)
- Applied to Item and added to itself (that is, Direct or Production)

The basis level lets you specify if the percentage overhead should be applied to this level item cost or to the total item cost.

Based on the selected basis option, the Cost Rollup process applies percentage overhead rules either to this level cost components or to all cost components of the item cost.

If you have already set up percentage overhead codes, then select the basis value for these codes. If you do not select the basis value, then the Cost Rollup process considers Total Cost as the default value and applies percentage overheads to the total item cost.

### To define percentage overhead codes:

1. Navigate to the **Percentage Overhead Codes** window.
2. Enter a unique **Code** that identifies a percentage overhead. For example, SHR. Required.
3. Enter a description for the code in **Description**. For example, enter Shrinkage for the percentage overhead code SHR. Required.
4. **Usage** lets you enter at what level cost is affected by the percentage overhead code. The percentage can either be applied to an ingredient but added to the product or applied to an item and added to itself. Required. The two usage options are:
  - Applied to Item and added to itself (that is, Direct or Production)
  - Applied to Ingredient but added to Product (that is, Consumption)

These options let you add percentage overhead cost to an item when it is either

produced or consumed. For example, if Item A has associated overhead costs when it is produced, then a percentage overhead code with the usage indicator "Applied to Item and added to itself" should be defined. The percentage overhead incurred on producing Item A is determined by applying overhead percentage to component costs of Item A and added to the cost of Item A. Similarly, if Item A has a type of percentage overhead cost which is incurred during consumption, then define a separate percentage overhead code with usage indicator "Applied to Ingredient but added to Product". In such a case, any product which uses Item A as an ingredient will have percentage overhead costs added to its cost.

5. **Basis** lets you enter if the percentage overhead should be applied to this level item cost or to the total item cost.
  - This Level Cost - Applies percentage overhead rules to this level cost components of the item cost.
  - Total Cost - Applies percentage overhead rules to all the cost components including this level and the lower level of the item cost.
6. The double brackets (**[ I ]**) identify a descriptive flexfield that lets you add data fields to this window without programming.

## Defining Overhead Priorities

The usage of percentage overhead code is categorized by attaching it to one or more of the following entities in the required order:

- Inventory Organization
- Item
- Item GL Category
- Item Cost Category
- GL Business Class
- GL Product Line

For each entity, you can assign different overhead priorities for a given legal entity code and a percentage overhead code. You can assign numerical sequential values for the given overhead entities. Only the priority entities that have values assigned impact the specific overhead percentage definition. The remaining entities do not appear on the Overhead Percentage window and does not impact cost rollup and how percentage overhead cost is calculated for the percentage overhead code.

## To define overhead selection priorities:

1. Navigate to the **Overhead Selection Priorities** window.
2. Enter the **Legal Entity** for which you are defining overhead priorities. Required.
3. Enter the **Overhead Code** for which you are defining overhead priorities. For example, enter SHR for the Shrinkage. Required.

### Priorities

4. After the overhead code is entered, the attributes associated with the indicated overhead code are displayed in **Overhead Entities**. Starting with the number 1 (1=highest priority), enter a priority number next to each field to be used for defining and retrieving costing overhead percentages. If a field does not have a number, it will not be used for overhead percentage definition and retrieval. None of the fields are mandatory but at least one field is required in order for the record to be saved. Do not use the same priority for two fields. Required.

Following is a list of all attributes:

- Inventory Organization
- Item
- Item GL Category
- Item Cost Category
- GL Business Class
- GL Product Line

## Defining Overhead Percentage

You can define the actual overhead percentage value for a given overhead code. The overhead percentage is defined for a given calendar, period, cost types, and overhead code. The overhead entities defined on the Overhead Selection Priorities window is used to define overhead percentages.

This window displays the GL Business Class and GL Product Line fields, if you had selected them as one of the priorities in the Overhead Priorities window.

### To define overhead percentages:

1. Navigate to the Overhead Percentages window.

2. The Legal Entity displays. The overhead percentages you define using this window are assigned to the legal entity.
3. Enter the name of the cost Calendar (for example, enter 1997) for which overhead percentage is being defined. Required.
4. Enter the cost Period for which the overhead percentage is being defined. Required.
5. Enter Standard as the Cost Type code to be used. Only the Standard Cost type is supported. Required.
6. Enter or select a Overhead Code for which percentage will be specified. The system then looks for all the entities that have selection priorities assigned to them for the specified overhead code and legal entity for the given calendar and displays them. Choose any values for these priorities for which you are defining the overhead percentage. Required.

**Note:** Depending on the specified Overhead Code, the system retrieves and displays all the entities that have selection priorities assigned to them on the Overhead Priorities window.

7. Enter the Percentage value associated with the overhead code and entities to be applied to items component costs. The cost components that the percentages are applied to are specified in the Source and Target Percentage Overhead Component window. When cost rollup is run, all the items specified for rollup belonging to the specified overhead selection entities will have the specified overhead percentage value applied to the costs. You can enter both positive and negative Percentage burden values. The limit for negative Percentage burden value is -100. For example, if you enter 4% overhead value for the overhead code SHR, with Organization ORG1 and Inventory Organization WH1. When the cost rollup process is run, all the items belonging to the ORG1 organization and the WH1 inventory organization will have 4% overhead cost added to their costs.

## Defining Source and Target Variable Overhead Components Associations

The overhead percentage is applied to each of the defined source component class costs and analysis codes. The result is stored in the target component class and analysis code.

In the source component class field, you can select component classes with the usage types of material. In the target component class field, you can only select component classes with the usage type of Overhead Detail.

The source cost component class, analysis code, and overhead code must be a unique combination. You can map this unique component class and analysis code combination to any target cost component class and analysis code. This flexibility lets the same source cost component class and analysis code to be mapped to different target cost

component class and analysis code for different overhead codes. Similarly, different source cost component class and analysis code can be mapped to the same target cost component class and analysis code for different overhead codes.

When the cost rollup process is run, the system looks for any percentage overhead record defined for any of the ingredient items. If a overhead percentage is defined, then the system applies the overhead percentage to the cost of the source cost component class, and analysis code combination of the ingredient item and then posts the amount under the target cost component class and analysis code.

### To define source and target variable overhead components:

1. Navigate to the **Source and Target Variable Overhead Components** window.

#### **Overhead Source**

2. Enter the **Component Class** code that identifies the cost component to be applied to the percentage overhead. In the source component class field, select component classes with the usage types Material, Resource, Overhead, Expense Allocation, or Standard Cost Adjustment. Required
3. Enter the code that identifies the cost **Analysis Code** to be applied to the percentage overhead.
4. Enter or select a **Overhead** code to be used where percentage will be applied to the specified cost component.

#### **Overhead Target**

5. Enter the code that identifies the cost component to store the result of the percentage overhead as it is applied to the source cost component in **Component Class**. In the target component class field, you can only select component classes with the usage type Overhead Detail. Required
6. Enter the code that identifies the cost **Analysis Code** to store the result of the percentage overhead as it is applied to the source analysis code.

## Defining Cost Factors

You can set up the cost factors using the Cost Factors window.

**Note:** Refer to the Cost Factors Setup in Oracle Purchasing User's Guide for details.

## To define cost factors:

1. Navigate to the **Cost Factors** page. The Cost Factors page appears displaying all of the cost factors.
2. Click **Create**. The **Create Cost Factor** page appears.
3. Enter the code for the cost factor in the **Code** field. This code will appear in the **Charge Type** list of values in the Shipments Workbench.
4. Select **Active** for the Status.
5. Enter a name for the cost factor in the **Cost Factor Name** field.
6. Select the basis for pricing using the **Pricing Basis** field. Per-Unit appears by default for the pricing basis.
7. Enter the description for the cost factor in the **Description** field.
8. In the **Cost Management** region,
  1. Select the **Allocation Basis** for the cost factor. Options are: Quantity, Value, Volume, and Weight.
  2. Select the **Cost Component Class** and **Cost Analysis Code**.
  3. Select the **Acquisition Cost Indicator** as **Expense** to not apply the cost factor in cost calculations or **Inventory** to apply the cost factor in cost calculations.
9. Click **Apply**.

## Defining Resource Costs

Define your resources with appropriate units of measure, component classes, and cost analysis codes. To reflect resource costs incurred during production in the product cost, set up routings and define the amount or number of resources used. Outside production, set up overheads to reflect the amount of resources other than the production or ingredients used in the product; you can then include overhead costs in the cost of producing the product.

In either case, you must first define nominal usage costs associated with the resources. You define resource costs for a legal entity and calendar and period basis. The cost component class assigned to the resource, and the currency associated with the organization, are displayed on this window. Prior to defining resource costs, define the resource code identifying the resource.

Resource cost is calculated based on the routing, operation, and overhead definition

setup.

## Prerequisites

Define Resources

### To define resource cost:

1. Navigate to the **Resource Cost** window.
2. Enter the **Legal Entity** for which you are defining the resource cost.
3. Enter the code for the **Organization** for which this resource cost is effective. You can leave the organization field blank, to set up the resource cost for the Legal Entity, or enter the organization to setup for each organization. The resource cost setup at the organization level takes precedence over the cost setup at the legal entity level.
4. Enter the code identifying the **Resource** for which you are defining costs.
5. Enter the cost **Calendar** for which this resource cost will be effective.
6. Enter the cost calendar **Period** for which this resource cost will be effective.
7. If you are displaying costs for a formula item, ingredient, or product, then the **Component Class** displays the component class associated with the cost shown on this line. This field is display only.
8. **Base Currency** displays the legal entity's base currency. This field is display only

### Cost Details

9. Enter for which cost type this resource cost is defined in the **Cost Type** field.
10. **Description** displays the description of the cost type.
11. Enter the **Nominal Cost** for this resource for using it for one unit of measure. For example, if you are defining the resource cost for a mixing machine, and its usage is measured in hours, then enter the cost of using the resource in per unit.
12. Enter the unit of measure in which usage of this resource is measured in **UOM**. The default value is the unit of measure initially defined for this resource. You can edit the value within the same unit of measure class. You define the unit of measure for the resource on the Resources window.
13. **Status** is not used currently.

## Selecting Resource Cost

The Resource Cost Selection lets you select the criteria for populating the Resource Cost List window.

### To select a resource cost

1. Navigate to the **Resource Costs** window.
2. Select **Resource Cost List** from the **Actions** menu.
3. Enter all or part of a valid cost **Calendar** code for which the resource cost will be effective.
4. Enter all or part of a valid cost calendar **Period** code.
5. Enter each **Cost Type** for this resource, along with the appropriate unit cost.

### Selection Range

6. Enter the code for the **From Organization** for which this resource cost will be effective.
7. Enter the code for the **To Organization** for which this resource cost will be effective.
8. Enter the code identifying the **From Resource** for which you are defining costs.
9. Enter the code identifying the **To Resource** for which you are defining costs.

### Viewing Resource Cost List

The Resource Cost List produces a list of all resource costs, by organization. This can aid you in determining if one or more resource costs must be modified.

#### To obtain a list of resource cost:

1. Navigate to the **Resource Costs** window.
2. Select **Resource Cost List** from the **Actions** menu.
3. **Organization** displays the selected organization code.
4. **Resource** displays the selected resource.
5. **Description** displays the description of the resource.
6. **Cost** displays the cost of the resource.
7. **Unit Of Measure** display the initial unit of measure for the resource.

## Defining Fixed Overheads

Use the Fixed Overheads window to set up and maintain overheads. An overhead is a cost associated with a resource other than the resource usage assigned in the routing.

Assume you need a laborer to clean MIXER1 after each use. To account for the cost of cleanup, instead of adding another component cost to each item that uses MIXER1, you can assign an overhead to the items being produced by that laborer on MIXER1. The overhead assignment would be the time it takes the laborer to clean MIXER1 multiplied by the cost per hour for the laborer. In addition, you can add other costs into the overhead (for such things as cleaning agents).

To reflect overheads in the cost of a product or an ingredient, first create the overhead using this window. In order to assign overheads to resources, you must first set up a resource to be used as the overhead. As in the example above, this would be the MIXER1 resource. You must then define a cost for that resource. Then, when assigning overheads, you will assign the amount of that resource needed to perform the overhead. As in the example above, you may need to use .25 hours of MIXER1 for cleanup.

The following fields are required on the Fixed Overhead window and must be set up prior to defining overheads. The application where each field is set up is shown in parentheses:

- Item (Oracle Inventory)
- Inventory Organization (Oracle Inventory)
- Calendar/Period
- Cost Type
- Resource (OPM Process Planning)
- Cost Component Class
- Cost Analysis Code

**Note:** You cannot add new cost overhead information for a period that is closed.

### To define fixed overheads:

1. Navigate to the **Fixed Overheads** window.
2. Enter the **Item** code for the product or intermediate to which this overhead is

assigned. For example, if the product Blue Paint uses MIXER1 as a resource, and you assign a overhead for cleanup of MIXER1 to the process for making Blue Paint, then enter the item code for blue paint.

3. Enter a valid **Calendar** code. The overhead only applies to this item when associated with this calendar.
4. Enter a valid **Period** code within this calendar. The overhead will only apply to this item when associated with this calendar/period.

**Note:** Overhead details in a closed period can only be viewed and cannot be edited.

5. The **Cost Type** for the specified calendar displays.
6. **Base Currency Code** displays the base currency of the legal entity. This field is for display only.

#### **Overhead Details**

7. Enter the code for the **Resource** overhead. For example, if the product Blue Paint uses MIXER1 as a resource, and you assign a overhead for cleanup after each use of MIXER1, then enter the code for MIXER1.
8. Enter **Component Class Code** you defined as overhead usage for this resource.
9. Enter the **Analysis Code** under which this overhead appears in cost details.
10. Enter the number of this resource used in the production of the item in **Resource Count**. For example, if it takes one laborer to cleanup MIXER1 after each use, then enter 1 (laborer). This number is multiplied by the Resource Usage to calculate the total resource usage.
11. Enter the amount of the resource used for this overhead in **Resource Usage**. For example, if it takes one laborer .25 hours to cleanup MIXER1 after each use, then enter .25.
12. Enter the unit of measure in which this resource is yielded in **Resource UOM**.
13. Enter the amount of the item yielded in this production process (the item entered in the Item field) during that .25 hours of resource usage in **Item Quantity**.
14. Enter the unit of measure in which this overhead is measured (for example, pounds) in **Item Unit of Measure**.



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## Using Standard Costing

This topic describes how to define and use standard costs for production items. These costs include raw materials, overheads, and other costs associated with production. Once defined, you can propagate those costs for use by other organizations within your legal entity and determine the appropriate costs to use for accounting.

Individual ingredient and resource costs must be rolled-up to reflect the total standard cost of the item that is produced. This procedure is detailed in the Standard Cost Rollup discussion.

This chapter covers the following topics:

- Requirements
- Understanding Standard Cost
- Factors Affecting Standard Costs
- Defining Standard Item Costs
- Defining Recipe, Routings, and Formulas
- Defining Resources and Resource Costs
- Defining Rollup Source Organizations
- Running Standard Cost Rollup
- Cost Rollup Error Messages
- Viewing Standard Costs
- Viewing Overhead Details
- Viewing Routing Costs
- Viewing Formula Costs
- Viewing Item Costs
- Item Cost List Window

## Requirements

### Can I maintain cost formulas and routings?

Yes. You can create cost formulas and routings. These are by the Cost Rollup process to calculate costs. Create a cost formula and routing by copying the production formula and routing and giving it a different name or version.

#### **Maintaining Cost Formulas and Routings**

During production, you can adjust ingredients, products, or byproducts in the formulas or adjust the routing parameters. These adjustments are made to reflect the production changes in the plant. You can retain the product costs based on the standard proportions in the formula and the standard usage data in the routing that were determined at the beginning of the month or the year.

You can create the cost formulas and routings. Create a cost formula by copying the production formula and giving it a different name or version. If you use routings, then create a copy of the routing that is used for production. Create a recipe and associate the new formula version and routing version to that recipe. Lastly, create a validity rule as the Costing Use validity rule.

After the cost is calculated and finalized, freeze the cost along with the associated formula and routing to maintain a complete audit trail. If only one formula and routing are used, then the formula cannot be modified for production. Only cost formulas and routings are frozen, if they were used. You can adjust the production formulas and routings. The Cost Rollup process considers the Costing Use recipe first over the production recipes. You do not need to set up a costing recipe in addition to the production recipe for all products.

If required, set up only one Costing Use recipe for a product or for a set of products. Set the GMF: Use Only Costing Validity Rules for Cost Rollup profile value to Yes, so that the Cost Rollup process considers only the costing use recipes.

### Is the Standard Quantity on the Recipe Validity Rules window used in the Cost Rollup process?

Yes. The Cost Rollup process uses the Standard Quantity specified on the Recipe Validity Rules Details window to determine ingredient and product proportions for cost calculation.

#### **Using the Standard Quantity on the Recipe Validity Rules window in the Cost Rollup process**

The Cost Rollup process uses the Standard Quantity specified on the Recipe Validity Rules window to determine ingredient and product proportions for cost calculation.

If the formula product quantity does not match the standard quantity for a product, then the formula is scaled to the standard quantity and then the rollup calculations are

performed. The standard quantity represents the standard or the unit size of the product used for cost calculations. Therefore, set up the standard quantity correctly; it cannot be zero. If the standard quantity is zero, then scaling is not performed and the Cost Rollup process displays errors.

## **Can I specify multiple validity rules for a product? Which validity rule does the Cost Rollup process choose?**

Yes. You can specify multiple validity rules for a product. The Cost Rollup process selects the most appropriate validity rule as described in the subsequent paragraphs.

### **Multiple Validity Rules**

The Cost Rollup process selects the most appropriate validity rule using the following criteria:

- Costing Use and Production Use recipes are selected.
- Validity rules status is either Approved for General Use or Frozen. If the Lab Cost Method is used, then the Lab Recipes and validity rules are also selected.
- The validity rule start and end dates must include the entire costing period.

The validity rules are further analyzed for an item as follows:

- If the Cost Rollup is run for a Lab Cost Method, then the validity rule with the Lab Use status is selected over other statuses.
- Costing validity rules are selected over production validity rules
- Any organization-specific validity rules are considered. If such validity rules do not exist, then the global validity rules (with Organization field blank) are selected.
- A validity rule with a lower preference number is selected over a validity rule with a higher preference number, that is, the lower the preference number the better it is.

If all of the above criteria match, then the most recently created validity rule is selected.

## **Are resource scale types considered in resource cost calculations?**

Yes. In Standard Cost Rollup, the resource costs are calculated from the Routing, Step, and Operations. The resource cost calculation depends on the resource scale type set up at each operation level.

### **Resource Cost Calculations**

In Standard Cost Rollup, the resource costs are calculated from the Routing, Step, and Operations. The resource cost calculation depends on the resource scale type set up at each operation level.

The resource scale types are:

- Linear
- Fixed
- Fixed by charge

The resource cost calculations for the three scale types are as follows:

#### **Linear Scaling**

Resource Unit Cost = (1 / Standard Qty) \* [(Total Output Qty / Routing Qty) \* (Step Quantity / Process Quantity)] \* Resource Count \* Resource Usage \* Resource Nominal Cost \* Activity Factor

#### **Fixed Quantity**

Resource Unit Cost = (1/Standard Qty) \* [1] \* Resource Count \* Resource Usage \* Resource Nominal Cost \* Activity Factor

#### **Fixed By Charge**

Resource Unit Cost = (1/Standard Qty) \* [Number of Charges] \* Resource Count \* Resource Usage \* Resource Nominal Cost \* Activity Factor

### **Does cost rollup consider overrides at the validity rule level?**

The Cost Rollup process considers all the overrides at the validity rule level in the cost calculations.

#### **Overrides of various parameters at the validity rule level**

The Cost Rollup process considers all the overrides at the validity rule level in the cost calculations. The process loss and step quantities can be overridden at the validity rule level. These are preferred over the values set up in the routing and operations.

### **Does standard cost handle byproducts in Cost Rollup?**

Yes. The byproduct costs are either added or subtracted from the total ingredient and resource cost to calculate the final cost of products.

#### **Handling byproducts in Cost Rollup**

The byproduct costs are either added or subtracted from the total ingredient and resource cost to calculate the final cost of products. If a byproduct is sold, then set a cost for the byproduct, so that it reduces the total cost of the product. If you spend money to dispose off the byproduct, then enter a negative cost for it and it increases the product proportionately to reflect this affect.

### **Why Expense Allocation Variance (ALV) accounting entries are created, if the product uses standard cost?**

Expense Allocation Variance (ALV) entries get created during batch closure, if the

product uses standard cost and if one of the Cost component class of the product/ingredient costs is GL Expense Allocation.

The OPM Financials application currently does not allow the setup of GL Expense Allocations for Standard Costing. The only possibility by which it can be present as the cost component is through Copy Cost Function. If you copy the Actual Cost with GL Expense Component Class to Standard Cost Method, this cost component is visible at This Level Cost. Once expense component class is present in the cost of an item (in a batch) then batch close event can generate ALV variance, if there is a difference in the actual quantity on the batch compared to planned quantity of the costing formula. ALV is computed by multiplying GL Expense Component Cost with the difference between actual quantity on the batch and the planned quantity on the formula (after scaling).

## Understanding Standard Cost

The standard cost of a product depends on the combination of:

- Ingredients that are defined in formulas
- Resources that are defined in routings
- Overheads from facilities where the product is produced

Any applicable overrides that are identified at the recipe level for the formula and routing combination.

Standard costs are predefined costs that are set up for ingredients and resources and are calculated for products based on formulas, routings, and overheads. Define the cost of ingredients in a specific organization for a cost period. This cost information remains static during a cost period.

## Factors Affecting Standard Costs

The factors affecting standard cost of product are:

### Recipes

Recipes contain the minimum set of information that uniquely defines the manufacturing requirements for a specific product. Recipes provide a way to describe products and how those products are produced. A recipe entity standardizes the structure of all information that defines the production of one or more products.

Recipes have:

- Formulas that define the composition of materials (products, ingredients, and byproducts).
- Routings that reflect the production processes (labor and equipment operations)

with activities and their associated resources). Routings are optional.

- Process Instructions that indicate additional information for production.

To provide flexibility, formulas and routings are built independently. They are linked using a recipe that has validity rules. Multiple formulas can use the same routing. One formula can be associated to several different routings.

### **Validity Rules**

Validity rules specify the circumstances under which the recipe can be used. One or more validity rules can be associated with each recipe. A validity rule determines when, where, and under what circumstances a recipe can be used to create a batch, to plan with, or base standard costs upon. Validity rules also determine which plant (inventory organization) the recipe is valid for. Thus, recipe validity rules let you specify under which condition and for what purpose (production, planning, costing, regulatory, or technical) a particular recipe can be used in order to maximize raw materials and leverage their inherent variability.

Validity rules provide a combination of material quantities and a range of effective dates used by production and planning in one or more specified organizations.

The Validity Rule hierarchy lets the application to use most recently created rule instead of the most recently updated rule.

In the OPM Product Development application, recipe validity rules are entered with the appropriate recipe use data. A Validity Rule indicates the type of a Recipe (used for Production or Costing or Planning), the effective start and end dates between which a particular Recipe can be used, the Min and Max quantities of production that can be done using the Recipe, a preference to indicate which Recipe is preferred among multiple valid Recipes and a status. The Cost Rollup process considers recipes that are set up for costing and production. Recipes, validity rules, formulas, routings, and operations all have a new status attribute. The Cost Rollup process selects statuses that fall within the following categories: Approved for Lab Use (only for Lab Cost Rollups that are run for a Lab Cost Type), Approved for General Use, and Frozen. The Cost Rollup process determines whether to use a lab recipe based on the specified cost type for which the cost rollup is run. This process takes precedence over the other recipes during a Lab Cost Rollup. Refer to the *Oracle Process Manufacturing Product Development User's Guide* for details on formulas and recipes. Refer to the "Defining Cost Types" topic.

### **Using Lab Recipes for Simulations**

The Usage type for a cost type lets you indicate if the cost type is identified for the lab use. The default value is general use which when selected considers only the production and costing recipes. If the usage field is set to Lab use, then the Cost Rollup process uses the lab recipes along with the product or costing recipes and lab use takes precedence over other recipes.

To create a new recipe, you can specify product code and quantity, or formula number and version. You can also specify a routing in the recipe. You can override routing

attributes such as Capacity, Activity Factor, Charges, and Resource Usage for each recipe you define. If a recipe is set up for Automatic Step Quantity Calculation, then ensure that the formula material is properly associated to each appropriate routing step.

## Formulas and Routings

Formulas are lists of ingredients and products with their associated quantities. Production batches are based on formulas defined in Product Development. Formulas are also used for planning, managing costs, and regulatory compliance.

Routings are defined in terms of operations. You enter and maintain the sequence of operations and step quantities used in a routing. You define multiple versions for a routing that makes the same product to accommodate for several production lines with differing characteristics. Since routings and operations are modeled into the structure of a new recipe, several attributes are defined at the recipe level, including planned process loss, step quantity, capacity, and activity factor.

Since a single product can be associated with several routings on the manufacturing floor, it can have different costs depending on the specified routing. Product Development tracks the route that the ingredients follow, thereby tracking appropriate costs.

## Material Scaling

You can scale formulas up or down by input or by output:

- If the formula input ingredients are scaled, a specific scaling factor is applied to all scalable ingredients. A calculated output scale factor is applied to all scalable outputs
- If the formula outputs are scaled, a factor is applied to all scalable outputs. A calculated input scale factor is applied to all scalable ingredients.

In order for this approach to be successful, you need to specify whether the quantities of each item in the formula are fixed or scalable. Proportional scaling is the least complex scaling type since the given and calculated factors are applied appropriately to the scalable item inputs or outputs. In order to scale formulas properly, specify whether the ingredients need to be increased using fixed or proportional scaling.

The following lists the types of formula scaling available in Product Development:

- Type 0 is Fixed scaling.
- Type 1 is Proportional scaling.
- Type 2 is Integer scaling.

The following lists the Contribute to Yield types available in Product Development:

- Yes indicates that an ingredient contributes to yield.
- No indicates that an ingredient does not contribute to yield.

## Process Loss

The Cost Rollup process considers the process losses defined. A process loss is a percentage established at the recipe level to indicate any loss of materials that occur during the various stages of routing. The Cost Rollup takes the process loss value defined at the Plant/Lab level and the validity rules level. The values for the process loss, if defined at the validity rule level will take precedence. Cost Rollup does not take into account the value defined at the Recipe Header level. The loss percentage is used to calculate the actual ingredient consumptions, and thus affects the material and resource unit costs rolled up to the product. Refer to the *Oracle Process Manufacturing Product Development User's Guide* for more details on process loss overrides.

All linearly scaled ingredients are increased by:

Ingredient Quantity / [1 - (Process Loss / 100)]

## Activity Factors and Charges

The activity factor indicates the number of times an activity is performed. The factors are applied to resource usage when calculating resource costs.

Charges are determined by capacity and relates to the number of times a routing step or an activity needs to be performed. This is specific to a recipe. The OPM Product Development application includes a new resource scaling type, Fixed by Charge. This scaling type determines if the resource cost is fixed by the number of charges. The Cost Rollup process considers the new scaling type and computes the costs accordingly. Refer to the *Oracle Process Manufacturing Product Development User's Guide* for details on the Fixed by Charge scaling type.

The Cost Rollup process uses the fixed quantity scale type in the cost calculations.

- **Fixed Quantity**

The resource cost using the Fixed quantity scaling type is calculated as:

Resource Unit cost = (1/Product Yield Qty) \* [1] x Resource Count \* Resource Usage \* Nominal Cost \* Activity Factor

- **Linear Scaling**

The resource cost using the Linear Scaling type is calculated as:

Resource Unit Cost = (1 / Standard Qty) \* [(Total Output Qty / Routing Qty) \* (Step Quantity / Process Quantity)] \* Resource Count \* Resource Usage \* Resource Nominal Cost \* Activity Factor

- **Fixed By Charge**

The resource cost using the Fixed by Charge scaling type is calculated as:

Resource Unit cost = (1/Product Yield Qty) \* [Number of Charges] \* Resource Count \* Resource Usage \* Nominal Cost x Activity Factor

## Resource Cost Calculation

The OPM Product Development application provides the flexibility to override the operation throughput, process quantity, and resource usage at the recipe level. The Cost Rollup process supports these overrides. The Resource Usage is calculated based on the total output rather than the product itself. Refer to the *Oracle Process Manufacturing Process Execution User's Guide* for more details on the resource usage.

## Validity Rule Overrides

You can now override the planned process loss at the validity rule level. The planned process loss value is taken from the validity rule, if available. Otherwise, it is calculated from the recipe along with the theoretical loss table for the validity rule standard quantity. The Cost Rollup process considers the planned process loss override and uses them cost calculation.

## Support for Item Substitutions

A plant can modify its formulas to achieve certain product specifications such as replacement of its items. These substitutions are based on a prescribed list of alternative item replacements with usage controlled by defined start and end dates.

- The list of items including the substitute items that were used to calculate the product cost display in the Formula Details window from the Item Costs window.
- The profile option, GMF: Use Substitute Items in Standard Costing, lets you specify whether the Cost Rollup process must use the original formula item or the most appropriate substitution item based on the costing period start date or end date.
- The Cost Rollup process considers the substitute item for the product cost calculation based on the specified effective date using the profile option.

This profile option lets you specify whether to use the original formula item or the substitute item in the product cost calculations. This profile option has the following values:

- No  
Uses the original item for cost calculations. This is the default value.
- Yes, use period start date as effective date

Uses the substitute item. The most appropriate substitute item is determined using the costing period start date as the effective date. The costing period start date must be within the item substitution's effective start and end date as set up in the OPM Product Development application.

- Yes, use period end date as effective date

Uses the substitute item. The most appropriate substitute item is determined using the costing period end date as the effective date. The costing period end date must be within the item substitution's effective start and end date as set up in the OPM Product Development application.

This profile is available at the Site, Responsibility, and Application levels.

When the substitute item option is selected for calculating costs, the Cost Rollup process uses the costing period start date or end date to derive the most appropriate substitute item based on the selected profile value.

The substitute item inherits the scaling attributes of the original item (the replaced item). If the original item is integer scaled, then the scale multiple is converted to the appropriate unit of measure.

The substitute item quantity is calculated by multiplying the original item quantity in the primary unit of measure by the replacement ratio. The replacement ratio is calculated by dividing the replacement quantity by the original item quantity.

Refer to *Oracle Process Manufacturing Product Development User's Guide* for more details on setting up and using item substitutions.

## Defining Standard Item Costs

Use the Item Costs window to define the cost for ingredients or inquire the cost of producing a product or intermediate. The cost is based on the following parameters:

- Item
- Inventory organization
- Cost calendar and period
- Cost type

The derived cost is per unit of the item being costed. For example, if you are costing the product Blue Paint, which has an inventory unit of measure as gallons, the cost entered or calculated is that to produce one gallon of blue paint.

The cost entered or calculated is shown in one unit of item's unit of measure. The total cost to produce the item is shown in the Item Costs window. A breakdown of costs is shown in two tables located in the lower portion of the window. Costs are broken into two levels. All costs carried over from previous levels of production are shown as

Lower Level costs. All costs added at the current level of production are shown as This Level costs. A total cost for each level is shown at the top of each breakdown.

Each cost is associated with the component class assigned to the item, ingredient, or resource used. If more than one item with the same component class and analysis code is used at the same level in the production process, the cost for each of those items is summed and listed under on the same line.

Purchased raw materials are entered only in the This Level. Produced items can have item costs in both levels. The Lower Level summarizes costs from all intermediates regardless of the number of levels.

### **Prerequisites**

The following information is required on the Item Costs window, and must be set up prior to using this window. The application where each field is set up is shown in parentheses if they are set up in other applications:

- Cost Types
- Cost Calendars and Periods
- Inventory Organization(Oracle Inventory)
- Item (Oracle Inventory)
- ComponentClasses
- AnalysisCodes

### **To define item costs:**

1. Navigate to the Item Costs window.
2. Enter the Item for which you are entering or inquiring costs.
3. Enter a valid Calendar code.
4. Enter a valid Period code within this calendar.

**Note:** You can enter costs only for open periods. You can add but you cannot make changes to item costs in a period that has been frozen through a successful final cost update process. Also, you cannot add new costs or update costs in a period that has been closed.

5. Enter a valid Cost Type code. Only standard cost types are available.
6. Indicate whether the costs are Frozen or not. You cannot edit this field.

7. Total Cost displays the item's total cost in the legal entity currency in the item's primary unit of measure.

#### **This Level**

8. This Level Cost displays the sum of this level costs cost component values.
9. Usage Type indicates the classification of the component class associated with the cost for that line. Usage type has one of the following values:

- Material
- Resource
- Overhead
- Expense Allocation
- Std Cost Adjustment

While entering standard costs, only cost component classes of usage type Material or Standard Cost Adjustment can be entered.

First, select the usage type and then only select a cost component to enter the costs.

10. Enter a Component Class Code.
11. Description displays the description of the Component Class Code.
12. Enter an Analysis Code.
13. Enter the cost of each component in Component Cost.
14. Cost Origin displays the origin of the cost data. Indicates if the cost is calculated or derived using one of the following methods:
  - Carried over from the previous period by actual costs
  - Copied using the Copy Cost process
  - Loaded through the Costing APIs
  - Merged lower level costs with this level costs during the Copy Cost process

#### **Lower Level**

The meaning of the fields are the same as that in the This Level but the costs are shown for display only. Lower Level costs cannot be entered directly. Cost Rollup calculates costs for products and the material costs from formulas are shown at the

lower level.

**Note:** Two level display is available for Actual Cost method. Similar to Standard Cost, Actual Item Cost is displayed as This level and Lower Level Costs.

#### **Item Costs Window Menu Features - Actions Menu**

- Overhead Details - The window displays the overhead costs that have been included for the item shown on the Item Costs window.
- Formula Details - Use this window to display the recipe and formula ingredient cost for each item displayed on the Item Costs window.
- Routing Details - Use this window to display the cost of resources used in routings and operations in your formulas. The Cost Rollup process rolls up the cost of the resources used in the operations and routings into the end-product cost, which can then be viewed using this window.
- Item Cost List - Use this window to display item costs for a particular cost calendar, period, and cost type. You can display costs for all, one, or a range of items or item classes for a particular calendar, period, and cost type.
- Actual Transaction View - View transactions in a costing period used to calculate actual costs. You can also view actual cost transactions from the previous period. This option is applicable only to Actual Cost.

## **Defining Recipe, Routings, and Formulas**

You define recipe, routings, and formulas in the OPM Product Development application. Refer to the *Oracle Process Manufacturing Product Development User's Guide* for more details.

## **Defining Resources and Resource Costs**

You define resources in OPM Process Planning. Refer to *Oracle Process Manufacturing Process Planning User's Guide* for more details.

Refer to "Costing Setup" topic for more details on defining resource costs.

## **Defining Rollup Source Organizations**

When calculating costs using Cost Rollup, use the item costs from different organizations to reflect how the ingredients are sourced from the organizations for production. Indicate the cost from each organization to arrive at a final cost to produce

the end product.

For example, if you normally pull a particular item from a single organization, you indicate that 100% of the cost for the item should be costed from that organization. If however, half of the time you draw the items from one organization, and the other half of the time you draw from a different organization, you can indicate to use 50% of the cost defined from each organization. Another example could be that you have an organization within 50 miles of the distributor of one of your raw materials. Due to the proximity of the organization, the shipping costs, the cost of the raw material from that organization would be significantly less than in another organization located 2,000 miles away from the distributor.

**Note:** The cost rollup requires a default rule by organization, calendar, and period. This record shows blank in the Cost Category and Item fields indicating that it is not specific to any item or cost category but rather applies to all items for which a specific sourcing rule is not set up.

### **Applying Burdens for the Ingredient Item to the Item Cost in a Target Organization**

The profile option GMF: Compute Ingredient Cost in Target Organization Based on Sourcing Rules determines creation of ingredient Item Cost Records in target organization if there is no pre-existing Item Cost in target organization based on source rule setup. The costs created in target organizations are used for computation in Product Cost calculation.

If Percentage burdens are defined in source Organization and value for the profile option GMF: Compute Ingredient Cost in Target Organization Based on Sourcing Rules is set to Yes, then the percentage burdens are applied in the target organization. If Percentage burdens are defined in both source and target organizations, then burdens defined in source organization overrides the burdens defined in the target organization as long as the profile value is set to Yes.

Item cost in source organization is used to create Item cost for ingredients in Target Organization. Item Cost in Source organization for this purpose includes burdens, resource cost, overheads and material cost. The byproduct costs are created in Target Organization based on the cost in the Source Organization, provided the byproduct is an ingredient in a downstream or upstream transaction in target organization.

Ingredient Item Cost creation in target organization is dependent on profile value being set to Yes, Item assignment to target organization, Recipe Validity Rule for the target organization, and existing Item Cost in target organization. When item transferred is not ingredient based on any Recipe or Formula applicable in target organization, the Item cost is not created based on source rule. Ingredient added at Batch Level shall not be sued for creation of cost using Sourcing Rule. Ingredient Item Cost are created based on Primary UOM of Item in target organization.

### **To define rollup source organization:**

1. Navigate to the Rollup Source Organizations window.
2. Displays the Legal Entity for which you are defining the resource cost.
3. Displays the Organization for which you are defining source inventory organization cost allocations.
4. Enter the cost Calendar for which you are defining source inventory organization cost allocations.
5. Enter the Period for which you are defining source organization cost allocations.
6. If you are defining source organization cost allocations for all items assigned to a particular item Cost Category, then enter the cost category. Otherwise, leave it blank and enter the item to define source organization cost allocations by item.
7. If you are defining source organization cost allocations for one Item, then enter the item code. Leave it blank, if you are entering the Cost Category.

Cost categories are associated with items on the Items window in Oracle Inventory.

### **Source Organizations**

8. Enter the code for the Inventory Organization from which you are sourcing raw material costs.
9. The organization Description displays automatically.
10. Enter the Allocation % to be used from this organization. The allocation percentage must add up to 100, otherwise you cannot save the record.

## **Running Standard Cost Rollup**

Describes the Cost Rollup process.

### **Prerequisites**

Set up the following prior to running the cost rollup:

- Recipes
- Formulas
- Operations
- Routings

- Validity rules for costing or production
- Raw material cost
- Resources
- Resource cost
- Overheads
- Percentage overheads
- Lab recipes and validity rules if running a job cost rollup

**To run the standard cost rollup:**

1. Navigate to the Cost Rollup window.
2. Select Start from the Cost Rollup window Actions menu. The Start Cost Rollup window displays. You can begin the rollup for a specified calendar, period, and cost type.

**Selection Criteria**

3. Enter the Legal Entity linked to the calendar. Transactions for all organizations linked to this legal entity are selected and included in the Cost Rollup process.
4. Enter the code for the Calendar for which the cost rollup will be processed. Costs are rolled up for the legal entity and the cost type linked to this calendar. Required.
5. Enter the Period for which costs will be rolled up; this period defines the start and end dates for selecting all validity rules. This period in the cost calendar must be either open or frozen (a closed period cannot be entered). Required.
6. Period Status is the status of the calendar period (either Never Opened, Open, Closed, or Frozen) displays. You cannot edit this field.
7. The cost type linked to the cost calendar displays in Cost Type. Only standard cost types are allowed.
8. Click Single Level, if a single level rollup is to be performed for the item to be entered.
9. Enter a range of Inventory Organization (From and To) to run the cost rollup process. For running the cost rollup for a single inventory organization, enter the same value in the From and To. To run the cost rollup for all inventory organizations, leave the inventory organization From and To blank. For open ended range, if you specify From inventory organization and leave the To blank, then the

cost rollup considers inventory organizations starting from the specified From value and beyond. Similarly, if you specify to inventory organization and leave the From blank, then the cost rollup considers inventory organizations up to the To value.

10. Enter a range of Cost Category From and To by entering the opening and closing ends of the cost category number range respectively. For a single item or item cost category, enter the same value in From and To.
11. You can include component costs for a range of items Item From and To by entering the opening and closing ends of the item number range respectively. For a single item or cost category, enter the same value in From and To.
12. Enter a range of items for which to run the cost rollup in Item List.

### **Start Cost Rollup Fields**

13. Enter the Start Date and time that the cost rollup process must start. Click Now to start the process immediately.

To start the rollup at a particular date, click the Specific Date radio button. Enter the date you want the cost rollup to run.

14. OPM assigns a unique identifier number for each individual cost rollup process in Rollup Reference Number. You cannot edit this entry.

### **Cost Rollup window - Additional Menu Features - Actions Menu**

Start - Displays the Start Cost Rollup window that lets begin the rollup for a specified calendar, period, and cost type.

Process Status - Use this option to review the status of a cost rollup that is in progress. You can also review figures from previous processes, each of which is identified by the reference number. The reference number lookup is available to help you in selecting previous rollups for query.

Abort/Reset - Use this option to abort the cost rollup process that is running currently. For situations where a process was terminated unintentionally, this option also resets the internal controls and settings required to start the rollup process again.

An Aborted Reason field is provided to capture appropriate text.

View Error Messages - Use this option to review any errors generated during a cost rollup processing run. The Cost Rollup Error Messages window is shown. Each generated error is listed on an individual, OPM-generated line. The error itself is explained under the Error Comment heading.

**Note:** The first message line is not an error, but a summary of the parameters or options selected to start the rollup.

## Cost Rollup Error Messages

Describes the Cost Rollup error messages.

1. **Cost Rollup Reference Number** OPM assigns a unique identifier number for each individual cost rollup process. You cannot edit this entry.
2. **Line** displays the line number of the error message.
3. **Error Message** displays the text of the error message.

## Viewing Standard Costs

The Viewing Standard Costs discussion describes how to view standard costs once they have been calculated. You can view standard costs for items, formula ingredients, cost overheads, and routings.

You access all of these view cost options from the Item Costs window. Complete the Item Costs window in order to display cost details. Once the Item Costs window is complete, follow these procedures to display item, ingredient, overhead, or routing costs.

## Viewing Overhead Details

The Fixed Overheads window displays overhead details for an item as calculated by the Cost Rollup process.

The cost displayed shows the contribution that overheads make to the total unit cost. Overhead details are entered on the Fixed Overheads window.

### To view the fixed overhead:

1. Navigate to the Item Costs window.
2. Query and retrieve the cost details of the product.
3. Select Overhead Details from the Actions menu.
4. Item displays the item for which cost overheads are being displayed. The Item is retrieved from the Item Costs window.

### Overhead Details

5. Inventory Organization displays the inventory organization associated with this item, for which costs are displayed.

6. Resource displays the resource for which the overhead is assigned.
7. Component Class Code displays the component class associated with this resource, and used for the overhead cost calculation. Component classes are associated with overheads on the Fixed Overheads window.
8. Analysis Code displays the analysis code associated with this resource and used for the overhead cost calculation. Component classes are associated with overheads on the Fixed Overhead window.
9. Overhead Cost displays the calculated overhead cost. The cost equals the resource cost multiplied by the quantity of the resource used for this overhead, divided by the item quantity and the resource quantity. These figures are entered on the Fixed Overheads window.

For example, if you specified LABOR at \$5.00 per hour as the overhead resource, and the overhead quantity is .25 hours, this field equals .25 multiplied by 5.00, or \$1.25.

## Viewing Routing Costs

For standard cost this window displays the cost of resources used in routings in the production of items or intermediate items. If you use operations and routings in your formulas, the Cost Rollup process rolls up the cost of resources used in operations and routings into the end-product cost.

For each resource, the component class, analysis code, and the component cost from the resource is listed.

### **To view the routing cost:**

1. Navigate to the Item Costs window.
2. Query and retrieve the cost details of the product.
3. Select Routing Costs from the Item Costs window Actions menu.
4. Item displays the item for which routing costs are shown.
5. Quantity displays the process amount for the resource with Quantity UOM as its unit of measure.
6. Routing Number displays the routing code associated with the highlighted routing line for which costs are shown.
7. Routing Version displays the routing version associated with the routing for which costs are shown.

8. Recipe Number displays the recipe code.
9. Recipe Version displays the version associated with the recipe.
10. Resource displays the resource used for this routing.
11. Component Class Code displays the cost component class used to cost this resource. The corresponding component class description displays automatically.
12. Analysis Code displays the analysis code for the component class.
13. Component Cost displays the cost associated with this resource (cost to produce one unit of this product). For example, if this routing is assigned to the production of Blue Paint, and the unit of measure for Blue Paint is gallons, the cost shown is that to produce one gallon of Blue Paint.
14. Resource Usage displays the rate of use for the resource.
15. Resource Count displays the number of resources used.
16. UOM displays the primary Unit of Measure for the item.

## Viewing Formula Costs

Use the Formula Costs window to display the formula ingredient cost for an item. The sum of the ingredient components in a formula should be equal to the product component cost on the Item Costs window.

If more than one ingredient with the same cost component class is used in the production for the item, the cost for each of those items is summarized and shown as one line on the Item Costs window. The Formula Detail window breaks the items down and shows each of them individually.

The item cost component class and analysis code used to cost the item are displayed for each ingredient in the formula. In addition, the component cost associated with each item is also displayed.

### **To view formula costs:**

1. Navigate to the Item Costs window.
2. Query and retrieve the cost details of the product.
3. Select Formula Costs from the Item Costs window Actions menu.
4. Item displays the formula item and for which costs are shown.
5. Formula displays the formula name used to produce this formula item.

6. Formula Version displays the formula version.
7. Recipe displays the recipe name used to rollup the product cost.
8. Recipe Version displays the recipe version.

#### **Formula Details**

9. Ingredient displays the ingredient for which costs are shown.
10. Component Class Code displays the component class associated with this formula, used to calculate the formula ingredient costs.
11. Analysis Code displays the cost analysis code associated with this formula, used to calculate the formula ingredient costs.
12. Component Cost displays the formula item (ingredient) for which the costing details on this line are displayed.  
  
The item cost component class and analysis code used to cost this item are displayed. In addition, the component cost associated with the item is also displayed.
13. UOM displays the primary Unit of Measure for the item.

## **Viewing Item Costs**

Use this window to display item costs for a particular cost calendar, period, and cost type. You can display costs for all, one, or a range of items or cost categories for a particular calendar, period, and cost type.

#### **To display item costs:**

1. Navigate to the Item Costs window.
2. Select Item Cost List from the Actions menu. The Item Cost Selection window displays.
3. Enter the cost Calendar for which you want to display item costs. Required.
4. Enter the cost calendar period for which you want to display item costs in the Period field. Required.
5. Enter the cost type code for which you want to display item costs in the Cost Type field.

### **Selection Range**

6. To display item costs for a range of item cost categories, then enter the first item and last item cost category in the range (alpha-numerically) in Item Cost Category (From, To).
7. To display costs for a range of items, then enter the first item and the last item in the range (alpha-numerically) in Item (From, To).

Select Accept . The Item Cost List window displays.

## **Item Cost List Window**

1. Item displays the item for which costs (on this line) are shown.
2. Unit of Measure displays the unit of measure for which costs are shown. The cost shown is for one unit of this item.
3. Organization displays the organization, in which this item is stored, for which costs are shown.
4. Cost displays the nominal cost for this item, in this inventory organization.
5. Description displays the description of this item.

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## Using Actual Costing

This topic describes how to setup and use actual cost.

This chapter covers the following topics:

- Requirements
- Understanding Actual Costing
- Actual Cost Calculation Methods
- Describing Transactions in Actual Costs
- Calculating PMAC Cost with Circular References
- Setting Up Expense Allocations
- Defining Allocation Codes
- Defining Allocation Basis
- Defining Expenses to Allocate
- Using Material Cost Component Classes
- Defining Adjustment Reason Codes
- Processing Cost Allocations
- Running the Actual Cost Process
- Viewing the Actual Cost Process
- Viewing Actual Cost Error Messages
- Aborting or Resetting the Actual Cost Process
- Viewing Actual Cost Transactions
- Viewing Item Cost List
- Item Cost List Window
- Viewing Overhead Details
- Viewing Routing Costs

- Using Actual Cost Adjustments
- Zero Activity/Quantity Adjustments in Actual Costing

## Requirements

### Can I enter initial costs when using actual cost?

No. Because actual costs are calculated, you cannot enter cost data using the Cost Details window.

#### Entering initial costs when using the Actual Cost Method

Actual costs cannot be entered manually using the Cost Details window. To enter costs for the first period for Actual Costs, use the Item Cost API to load the costs. Source the first period costs from an external application or legacy systems.

### How can inventory be easily reconciled under actual costs?

There are a few recommendations for easier inventory reconciliation in Actual Costing is provided in the subsequent paragraphs.

Recommendations for easier inventory reconciliation under Actual Costs If the Period Moving Average (PMAC) method is used for Actual Costs, then set the Purchase Price Variance to Book Inventory at PO Price on the Event Fiscal Policy window. PPV is not recorded and the Cost Revaluation is not needed. For the batch accounting entries, map the CLS account to inventory, so that finished goods inventory balance in subledger is in synchrony with the inventory valuation.

If the Period Weighted Average (PWAC) method is used for Actual Costs, then set the Purchase Price Variance to Book Inventory at Item Cost on the Event Fiscal Policy window. PPV is recorded against each receipt but the net affect is zero at the end of the period because of averaging. Run the Cost Revaluation process to accurately reconcile the inventory at the end of the period.

### Does actual cost support invoice override of receipts?

Yes. Actual cost uses the invoice price, if available, and the invoice price is preferred over the PO price in cost calculations.

#### Invoice override of receipts

Actual cost uses the invoice price, if available, and the invoice price is preferred over the PO price in cost calculations. For the matching to work correctly, it is recommended that you match the invoice to a receipt (three-way match) instead of to a PO (2-way matching). If the invoice is matched to a PO, then the invoice price overrides all the receipts for the PO line, though the invoice is for one receipt only. Set the GMF: Exclude Invoices which have no Receipts to Yes, so that only those invoices that have a matching receipt in the current costing period are considered in the cost calculation. The invoices

recorded in the current period against receipts in earlier periods are ignored and any difference in price is resolved using the Invoice Price Variance (IPV).

### **What is the criteria for a batch inclusion in actual cost calculations?**

The Actual Cost Processor not only considers batches in Pending status but also considers batches with other statuses like WIP, Completed, and Closed for actual costing.

## **Understanding Actual Costing**

OPM captures the actual costs from business transactions. Costs of raw materials are captured based on the raw material purchase order receipts and or invoices. Costs of products are captured based on the actual quantities of the raw materials consumed and the resource usage or conversion cost recorded in the production batch. A transaction history is maintained for reference.

## **Actual Cost Calculation Methods**

Following are actual cost calculation methods:

### **Period Weighted Average Cost (PWAC)**

This is the strict average cost of the raw material during the period, based on the total estimated receipt (or invoiced) price for the entire inventory quantity. The period weighted average cost is a strict average cost for the period based on Period Total Quantity and Estimated or Final Prices.

PWAC is calculated by dividing -- the sum of the transaction quantity multiplied by price -- by the sum of transaction quantity, as shown in the following illustration:

$$PWAC = \frac{(\text{Sum of Trans Qty} * \text{Price})}{(\text{Sum of Trans Qty})}$$

Where:

Trans Qty - Receipt Quantities or AP interfaced quantities within the costing period

Price - Receipt estimated prices or AP invoice final prices within the costing period

### **Period Moving Average Cost (PMAC)**

OPM calculates the average cost for the period while moving previous period's cost with last period's inventory balance and cost:

PMAC is calculated by dividing the result of -- the quantity of the prior period

inventory balance multiplied by the prior period cost, plus the sum of the transaction quantity multiplied by price -- by the prior period inventory balance plus the sum of transaction quantity, as shown in the following illustration.

Where:

Prior Period Inv Balance - This is the prior period inventory balance captured from the inventory period ending balances.

Prior Period Cost - The prior period actual cost component from the cost component details table.

Trans Qty - Receipt Transaction Quantities or AP Interfaced Quantities within the costing period.

Price - Receipt estimated prices or AP invoice final prices within the costing period.

$$PMAC = \frac{( \text{Prior Period Inv Balance} * \text{Prev Period Cost} ) + ( \text{Trans Qty} * \text{Price} )}{\text{Prior Period Inv Balance} + \text{Sum of ( Trans Qty )}}$$

## Perpetual Weighted Average Cost (PPAC)

The perpetual weighted average cost type computes the average cost for the entered receipts and quantities within the defined boundaries of the cost calendar. The calendar definition may in turn be identical to a fiscal year, or may span multiple fiscal years providing the flexibility of a variety of Perpetual Weighted Average cost methods.

PPAC is calculated by dividing -- the sum of the transaction quantity multiplied by price -- by the sum of transaction quantity, as shown in the following illustration:

$$PPAC = \frac{( \text{Sum of Trans Qty} * \text{Price} )}{( \text{Sum of Trans Qty} )}$$

Where:

Trans Qty - Receipt Quantities or AP interfaced quantities from the start of the costing calendar to the end of the current period.

Price - Receipt estimated prices or AP invoice final prices within the costing calendar.

## Last Transaction Cost

There are two methods for determining last actual cost of a raw material:

- LSTT - This method uses the last transaction within the costing period, regardless of whether the transaction is a receipt or an Accounts Payable invoice.
- LSTI - This method uses the last Accounts Payable Invoice transaction within the

costing period, even if there are latest receipts with estimated prices. In the absence of AP invoice transactions the latest receipt will be considered for the actual cost.

Last transaction cost adjustments will supersede any other transaction for the actual cost. For both methods, the adjustment unit cost is the actual cost.

**Last Transaction (LSST)** - OPM uses the last transaction in the costing period as the basis for the raw material cost (if there is no Accounts Payable invoiced cost for the period, the last receipt price is used to cost the raw material).

**Last Invoice Transaction (LSTI)** - OPM uses the last Accounts Payable invoice transaction in the costing period as the basis for the raw material cost, even if there are raw material receipt transactions that occur later in the period. If there are no Accounts Payable invoiced costs for the period, the last receipt price is then used to cost the raw material. Actual cost adjustments supersede any of the methods used to calculate actual cost - an adjusted cost is the actual cost.

## Describing Transactions in Actual Costs

The actual cost is calculated as either raw material cost or product cost.

### Transactions for Raw Material Cost Calculations

The raw material cost for an item in a organization is based on the following incoming transactions:

- Purchasing receipts including Freight and Special Charges estimated on the PO, returns, and corrections of receipts
- Paid invoices
- Opening inventory balances
- Cost overheads
- Cost adjustments
- General Ledger Expense allocations for indirect overheads
- Inventory transfers including process to discrete organization, interorg transfers and internal orders within and across operating units

A weighted average of all the incoming transactions is taken to arrive at the material component cost. During the actual cost process, overheads, expense allocations, and adjustments are also applied to the item along with the material cost.

## Transactions for Product Cost Calculations

When calculating the product cost, production batches are included as the incoming transaction. All the other incoming transactions are similar to raw material cost calculation.

## Transactions Impacting Raw Material Costs

### Purchasing Receipts and Invoices

The Actual Cost process includes the following purchasing details:

- Selects the receipt and invoice details data from the appropriate Oracle Purchasing and AP Invoice tables.
- The Actual Cost process considers freight and special charges specified as affecting inventory and calculates the item costs appropriately.

### Inventory Transfer

Inventory Transfer is treated similarly as any other transaction in OPM such as Invoice or Receipts and the cost is determined as the cost at the source inventory organization.

OPM Actual cost process supports the following types of transfers:

- Interorg transfers (Quantity at the source organization cost for transfers within an organization, and transfer price is considered for transfers across organizations).
- Internal orders
- Transfer between process to discrete organization

The PMAC raw material cost calculation uses the following formula:

$$C = \frac{[(Q_p * C_p + \text{Sum of } (Q_t * C_t) + \text{Sum of } (Q_x * C_x) + \text{Sum of } (Q_{x2} * C_{x2}) + \text{Sum of } (A_s) + \text{Sum of } (A_g) + \text{Sum of } (A_q))]}{[(Q_p + \text{Sum of } (Q_t) + \text{Sum of } (Q_x) + \text{Sum of } (Q_{x2}) + Q_s)]}$$

Where:

C is the desired cost for the current period using the PMAC cost method

Qx is the quantity received as a result of the transfer in the current period

Cx is the cost of transferred goods. This corresponds to the current period item cost **at the source inventory organization.**

Qx2 corresponds to transfers released in a previous period, but received in the current period.

Cx2 is the cost of transferred goods. This corresponds to the **previous period item** cost at the source inventory organization.

The above formula can also be represented as:

$$C = \frac{[(C_{(1)} * Q_{(1)} + \text{Sum of } (Q_x * C_x) + \text{Sum of } (Q_{x2} * C_{x2}))]}{[(Q_{(1)} + \text{Sum of } (Q_x) + \text{Sum of } (Q_{x2}))]}$$

Where:

C is the cost calculated by the PMAC cost method including transfers

Q(1) is the sum (Qp + Sum of (Qr) + Qa)

C(1) is the cost without the transfers, as calculated in the original formula before the Inventory Transfer was implemented

The following example illustrates how the actual cost program will process transfers and calculate actual cost.

Assume that the following is the previous period cost and previous period inventory ending balances for the item CORN:NY inventory organization

Previous period cost: \$2.05 / LB (pound)

Inventory Balance: 5000 LB (pound)

**BOS Inventory Organization**

Previous period cost: \$2.90 / LB

Inventory Balance: 2000 LB

Additionally, following are the PO Receipts for the current period:

Item	Inventory Organization	Receipt Date	Receipt Quantity	Price
CORN	NY	2/2/2000	500 LB	\$ 1.50
CORN	BOS	2/1/2000	1000 LB	\$ 1.75

The following describes the calculation of the item CORN including:

- PO Receipts
- Inventory transfer of 100 LB of CORN from NY to BOS inventory organization

Cost at NY inventory organization = (5000 LB \* \$2.05 + 500 LB \* \$1.50) / (5000 + 500)

$$11000 / 5500 = \mathbf{\$2.00 /LB}$$

Since the Inventory Transfer originated from the NY inventory organization, there is no impact on the raw material cost calculation of the item CORN at the NY inventory organization. Though the following calculation shows how the inventory transfer affects the cost calculation of the item CORN at the BOS inventory organization:

$$\text{Cost at BOS inventory organization} = (2000 \text{ LB} * \$2.90 + 1000 \text{ LB} * \$1.75 + 100 \text{ LB} * \mathbf{\$2.00}) / (2000 + 1000 + 100)$$

$$7750 / 3100 = \mathbf{\$2.50 /LB}$$

This is the actual cost calculated for the item CORN at the NY and BOS inventory organizations. The Subledger program then uses this cost to book Inventory Transfers.

### **Transfers Between Process and Discrete Organizations**

Inventory can be transferred from one organization to another using a simple Inter-Organization Transfer or using Internal Orders where supporting transfer documents are required. Actual Cost will consider the inventory transfers between process inventory organizations within the same Legal Entity at the source organization cost. For transfers that go across Legal Entities, the transfer price is used. For transfers that originate from a discrete inventory organization to a process inventory organization or vice versa, transfer price is used regardless of whether the transfer is within or across Legal Entities.

In the case of process to discrete or discrete to process transfers, the difference between the sending organization's cost and the transfer price is captured in a new account called Inter-Org Profit account. The profit generated by such transfers is eventually washed out when accounts are consolidated at the enterprise level.

#### **Prerequisites**

You must set up a transfer price for every combination of process and discrete organizations between which such transfers will be done

The profile, CST: Transfer Pricing Option, in Oracle Costing controls whether to use transfer price to cost internal order transfers across operating units and if so, whether to use the transfer price as incoming cost or not. The profile is used only for transfers from Discrete to Discrete Inventory Organizations only.

- No support for lot level costing is provided across such transfers
- No support for elemental/subelemental visibility is provided across the transfer since a transfer price is being used

#### **Types of Transfers**

All types of transfers:

- direct or intransit transfers using the interorganization transfer
- direct or intransit transfers using internal orders

- transfers across operating units, across sets of books

are allowed between process and discrete organizations.

### **Changes to Shipping Networks Window**

The Shipping Networks window, in the Oracle Inventory application, includes a tab Transfer Price. This tab includes two fields, Price List and Interorg Profit Account.

The price list is used to derive the transfer price with the static pricing option by both the OPM cost processor and Oracle Costing PAC cost processor. The perpetual costing processors of Oracle Costing will ignore the transfer price.

The Inter-Organization Transfer form is used to create a transfer between any two organizations. Set up a transfer price between two organizations if the transfer happens between a process and discrete organizations. If the transfer price cannot be derived at the transaction creation time, then the transfer fails.

### **Cost Manager Concurrent Process**

A transfer creates two transactions in material transaction table. One is the shipment and the other is the receipt transaction.

The Cost Manager derives costs for discrete organization owned transactions (the other being the process organization owned transaction).

For intransit transfers, there is an impact on the discrete organization from the process transaction and vice-versa and costing and accounting depend on the FOB point set up for the transfer.

The Cost Manager generates accounting entries for the discrete organization that is impacted by this transfer. For intransit transfer to a discrete average, LIFO (Last In First Out), and FIFO (First In First Out) costing organization with FOB set to Shipping then the Cost Manager re-averages the cost in the target organization on completion of the first shipment transaction.

For example, a transfer originates from a discrete organization, M3, to the process organization, PR1. The FOB point is Receiving. When the transfer is shipped from M3, a row is created in the Material Transactions table for the source organization (M3). The Cost Manager costs these transactions. When the transaction is received in PR1, a second row is created in the transaction table for the target organization (PR1). The transaction is owned by PR1 but an accounting entry is generated for M3 to clear the intransit entry and record an Interorg Receivables entry. The journal entry for M3 is created only when the receipt is completed.

When the inventory is transferred from process organization (PR1) to discrete organization (M3) and the FOB point is Shipping, then a journal entry is created for M3 when the transfer is shipped. An intransit and interorganization payables journal entries are created for M3, target organization. If M3 is an average cost organization, then the cost in M3 is also re-averaged based on the incoming cost.

### **OPM Actual Cost Concurrent Process**

The OPM Actual Cost Process includes all transfers including the ones originating from

a discrete organization.

The cost of the incoming transfer from a discrete organization is considered at the transfer price established between the two organizations.

The following features are supported:

- Transfers both from process and discrete organizations are considered for cost calculations
- Transfers from discrete organization are considered at the transfer price
- Since transfer price is used, transfers within and across operating units are also considered for cost calculations

## Overhead Costs

Actual overhead cost calculations are identical to the standard cost overhead calculation used during the standard cost rollup process. It is important to note that overhead costs may be defined and computed for raw materials or products. Therefore, overhead cost must be computed prior to computing the production costs.

Overhead Unit Cost is calculated by dividing the Item Quantity into the sum of -- Overhead Usage, multiplied by Overhead Quantity, multiplied by Resource Cost, as shown in the following illustration.

$$\text{Overhead Unit Cost} = \frac{\text{Overhead Usage} * \text{Overhead Quantity} * \text{Resource Cost}}{\text{Item Quantity}}$$

## Expense Allocations

You can take an expense amount and allocate it through to multiple raw materials or products on a percentage basis. You can perform any last minute adjustments to allocations prior to Actual Cost calculations.

Ensure that expenses are allocated in the correct period and that batches are completed and closed in the same period.

Another alternative is to enter the account balances into OPM manually using Cost Allocation Maintenance.

## GL Expense Allocation Calculation

The Raw Material and Expense calculations consider the Prior Period Inventory Balance and Allocation component costs when computing averages. This method ensures that there is no mismatch between the Inventory Accounts and Inventory valuation based on unit cost. The current period transaction quantity considered for PMAC Raw Material Expense calculations is the total receipt quantity in that period and not overridden by the consumption quantity, if any.

However, the cost calculation for PMAC has been modified to include the prior period inventory balance and the prior period cost as follows:

- For raw materials, the expense amount is calculated as the sum of expenses to be allocated and the product of prior period inventory balance and prior period cost. This is represented as:

$$\text{GL Expense component cost} = \frac{[(\text{Previous Period Inventory Balance} * \text{Previous Period Expense Component Cost}) + \text{Expense Amount for Current Period}]}{[\text{Previous Period Inventory Balance} + \text{Received Quantity}]}$$

- For products, the quantity is determined as sum of the previous period balance, the total quantity produced and the total quantity received, if any. The expense amount is the sum of expenses to be allocated in the current period and the product of prior period inventory balance and prior period cost. This is represented as:

$$\text{Expense component cost} = \frac{[(\text{Previous Period Inventory Balance} * \text{Previous Period Component Cost}) + \text{Expense Amount for Current Period}]}{[\text{Previous Period Inventory Balance} + \text{Produced Quantity} + \text{Received Quantity (if any)}]}$$

The expense allocations are averaged using prior period inventory balance for items that have no current period transactions, such as receipts or production.

Whenever there is a non-zero expense amount that could not be allocated because the total quantity is zero, a warning is displayed.

## Actual Cost Adjustments

Actual costs are recalculated based on the adjustments that you enter for the specified item, inventory organization, cost calendar, and cost period.

The Actual Cost Adjustment supports three adjustment types:

- Average Cost Adjustment
- Value Adjustment
- Unit Cost Adjustment

The Average Cost Adjustment type lets you enter a quantity and a cost. This adjustment simulates a transaction that happened outside the OPM Actual Cost process. For example, if you use a third party system to record transactions, then use this adjustment type to replicate the event to include in cost calculations. The Actual Cost process considers these transactions similar to a purchase order receipt.

The Average Cost Adjustment is calculated as follows:

$$\text{New Unit Cost} = \frac{(\text{Prior Quantity} * \text{Prior Cost}) + \text{Sum of}(\text{Receipt Quantity} * \text{PO Price}) + \text{Average Cost Adjustments}}{(\text{Prior Quantity} + \text{Sum of Receipt Quantity} + \text{Sum of Average Cost Adjustment Quantity})}$$

The Value Adjustment type lets you enter an adjustment without a quantity with a value to apply to the entire quantity considered for actual cost calculations.

The Value Adjustment is calculated as follows:

$$\text{New Unit Cost} = \frac{(\text{Prior Quantity} * \text{Prior Cost}) + \text{Sum of } (\text{Receipt Quantity} * \text{PO Price}) + \text{Value Adjustments}}{(\text{Prior Quantity} + \text{Sum of Receipt Quantity})}$$

The Unit Cost Adjustment type lets you adjust the actual unit cost of the item with the specified cost. The Actual Cost process calculates the cost of the item per the current logic and then applies this unit cost adjustment to calculate the new adjusted cost. This adjusted cost becomes the new actual cost of the item.

First the New Unit Cost (without the Unit Cost Adjustment) is calculated as follows:

$$\text{New Unit Cost (without Unit Cost Adjustments)} = \frac{(\text{Prior Quantity} * \text{Prior Cost}) + \text{Sum of } (\text{Receipt Quantity} * \text{PO Price}) + \text{Value Adjustments} + \text{Average Cost Adjustments}}{(\text{Prior Quantity} + \text{Sum of Receipt Quantity} + \text{Sum of Average Cost Adjustment Quantity})}$$

The Unit Cost Adjustment is included only after the Actual Cost is calculated based on the existing Adjustment types. Then, the New Unit Cost (with the Unit Cost Adjustment) is calculated as follows:

$$\text{New Item Cost (with Unit Cost Adjustments)} = \text{New Item Cost (without Unit Cost Adjustments)} + \text{Unit Cost Adjustments}$$

## Transactions Impacting Product Costs

### Product Costs

You can let OPM calculate actual costs of products, which is useful if you need to spread actual product costs for the period over more than one cost calendar period. For example, assume you have a steady level of production for ten straight periods in a cost calendar. If production soars in the eleventh period, then production costs for that period soars also.

OPM uses one of the following methods to calculate product cost so that those greater-than-usual product costs for the period are redistributed, and leveled, over a greater period of time:

- 1 - Period Moving Average Cost (PMAC)
- 2 - Period Weighted Average Cost (PWAC)
- 3 - Perpetual Average Cost (PPAC)

**Note:** Raw material calculation and product calculation types can be different. For example, raw materials can be calculated based on Period Weighted Average Cost (PWAC), and products based on Period Moving Average Cost (PMAC).

### **Period Moving Average Cost (PMAC)**

OPM calculates the cost of the product based on closed batches in this period, and also on prior-period inventory balances and period costs.

#### **Example 1:**

When the product is produced, but not received or invoiced in this period, the following calculation takes place:

$$\text{PMAC} = [(\text{PBAL} * \text{PCOST}) + \text{BCOST}] / (\text{PBAL} + \text{BQTY})$$

Where:

PBAL is the closing inventory balance for item at current inventory organization in prior period. This is the same for all cost components for item.

PCOST is the component cost from previous cost period.

BCOST is the sum of component costs of all ingredients in all batches for the specific cost component, in this period.

BQTY is the total quantity produced in all batches in this period. This is the same for all cost components for item.

RCOST is the total receipt cost for this component in this period this amount was used in raw material cost calculation for the item.

RQTY is the quantity used in raw material cost calculations for this item.

#### **Example 2:**

When the product is both produced and received or invoiced in this period, the following is calculated:

$$\text{PMAC} = [(\text{PBAL} * \text{PCOST}) + \text{BCOST} + \text{RCOST}] / (\text{PBAL} + \text{BQTY} + \text{RQTY})$$

### **Period Weighted Average Cost (PWAC)**

Calculates cost of a product based on current-period transactions only. All closed batches in the period are considered.

#### **Example 1:**

When the product is produced, but not received or invoiced in this period, the following is calculated:

$$\text{PWAC} = \text{BCOST} / \text{BQTY}$$

#### **Example 2:**

When the product is both produced and received or invoiced in this period, the following is calculated:

$$PWAC = (BCOST+RCOST)/(BQTY+RQTY)$$

Where:

BCOST is the sum of component costs of all ingredients in all batches for the specific cost component, in this period.

BQTY is the total quantity produced in all batches in this period (this will be same for all cost components for item).

RCOST is the total receipt cost for this component in this period. This amount was used in raw material cost calculation for the item.

RQTY is the quantity used in raw material cost calculations for this item.

### **Period Perpetual Average Cost (PPAC)**

Calculates average cost of a product based on the entire calendar's transactions and batches up to and including the previous period, and the current period.

#### **Example 1:**

When the product is produced, but not received or invoiced in this period, the following is calculated:

$$PPAC = PPAC\_COST + BCOST/PPAC\_QTY + BQTY$$

#### **Example 2:**

When the product is both produced and received or invoiced in this period, the following is calculated:

$$PPAC = PPAC + BCOST + RCOST/PPAC + BQTY + RQTY$$

Where:

PPAC\_COST is the result of the transaction quantity "times" transaction component cost for calendar to prior-period transactions this includes all the calendar to prior period receipt transaction batches and adjustments.

PPAC\_QTY is the sum of transaction quantity for calendar to prior-period transactions.

BCOST is the sum of component costs of all ingredients in all batches for the specific cost component, in this period.

BQTY is the total quantity produced in all batches in this period (this will be same for all cost components for item).

RCOST is the total receipt cost for this component in this period. This amount was used in raw material cost calculation for the item.

RQTY is the the quantity used in raw material cost calculations for this item.

## Production Batch Costs

Actual ingredient usage from Production is captured for closed batches. Ingredient cost is calculated by the actual cost raw material method for your cost method.

Actual resource usage, count, and throughput are captured in the OPM Process Execution application. Resource rate or nominal cost is entered in costing.

Batch unit cost is calculated by dividing -- the sum of ingredient quantity, multiplied by the ingredient actual cost, plus the sum of resource use multiplied resource rate -- by the batch item quantity, as shown in the following illustration:

$$\text{Batch Unit Cost} = \frac{\left( \text{Sum of Ingredient Qty} * \text{Ingredient Actual Cost} + \text{Sum of Resource Use} * \text{Resource Rate} \right)}{\text{Batch Item Quantity}}$$

Period Product Unit Cost is calculated by dividing -- the sum of the period batch quantity multiplied by batch unit cost, plus the sum of allocations multiplied by the sum of adjustments -- by the sum of all period batch quantity, as shown in the following illustration:

$$\text{Period Product Unit cost} = \frac{\left( \text{Sum of Batch Qty} * \text{Batch Unit Cost} + \text{Sum of Allocations} * \text{Sum of Adjustments} \right)}{\text{Sum of All Period Batch Quantity}}$$

## Production Batches

In Process Execution, when a lab batch is created you can specify whether to update inventory by checking the Update Inventory box. If you do not check this box, then the work-in-process inventory organization is set to null. In this case, no inventory transactions are created and the Actual Cost process ignores these batches in cost calculation. As a result, the variances are not calculated.

## Recipe Process Loss

The Actual Cost process considers the process loss when determining the costs. The process loss is defined as the percentage specific to the formula and process routings (Recipe) and is applied to the product yield. The batch transactions include the process loss to determine the actual consumption and output of an item.

## Activity Factors and Charges

The activity factor indicates the number of times an activity is performed. The factors are applied to resource usage when calculating resource costs.

Number of Charges is determined by capacity and relates to the number of times a

routing step, an activity, or a particular resource (the level where charges are maintained depends on the user setup) needs to be performed. This is specific to a recipe. The New Product Development includes a new operation scaling type, Fixed by Charge. This scaling type determines if the resource cost is fixed by the number of charges. The Cost Rollup process considers the new scaling type and computes the costs accordingly. Refer to *Oracle Process Manufacturing Product Development User's Guide* for details on the Fixed by Charge scaling type.

The Actual Cost process considers both activity factors and charges as they are included in the batch transaction details when calculating costs.

### **Reopen a Production Batch**

The Actual Cost process lets you reopen a batch to correct entries. If the batch details were used in calculating the actual cost of a product, then a warning message displays. Run the Actual Cost process again to ensure that the costs are accurate and reflect the changes. If a batch is already posted or has contributed to a frozen actual cost, then it cannot be reopened.

### **Inventory Transfer of Products**

The Actual Cost process supports inventory transfers of products. The costs from the source inventory organization is considered in the cost calculation to arrive at an accurate cost of the item in the destination inventory organization.

- A product in source or destination inventory organization and the transfer is completed within a period.
- A product in a destination inventory organization and transfer is completed across periods.
- A product in a source inventory organization and the transfer is canceled across periods.

The canceled transfers within a period are ignored.

In manufacturing companies, material transfer between legal entity locations is a common practice depending on production or other requirements. A raw Material or product is transferred to a consumption facility to produce a product or to a distribution facility to ship to a customer. For example, oranges are first received into a processing facility, and then transferred to a production facility to produce a final product. This final product, from multiple inventory organizations, is transferred to a distribution facility to ship to customers. To calculate the actual cost, all the costs of the item at the source locations is included in the average cost at the receiving location.

The two common types of product transfers are:

- Transfer of a product from a production inventory organization to a destination inventory organization

- Transfer of a product from multiple production inventory organizations to a distribution inventory organization

To evaluate the cost of an item, the Actual Cost process looks at transfer records, which are either completed or canceled in the current period.

**Product Transfer Example 1: Product transfer from production inventory organization to a distribution inventory organization**

In this example, the cost for the product PROD-A is as follows:

Production Inventory Organization: WHS1

- Cost: \$5.00 per LB  
Inventory Balance: 200 LB

Distribution Inventory Organization: WHS2

- Cost: \$6.00 per LB  
Inventory Balance: 500 LB

Transfer 100 pounds of product PROD-A from the production inventory organization WHS1 to distribution inventory organization WHS2. The inventory transfer originates from WHS1, there is no impact on the cost in that inventory organization. Cost is impacted at WHS2 as shown:

- Cost at WHS2 = (Previous Balance \* Previous Cost) + (Transfer Qty \* Unit Cost at WHS1) / (Previous Balance + Transfer Qty)  
= ((500 \* \$6) + (100 \* \$5)) / (500 + 100) = (3000 + 500)/600 = \$5.8333 per LB

**Product Transfer Example 2: Product transfer from multiple production inventory organizations to a distribution inventory organization**

In this example, the cost for the product PROD-A is as follows:

Production Inventory Organization: WHS1

- Cost: \$5.00 per LB  
Inventory Balance: 200 LB

Production Inventory Organization: WHS2

- Cost: \$6.00 per LB  
Inventory Balance: 200 LB

Distribution Inventory Organization WHS3: No cost exist.

Transfer 100 pounds of product PROD-A from production inventory organizations WHS1 and WHS2 to a distribution inventory organization WHS3. Incoming transfers are averaged to get the cost at the destination inventory organization WHS3 as shown:

- Cost at WHS3 = (Transfer Qty from WHS1 \* Unit Cost at WHS1) + (Transfer Qty from WHS2 \* Unit Cost at WHS2) / (Previous Balance + Transfer Qty)  
 = ((100 \* \$5) + (100 \* \$6)) / (100 + 100) = (500 + 600)/200 = \$5.5 per LB

**Product Transfer Example 3: Raw material transfer in source and product in destination locations**

This example shows the item PROD is produced from the ingredient item RAW-MATL in period 2. The items have following costs in period 1 and 2 as shown in the tables:

Period 1

Item	Inventory Organization	Item Quantity	Item Cost
PROD	WHS1	100 LB	\$10.00 per LB
RAW-MATL	WHS1	100 LB	\$10.00 per LB
n/a	WHS2	100 LB	\$5.00 per LB

Period 2

Transaction for PROD

Transaction	Inventory Organization 1 (WHS1)	Inventory Organization 2 (WHS2)
Receiving	10 LB at \$1.00	n/a
Transfer	100 LB to WHS2	100 LB from WHS1
Production	None	200 LB from 400 LB of RAW-MATL

Item	Inventory Organization Code	Item Cost	Onhand Quantity
PROD	WHS1	\$9.18 per LB	10 LB (received) at the cost of \$1.00  Raw material calculation: $(10*1 + 100*10) / (10+100)$
n/a	WHS2	See next table	200 LB produced from 400 LB of raw material

The subsequent tables describe the affect of transactions on item cost in WHS1 and WHS2. The transfer is completed or canceled in the period 2.

Transfer is released and completed in period 2.

Transfer Status	Release Period	Cost Inventory Organization	Cost (P2)	Comments
Completed	P2	WHS1	\$9.18	No impact of transfer. Cost is from receiving
n/a	P2	WHS2	\$9.73	$(400*5 + 0 + 100*9.18) / (200+100)$  Production + Period 1 Balance + Transfer Cost at WHS1 in Period 2

Transfer is released in period 1 and completed in period 2.

Transfer Status	Release Period	Cost Inventory Organization	Cost (P2)	Comments
Completed	P1	WHS1	\$9.18	No impact of transfer. Cost is from receiving

<b>Transfer Status</b>	<b>Release Period</b>	<b>Cost Inventory Organization</b>	<b>Cost (P2)</b>	<b>Comments</b>
n/a	P2	WHS2	\$10.00	$(400*5 + 0 + 100*10) / (200+100)$  Production + Period 1 Balance + Transfer Cost at WHS1 in Period 1

Transfer is released and canceled in period 2.

<b>Transfer Status</b>	<b>Release Period</b>	<b>Cost Inventory Organization</b>	<b>Cost (P2)</b>	<b>Comments</b>
Canceled	P2	WHS1	\$9.18	If the transfer is canceled in the same period as the release, then the cost is not affected
n/a	P2	WHS2	\$10.00	$(400*5) / 200$  Only production, no impact of transfer

Transfer is released in period 1 and canceled in period 2.

<b>Transfer Status</b>	<b>Release Period</b>	<b>Cost Inventory Organization</b>	<b>Cost (P2)</b>	<b>Comments</b>
Canceled	P1	WHS1	\$9.96	$(100*10 + 100*10 + 10*9.18) / (100+100+10)$  Transfer Cost at WHS1 in Period 1 + Period 1 balance + Period 2 cost

Transfer Status	Release Period	Cost Inventory Organization	Cost (P2)	Comments
n/p	P2	WHS2	\$10.00	(400*5 + 0) / 200  Production + Period 1 balance, no impact of transfer

## Calculating PMAC Cost with Circular References

The actual cost calculates the cost of items in a circular reference repeatedly, until it arrives at a cost that does not change. The cost from the previous iteration is used in the current iteration. The cost is recalculated until the cost in the previous iteration and the current iteration match. To restrict the Actual Cost process from running infinite number of iterations, a maximum limit of 200 is set in the program. You can override this value by changing the profile value for GMF: Actual Costing Maximum Iteration Limit for Circular Reference.

Using the PMAC Method, OPM calculates the cost of the product based on closed batches in this period, and also on prior-period inventory balances, using the following calculation:

$$\text{PMAC ITEM A} = [(\text{PBAL} * \text{PCOST}) + \text{BCOST}] / \text{PBAL} + \text{BQTY}$$

Where:

PBAL is equal to 2948

PCOST is equal to 109.14

BQTY is equal to 1000

PMAC Cost ITEM B is equal to 12.034

$$\text{BCOST} = (\text{PMAC Cost ITEM B} * 1000 + \text{PMAC Cost ITEM A} * 500)$$

$$\text{Iteration 1} = [(2948 * 109.14) + (1000 * 12.034 + 500 * 109.14)] / 2948 + 1000 = 98.40$$

$$\text{Iteration 2} = [(2948 * 109.14) + (1000 * 12.034 + 500 * 98.40)] / 2948 + 1000 = 97.00$$

$$\text{Iteration 3} = [(2948 * 109.14) + (1000 * 12.034 + 500 * 97.00)] / 2948 + 1000 = 96.83$$

$$\text{Iteration 4} = [(2948 * 109.14) + (1000 * 12.034 + 500 * 96.83)] / 2948 + 1000 = 96.81$$

$$\text{Iteration 5} = [(2948 * 109.14) + (1000 * 12.034 + 500 * 96.81)] / 2948 + 1000 = 96.80$$

$$\text{Iteration 6} = [(2948 * 109.14) + (1000 * 12.034 + 500 * 96.80)] / 2948 + 1000 = 96.80$$

Since the PMAC Cost for Item A stabilizes after the 6th iteration at a cost of 96.80, the calculation stops.

## Setting Up Expense Allocations

Accrued indirect costs (such as material overhead) maintained in accrual accounts can be included in actual cost calculations. These accrued costs are captured from General Ledger. Define the parameters to allocate accrued costs automatically to designated cost component classes.

### Expense Allocation Setup Chronology

1. Define Allocation Codes
2. Define Expense Allocation Accounts
3. Define Allocation Definitions

## Defining Allocation Codes

Allocation codes are required to bring in balances from General Ledger expense accounts. You can define parameters to allocate these expenses to appropriate cost component classes.

Since allocations can be processed in multiple steps, we recommend that you adopt a naming convention to simplify processing of ranges of allocation codes.

### To define allocation codes:

1. Navigate to the Allocation Codes window.
2. Specify the Legal Entity for which you are defining expense allocations. Required.

### Allocation Code Details

3. Enter a code that defines the expense allocation in Allocation Code. Required.
4. Enter a brief Description of the expense allocation. Required.

## Defining Allocation Basis

On this window you specify the item, component class, and related information required to identify where the allocation details are generated. The accounts maintain the information (for example, the quantity of production and machine usage) associated with each item. The allocation is setup and are based on GL balances.

When you enter item code and tab out of the field, the cost component class, analysis code, and inventory organization fields default from the previous record.

### **To define allocation definitions:**

1. Navigate to the Allocation Definitions window.
2. Specify the Legal Entity for which you are entering allocation.
3. Specify the allocation code for which you are entering allocation definitions in Allocation Code. The corresponding allocation description displays automatically. Required.
4. Indicate the allocation method to use in Allocation Basis. Select GL Balances if the allocation percentage is to be calculated based on the balance in the basis account. When you use this allocation type, you define the account key, balance type, and period and year-to-date.

Select Fixed % to use a fixed percentage for the calculation. If you use this allocation type, then the Account, Balance Type, and Period and Year-to-Date fields are bypassed; you only enter percentages by item. The allocation basis applies to all lines for the allocation code. Required.

### **Basis - GL Expenses**

5. Line displays the generated number for each line.
6. Enter a valid Organization. Required.
7. Specify the Item to which expenses are allocated. Required.
8. If you specified GL Expenses in the Allocation Basis field, then specify the account from which the basis amount is used to determine the allocation percentage in the Account field. Required.
9. Description displays the description of the basis account.
10. Enter the Balance Type for the basis account type. Required.
  - Statistical
  - Budget
  - Actual
11. Specify the year-to-date or period-to-date indicator in Year-to-date/Period-to-date. Select Period-to-date if this balance amount should be used to calculate the allocation percentage. Select Year-to-date if this balance amount will be used to calculate the allocation percentage. Required.

### **Basis - Other**

This region contains Line, Organization, Item, and Basis Type as described in the previous topic.

12. If the fixed allocation method is used, then enter the allocation for the line in Fixed%. If you specified GL Expenses in the Allocation Basis field, you cannot edit the entry. Percentages are calculated dynamically.

You can enter allocation definition details whose total percentage value does not equal 100%. If your total percentage value is less than or greater than 100, then a warning displays when saving the window. You can either save without making any changes or go back and correct the percentage values.

The Cost Allocation process flags such codes as not equal to 100 percent and ignores these codes during processing. The system displays the total percentage entered until the save. It allows you to selectively enter more records or update existing records.

### **Cost Information**

13. Item Description displays a description of the item.
14. Enter a valid Component Class Code. Only those component classes that were defined as allocation detail are available in the list of values and only one of these can be entered. Required.
15. Enter a valid Analysis Code.

**Note:** After you have defined expense allocations, you must define the accounts to which overhead expenses will post when those expense allocations are used. See the *Define Expense Allocation Accounts* discussion for details.

## **Defining Expenses to Allocate**

This window lets you indicate the accounts where the expenses are tracked in General Ledger. In this window, you define the expense pool to allocate; and on the Allocation Definitions window, you specify the products to which these expenses are allocated.

**Note:** Ensure that the expenses are allocated in the same period that they were incurred in.

When using Actual Costing,

**To define allocation accounts:**

1. Navigate to the Expenses to Allocate window.
2. Specify the Legal Entity. Required.
3. Specify a valid Allocation Code defined for the legal entity for which you are allocating expenses to. The allocation code description displays automatically. Required.

**Expense Pool - Accounts**

4. OPM automatically displays Line numbers in sequence. You cannot edit the entry.
5. Enter the From Account.
6. Enter the To Account.
7. Specify the account's Balance Type used for this expense pool. The available options are:
  - Statistical
  - Budget
  - Actual
8. Specify if the expense should be year-to-date or period-to-date balance in Period to Date/Year To Date. Required.

**Expense Pool - Description**

This region has Line, From and To Account Description, Balance Type besides the Period to Date/Year to Date as described.

9. Specify if the expense should be year-to-date or period-to-date balance in Period to Date/Year To Date. Required.

## Using Material Cost Component Classes

If you want to track the entire batch from the individual raw material to intermediary and end product, then setup a unique component class and analysis code for the raw material and ingredient calculation. Item costs are defined using the component classes and analysis codes. You setup the component class and analysis code while calculating raw material cost for purchases and transfers.

### To associate material component classes and analysis codes:

1. Navigate to the Material Cost Component Class window.
2. Enter the Legal Entity for which you are defining material component classes. Required.
3. Enter a valid Organization. Required.
4. Enter a valid Item Cost Category. If you enter a valid item cost category, then the Item field is not available and your cursor is moved to the Material Component Class field. You can leave the Item Cost Category blank and specify an item instead.
5. Enter a valid Item. If you enter a valid item code, then the cursor moves to the Material Component Class field.

### Material Components

6. Enter a valid Component Class Code. It is treated as a material component class either for an item cost category or an item. You can designate any cost component class as the material component class. Required.
7. Specify a valid cost Analysis Code. It is treated as a material analysis code in combination with the material cost component class either for an item cost category or an item. Required.
8. Indicate the Start Date for the material component class and cost analysis code definition effective from. Required.
9. Indicate the End Date for the material component class and cost analysis code definition until which they are effective to. Required.

**Note:** It is recommended that the costing period start and end dates should be one day later than the General Ledger calendar. For example, the following scenario supports this suggestion:

**Start and End Date** 1/1/96-12/31/97 **General Ledger Calendar**  
4/1/96-4/30/97 **Costing Calendar** 4/1/96-5/01/97

## Defining Adjustment Reason Codes

If there is a need to adjust actual costs calculated by OPM, then use the Actual Costs Adjustments to enter the adjustment costs. You must specify a valid reason code to justify the reason for the cost change.

### **To define adjustment codes:**

1. Navigate to the Actual Cost Adjustment Code window.
2. Specify the Code that explains the reason for adjusting the actual cost calculation for a raw material or a product. Required.
3. Enter a brief Description of the reason (for example, "Supplier Price Increase"). Required.
4. Select the Subledger Entry box to indicate whether to book the adjustment to subledger or not.

## **Processing Cost Allocations**

This procedure allocates accrued expenses from the general ledger accounts to the appropriate costing allocation codes.

This functionality requires Oracle General Ledger to be fully installed. If you are using OPM not integrated with Oracle Financials, and GL is not fully installed, then a warning message displays and the data you enter may not be used.

### **To process cost allocations:**

1. Run the Cost Allocation Process concurrent process by running the Report and selecting the process. The following restrictions pertain to running the Cost Allocation process:
  - You can only run one allocation process at a time
  - You cannot run process for a closed period
  - You can only use calendar belonging to the legal entity for which you have authorization

**Note:** Use the Reset option in the event of abnormal shutdown during a process (that is, for any situation in which the process did not end normally). This option resets internal parameters.

2. Legal Entity linked to this cost calendar (on the Cost Calendar window) displays automatically. You cannot edit the entry.
3. Cost Calendar indicates the cost calendar for which you are allocating expense costs. Required.
4. Period indicates the cost calendar period for which you are allocating expense costs.

Required.

5. Indicate the Cost Type you are running for.
6. The Period Status of the cost calendar period you specified displays automatically. You cannot edit the entry.
7. Fiscal Year indicates the fiscal year (defined in the appropriate General Ledger application) from which cost expenses will be selected for processing.
8. Period indicates the fiscal year period (defined in the appropriate General Ledger application) from which cost expenses will be selected for processing.

**Note:** The GL Fiscal Year and Period must be valid for the cost calendar's legal entity. Otherwise, an error displays.

9. You have the option of exporting cost expenses for all allocation codes, or restricting the export to cost expenses for a range of allocation codes in Allocations From and To.
10. Indicate whether to delete previous data that were processed for the cost expense allocation parameters by selecting Yes or No for Refresh Interface.
11. Click Ok and Submit to run the process.

## Running the Actual Cost Process

Describes running the Actual Cost process. If you have enabled the Landed Cost Management functionality for your organization, then the Actual Cost Process considers the estimated and actual landed cost adjustments in cost calculations and updates the cost adjustments in the Actual Cost Adjustments window.

### Actual Cost Prerequisites

The following prerequisite conditions must be met in order to produce accurate actual cost calculations:

- All Purchasing receipts and invoices must be entered, with any necessary price corrections.
- Freight and special charges must be entered.
- It is recommended that you close all production batches that can be closed.
- Expense allocations must be completed.
- All overhead details must be assigned.

- All actual cost adjustments must be completed.
- For PMAC, the prior period must be closed or preliminary closed.

### **To run the actual cost process:**

1. Navigate to the Actual Cost Process window. The Start Actual Cost Process window displays.
2. Enter the Legal Entity.
3. Enter the Calendar. Costs are processed for the legal entity and the cost type linked to this calendar. Required.
4. Enter the Period for which actual costs are processed. This period defines the start and end dates for selecting all transactions. This period in the cost calendar must be either open or frozen (a closed period cannot be entered). Required.
5. Period Status displays the status of the calendar period (Open, Closed, or Frozen). You cannot edit this field.
6. Specify the actual Cost Type for which all cost calculations are calculated and updated. The default is the cost type linked to the cost calendar. The cost type also defines which raw material cost calculation type or product calculation type is used in cost calculations.
7. Specify the date and time that the actual cost processing should start in Start Date. To start the process immediately, click Now.
8. Click Accept to run the process.  
Note the reference number assigned by OPM.
9. OPM assigns an identifier number for each individual cost process in Actual Cost Reference . You cannot edit the entry.

### **Actual Cost Process - Additional Menu Features - Actions Menu**

- Start - Displays the Start Actual Cost Process window, where you specify the criteria by which OPM will select the costs to be processed.
- Process Status - Use this option to review the status of an actual cost process that is in progress. You can also review figures from previous processes, each of which is identified by the AC Ref No. The AC Ref No lookup is available to help you in selecting previous processes for query.
- Abort/Reset - Use this option to abort the actual cost process that is running currently. For situations where a process was terminated unintentionally (such

as a power failure), this option also resets the internal controls and settings required to start the costing process again.

- View Error Messages - Use this option to review any errors generated during an actual costing process run. The Actual Cost Error Messages window displays.

**Note:** The Actual Cost Process does not calculate costs for expense items. The process calculates costs for inventory items only. If you want the process to include the expense of an item in cost calculations, then you must include the item as an inventory item.

## Viewing the Actual Cost Process

To view the actual cost process:

1. Navigate to the Actual Cost Process window.
2. OPM assigns an identifier number for each individual cost process in the Actual Cost Reference field. You cannot edit this field.

### Selection Criteria

3. Displays the legal entity in the Legal Entity field.
4. Displays the calendar in the Calendar field. Costs are processed for the legal entity and the cost type linked to this calendar.
5. Displays the period for which actual costs are processed in the Period field; this period defines the start and end dates for selecting all transactions.
6. Period Status displays the status of the calendar period (Open, Closed, or Frozen).
7. Displays the actual cost type for which all cost calculations are calculated and updated in the Cost Type field.

### Scheduling Information

8. Scheduled On displays when the Actual Cost process was scheduled to run.
9. Started On displays the start date of the Actual Cost process.
10. Started By displays the user ID and name of the person who started the Actual Cost process.
11. Ended On displays the end date for the Actual Cost process.

### **Errors**

12. Limit displays the error limit.
13. Found displays the number of errors found during the Actual Cost process run.
14. Posted displays the number of errors posted.

### **Abort Information**

15. Aborted By displays the name of the user who aborted the Actual Cost process.
16. Aborted On displays the date on which the process was aborted.
17. Aborted Reason displays the reason for aborting the subsidiary ledger update process.

## **Viewing Actual Cost Error Messages**

To view the actual cost error messages:

1. OPM assigns an identifier number for each individual cost process in Actual Cost Reference. You cannot edit the entry.
2. Line displays the line on which the error occurred.
3. Error Message displays the text of the error message.

## **Aborting or Resetting the Actual Cost Process**

This option lets you abort or reset the Actual Cost process.

1. Navigate to the Actual Cost Process window.
2. Select Abort/Reset from the Actions menu.
3. Enter the abort details and the reason to abort the process.

## **Viewing Actual Cost Transactions**

OPM allows you to view the transactions in a costing period that it used to calculate actual costs; the most recent actual costing transactions display first. You can also view actual cost transactions from the previous period.

Possible sources of these transactions are as follows:

- Purchase Order Receipts

- Actual Raw Material Invoice Prices (through interface with an Accounts Payable application, such as Oracle Accounts Payable)
- Overhead Details
- Expense Allocations
- Production Batches
- Resources
- Actual Cost Adjustments
- PO Internal Orders
- Invoices Entered in Payables
- Transfers

You can also display the Actual Costs Transactions View from the Cost Details and the Cost Adjustments forms Actions menus (with key field values already filled from those forms).

**To view the actual cost calculations:**

1. Navigate to the Cost Details window.
2. Select Actual Transaction View from the Actions menu.
  - You can also access the Actual Cost Transactions View window by selecting View Transactions from the Actual Costs menu.
3. Enter the Item for which you want to display actual cost calculations. Required.
4. Enter the fiscal Calendar for which you want to list actual cost transactions. Required.
5. Specify the calendar Period for which you want to list actual cost transactions. Required.
6. Indicate the actual Cost Type for which you want to list actual cost transactions.
7. Item Cost displays the item's total cost.  
Also, displays the currency in which the cost is calculated and the item's primary unit of measure.
8. Enter Prior Period Cost as the item cost in the period before the current period.

9. Enter Prior Period Closing Balance as the closing on-hand quantity of the item in the period before the current period.

**Actual Cost Transactions**

10. Source indicates the source of the actual cost transactions which OPM uses to calculate actual costs. These sources are listed:

- Batch Material Cost
- Batch Resource Cost
- Overhead Cost
- PO Receipts (OPM)
- GL Expense Allocations
- AP Interface
- Inter-Org Transfers
- PO Receipts

Using Actual Cost Method for a Product Item, the costs from Ingredients are displayed at Lower Level. Actual Item cost based on PO Receipts, Resource Cost on Product, Expense Allocations, Overheads , actual Cost Adjustments are displayed at This Level cost

- Internal Orders
  - Inventory Movements
  - Inter-Company Transfer
  - Inter-Company Internal Order
  - Inter-Org Internal Orders
  - Value Adjustments
  - Unit Cost Adjustments
  - Average Cost Adjustments
  - Actual LC Adjustments
11. Organization is the code for the organization in which the transaction originated.

12. Document Number is the number of the document which originated the transaction.
13. Component Class Code displays the component class for the actual cost calculated for the transaction.
14. Analysis Code displays the cost analysis code for the actual cost calculated for the transaction.
15. Cost displays the actual cost calculated for the transaction.
16. Quantity is the transaction quantity at this source, in the item's unit of measure. For production batches, this is the actual yield quantity. For purchase order receipts, this is the total quantity received.

**Note:** If the costing method is Actual, then you cannot update the flexfields in the Cost Details window.

## Viewing Item Cost List

Use this window to display item costs for a particular cost calendar, period, and cost type. You can display costs a range of items or item classes for a particular calendar, period, and cost type.

### To display the item cost lists:

1. Navigate to the Item Costs window.
2. Select Item Cost List from the Actions menu.
3. Enter the cost Calendar for which you want to display item costs. Required.
4. Enter the cost calendar Period for which you want to display item costs. Required.
5. Enter the Cost Type code for which you want to display item costs.

### Selection Range

6. To display item costs for a range of item cost categories, enter the first item and the last item cost categories in the range (alpha-numerically) in Item Cost Category (From, To).
7. To display costs for a range of items, enter the first item and the last item in the range (alpha-numerically) in Item (From, To).

8. Select Accept to display the Item Cost List window.

### **This Level**

9. This Level Cost displays the sum of this level costs cost component values.
10. Usage Type indicates the classification of the component class associated with the cost for that line. Usage type has one of the following values:

- Material
- Resource
- Overhead
- Expense Allocation
- Std Cost Adjustment

While entering standard costs, only cost component classes of usage type Material or Standard Cost Adjustment can be entered.

First, select the usage type and then only select a cost component to enter the costs.

11. Enter a Component Class Code.
12. Description displays the description of the Component Class Code.
13. Enter an Analysis Code.
14. Enter the cost of each component in Component Cost.
15. Cost Origin displays the origin of the cost data. Indicates if the cost is calculated or derived using one of the following methods:
  - Carried over from the previous period by actual costs
  - Copied using the Copy Cost process
  - Loaded through the Costing APIs
  - Merged lower level costs with this level costs during the Copy Cost process

### **Lower Level**

The meaning of the fields are the same as that in the This Level but the costs are shown for display only. Lower Level costs cannot be entered directly. Cost Rollup calculates costs for products and the material costs from formulas are shown at the lower level.

**Note:** Using Actual Cost Method for a Product Item, the costs from Ingredients are displayed at Lower Level. Actual Item cost based on PO Receipts, Resource Cost on Product, Expense Allocations, Overheads , actual Cost Adjustments are displayed at This Level cost

## Item Cost List Window

1. Item displays the item for which costs (on this line) are shown.
2. Unit of Measure displays the unit of measure for which costs are shown. The cost shown is for one unit of this item.
3. Inventory Organization displays the inventory organization, in which this item is stored, for which costs are shown.
4. Cost displays the nominal cost for this item, in this inventory organization
5. Description displays the description of this item.

## Viewing Overhead Details

The Overhead Details window displays overhead cost details for an item. The window displays the overhead costs set up for the item.

The cost displayed shows the contribution that overheads make to the total unit cost. These figures are entered on the Overhead Detail window.

### **To view overhead costs:**

1. Navigate to the Cost Details window.
2. Retrieve the Cost Details of the product using either the View Find All option or by entering a wildcard value with Query Enter.
3. Select Overhead Details from the Actions menu.
4. Item displays the item for which cost overheads display.
5. Inventory Organization displays the inventory organization associated with this item, for which overhead costs apply.
6. Resource displays the resource assigned as a overhead for the production of this item.

7. Component Class Code displays the component class associated with this resource, and used for the overhead cost calculation. Component classes are associated with overheads on the Overhead Details window.
8. Analysis Code displays the analysis code associated with this resource and used for the overhead cost calculation. Component classes are associated with overheads on the Overhead Details window.
9. Overhead Cost displays the calculated overhead cost. The cost equals the resource cost multiplied by the quantity of the resource used for this overhead, divided by the item quantity. These figures are entered on the Overhead Details window.

For example, if you specified LABOR at \$5.00 per hour as the overhead resource, and the overhead quantity is .25 hours, this field equals .25 multiplied by 5.00, or \$1.75.

## Viewing Routing Costs

For each resource, the component class, analysis code, and the component cost from the resource is listed. For actual cost types, routing details from the closed batches used by the actual cost process are displayed here. The resources are those defined in the routing operations for the routings used in each batch from which actual costs are calculated.

### Prerequisites

To include operation and routing costs in your product costs, routes must be assigned to the product. To do this, you need to set up operations, include the operations in routings, create a formula effectivity record for the product, and include the routing in the formula effectivity record. A batch must have already been run in which the routing resource was used as a component cost.

**Note:** Formula operations, routings, and effectivities are explained in the *OPM Product Development User's Guide*.

### To view the routing costs:

1. Navigate to the Cost Details window.
2. Retrieve the Cost Details of the product using either the View Find All option or by entering a wildcard value with Query Enter.
3. Select Routing Details from the Actions menu.
4. Item displays the item for which the routing and recipe display.
5. Routing Number displays the routing code associated with the highlighted routing

line for which costs are shown.

6. Version displays the routing version associated with the highlighted routing line for which costs are shown.
7. Recipe Number displays the recipe number.
8. Version displays the recipe version number.
9. Resource displays the resource used for this routing.
10. Component Class Code displays the cost component class used to cost this resource.
11. Analysis Code displays the analysis code used to cost this resource.
12. Component Cost displays the cost associated with this resource (cost to produce one unit of this product). For example, if this routing is assigned to the production of Blue Paint, and the unit of measure for Blue Paint is gallons, the cost shown is that to produce one gallon of Blue Paint.
13. Displays the number of times this resource is used in the production of the item in the Resource Count field.
14. Displays the amount for the resource used in the Resource Usage field.
15. UOM displays the primary unit of measure of the item.

## Using Actual Cost Adjustments

This option lets you adjust the final calculated actual cost of a raw material or product based on quantity and unit cost. Actual costs are recalculated based on the adjustments that you enter for the specified item, inventory organization, cost calendar, and cost period.

Value adjustment is done on the sum of prior period end inventory onhand balance and current period transactions. Transactions like Create Immediate and Adjust Immediate are not considered in cost calculations. For such transactions you can use average cost adjustment.

### **To use actual cost adjustments:**

1. Navigate to the Actual Cost Adjustments window.
2. Item represents the item for which you are entering cost adjustments. This may be a raw material, coproducts, by-product, intermediate, or product. Required.

3. Enter the cost Calendar to which the adjusted actual costs for the item will be updated. Required.
4. Indicate the Period within the cost calendar to which the adjusted actual costs for the item will be updated. Required.
5. Cost Type must be an actual cost type.

#### **Actual Cost Adjustment Details**

6. Lets you choose the type of cost adjustment in Adjustment Type. The options are:
  - Average Cost Adjustment
  - Value Adjustment
  - Unit Cost Adjustment
7. Enter the Component Class code being adjusted. For example, if you are adjusting the actual cost of raw materials, then enter the component classification code for raw materials. You may also specify a component class that was specifically defined for actual cost adjustments.
8. This is the cost Analysis Code used to further define the specific adjustment.
9. Enter the Quantity of the item for which you are adjusting actual costs.
10. Enter the unit of measure in which the specified item's actual costs are being adjusted in UOM. This can be any unit of measure that can be converted to the item's unit of measure.
11. Specify the new unit Cost for the item in this inventory organization, calendar, and period.
12. Enter the Reason Code that defines the nature of the actual cost adjustment you are making.
13. Click the Subledger Entry to choose whether a subledger entry is created for the adjustment.

Based on the Reason Code selected, the Subledger Entry defaults what was selected for the adjustment reason code. For example, if the specified adjustment reason code was selected as a reason code with the Subledger Entry option enabled on the Actual Cost Adjustment Codes window, then this field is automatically enabled.
14. GL Transaction Date Indicates the GL transaction date used by the Accounting process for creating accounting entries for adjustments. If the Subledger Entry option is selected, then the GL Transaction Date is enabled and defaults to the start

date of the selected calendar and period. If the Subledger Entry option is not selected, then the GL Transaction Date is disabled and the date is set to Null.

15. One of three statuses of the costing adjustment displays automatically in Adjustment Status. The statuses are listed:
  - Not Applied - This is the initial status applied to the adjustments
  - Applied - This indicates that the adjustments have been "picked up" by the Actual Costing process and have been used in the cost calculation.
  - Modified - This indicates that the adjustments have been modified after they have been applied to actual costs.

#### **Actual Cost Adjustments - Additional Menu Features - Actions Menu**

- Actual Transactions View - View transactions in a costing period used to calculate actual costs; the most recent actual costing transactions display first. You can also view actual cost transactions from the previous period.

## **Zero Activity/Quantity Adjustments in Actual Costing**

The existing OPM Actual Costing process only considers the Receipt, Invoice, Production or Consumption of items as transactions or Activities applicable for that item. You can alter the cost after it is calculated based on transaction records using the Expense Allocations and Cost Adjustments functionality.

Currently, the OPM Actual Costing process does not consider certain transactions or other inventory monetary amount changes. For example, an adjustment to the Inventory where only the monetary amount is known but not an associated quantity, such as Inventory write-offs or other one time charges. These transactions affect the cost of the items and they should be accounted for in the cost. With the existing functionality, you could use the Actual Cost Adjustments to capture these activities in OPM. But the Actual Cost Adjustments do not impact the cost of an item if:

- There is no other Activity to impact the costing calculations
- The quantity specified for the adjustment is zero

The Actual Cost process includes the following adjustments in cost calculation:

- Even if there is no other Activity for an Item
- With only the amount specified and a zero quantity. In this case the amount is considered for the entire transaction quantity of that item.

#### **Cost Adjustments Calculation Changes**

The following topics explain how the Cost Adjustments with no activity and zero

quantity is calculated:

### Calculating Cost Adjustments when there is no activity

OPM tries to get Cost Adjustments entered using the Actual Cost Adjustments window even if there is no activity for that Item in the current period. The Actual Cost process uses the adjustment quantity and the amount you entered along with any previous period balance (in the case of PMAC) to derive the cost. The adjustment calculation is done before costing the product so that the ingredient costs are reflected accurately in the product cost and also before any GL Expenses are allocated. The Zero Activity Cost Adjustments calculations will be performed regardless of any costing method. The following is an example of Zero Activity Cost Adjustments calculation.

#### Example

In this example there is no Activity in the current period except Adjustments as shown below:

Cost Component	Analysis Code	Adjustment Quantity	Cost
MATERIAL	ADJ	50	0.75

Prior Period Costing data:

- Inventory Balance = 1000 units  
Previous Period Unit cost

Cost Component	Analysis Code	Cost
MATERIAL	ADJ	1.25

The cost of the Item calculated as per this design would be:

$$\text{PMAC Cost} = [(1000 * 1.25) + (50 * .75)] / (1000 + 50) = 1.2262$$

$$\text{PWAC Cost} = 50 * .75 / 50 = .75$$

### Calculating Cost Adjustments with Zero Quantity

As an extension to the Zero Activity Cost Adjustments feature, any Adjustments are also selected even if the quantity is zero. The only limitation is that the cost specified with a zero quantity is applied to the entire Item Transaction Quantity for the period concerned and not to a per unit cost. This is displayed as a message whenever you specify zero in the Adjustment Quantity field on the Actual Cost Adjustments window. The calculations are again performed before costing the products.

In either case, if any adjustment cannot be applied because of the total transaction quantity being zero, a warning message is displayed that the adjustment could not be

applied. The following is an example of Zero Quantity Cost Adjustments calculation.

**Example**

In this example there is Activity in the current period. The Batches and PO Receipts are 500 Units, Cost is 1.10 per Unit and Adjustment is as shown below:

Cost Component	Analysis Code	Adjustment Quantity	Cost
MATERIAL	ADJ	0.0	-250.00

Prior Period Costing data:

- Inventory Balance = 1000 units

Previous Period Unit cost:

Cost Component	Analysis Code	Cost
MATERIAL	ADJ	1.25

The Cost of the Item is calculated as follows:

PMAC Cost =  $(1000 * 1.25) + (500 * 1.10) / [1000 + 500] = 1.20$ , the adjustment is ignored.

PWAC Cost =  $[(500 * 1.1) + (-250)] / 500 = 0.60$

The cost of the Item calculated as per the design would be:

PMAC Cost =  $[(1000 * 1.25) + (500 * 1.10)] + (-250) / [1000 + 500] = 1.03$

PWAC Cost =  $[(500 * 1.10) + (-250)] / 500 = 0.60$

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## Using Lot Costing

This topic describes how to set up and use lot costing.

This chapter covers the following topics:

- Requirements
- Understanding Lot Costing
- Transactions Affecting Lot Cost
- Setting Up Lot Cost Items
- Defining Lot Cost Overheads
- Running the Lot Cost Process
- Viewing the Lot Cost Details
- Using Lot Cost Adjustments
- Lot Costing Examples

### Requirements

#### How is lot cost different from Standard or Actual Cost?

Lot Costing is a perpetual form of costing unlike standard or actual costs that are periodic in nature.

#### Lot Costing compared with Standard or Actual Cost

Lot Costing is a perpetual form of costing unlike standard or actual costs that are periodic in nature. The lot costs do not have cost calendar and period. Once the cost of a lot is identified, it remains the cost of the lot until the entire lot is consumed or another receipt or batch yield is created for the same lot. When a lot is received or yielded from a batch again, the previous cost of the lot and the current onhand quantity of the lot is averaged with the new receipt or batch yield quantity and cost to arrive at the new cost of the lot.

Lot cost records and maintains the cost of raw materials and products. In cases where items are maintained in lots with varying attributes, the need arises to record and maintain the costs of the items on a per lot basis to accurately reflect the variations among different lots. Lot costing lets you calculate and store costs at the lot level. In other words, every lot has a unique cost associated with it and that lot retains this cost until the entire lot is consumed. The lot costs are computed on a perpetual basis unlike the existing periodic actual costing.

## **Do I need to set up an alternate cost type and the start date for a lot cost type?**

Yes. If you want lot costs for a specific set of items, then enter the standard cost as the alternate cost method. The start date is the date after which all transactions are considered for lot cost calculations.

### **Setting up an alternate cost method and the start date for a lot cost method**

If the user desires so, Costs of only a subset of the lot controlled items can be tracked at the lot level. For other lot controlled items and nonlot-controlled items, costs need not be tracked in such a detail. To retrieve cost for nonlot costed items used in cost calculations, an alternate cost method is used. If you want lot costs for a specific set of items, then enter the standard cost as the alternate cost method.

The start date is the date after which all transactions are considered for lot cost calculations. Choose the date carefully as it cannot be changed once lot costs are calculated. The date must be at least a few periods behind the current date, so that all transactions for lots currently being used are considered for cost calculations. If you set the start date in the past (for example, several years), then the Lot Cost process tries to select all transactions from that date and the process can take a very long time. This results in unused lots also being costed and stored in the table and affects the performance of the Lot Cost process.

## **Does cost update apply to lot costs?**

The Cost Update is not necessary for lot costs.

### **Using Cost Update with Lot Costs**

The Cost Update is not necessary for lot costs. When the Lot Cost process is run in final mode, all transactions are marked as processed. Verify the lot costs by running the Lot Cost process in preliminary mode. You can use the Lot Cost Adjustment to adjust costs if needed. Then, run the Lot Cost process in final mode.

## **Are invoices and allocation considered by lot costs?**

No. Lot costs do not consider invoices and expense allocations.

### **Invoices in Lot Costs**

The Lot Cost process does not consider invoices.

## **Are invoices and allocation considered by lot costs?**

No. Lot costs do not consider invoices and expense allocations.

### **Expense Allocations in Lot Cost**

The Lot Cost process does not consider expense allocations.

## **Does lot cost process consider partially completed batches?**

The Lot Cost process considers completed inventory transactions for products to calculate costs. Lot cost process does not consider WIP batches and considers only Completed or Closed batches.

## **Can I view lot costs?**

Yes. Use the Lot Cost Details window or the Lot Item Cost Detail report.

### **Viewing Lot Costs**

After lot costs are calculated, view them using the Lot Cost Details window or the Lot Item Cost Detail report. The Lot Cost Details window is similar to the Cost Details window and includes lot and subplot fields instead of calendar and periods. The Lot Item Cost detail report prints a detailed component level cost information. Refer to "OPM Lot Cost Detail Report" in this guide for more details.

## **Can I determine what transactions led to the calculated lot cost?**

Yes. Run the Lot Cost History report to view the transactions that contributed to the lot cost.

### **Transactions affecting calculated lot costs**

Run the Lot Cost History report to view the transactions that contributed to the lot cost. This report displays all the transactions that contributed to the lot cost as well as any consumption transactions that affected the onhand balance for this lot. Refer to "OPM Lot Cost History Report" in this guide for more details. Due to the nature of the calculations and how costs are stored, you cannot query the lot actual costs using the View Actual Cost Transactions window. The Lot Cost History report provides all the details.

## **Should I enable the Automatic Step Quantity Calculation?**

If the batch has multiple steps with step dependencies and the ingredients or products have different unit of measures that belong to different unit of measure types, then enable the Automatic Step Quantity Calculation option.

### **Enable Automatic Step Quantity Calculation**

If the batch has multiple steps with step dependencies and the ingredients or products

have different unit of measures that belong to different unit of measure types, then enable the Automatic Step Quantity Calculation option. The Automatic Step Quantity Calculation ensures that all material lines are associated to one or more steps and conversions between the items and the various step quantity unit of measures are available.

If the Automatic Step Quantity Calculation is not enabled, then associate all material lines with one or more steps for accurate cost determination.

### **What happens if one or more material lines are not associated to batch steps or do not have any material-step associations at all?**

If one or more ingredients are not associated to step, then those ingredients are added at the first step. If one or more products or byproducts are not associated to any step, then those items are considered yielded at the last step.

If there is no material-step association, then all ingredients are added at the first step and all products or byproducts are considered yielded at the last step.

## **Understanding Lot Costing**

Lot costing, also referred to as lot-based costing is a Specific Identification type costing. Oracle Process Manufacturing lets you maintain standard and actual item costs by inventory organization. In cases where items are maintained in lots with varying attributes, the need arises to record and maintain the costs of the items on a per lot basis to accurately reflect the variations among different lots. Lot costing lets you calculate and store costs at the lot level. In other words, every lot has a unique cost associated with it and that lot retains this cost until the entire lot is consumed. The lot costs are computed on a perpetual basis unlike the existing periodic actual costing.

The cost of a lot can vary over time. For example, material can be received into the same lot several times but the costs of the raw material might be different each time. In this case, the lot cost is the weighted average of the existing and new costs. The cost of a manufactured lot can also vary, depending on the costs of the ingredient lots, and also the resource costs, at the time of production. In case of inter-organization transfers Lot costing does not include transfer charges in the item/lot cost calculations, when they are calculated in the receiving organization.

Lot costing involves tracking the cost of a lot from its initial creation through all consumptions and replenishments.

## **Transactions Affecting Lot Cost**

The lot cost is calculated as either raw material cost or product cost. The transactions that affect the Lot Cost of an item are:

- Purchase Order Receipts (at PO Price)

- Production Batches yields (at the cost of the batch)
- Incoming Inventory Transfers (at cost of the source inventory organization)
- Incoming Internal Orders (at the cost of the source inventory organization)
- Lot Split, Lot Merge, and Lot Translate

The transactions are explained in the "Using Actual Costing" topic and are similar to the way actual costs are calculated.

## Support for Lot Split, Lot Merge, and Lot Translate

- **Lot Split** - You can divide a lot into any number of child lots. When a lot is split into multiple children, the costs allocated to the starting lot are reallocated to the resulting lots, that is, all child lots inherit the cost of starting lot. The Lot cost process considers lot split transactions for process organizations and stores cost for resulting lots into lot costing tables.
- **Lot Merge** - Multiple lots with identical attributes are combined to create a single lot. The Lot cost process performs weighted average cost of multiple merged lots based on onhand quantities to arrive at the cost of single merged lot.
- **Lot Translate** - Lot translate moves items from one lot to another. Selected number of lots are moved into another lot and renamed in the target lot. Complete inventory is moved into another lot when a lot is moved. For example, if lot translate is used to move from lot A to lot B, then all the inventory in lot A is moved to lot B.

## Setting Up Lot Cost Items

Use this window for setting up items that are costed on a lot basis.

If an item has to be costed by lot or if all items that belong to an item cost category need to be costed by lot, then enter the appropriate item or item cost category.

Only lot-controlled items are available here. If an item cost category is entered, then all items that are lot-controlled and belong to the item cost category are used for lot costing.

### To set up lot cost items:

1. Navigate to the Lot Cost Items window.
2. Enter or select the Legal Entity for which you want to select items or item cost categories that are to be costed on a lot basis. Required.

**Note:** The Context Organization's master organization is used for the item validation.

3. Enter the Lot Cost Type for which you want to select items or item cost categories that are to be costed on a lot basis. Required.

#### **Details**

4. Enter Cost Category.
5. Enter the Item.
6. Save.

## **Defining Lot Cost Overheads**

Use the Lot Cost Overheads window to set up and maintain overheads. An overhead is a cost associated with a resource other than the resource usage assigned in the routing.

#### **Prerequisites**

The following fields are required on the Lot Cost Burden window and must be set up prior to defining overheads. The application where each field is set up displays in parentheses:

- Item (Oracle Inventory)
- Inventory Organization (Oracle Inventory)
- Cost Types
- Organization (Oracle Inventory)
- Resource (OPM Process Planning)
- Cost Component Class
- Cost Analysis Code

#### **To define lot cost overheads:**

1. Navigate to the Lot Cost Overheads window.
2. Enter the Item code for the product or intermediate to which this lot cost overhead is assigned.
3. Enter the appropriate cost type.

4. Select the Lot number for which the overhead cost is established. The lot can be left blank in which case the overhead is applied on all lots for the item specified.
5. Base Currency displays the base currency of the legal entity. This field is display only.

#### **Overhead Details**

6. Enter the code for the Resource overhead. For example, if the product Blue Paint uses MIXER1 as a resource, and you are assigning a overhead for cleanup after each use of MIXER1, enter the code for MIXER1.
7. Enter Component Class Code you defined as overhead usage for this resource.
8. Enter the Analysis Code under which this overhead appears in cost details.
9. Enter the number of this resource used in the production of the item in Resource Count. For example, if it takes one laborer to cleanup MIXER1 after each use, enter 1 (laborer). This number will be multiplied by the Resource Usage number to determine the total resource usage.
10. Enter the amount of the resource used for this overhead in Resource Usage. For example, if it takes one laborer .25 hours to cleanup MIXER1 after each use, enter .25.
11. Enter the unit of measure in which this resource is yielded in Resource UOM.
12. Enter the quantity of the item for which the resource usage is specified in Item Quantity.
13. Enter the Item Unit of Measure in which this overhead is measured (for example, pounds).
14. Enter the date range in which these overheads are applicable in Effective Date (From and To).

## **Running the Lot Cost Process**

The Lot Cost process calculates and stores the lot level costs of items. The process retrieves all the transactions that are applicable and processes them in the order in which the items were replenished or consumed.

It is run for a legal entity and lot cost type. Additional parameters can be specified. If you have enabled landed cost management functionality for your organization, then the Lot Cost Process considers the estimated and actual landed cost adjustments in cost calculations and updates the cost information in the Lot Cost Adjustments window.

### **To submit the Lot Cost Process:**

1. Navigate to the Lot Cost Process window.
2. Enter the Legal Entity for which you want to run the Lot Cost process.
3. Enter the appropriate lot Cost Type.
4. Indicate whether the process should run in final mode (Yes) or not (No) in Final Run . The default value is No. If the mode is final, then after cost calculations, all inventory transactions used in cost calculations are marked as lot costed. You cannot change lot costs once they are processed in final mode. Set Final Run to no to run the process in the test mode and verify costs. Once costs are correct, run the Lot Cost process in final mode.
5. Enter the Cost Category for which you want to run the process. The process calculates lot costs for all lot controlled items that belong to this item costs class and specified as lot costed in the Lot Cost Items window. You enter this field when the process is run in test mode or for diagnostic purposes. Leave this field null when running this process in actual or final mode.
6. Enter the Process Organization.
7. Enter the Item for which you want to run the Lot Cost process. Any item that is lot controlled and specified as lot costed can be selected here. You enter this field when running the process in test mode or for diagnostic purposes. Leave this field null when running this process in actual or final mode.
8. Enter the Lot Number. It is applicable only when a specific item is selected. Only valid lots for this item can be selected.
9. Enter the Lot Cost Date. Defaults to the current system date.
10. Click Ok.

## **Viewing the Lot Cost Details**

This window is used to inquire the lot costs of items. You can query the cost of a single item or lot or perform various other queries. The window is view only as you cannot enter a lot actual cost directly for an item.

If there are overheads attached to the item or lot, or if the item is a product and is produced from multiple ingredients, then for a given item or lot there could be multiple detail rows.

### **Prerequisites**

- Run the Lot Cost Process.

### **To view lot costs:**

1. Navigate to the Lot Cost Details window.
2. Query by entering one or more values for the fields or use the Query-Find window.
3. Displays the Item code for which you are inquiring costs in the field.
4. Displays the Lot Cost Type .
5. Displays the Lot number for which you want to see the costs in .
6. Displays the date in Cost Date. If a lot is received or otherwise replenished more than once in the same inventory organization, then the costs before and after the receipt are both stored in the lot costs table. This cost is used for audit, and display and reporting purposes.
7. Displays if it is a Final Cost run.
8. Displays the item's Total Cost in the item's primary unit of measure.

### **Details**

9. Displays the Component Class Code. When displaying costs for a formula item, ingredient, or product, this field displays the component class associated with the cost shown on this line.
10. Displays the Description of the component class code.
11. When displaying costs for a formula item, ingredient, or product, the Analysis Code associated with the cost shown on this line displays.
12. If you are displaying costs for a formula item, ingredient, or product, the Cost Component Class shown on this line displays.

### **Lot Cost Details Window Menu Features - Actions Menu**

- **Lot Item Cost Detail Report** - Use this report to list costs generated by the Lot Cost process. You can verify the calculated costs. Refer to "OPM Lot Cost Detail Report" for more details on running this report.
- **Lot Costing History Report** - Use this report to view the lot history to analyze how costs are calculated. A history of item and lot is maintained for costing purposes. Refer to "OPM Lot Cost History Report" for more details on running this report.

## Using Lot Cost Adjustments

This window lets you adjust the final calculated lot cost of a raw material or product based on the unit cost. Lot costs are recalculated based on the adjustments that you enter for the specified legal entity, item, inventory organization, lot, child lot, and adjustment date.

These adjustments directly alter the cost of an item. This approach produces a complete adjustment audit trail.

### Prerequisites

- Run the Lot Cost Process.

### To use the lot cost adjustments:

1. Navigate to the Lot Cost Adjustments window.
2. Enter the item for which you are entering lot cost adjustments in the Item field. This may be a raw material, byproduct, intermediate, or product.
3. Enter the Cost Type.
4. Enter the Lot to which the cost adjustment must be applied.
5. Displays the reference number.
6. Enter the Reason Code that defines the nature of the lot cost adjustment.
7. Enter the date on which the cost adjustment is applied in Adjustment Date. It is set to the system date by default. This date must be greater than the date of the last transaction processed by the Lot Cost process final run.
8. Select the Adjustment Status. One of two statuses of the costing adjustment displays automatically. The statuses are:
  - Not Applied - This is the initial status applied to the adjustments
  - Applied - This indicates that the adjustments are "picked up" by the lot costing process and used in the cost calculation.

### Lot Cost Adjustment Details

9. Enter the Component Class code for the component being adjusted. For example, if you are adjusting the actual cost of raw materials, then enter the component classification code for raw materials. You may also specify a component class that was specifically defined for actual costs.

10. Enter the cost Analysis Code used to further define the specific adjustment.
11. Enter the new unit cost for the item in this legal entity, inventory organization, and lot in Cost Adjustment .

## Lot Costing Examples

In the following examples, Inv Org refers to inventory organization, Qty refers to Quantity, and Trans-Date refers to Transaction date.

### Example 1: A Purchase Order Receipt Created for Item A, Lot 1

This example shows a purchase order receipt created for Item A, Lot 1. The following table shows a purchase order receipt created for Item A, Lot 1, with quantity 100 at the price of \$3.00 on January 1, 2004.

Transaction	Item	Lot	Inv Org	Price	Qty	Trans-Date	Comments
PO Receipt	A	L1	W1	3.00	100	01-Jan-04	Cost is the PO price and cost component and analysis code are from the Material Cost Components table

If the item or item cost category specific material component cost and analysis code is not found in the Material Cost Components table, then the application defaults to the fiscal policy values.

### Lot Cost Details

The following table displays the lot cost details:

Item	Lot	Inv Org	Cost Date	Cost Component	Analysis Code	Component Cost
A	L1	W1	01-Jan-04	C1	N1	3.00

### Example 2: A Second Purchase Order Receipt Created for Item A, Lot 1

This example shows another purchase order receipt created for Item A, Lot 1. The following table shows another purchase order receipt created for Item A, Lot 1, with

quantity 100 at the price of \$4.00 on January 5, 2004.

Transaction	Item	Lot	Inv Org	Price	Qty	Trans- Date	Comments
PO Receipt	A	L1	W1	4.00	100	05-Jan-04	Cost is the PO price and cost component and analysis code are from the Material Cost Components table

Note that, if the item or item cost category specific material component cost and analysis code is not found in the Material Cost Components table, then the system defaults to the fiscal policy values.

## Lot Cost Details

The following table displays the lot cost details:

Item	Lot	Inv Org	Cost Date	Cost Component	Analysis Code	Component Cost
A	L1	W1	01-Jan-04	C1	N1	3.00
A	L1	W1	05-Jan-04	C1	N1	3.50

### Example 3: Consumption of Item A, Lot 1

This example shows consumption of Item A, Lot 1. The consumption includes, inventory adjustment, OM shipments, production ingredient consumption, or inventory transfer from the inventory organization.

The lot cost remains the same but the onhand is reduced appropriately. If a miscellaneous transaction is recorded when there is already an existing onhand, then it is processed like an adjustment.

### Example 4: A Purchase Order Receipt Created for Item A, Lot 2 with Freight and Special Charges

This example shows a purchase order receipt created for Item A, Lot 2 with freight and special charges. The following table shows a purchase order receipt created for Item A,

Lot 2, with quantity 100 at the price of \$4.00 on January 1, 2004.

Transaction	Item	Lot	Inv Org	Price	Qty	Trans- Date	Comments
PO Receipt	A	L2	W1	4.00	100	01-Jan-04	Cost is the PO price and cost component and analysis code are from the Material Cost Components table

The following table shows the details of acquisition costs:

Code	Cost Component	Analysis Code	Unit Cost	Include or Exclude
Freight	C2	N2	0.10	Include
Insurance	C3	N3	0.05	Exclude

Note that, any excluded acquisitions are not included in the item cost.

## Lot Cost Details

The following table displays the lot cost details:

Item	Lot	Inv Org	Cost Date	Cost Component	Analysis Code	Component Cost
A	L1	W1	01-Jan-04	C1	N1	4.00
A	L2	W1	01-Jan-04	C2	N2	0.10

In this case, the unit cost is calculated as \$4.10 by adding the component costs.

## Example 5: A Second Purchase Order Receipt Created for Item A, Lot 2 with Different Freight and Special Charges

This example shows a purchase order receipt created for Item A, Lot 2 with different freight and special charges. The following table shows a second purchase order receipt created for Item A, Lot 2, with 100 quantity at the price of \$5.00 on January 5, 2004.

Transaction	Item	Lot	Inv Org	Price	Qty	Trans- Date	Comments
PO Receipt	A	L2	W1	5.00	100	05-Jan-04	Cost is the PO price and cost component class and analysis code are from the Material Cost Components table

The following table shows the details of acquisition costs:

Code	Cost Component	Analysis Code	Unit Cost	Include or Exclude
Freight	C2	N2	0.15	Include
Insurance	C4	N4	0.10	Include

## Lot Cost Details

The following table displays the lot cost details:

Item	Lot	Inv Org	Cost Date	Cost Component	Analysis Code	Component Cost
A	L2	W1	01-Jan-04	C1	N1	4.000
A	L2	W1	01-Jan-04	C2	N2	0.100
A	L2	W1	05-Jan-04	C1	N1	4.500
A	L2	W1	05-Jan-04	C2	N2	0.125
A	L2	W1	05-Jan-04	C4	N4	0.050

In this case, the unit cost is calculated as \$4.675 by adding the third, fourth, and fifth component cost rows.

## Associated

This example shows a purchase order receipt created for Item A, Lot 5 with overhead associated. The following table shows a purchase order receipt created for Item A, Lot 5, with 100 quantity at the price of \$5.00 on January 5, 2004.

Transaction	Item	Lot	Inv Org	Price	Qty	Trans-Date	Comments
PO Receipt	A	L5	W1	5.00	100	05-Jan-04	Cost is the PO price and cost component and analysis code are from the Material Cost Components table

The following table shows overhead details:

Resource	Cost Component	Analysis Code	Burden Factor	Resource Cost
Freight	C2	N2	0.10	1.00

## Lot Cost Details

The following table displays the lot cost details:

Item	Lot	Inv Org	Cost Date	Cost Component	Analysis Code	Component Cost
A	L5	W1	05-Jan-04	C1	N1	5.00
A	L5	W1	05-Jan-04	C2	N2	0.10

In this case, the unit cost is calculated as \$5.10 by adding the component costs.

## Example 7: Another Purchase Order Receipt Created for Item A, Lot 5 with Overhead Associated

This example shows a purchase order receipt created for Item A, Lot 5 with overhead associated. The following table shows a purchase order receipt created for Item A, Lot 5, with 100 quantity at the price of \$5.00 on January 5, 2004.

Transaction	Item	Lot	Inv Org	Price	Qty	Trans- Date	Comments
PO Receipt	A	L5	W1	6.00	100	05-Jan-04	Cost is the PO price and cost component and analysis code are from the Material Cost Components table

The following table shows overhead details:

Resource	Cost Component	Analysis Code	Burden Factor	Resource Cost
Freight	C2	N2	0.10	1.00

## Lot Cost Details

The following table displays the lot cost details:

Item	Lot	Inv Org	Cost Date	Cost Component	Analysis Code	Component Cost
A	L5	W1	05-Jan-04	C1	N1	5.00
A	L5	W1	05-Jan-04	C2	N2	0.10
A	L5	W1	05-Jan-04	C1	N1	5.50
A	L5	W1	05-Jan-04	C2	N2	0.10

In this case, the unit cost is calculated as \$5.60 by adding the third and fourth component cost rows.

## Example 8: Purchase Order Corrections and Returns

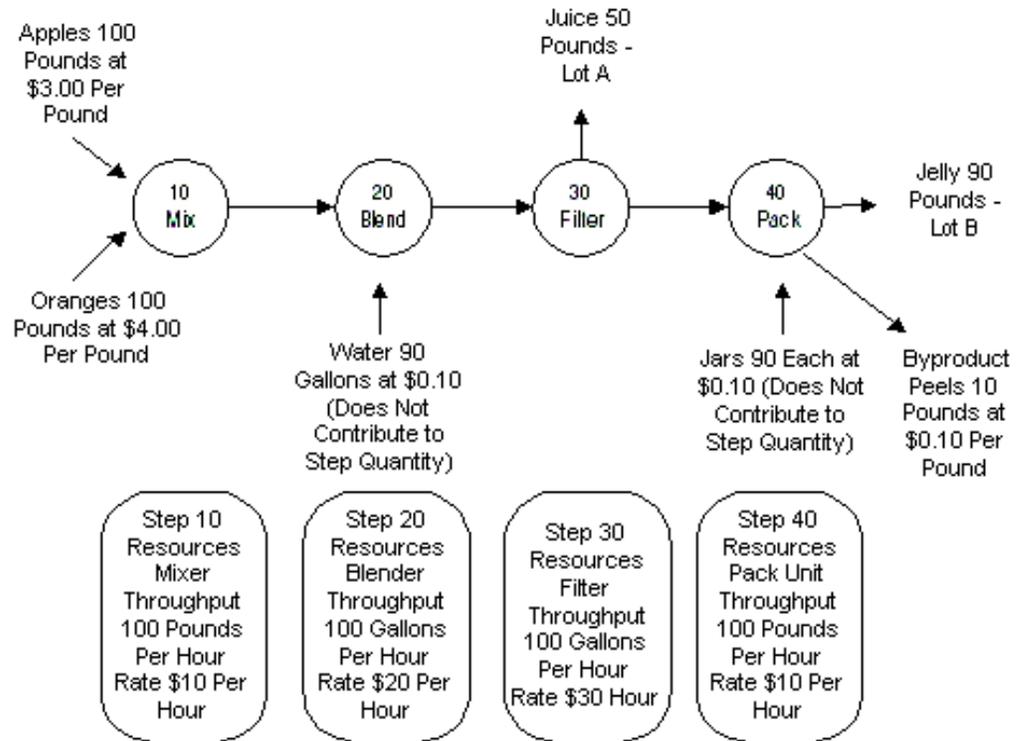
The purchase order corrections and returns work the same as the purchase order receipts except that the quantity is taken with the proper sign to maintain the balance properly.

## Example 9: Batch Cost Calculation

This example shows batch cost calculation in lot costing. The following diagram illustrates that the ingredient lines of apples and oranges are associated to the step 10, water is associated to Step 20, juice to Step 30, and jelly and peels are associated to Step 40.

In this example as shown in the diagram, apples, oranges, waters, and jars are used to produce juice and jelly. The byproduct is peels.

Set up these associations in the Batch Step/Batch Item Association window. The step sequence or dependency is set up in the Batch Step Dependencies window.



### Cost Calculation Logic

The step dependency and step or material association are used to decide the step sequence.

Then, the total cost of ingredients and resources used at each step is calculated. The costs are accumulated at each step in succession. Resource usages and step quantities are taken from the OPM Process Execution tables.

If a product yields at any step, then the step quantity and the yield quantity are used to arrive at the proportion of costs accumulated so far to be applied to the product yield. This is used to calculate the unit cost of the lots yielded at that step.

The rest of the accumulated cost is carried over to the next step, and so on. At the last step, any remaining accumulated costs are applied to products that are yielded at that step.

To determine accurately how much of material is processed at each step, it is recommended that you use the Calculate Step Quantity option when creating batches. If this option is not used, then enter the actual step quantities processed at each step. If the actual step quantity is not recorded properly, then the costs calculated may not be accurate.

Using the above logic, the costs are calculated as follows:

**Costs accumulated at Step 10:**

Equals 100 pounds of apples at \$3.00 per pound + 100 pounds of oranges at \$4.00 per pound + Mixing Cost.

- Step Quantity for Step 10 = 200 pounds  
Mixer usage = (200 pounds / 100 pounds per hour) = 2 hours which is 2\* \$10.00 per hour = \$20

Step 10 Costs = \$300 + \$400 + \$20 = \$720.

**Costs accumulated at Step 20:**

When the Calculate Step Quantity option is used, OPM Process Execution uses the unit of measure conversion for apples and oranges between pound and gallon to maintain the step quantities for all steps in both mass and volume units.

\$720 from Step 10 + 90 gallons water at 0.10 per gallon + Blending Cost

- Step Quantity for Step 20 = 200 pounds = 100 gallons (assume a conversion rate of 1 gallon to 2 pounds of apples and oranges)  
Blending Cost = (100 gallons / 100 gallons per hour) = 1 hour which is 1\* \$20.00 per hour = \$20

Step 20 Costs = \$720 + \$9 + \$20 = \$749

**Costs accumulated at Step 30:**

Equals \$749 from Step 20 + Filtration Cost

- Step Quantity for Step 30 = 200 pounds = 100 gallons  
Filtration Cost = (100 gallons / 100 gallons per hour) = 1 hour which is 1 \* \$30.00 per hour = \$30

Step 30 Costs = \$749 + \$30 = \$779

50 gallons of juice, Lot A, is yielded at Step 30. The proportion of costs removed by juice is calculated as follows:

- The 50 gallons of juice is in the same unit of measure as the step quantity unit of measure. No unit of measure conversion is required.

The cost of juice is calculated as:

$[50 \text{ gallons} / \text{Total Step Quantity}] * \text{Total Costs accumulated}$

which is,  $50 / 100 * \$779 = \$389.5$

The unit cost of juice, Lot A, is  $\$389.5/50$  equals \$7.79 per gallon.

The remaining cost, \$389.5, is carried over to Step 40.

**Cost accumulated at Step 40:**

Equals \$389.5 from Step 30 + 90 jars at \$0.10 per each + Packing costs - 10 pound peels at \$0.10 per pound

- Step Quantity for Step 40 = 50 gallons = 100 pounds

Packing Cost =  $(100 \text{ pounds} / 100 \text{ pounds per hour}) = 0.1 \text{ hour}$  which is  $0.1 * \$10.00$  per hour = \$10.00.

Step 40 Costs =  $\$389.5 + \$9 + \$10 - \$1 = \$407.5$

The unit cost of jelly, Lot B, is  $\$407.5/90$  equals \$4.528 per pound

If the Calculate Step Quantity option is not used, then the Lot Cost process performs the unit of measure conversions between various ingredients and products to calculate the step quantities. If any of the unit of measure conversion is not set up, then an error displays and the batch is not costed.



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# OPM - Landed Cost Management Integration

## Understanding OPM - Landed Cost Management Integration

Oracle Landed Cost Management (LCM) enables organizations to gain insight into the real costs associated with acquiring products. Landed cost is the cost to "land" a product on the buyer's final location. These costs are initially estimated and then updated with actual amounts, as they become known, allocating them to shipments, orders, and products. Landed costs may include costs like freight, storage, taxes, and handling. Cost methods and inventory valuations are accurately maintained providing better visibility into an individual product's profitability and an organization's outstanding exposure. The OPM-LCM integration provides better insight for product forecasting and budgeting, and provides clear evidence of the detailed accumulation of expenses for regulatory requirements and reporting. You must set an organization as LCM-enabled on the Organization Parameters window in Oracle Inventory to use the LCM functionality.

**Note:** If you want to use the Freight and Special charges functionality in Release 12.1, then you must setup the RCV: Freight and Special Charges Enabled profile value to Yes in the Oracle Purchasing application.

Using Oracle Landed Cost Management, you can estimate the landed costs for items and update their costs with the actual landed costs, as they are known. Oracle Landed Cost Management supports two receiving flows.

- Oracle Landed Cost Management as a service: In this flow the receiving clerk receives goods into inventory using the Oracle Purchasing application windows. Landed costs are calculated in the LCM application.
- Oracle Landed Cost Management pre-receiving: In this flow users receive goods from within the Oracle Landed Cost Management application windows. Charges can be edited before the estimated landed cost is calculated and the goods are

received.

Using Oracle Landed Cost Management you can view the estimated and actual landed costs for an item simultaneously providing valuable information about the landed cost for an item and where cost improvements can be made.

The landed costs calculated by Oracle Landed Cost Management are passed on to OPM and the landed costs are then included in the cost calculations performed by Actual, Standard, and Lot Costing.

In OPM, Standard, Actual, and Lot Costing methods support LCM and the cost adjustments are identified as:

- **Estimated Landed Cost (ELC):** ELC is the item landed cost calculated based on the estimated amounts of the item price, the taxes, and the charge amounts. LCM generates ELC adjustments for receipts.
- **Actual Landed Cost (ALC):** ALC is the item landed cost calculated based on the actual amounts of the item price, the taxes, and the charge amounts. The actual amounts are provided by the related documents, as item invoices, freight invoices and charges. LCM generates ALC adjustments for invoices.

You must perform the following setups to be able to use the LCM functionality:

1. Set up the following LCM accounts in Oracle General Ledger:
  - LCM Absorption (This account is applicable to OPM Cost Management.)
  - LCM Invoice Price Variance
  - LCM Exchange Rate Variance
  - LCM Tax variance
  - LCM Default Charge account
  - LCM Cost Variance

Refer to the *Oracle General Ledger User's Guide* for more information.

2. Set up the following in Oracle Inventory:
  - Select the LCM Enabled checkbox in the Organization Parameters - Inventory Parameters window.
  - Enter the LCM Variance account in the Other Accounts tab of the Organization Parameters window.

Refer to the *Oracle Inventory User's Guide* for more information.

3. Set up the following in Oracle Purchasing:

- Select the Pre-Receiving in LCM check box in the Receiving Options window, to indicate that you want the organization to operate with Landed Cost Management as a pre-receiving application. This is optional.
- In the Receiving Options window, select an account from the list of values in the fields for the following LCM accounts:
  - Landed Cost Absorption
  - Landed Cost Invoice Price Variance
  - Landed Cost Exchange Rate Variance
  - Landed Cost Tax variance
  - Landed Cost Default Charge account
  - Landed Cost Variance

Refer to the *Oracle Purchasing User's Guide* for more information.

4. Set up Modifiers and the following profile options in Oracle Advanced Pricing:
  - Set the QP: Blind Discount Option to Yes
  - Set QP: Licensed for Product to Purchasing
  - Set QP: Pricing Perspective Request Type to Purchase Order
  - Set QP: Pricing Transaction Entity to Procurement
  - Set QP: Source System Code to Oracle Purchasing

Refer to the *Oracle Advanced Pricing User's Guide* for more information.

5. Set up Cost Factors. Refer to the "Defining Cost Factors" topic for more information.
6. Set up Shipment Line Types, Shipment Types, and the following profile options in Oracle Landed Cost Management:
  - INL: Default Currency Code for QP Charges Generation
  - INL: Default Currency Conversion Type for QP Charges Generation
  - INL: Default Shipment Type for Open Interface

Refer to the *Oracle Landed Cost Management User's Guide* for more information.

7. Set up the GMF: Landed Cost Adjustments Transfer Method to Inventory In Actual

Costing profile option in OPM Cost Management. Refer to the "Setting Up" chapter for more information.

8. Perform the following setups in SLA:
  - Set the following Event Types:
    - Landed Cost Adjustment Deliver
    - Landed Cost Adjustment Expense Deliver
    - Landed Cost Adjustment Receive
    - Landed Cost Adjustment Valuation
  - Landed Cost Absorption and Landed Cost Valuation accounts

Refer to the "OPM Costing - SLA Accounting Data", "Account Definitions", and "Oracle Purchasing Distribution for Process Organization" topics for more information. You can modify the LCA and LCV account derivation rules as required.

The journal entries for landed cost adjustments are posted in OPM Accounting Preprocess. The changes in inventory costs due to landed cost adjustments are posted to the Landed Cost Absorption (LCA) and Landed Cost Variance (LCV) accounts. You must setup the LCA and LCV accounts for organizations to use LCM in the Receiving Options window in Oracle Purchasing. Refer to the *Oracle Purchasing User's Guide* and *Oracle Landed Cost Management User's Guide* for more information. The Actual landed cost adjustments are stored in OPM in the Actual Cost Adjustments window.

LCM integrates with Oracle Purchasing and Oracle Payables application and supports the following transactions:

- PO Receipts
- Delivery
- Returns and Corrections

## Landed Cost Management - Accounting

The following sections explain the costing and accounting of inbound receiving transactions (PO receipts) where the organization costing method can be Actual, Standard, or Lot Costing:

### Actual Costing

#### Scenario 1: Item estimate is same as PO Price, but different than Invoice price

This is the most common scenario and can be implemented in both LCM as a service and LCM as pre-receiving flows. Let us consider Actual Costing as the cost method

used in this case.

#### **At PO creation**

- Item PO Price: \$9 (invoice matching: receipt)
- Tax set up; exclusive tax: 10%; recoverable rate: 50%

#### **At receipt**

- Receipt qty = 10 each
- Item cost (estimated ): \$9/ each) [ Event Fiscal Policy: Book INV at Receipt Price, No PPV]
- Freight (estimate) : \$1/ each) [ As per Charges setup]

#### **Landed Cost calculation**

- Item cost: \$9/ each [ At PO Price]
- Tax (non recoverable ): \$0.45/ each [ PO Price \$9, Tax Rate 10%, Non-Recoverable Rate 50%]
- Freight: \$1/ each
- Estimated landed cost: \$10.45/ each [ PO Price + Non-Recoverable Tax + Freight]

#### **Invoicing**

- Item Invoice comes at \$110 (Item \$100 + Tax \$10, \$5 recoverable and \$5 non recoverable)
- Freight Invoice \$20
- Actual Landed Cost = \$125 (Item \$105 + Freight \$20), Unit LC = 12.5 (\$125/10 Each). Calculated by LCM as an adjustment record and transferred to OPM repository through the OPM Landed Cost Adjustment Import concurrent program.
- The GMF: Landed Cost Adjustments Transfer Method to Inventory in Actual Costing profile option is set to Apply LC Adjustments based on the Period Opening Balance option.
- On hand at the time of cost update is 5 each:

Event Type	Journal Line Type	Calculation	Debit	Credit
Receipt	Receiving Inspection	Qty Received x Receipt Price (Estimated Landed Cost)	\$104.5	
	AP Accrual (at PO Price)	Qty Received x PO Price (including non-recoverable tax)		\$94.5
	Landed Cost Absorption	Qty Received x (Receipt Price - PO Price)		\$10
Delivery	Inventory Valuation	Qty Received x Receipt Price (Estimated Landed Cost)	\$104.5	
	Receiving Inspection	Qty Received x Receipt Price (Estimated Landed Cost)		\$104.5
Landed Cost Adjustment Receipt	Receiving Inspection	Receipt Qty x [Estimated Landed Cost- PO Price]	\$10 = 10 x (10.45-9.45)	
	Landed Cost Absorption	Receipt Qty x [Estimated Landed Cost- PO Price]		\$10
Landed Cost Adjustment Delivery	Receiving Inspection	Receipt Qty x [Estimated Landed Cost- PO Price]		\$10
	Landed Cost Absorption	Receipt Qty x [Estimated Landed Cost- PO Price]	\$10	

Event Type	Journal Line Type	Calculation	Debit	Credit
Landed Cost Adjustment valuation	Landed Cost Absorption	Period Opening Bal Qty x [Estimated Landed Cost- PO Price]		\$10.1
	Inventory Valuation	Period Opening Bal Qty x [Actual Landed Cost- Estimated Landed Cost]	\$10.1	
	Landed cost Variance	Unabsorbed value of the Landed Cost	\$0	

### Scenario 2: Landed costing with returns

Let us now consider a procure to pay cycle with returns. Consider that you receive and deliver full quantity to Inventory, the supplier sends an invoice, and you create invoice and make payment. You then find that some goods are defective in the inventory. So you return goods and then create debit note for the return quantity.

#### At PO creation

- Item PO Price: \$9 (invoice matching: receipt)
- Tax set up; exclusive tax: 10%; recoverable rate: 50%

#### At receipt

- Receipt qty = 10 each
- Item cost (estimated) : \$9/ each
- Freight (estimate) : \$1/ each

#### Landed Cost calculation

- Item cost: \$9/ each
- Tax (non recoverable) : \$0.45/ each
- Freight: \$1/ each
- Estimated landed cost: \$10.45/ each

### Invoicing

- Item Invoice comes at \$110 (Item \$100 + Tax \$10, \$5 recoverable and \$5 non recoverable), and
- Freight Invoice \$20
- Actual Landed Cost = \$125 (Item \$105 + Freight \$20), Unit LC = 12.5. (Calculated by LCM that creates a record in costing interface which is processed by OPM costing to create adjustments)
- On hand at the time of cost update is 10 each:

### Returns

- Consider that 5 units of goods are rejected and sent back to the supplier (assume that you do not recover inbound transport/charges incurred while procuring the material from supplier)  
Actual Item Invoice = \$11 (\$10 item price, \$0.5 recoverable and \$0.5 non recoverable tax)

Event Type	Journal Line Type	Calculation	Debit	Credit
Return to Vendor For Items:	Accrued Accounts Payable	Return Qty x PO Price	\$47.25(5 x 9.45)	
	Receiving Inspection	Return Qty x Receipt Price		\$52.5(5 x 10.5)
	Landed Cost Absorption	Return Qty x (Receipt Price- PO Price)	\$5.25	
Return to Vendor For Charges:	Receiving Inspection	Return Qty Charge	\$5	
	Landed Cost Absorption	Return Qty Charge		\$5
Return to Receiving	Inventory Valuation	Return Qty x Receipt Price		\$52.5(5 x 10.5)

Event Type	Journal Line Type	Calculation	Debit	Credit
	Receiving Inspection	Return Qty x Receipt Price	\$52.5(5 x 10.5)	

### Standard Costing

**Scenario : Item estimate is same as PO Price, but different than Invoice price**

#### At PO creation

- Item PO Price: \$9 (invoice matching: receipt)
- Tax set up; exclusive tax: 10%; recoverable rate: 50%

#### At receipt

- Receipt qty = 10 each
- Item cost (estimated) : \$9/ each
- Freight (estimate) : \$1/ each

#### Landed Cost calculation

- Item cost: \$9/ each
- Tax (non recoverable) : \$0.45/ each
- Freight: \$1/ each
- Estimated landed cost: \$10.45/ each

#### Invoicing

- Item Invoice comes at \$110 (Item \$100 + Tax \$10, \$5 recoverable and \$5 non recoverable), and
- Freight Invoice \$20
- Actual Landed Cost = \$125 (Item \$105 + Freight \$20), Unit LC = 12.5. (Calculated by LCM that creates a record in costing interface which is processed by OPM costing to create adjustments)
- On hand at the time of cost update is 5 each:

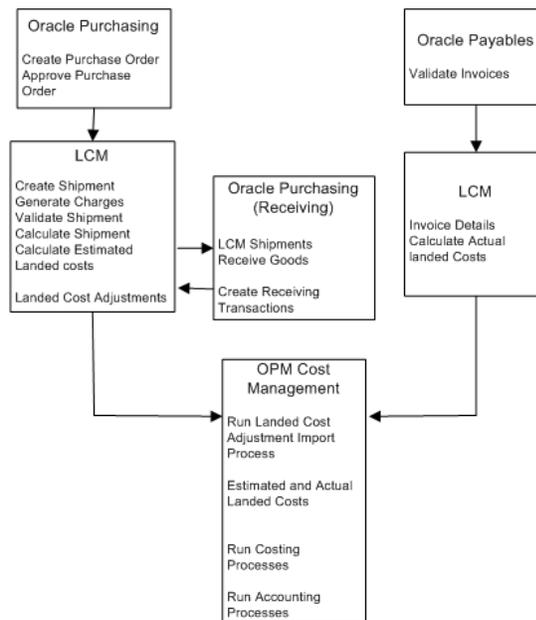
Event Type	Journal Line Type	Calculation	Debit	Credit
Receipt	Receiving Inspection	Qty Received x Receipt Price (Estimated Landed Cost)	\$104.5	
	AP Accrual (at PO Price)	Qty Received x PO Price (including non-recoverable tax)		\$94.5
	Landed Cost Absorption	Qty Received x (Receipt Price - PO Price)		\$10
Delivery	Inventory Valuation	Qty Received x Receipt Price (Estimated Landed Cost)	\$104.5	
	Receiving Inspection	Qty Received x Receipt Price (Estimated Landed Cost)		\$104.5
Landed Cost Adjustment Receipt	Receiving Inspection	Receipt Qty x [Estimated Landed Cost- PO Price]	\$10 = 10 x (10.45-9.45)	
	Landed Cost Absorption	Receipt Qty x [Estimated Landed Cost- PO Price]		\$10
Landed Cost Adjustment Delivery	Receiving Inspection	Receipt Qty x [Estimated Landed Cost- PO Price]		\$10 = 10 (10.45-9.45)
	Landed Cost Absorption	Receipt Qty x [Estimated Landed Cost- PO Price]	\$10	

## Using LCM as a Pre-Receiving Application

You can use Oracle Landed Cost Management as a pre-receiving application when estimation of the landed cost is required before the receipt of the item by the Receiving application. You must select the Pre-Receiving in LCM checkbox in the Receiving Options window of the Oracle Purchasing application in order to use LCM as a pre-receiving application. After the estimated landed cost is finalized in Landed Cost Management, the information is passed to Receiving during the receipt of the item based on the Landed Cost Management shipment. The receipt is performed using the known estimated landed cost. Receiving transactions are generated in the Receiving application and passed on to the OPM Cost Management.

After invoices are created and matched to the receipt of the item in Oracle Payables the actual price information is passed to Landed Cost Management using the concurrent Matches Interface Import concurrent program and by submitting the Submit Pending Shipments window. Using Landed Cost Management pages the actual landed cost for the shipment can be viewed and analyzed with the estimated landed cost information. Refer to the Oracle Landed Cost Management User's Guide for more information.

The Landed Cost Adjustments Import process is then run to transfer the LC adjustments to the OPM costing processes. The following figure describes the process flow when you use LCM as a pre-receiving application:



## Using LCM as a Service

When Oracle Landed Cost Management is used as a service after the receipt of items into inventory, the Landed Cost Management shipment is automatically created. The estimation of the item landed cost is also automatically calculated based on the purchase documents price and the charge amounts given by Advanced Pricing.

Landed Cost Management calculation and integration processes are performed using two concurrent programs (Landed Cost Integration Manager and Shipment Interfaces Import), which can be run or scheduled to run on a periodic basis.

The actual landed cost calculation is based on the information collected from Payables invoices and are not changed in this scenario. While viewing this cost information they can analyze and compare the difference between the estimated and actual landed costs. This information provides valuable insight into the costs of items.

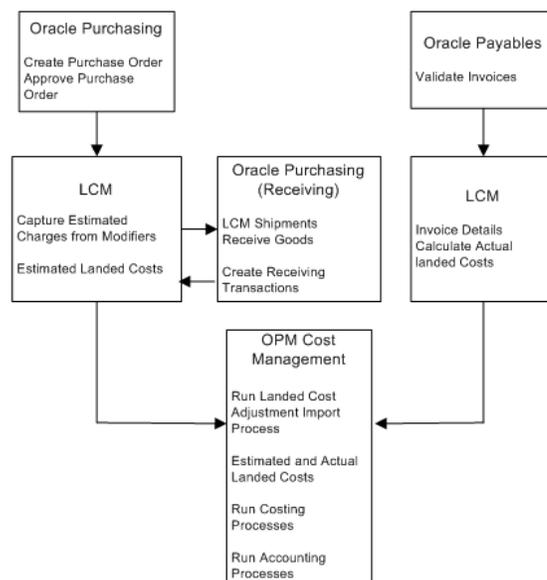
After invoices are created and matched for the receipt of the item in Oracle Payables that actual landed cost information is passed to Landed Cost Management using two concurrent programs (Matches Interface Import and Submit Pending Shipments). Using the Shipments Workbench the estimated landed cost can be viewed for the shipment after the Landed Cost Integration Manager and Shipment Interfaces Import concurrent programs have completed successfully. Refer to the Oracle Landed Cost Management User's Guide for more information on the concurrent programs.

Then, run the Landed Cost Adjustments Import process to import the landed cost adjustments into the OPM transaction tables. The landed cost adjustments are then included in item cost calculations by the following:

- Actual Cost Process, Lot Cost Process, and Standard Cost Rollup
- Cost Update
- OPM Accounting Pre-processor
- Create Accounting Program

The Detailed Subledger report displays the landed cost adjustment journal entries and the OPM Lot Cost History report displays the history of landed cost adjustments.

You can set the GMF: Landed Cost Adjustments Transfer Method to Inventory In Actual Costing to apply landed cost adjustments to inventory or period opening balance. Refer to the Setting Up chapter for more information on the profile option. The following figure describes the process flow when you use LCM as a service application:



## Running the Landed Cost Adjustments Import Process

Run the Landed Cost Adjustments Import process to validate and import ELC and ALC adjustments to OPM repository.

**To run the Landed Cost Adjustment Import process:**

1. Navigate to the **Parameters** window.
2. Enter the **Legal Entity** to import landed cost adjustments for transactions of a specific legal entity. Required.
3. Enter **From** and **To Organization** as the range of organizations for which you want to run the import process. Optional.
4. Enter **From Item** and **To Item** as the range of items for which you want to run the import process. Optional.
5. Enter **Start Date** and **End Date** to run the process for transactions of a specific date range.
6. Click **OK** then Submit.
7. Note the **Request ID** number.
8. Navigate to the **Requests** window and select the Request ID.
9. Click **Log** to view the process log. The process log lists the details of the LC adjustments that were transferred to the OPM transaction tables.

---

## Copying Costs

This topic describes copying item, overhead, and resource costs set up for one organization, calendar and period, and category to another period and inventory organization or to all periods and inventory organizations. You can use the copy processes to quickly replicate the cost data setup across several periods and several organizations rather than creating them one at a time in each periods and organizations that can be very time consuming. The copy programs let you copy the costs for a set of items or set of items belonging to a range of Item Categories or automatically modify the copied costs by a percentage or flat value providing additional flexibility in establishing your costs.

This chapter covers the following topics:

- Copying Item Costs
- Copying Costs Examples
- Copying Resource Costs
- Copying Fixed Overheads
- Copying Overhead Percentage
- Copy Source Organizations

### Copying Item Costs

You can copy item costs from:

- One period to all periods
- One organization to another organization
- One organization to all organizations

One period to:

- all subsequent open and frozen costing periods in the same calendar or

- all open and frozen periods in a different calendar

You can also update component costs while copying. You can alter the copied component costs by a flat amount or by a percentage.

### **To copy item costs:**

1. Navigate to the Copy Item Costs window.

### **Source and Target Parameters**

2. Enter the inventory organization from which you are copying item cost data in Organization Source.
3. Enter the inventory organization to which you are copying item cost data in Organization Target. To copy cost data to all inventory organizations, leave this field blank.
4. Click All Organizations to copy cost data to all inventory organizations in the given legal entity. If it is checked, then the target inventory organization (inventory organization To) is cleared.
5. Enter a valid Legal entity. The specified legal entity or organization must belong to the specified target calendar.
6. Enter the cost calendar from which you are copying cost data in Calendar Source.
7. Enter the cost calendar to which you are copying cost data in Calendar Target .
8. You can copy cost data from one period to another or to all periods in the same or different calendars in Period Source . Enter the cost calendar period from which you are copying costing data.

**Note:** You can copy component costs from a frozen or closed period to an open one. However, you cannot copy costs to a closed period from an open one. You can only copy new item costs into a frozen period.

9. Enter the cost calendar Period Target to which you are copying cost data. To copy costing data to all periods, leave it blank.

**Note:** You can copy component costs from a frozen or closed period to an open one. However, you cannot copy costs to a closed period from an open one. Only new item costs are copied.

10. Click All Periods to copy cost data to all subsequent open or frozen periods in a

given calendar. If this box is checked, then the target period (Period Target) is cleared.

11. Enter the Cost Type Source code from which you are copying costing data. Cost type codes are defined using the Cost Type Codes window.
12. Enter the cost type code to which you are copying costing data in Cost Type Target. Cost type codes are defined using the Cost Type Codes window.  
  
When you try to copy costs to Actual Cost type, a warning displays. When you run the Actual Cost process, all the copied costs are deleted.
13. Select the Copy Costs from Lower Level at Source to This Level in Target option to copy the cost components from the Lower Level at source to This Level in target.
14. To restrict the copy to a range of items, enter the opening end and the closing end of the item number range in Item (From and To).
15. To restrict the copy to a range of item cost categories, specify the opening end and the closing end of the cost category range in Cost Category (From and To)

#### **Increase/Decrease**

16. Indicate the Percentage % by which component costs should be increased or decreased as a result of the copy process. For example, if you enter 10% and the cost being copied is \$1.50, the resulting cost will be \$1.65
17. Indicate the monetary Amount by which component costs should be increased or decreased as a result of the copy process in the field. For example, if you enter \$.25 and the cost being copied is \$1.50, the resulting cost will be \$1.75.

#### **Existing Costs**

18. The Existing Costs field contains following options:
  - Remove Before Copy: Select Remove Before Copy option to remove current component costs as a result of the copy process. The current cost will be copied based on the other criteria you have entered, but the original component cost will be deleted.
  - Replace During Copy: Select Replace During Copy option to merge the current and copied component costs during the copy process. The resulting cost is different from the one that was replaced.

For example, assume the current period cost of a component is \$2.35, but you want to copy \$2.00 as the component cost into the next calendar period. If you select Replace During Costs for this option, \$2.00 will be copied into the next period.

## Copying Costs Examples

- Example 1: Increase by 10%

Cost in Source Period	Cost in Target Period after Copy
MATERIAL 2.00	MATERIAL 2.20
LABOR 1.50	LABOR 1.65

- Example 2: Increase by \$0.50

Cost in Source Period	Cost in Target Period after Copy
MATERIAL 2.00	MATERIAL 2.50
LABOR 1.50	LABOR 2.00

You have the choice of:

- Removing Existing Costs Before Copy
- Replacing Existing Costs During Copy

### Removing Existing Costs Before Copy

This option removes all cost components within the given selection criteria before proceeding to copy the costs. The example below illustrates what happens when cost components already exist in the target period and a Copy Cost process is invoked with the Remove Existing Costs Before Copy option.

#### Example 3:

Costs to Copy	Existing Costs	Result
MATERIAL 2.00	MATERIAL 2.35	MATERIAL 2.00
LABOR 1.50	LABOR 1.25	LABOR 1.50
n/a	OVERHEAD 0.75	n/a

### Replace Existing Costs During Copy

This option merges the cost of any existing component costs with the copied costs during the copy and leaves the other components unchanged. The example below illustrates what happens when cost components already exist and a Copy Cost process is executed with the Replace Existing Costs During Copy, option.

#### Example 4:

Costs to Copy	Existing Costs	Result
MATERIAL 2.00	MATERIAL 2.35	MATERIAL 2.00
LABOR 1.50	n/a	LABOR 1.50
n/a	OVERHEAD 0.75	OVERHEAD 0.75

## Copying Resource Costs

You can copy resource costs from:

- One period to all periods
- One organization to another organization
- One organization to all organizations

One period to:

- all the subsequent open or frozen costing periods in the same calendar or
- all the open or frozen periods if it is a different calendar.

You can set up all of your resource costs between one period to other costing periods and one cost type to other cost types and then copy those costs to all inventory organizations in a legal entity rather than setting up the same data repeatedly. Similarly, you can do this from one period to all the periods in the same or different calendar.

Even if the actual costs for the target organization are different, it may still be more efficient to do the following:

1. Setup the data for a source organization
2. Perform the copy to the target organization
3. Change resource costs for the target organization

4. Perform a cost rollup for the target organization

**Note:** This window is used to copy resource costs. To copy item, ingredient, and product costs, use the Copy Item Costs window.

#### **To copy resource costs:**

1. Navigate to the Copy Resource Costs window.

#### **Copy Resources**

2. Enter a valid legal entity in Legal Entity Source. The specified legal entity or organization must belong to the specified target calendar.
3. Enter a valid legal entity in Legal Entity Target.
4. Enter the organization from which you are copy resource cost data in Organization Source.
5. Enter the organization to which you are copying resource cost data in the Organization Target field.
6. Click All Organizations to copy resource cost to all inventory organizations in the given legal entity. If it is checked, then the target inventory organization (inventory organization To) is cleared.
7. Enter the cost calendar from which you are copying resource cost data in Calendar Source. Cost calendars are set up using the Cost Calendar window.
8. Enter the cost calendar to which you are copying resource cost data in Calendar Target.
9. Enter the cost calendar period from which you are copying resource cost data in Period Source.
10. Enter the cost calendar period to which you are copying resource cost data in Period Target. To copy costing data to all periods, leave it blank.

**Note:** You can copy component costs from a frozen or closed period to an open one. However, you cannot copy costs to a closed period from an open one.

11. Click All Periods to copy resource costs to all subsequent open or frozen periods in a given calendar. If it is checked, then the target period (Period To) is blanked out.
12. Enter the cost type code from which you are copying costing data in Cost Type

Source.

13. Enter the cost type code to which you are copying costing data in Cost Type Target.  
When you try to copy costs to Actual Cost type, a warning displays. When you run the Actual Cost process, all the copied costs are deleted.
14. Enter the Resource Class from which you are copying costing data. Setup resource classes using the Resource Classes form. If you enter a resource class, only the costs of resources that belong to the resource class will be copied. Leave the Resource Class empty to copy all resource costs.

## Copying Fixed Overheads

You can copy overhead details from:

- One period to all periods
- One organization to another organization
- One organization to all organizations

One Period to:

- all subsequent open and frozen costing periods in the same calendar or
- all open and frozen periods if they are in different calendars

You can set up all of your overhead details between one period to other costing periods and one cost type to other cost types and then copy those costs to all inventory organizations in a legal entity rather than setting up the same data repeatedly. Similarly, you may wish to do this from one costing period to all open and frozen costing periods in the same or different calendars.

### To copy overhead details:

1. Navigate to the Copy Overheads window.

### Source and Target Parameters

2. Enter the inventory organization from which you are copying overhead details in the Organization Source field.
3. Enter the inventory organization to which you are copying overhead details in the Organization Target field.

To copy overhead details to all inventory organizations, leave this field blank.

4. Click All Organizations to copy overhead details to all inventory organizations in

the given legal entity. If it is checked, then the target inventory organization (inventory organization To) is cleared.

5. Enter a valid Legal Entity. The specified legal entity or organization must belong to the specified target calendar.
6. Enter the cost calendar from which you are copying overhead details in Calendar Source.
7. Enter the cost calendar to which you are copying overhead details in Calendar Target .
8. You can copy overhead details from one period to another or to all periods in the same or different calendars in Period Source. Enter the cost calendar period from which you are copying overhead details.
9. Enter the cost calendar period to which you are copying overhead details in Period Target. To copy overhead details to all periods, leave this field blank.
10. Click All Periods to copy overhead details to all subsequent open or frozen periods in a given calendar. If it is checked, then the target period (Period To) is cleared.
11. Enter the cost type code from which you are copying overhead details in Cost Type From.
12. Enter the cost type code to which you are copying overhead details in Cost Type To.  
When you try to copy overheads to Actual Cost type, a warning displays. When you run the Actual Cost process, all the copied overheads are deleted.

### **Selection Range**

13. To restrict the copy to a range of items, enter the opening end and the closing end of the item number range in Item (From and To).
14. To restrict the copy to a range of item cost categories, enter the opening end and the closing end of the cost category range in Cost Category (From and To).

### **Existing Overhead**

The Existing Costs field contains following options:

15. Remove Before Copy: Select Remove Before Copy option to remove current overhead details as a result of the copy process. The current overhead details are copied based on the other criteria you have entered, but the original component overhead details are deleted.
16. Replace During Copy: Select Replace During Copy option to merge the current and copied overhead details during the copy process. The resulting overhead details is

different from the one that was replaced.

## Copying Overhead Percentage

You can copy percentage overhead values from one calendar period to another. It eliminates the need for defining overhead percentages manually for each calendar and period.

You can define overhead percentages once for one calendar and period and then use the copy overhead percentage window to copy that data over to another calendar, to one or all periods.

You can leave the target period blank, in which case:

- If the target calendar code is same as the source calendar code, then the overhead percentage is copied to all the subsequent periods of target calendar.
- If the target calendar code is different from the source calendar code, then the overhead percentage is copied to all the periods of the target calendar.

You can limit the number of records to be copied to target calendar and periods by selecting the range of overhead codes.

### To define overhead percentage:

1. Navigate to the Copy Percentage Overheads window.
2. Enter the legal entity from where you are copying the percentage overhead data in Legal Entity From.
3. Enter the legal entity to where you are copying the percentage overhead data in Legal Entity To.
4. Enter the cost Calendar From where you are copying the percentage overhead data. Cost calendars are set up using the Cost Calendar window.
5. Enter the cost Calendar To where you are copying the percentage overhead data. Cost calendars are set up using the Cost Calendar window.
6. Enter the cost calendar Period From which you are copying the percentage overhead data. You can copy percentage overheads from one period to another or to all periods in the same or different calendars.

**Note:** You can copy percentage overheads from a frozen or closed period to an open one. However, you cannot copy overheads to a frozen or closed period from an open one.

Cost calendars periods are set up using the Cost Calendar window.

7. Enter the cost calendar Period To which you are copying the percentage overhead data. To copy percentage overhead data to all periods, leave this field blank.

**Note:** You can copy percentage overheads from a frozen or closed period to an open one. However, you cannot copy overheads to a frozen or closed period from an open one.

Cost calendars periods are set up using the Cost Calendar window.

8. Click All Periods to copy percentage overhead data to all subsequent open or frozen periods in a given calendar. If it is checked, then the target period (Period To) is blanked out.
9. Enter Standard as the Cost Type code to be used. Only the Standard Cost type is supported. Required.

#### **Selection Range**

10. Enter or select a Overhead Code for which percentage will be specified. Required.

#### **Existing Percentage**

11. The Existing Costs field contains following options:
  - Remove Before Copy: Select Remove Before Copy option to remove existing percentage overheads in target periods before the copy process. The current overhead is copied based on the other criteria you entered, but the original percentage overhead is deleted.
  - Replace During Copy: Select Replace During Copy option to overwrite current percentage overhead cost during the copy process. The resulting percentage overheads are different from the one that was replaced. While doing so, if system finds matching record at target calendar, period then the record is updated with the source information else new record is inserted.

## **Copy Source Organizations**

Set up the rollup source organization and then copy the set up data to other organization , calendar, period, and item.

#### **To copy rollup source organizations:**

1. Navigate to the Copy Rollup Source Organizations window.
2. Enter the Organization to copy to.

3. Enter the Calendar to copy to.
4. Enter the Period to copy to.
5. Enter the Item Category to copy to.
6. Enter the item to copy to in Item.



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## Period-End Cost Processing

This topic explain how to update (book) item component costs in preparation for export to the proper general ledger accounts. The actual export to the general ledger requires an interface with Oracle General Ledger. This topic provides an outline for period-end processing of standard component costs and actual component costs.

This chapter covers the following topics:

- Running Cost Update
- Viewing Cost Update Results
- Viewing Cost Update Errors
- Aborting or Resetting the Cost Update Process
- Adding or Modifying Expense Allocation Costing Data
- Standard Cost Period-End Processing
- Actual Cost Period-End Processing
- Lot Cost Period-End Processing

### Running Cost Update

OPM Costing provides you an ability to cost items using the various supported cost types and view the costs simultaneously. Of these, you would use costs calculated by one cost type, defined in the Fiscal Policy, to create journal entries and other activities such as book variances. The Cost Update process creates the necessary cost records for this purpose.

You have the option of freezing updated costs for the costing period or running the update without any changes to the period status (you can run the update for the same period again). This is useful for update of component costs to the General Ledger for testing purposes. You can change component costs, then later run another cost update to replace previous costs.

You can then export these booked cost values to the proper General Ledger accounts.

## Freezing Recipe, Formulas, Routings, Operations in Final Cost Update

The Cost Update process freezes recipes, formulas, routings, and operations. When a period status is frozen, a concurrent process runs and freezes the associated recipes, formulas, routings, operations, and recipe validity rules. If the concurrent process fails to run, then only run the GMD Costing Status Update concurrent process to manually freeze the formulas, recipes, routings, and operations.

### To run the cost update process:

1. Navigate to the Cost Update window. The Start Cost Update Process window displays automatically. This window lets you begin the update for a specified calendar, period, and cost method. Specify the criteria by which OPM will select the costs to be processed.
2. Enter the Legal Entity. Transactions for all organizations linked to this legal entity are selected and included in the cost update process.
3. Enter the code for the Calendar for which the cost update is processed. Costs are updated for the legal entity and the cost type linked to this calendar. Required.
4. Enter the cost Period for which the cost update is effective. Note that closed cost periods are locked from the Cost Update process. Required
5. Period Status displays the status of the calendar period (either Open, Closed, or Frozen). You cannot edit this field.
6. Enter the Cost Type. This should be the same cost type specified on the Fiscal Policy window.
7. If you enter that the update is Final, then the period is marked as frozen at the end of the process. This locks the component costs for the specified period.

When the costing period is frozen, the following situations apply:

- You cannot update the same period costs again (however, you can update new item costs)
- You can only inquire on cost component details for the current period (however, you can enter new cost details)
- Only the costs of new items may be calculated and updated.
- You can copy costs From a frozen costing period, but not To a period that is frozen.
- Overhead details may be queried only.
- Resource cost details may be queried only.

8. Enter the date and time that the Cost Update process will start in Start Date. To start the process immediately, click Now. To start the process at a particular date, click Specific Date. Enter the date you want the cost update to run.
9. Click Accept to run the process.  
A reference number is generated by OPM. Note the reference number.
10. Cost Update Reference Number displays a unique identifier number for each individual cost update process assigned by OPM. You cannot edit the entry.

## Viewing Cost Update Results

This window displays the result of the Cost Update process run.

### To view the cost update process results:

1. Navigate to the Cost Update process window.
2. OPM assigns an identifier number for each individual cost process in Cost Update Reference Number. You cannot edit the entry.

### Selection Criteria

3. Displays the Legal Entity.
4. Displays the Calendar. Costs are updated for the legal entity and the cost type linked to this calendar.
5. Displays the Period for which costs are updated. This period defines the start and end dates for selecting all transactions.
6. Period Status displays the status of the calendar period (Open, Closed, or Frozen).
7. Displays the Cost Type for which cost are updated.

### Scheduling Information

8. Scheduled On displays when the Cost Update process was scheduled to run.
9. Started On displays the start date of the Cost Update process.
10. Started By displays the user ID and name of the person who started the Cost Update process.
11. Ended On displays the end date for the Cost Update process.

## Errors

12. Limit displays the error limit.
13. Found displays the number of errors found during the Cost Update process run.
14. Posted displays the number of errors posted.

## Abort Information

15. Aborted By displays the name of the user who aborted the Cost Update process.
16. Aborted On displays the date on which the process was aborted.
17. Aborted Reason displays the reason for aborting the Cost Update process.

### Cost Update Window - Additional Menu Features- Actions Menu

- View Error Messages - Use this option to list any errors generated during a cost update processing run. Each generated error is listed on an individual, OPM-generated line. The error itself is explained under the Error Comment heading.

Note that the first message line is not an error, but a summary of the parameters or options selected to start this update.

- Start - Displays the Start Cost Update dialog box, which allows you to begin the update for a specified calendar, period, and cost method.
- Process Status - Use this option to review the status of a cost update that is in progress. You can also review figures from previous processes, each of which is identified by the CU Ref No. The CU Ref No lookup is available to help you in selecting previous updates for query.
- Abort/Reset - Use this option to abort the cost update process that is running currently. For situations where a process was terminated unintentionally (such as a power failure), this option also resets the internal controls and settings required to start the update process again.

An Aborted Reason field is provided to capture appropriate text.

## Viewing Cost Update Errors

### Cost Update Error Messages Window

The fields on this window are:

1. Cost Update Reference Number displays a unique identifier number for each individual cost update process assigned by OPM. You cannot edit this field.

2. Line displays the line number of the error message.
3. Error Message displays the text of the error message.

## Aborting or Resetting the Cost Update Process

This window lets you abort or reset the Cost Update process.

Aborted Reason displays the reason for aborting the subsidiary ledger update process.

### To abort or reset the Cost Update process:

1. Navigate to the Cost Update Process window.
2. Select Abort/Reset from the Actions menu.
3. Enter the abort details and the reason for aborting the process.

## Adding or Modifying Expense Allocation Costing Data

You can modify any accrued expense costs allocated from the General Ledger. You can add new expense cost allocations to the ones that already exist, and create balances for statistical accounts.

### To add or modify GL cost data:

1. Navigate to Cost Allocation Maintenance. The Cost Allocation Maintenance window displays.
2. Enter the Legal Entity for which you are making modifications. Required.
3. Indicate the costing Calendar for which you are making modifications. Required.  
When a calendar is entered, the calendar's legal entity is validated against the given legal entity. A warning displays if they do not match.
4. Enter the cost calendar Period. Required
5. Enter the Allocation Code that defines the accrued indirect general ledger expenses that you are modifying. Required.
6. Enter the expense Account Key Type for which you are modifying general ledger cost allocations. Required.
  - Allocations
  - Expense

7. At this point all of the accounts that meet the criteria you have specified display in the bottom portion of the window. Modify the Amount for each account to reflect the desired General Ledger cost allocation.

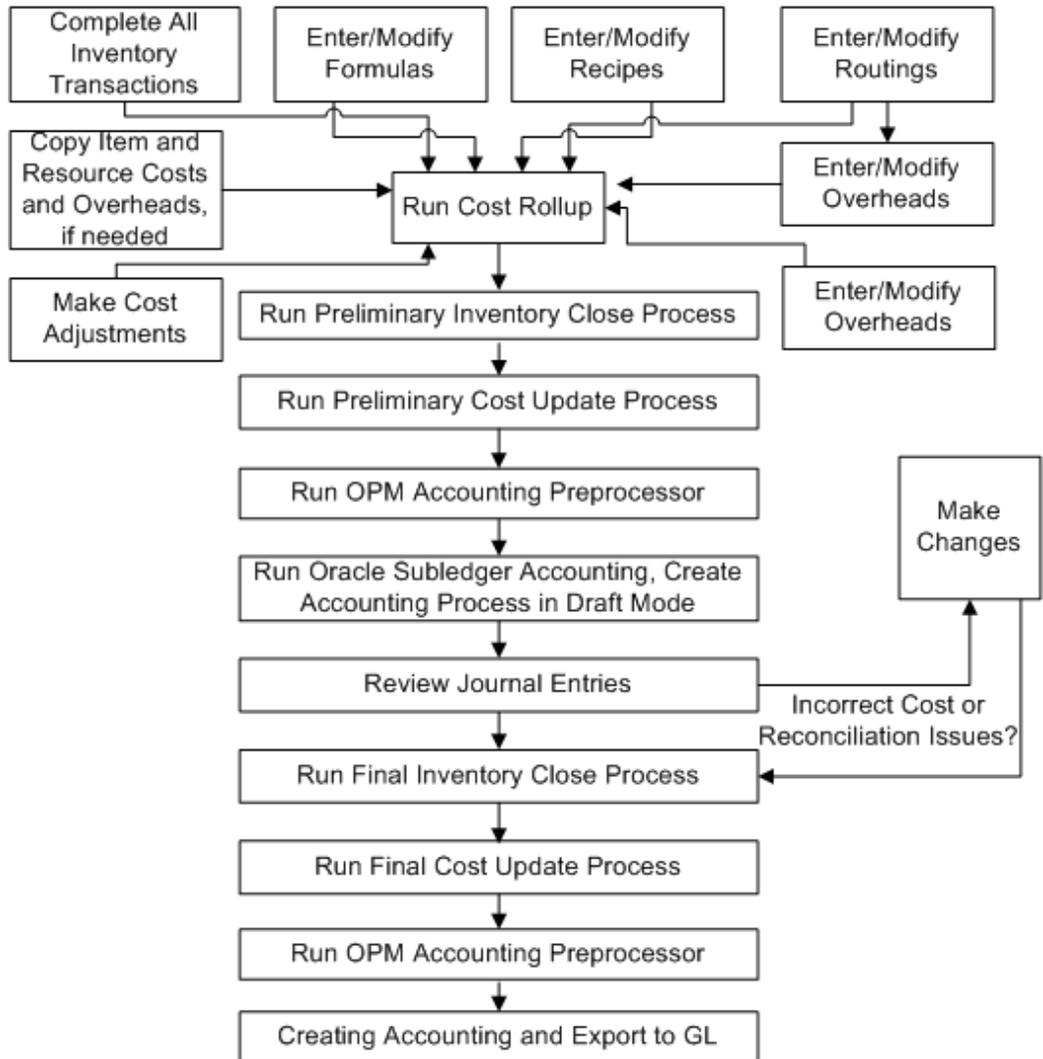
## Standard Cost Period-End Processing

This topic provides an outline for period-end processing of standard costs. For detailed procedures on each of the steps, refer to the following discussions.

The following graphic illustrates the Standard Cost Period-End Processing flow.

- First, establish raw material, resource, and overheads, and run the Cost Rollup process. Review and verify costs.
- If the costs are correct, then complete all inventory transactions for the period and run the preliminary inventory close and preliminary cost update process, and OPM Accounting preprocessor and review the results.
- If the costs are correct and there are no reconciliation issues, then run the inventory close and cost update process in the final mode. Also, run the OPM Accounting preprocessor and Create Accounting process in the final mode to create accounting entries in OPM Subledger.
- Finally, run the Create Accounting process again to export the Subledger Journals to Oracle General Ledger.

### Standard Cost Period-End Processing Flow



## Run Cost Rollup

Run the cost rollup at period-end time to consolidate standard costs of raw materials into product costs. The rollup encompasses component costs that have changed, and also new items, formulas, products, routings, and overheads that were added and set up for costing. Refer to the *Using Standard Costs* discussion for detailed cost rollup procedures.

## Run Preliminary Update

On the Cost Update window, indicate that you are Freezing the results of the cost rollup for the period. You can then (optionally) run the Oracle Subledger Accounting and

Create Accounting process in the draft mode for testing purposes (you may later change the raw material costs, then run another cost update to replace those costs).

## Close Inventory Calendar Period

Close the period (month, quarter, fiscal year) to prevent any further inventory transactions from being posted to it. Select either the Preliminary Close or Final Close.

- Preliminary Close - Period has been closed to transactions, but you may still open it and post transactions for the period
- Final Close - Transactions will no longer post for the period (balances have been frozen; you cannot open the period again)

## Run Final Cost Update

### Final Update

Specify that the update is Final; this locks the raw material costs for the specified period. You can then export these costs to the proper General Ledger accounts.

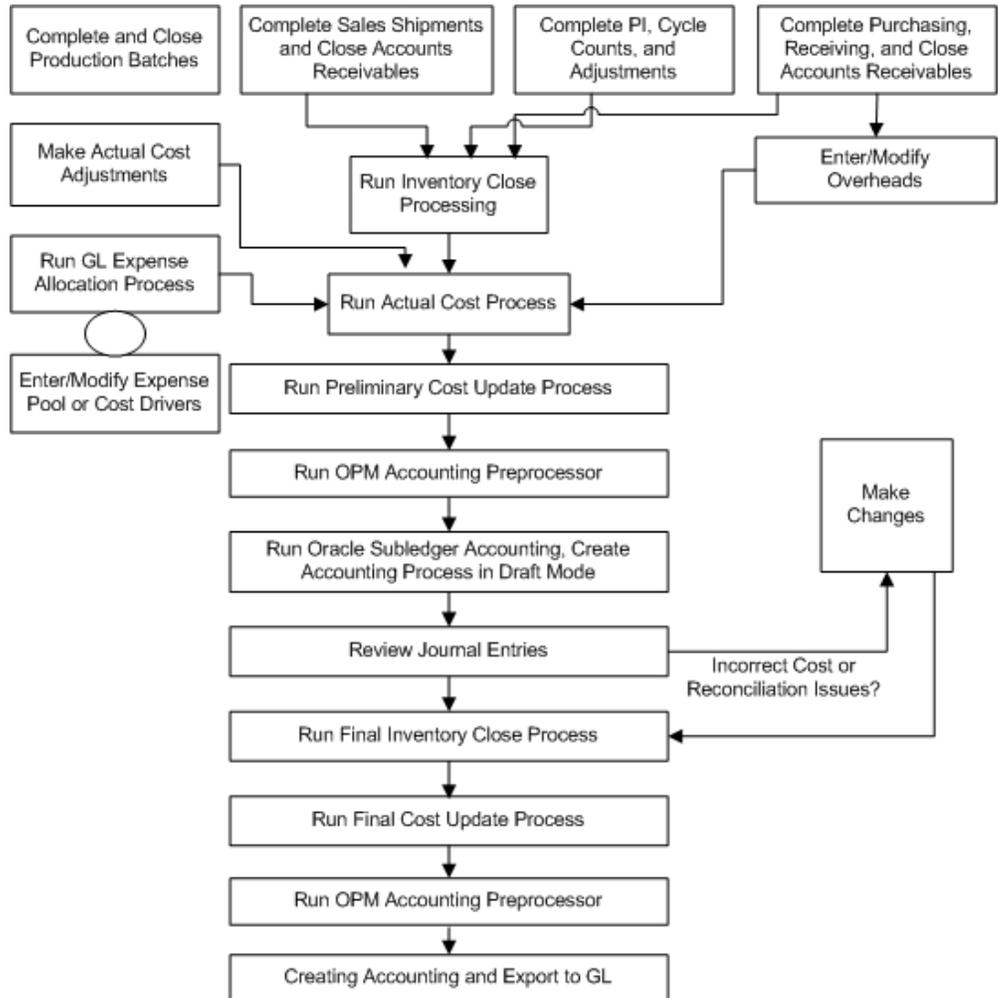
## Actual Cost Period-End Processing

The *Actual Cost Period-End Processing* topic provides an outline for period-end processing of actual component costs.

The following graphic illustrates the *Actual Cost Period-End Processing* flow.

- Ensure all transactions (in Production, Inventory, Sales, and Shipping) are completed and then run the Inventory close process either in the Preliminary or Final mode.
- Create necessary actual cost adjustments, expense allocations, and cost overhead data and run the Actual Cost process.
- Run preliminary cost update and OPM Accounting preprocessor and review the results.
- If the costs are correct and there are no reconciliation issues, then run the inventory close and cost update process in the final mode. Also, run the OPM Accounting preprocessor and Create Accounting process to create accounting entries in OPM Subledger. Finally, run the Create Accounting process again to export the Subledger Journals to Oracle General Ledger.

### Actual Cost Period-End Processing Flow



## Close Inventory Calendar Period

Close the period (month, quarter, fiscal year) to prevent any additional inventory transactions from being posted to it. Select either the Preliminary Close or Final Close.

- Preliminary Close - Period has been closed to transactions, but you may still open it and post transactions for the period
- Final Close - Transactions will no longer post for the period (balances have been frozen; you cannot open the period again)

## Calculate Actual Costs

Specify the period for which actual costs are processed. The Actual Cost process takes

the following into account:

- Raw Material Costs
- Production Batch Costs
- Overhead Costs
- Expense Allocations
- Actual Cost Adjustments

The period in the cost calendar must be either open or frozen (a closed period cannot be entered). Refer to the *Actual Cost Calculations* discussion for procedures on calculating actual costs.

## Run Preliminary Update

On the Cost Update window, indicate that you are Freezing the results of the cost rollup for the period. You can then run the Oracle Subledger Accounting and Create Accounting process in the draft mode for testing purposes (you can later change the raw material costs, then run another cost update to replace those costs).

## Run Final Cost Update

### Final Update

Specify that the update is Final. This locks the raw material costs for the specified period. You can then export these costs to the proper General Ledger accounts.

## Lot Cost Period-End Processing

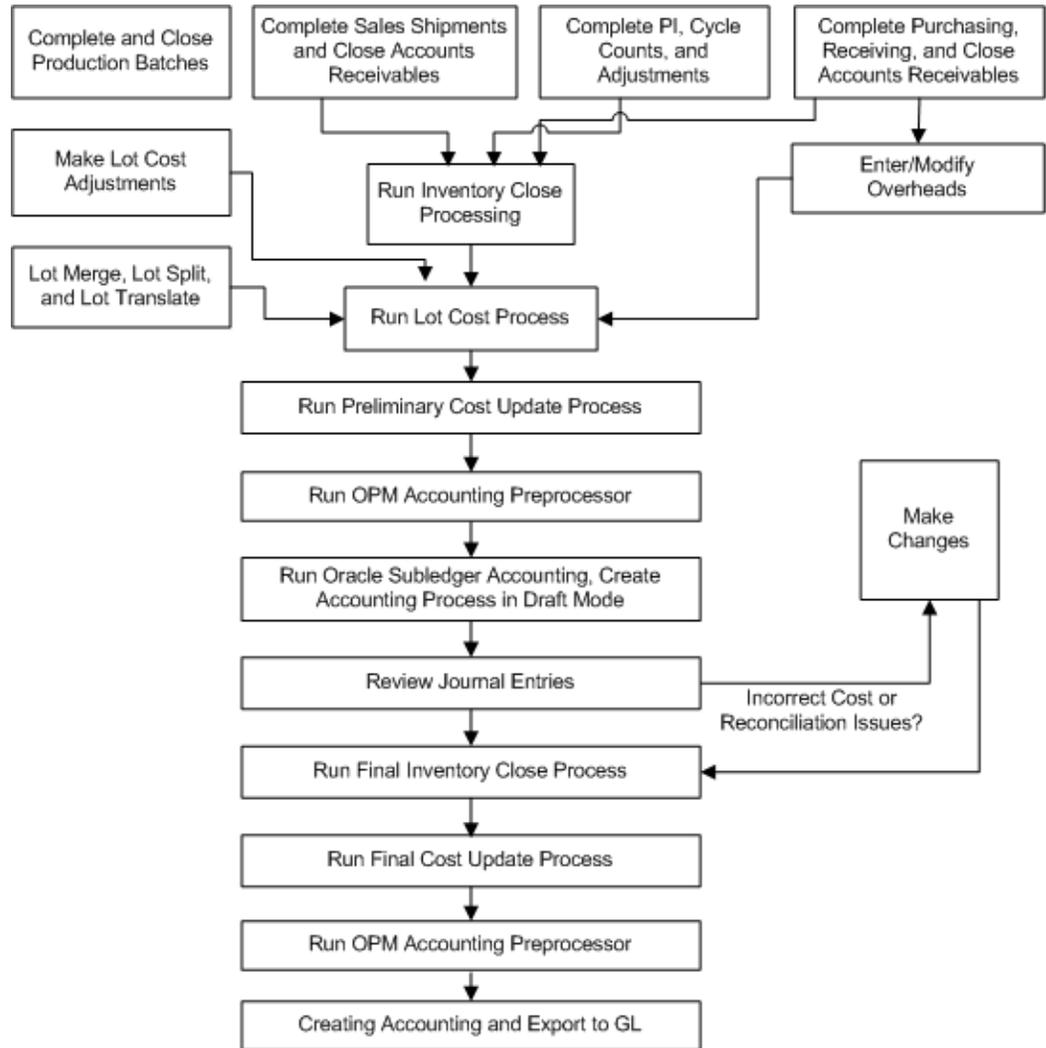
This topic provides an outline for period-end processing of standard costs. For detailed procedures on each of the steps, refer to the following discussions.

The following graphic illustrates the *Actual Cost Period-End Processing* flow.

- Ensure all transactions in Production, Inventory, Sales, and Shipping are completed. Run the Inventory close process either in the Preliminary or Final mode.
- Create necessary actual cost adjustments, expense allocations, and cost overhead data and run the Actual Cost process.
- Run preliminary cost update and OPM Accounting preprocessor and review the results.
- If the costs are correct and there are no reconciliation issues, then run the inventory close and cost update process in the final mode. Also, run the OPM Accounting

preprocessor and Create Accounting process to create accounting entries in OPM Subledger. Finally, run the Create Accounting process again to export the Subledger Journals to Oracle General Ledger.

### Lot Cost Period-End Processing Flow



All the period end processing steps are similar to the Actual Cost process period end processing. Refer to the following topics description in the "Actual Cost Period End Processing":

- Close inventory calendar period
- Run preliminary cost update or freeze costs for General Ledger
- Run final cost update

- Running Create Accounting process again to create and export accounting entries in OPM Subledger to Oracle General Ledger

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## Cost Management Reports

This topic describes the available costing reports. Reports are available through the Application's Standard Report Submission window.

This chapter covers the following topics:

- Item Cost Detail Report
- Costed Indented Bill of Materials Report
- Actual Cost Adjustments
- GL Expense Allocation Definition
- GL Expense Allocation Detail Report
- Cost Organization Association Report
- GL Item Cost Detail Report
- Inventory Valuation Report
- Batch Yield Variance Report
- Material Usage and Substitution Variance Report
- OPM Lot Cost Detail Report
- OPM Lot Cost History Report
- Running the Detailed Subledger Report
- Running the Accounting Unit Mapping Report
- Running the Account Mapping Report

### Item Cost Detail Report

Use the Item Cost Detail Report to view the cost of an item in each of the inventory organizations in which it is stored. The costs shown are based on the cost calendar, period, and cost method selected. The report can be printed by inventory organization, item and item class.

**To submit the Item Cost Detail report:**

1. Navigate to the Submit Request window.
2. Enter the Legal Entity for which you want to run the report.
3. Enter the cost Calendar Code for which you want to item costs
4. Enter the cost calendar Period for which you want to item costs.
5. Enter the Cost Type for which you want to item costs.
6. To report item costs for a range of inventory organizations, enter the first inventory organization of the range in From Organization.
7. To report item costs for a range of inventory organizations, enter the last inventory organization of the range in To Organization.
8. To report item costs for a range of items, enter the first item of the range in From Item.
9. To report item costs for a range of items, enter the last item of the range in To Item.
10. To report item costs for a range of cost categories, enter the first cost category in the range in From Cost Category.
11. To report item costs for a range of cost categories, enter the last cost category in the range in To Item Cost Category.
12. Enter the currency in which the report is generated in Report Currency.
13. Enter the exchange rate for the currency in Exchange Rate.

## Costed Indented Bill of Materials Report

The Costed Indented Bill of Materials Report is a listing of all the products, co-products, by-products, intermediates, and raw materials that are used in the production of a specific product in terms of Standard Cost break-up. The report enables you to drill-down on costs to ingredient levels for better sourcing decisions. You can request this report from the Item Cost Details and the Standard Cost Roll up window. The report does not provide information for Actual Costing or Lot Costing Cost Types.

**To run the Costed Indented Bill of Materials report:**

1. Navigate to the Submit Request window.
2. Enter Costed Indented Bill of Materials in the name field.

3. Enter the Legal Entity for which the report is to be generated. Required.
4. Enter the Cost Calendar to consider to generate the report. Required.
5. Enter the Period in the Cost calendar for which you want to generate the report. Required.
6. Select the Cost Type. Options are Standard, Actual, and Lot Costing. Required.
7. Enter any of the following fields to narrow the scope of the report:
  - From Organization and To Organization to generate the report for a range of organizations.
  - From Item and To Item to generate the report for a range of items.
  - From Cost Class and To Cost Class to generate the report for a range of cost classes.
8. Enter Maximum BOM Level as the maximum number of BOM levels to include in the report. The default value is 10. You can update this field. Required.
9. Enter Number of Indentation Character as the number of indentation characters to include in the report. The default value is 2. You can update this field. Required.
10. Select the Report Type to specify the detail level you want on the report. Options are:
  - All to display Summary, Cost component, and BOM Item level details
  - BOM Summary Only to display summary data for Material, Resource, Fixed Overhead, and Standard Cost Adjustment usage categories, for a product at each level of BOM
  - BOM Item Details to display Summary and BOM Item level details. The BOM Item Details breakup displays for a combination of Item, Cost Component, and Analysis Code.
  - Cost Component Details to display Summary and Cost Component level details. The Cost Component Details breakup displays for a combination of cost component , analysis Code, and Item.
11. Indicate how the report is to be sorted in the Sort By field. Options are:
  - Item
  - Organization

12. Click OK, then Submit.

## Actual Cost Adjustments

The Actual Cost Adjustments Report reflects actual cost adjustments made for a specific cost calendar and period. You can print cost adjustment information for all items in all inventory organizations, or restrict the report to one or more items in one or more specific inventory organizations.

### To submit the Actual Cost Adjustments report:

1. Navigate to the Submit Request window.
2. Enter Legal Entity for which you are adjusting the cost.
3. Enter the cost calendar for which you are printing actual cost adjustments in the Calendar Code field.
4. Enter the cost Period Code within the cost calendar for which you are printing actual cost adjustments.
5. Enter the Cost Type for the type of actual costing adjustments that will be included in the report.
6. To report actual cost adjustments for a range of inventory organizations, enter the first inventory organization of the range in From Organization.
7. To report actual cost adjustments for a range of inventory organizations, enter the last inventory organization of the range in To Organization.
8. To report actual cost adjustments for a range of items, enter the first item of the range in From Item.
9. To report actual cost adjustments for a range of items, enter the last item of the range in To Item.

## GL Expense Allocation Definition

Report The GL Expense Allocation Definition Report lists the definitions of the accrued general ledger expenses to be allocated to specified items. You can list definitions for all general ledger expense allocation codes, or restrict the report to only desired ones.

### To submit the GL Expense Allocation Definition report:

1. Navigate to the Submit Request window.

2. Enter Legal Entity for which you are listing General Ledger cost allocation account definitions.
3. To report on a range of allocation codes, enter the first allocation code in the range in From Allocation code.
4. To report on a range of account codes, enter the last allocation code in the range in To Allocation Code.

## GL Expense Allocation Detail Report

The GL Expense Allocation Detail Report is a detailed list of all of the expense costs that were allocated to item components from the indirect expense accruals. You can list allocation detail for all expense allocation codes, or restrict the report to allocations for only desired ones.

### To submit a GL Expense Allocation Detail report:

1. Navigate to the Submit Request window.
2. Enter Legal Entity for which you are listing general ledger cost allocation details.
3. Enter Cost Calendar to which expenses will be allocated to the mapped accounts.
4. Enter cost calendar Period Code to which expenses will be allocated to the mapped accounts. This must be an open period.
5. To report on a range of expense allocations, enter the first allocation code of the range in From Allocation code .
6. To report on a range of expense allocations, enter the last allocation code of the range in To Allocation Code.

## Cost Organization Association Report

The Cost Organization Association Report lists the cost organizations associated with the inventory organizations, or inventory organizations associated with cost organizations.

### To submit the Cost Organization Association report:

1. Navigate to the Submit Request window.
2. To report associations for a range of cost organizations, enter the first cost organization of the range in the From Cost Organization field.

3. To report associations for a range of cost organizations, enter the last cost organization of the range in the To Cost Organization field.
4. To report associations for a range of inventory organizations, enter the first inventory organization of the range in the From Inventory Organization field.
5. To report associations for a range of inventory organizations, enter the last inventory organization of the range in the To Inventory Organization field.
6. If you want to list cost organizations associated with each specific inventory organization, choose cost organizations in the Sort By fields. To list inventory organizations associated with a specific cost organization, select the inventory organization option.

## GL Item Cost Detail Report

The GL Item Cost Detail Report lists the cost updates generated by the cost update process. Use this report to verify the updated cost and make corrections before executing the subsidiary ledger process. You can restrict the report to one or more items or inventory organizations, and select from four report types:

- GL Item Cost Detail
- GL Item Cost Summary
- Zero/Negative Item Cost Detail
- Zero/Negative Item Cost Summary

### **To submit the GL Item Cost Detail report:**

1. Navigate to the Submit Request window.
2. Enter the Calendar Code for which the report is to be generated in the field.
3. Enter the Period for which this report is to be generated in the Period field. The period defined can be for an open, frozen, or closed period.
4. The Cost Method defined by the calendar displays. However, the default can be changed.
5. To report for a range, enter the first item class of the range in From Item Class.
6. To report for a range, enter the last item class of the range in To Item Class.
7. To report for a range of items, enter the first item of the range in From Item.

8. To report for a range of items, enter the last item of the range in To Item.
9. To report for a range, enter the first inventory organization of the range in From Whse.
10. To report for a range, enter the last inventory organization of the range in To Whse.
11. Indicate the Report Type to be printed in the field. There are four options:
  - GL Item Cost Detail
  - GL Item Cost Summary
  - Zero/Negative Item Cost Detail
  - Zero/Negative Item Cost Summary
12. Indicate whether the report should be generated by either an item or inventory organization in Sort By.

## Inventory Valuation Report

The Inventory Valuation report provides a tool to evaluate the cost of items in inventory by organization. This report lists the true value of inventory items for a specified period of time, in specified organizations. The costs listed are the accounting costs for the item in the organization, if available. Otherwise, the cost of the item for the legal entity is used. The inventory valuation can be based on balances available at report printing time, or the closing balance for the end of a specified calendar period.

The report is listed by item within organization. This includes item onhand balances for both primary and secondary units of measure, unit cost and total cost (value). You can print the report for one or more organization or items.

### **To submit the GL Item Cost Detail report:**

1. Navigate to the Submit Requests window.
2. Enter the Legal Entity for which you are listing general ledger cost allocation details.
3. Enter the beginning organization for the report in From Organization.
4. Enter the ending organization for the report in To Organization.
5. Enter the beginning item for the report in From Item.
6. Enter the ending item for the report in To Item.

7. To show current inventory valuation balances (that is, inventory valuation at report printing time), select Yes in Current Balance. Otherwise, select No and complete the Fiscal Year and Period to show inventory valuation as of a particular calendar and period closing date.
8. To show inventory valuation as of a particular fiscal calendar year enter the cost calendar code in Fiscal Year.
9. To show inventory valuation as of a particular period closing date, enter the period code for the cost calendar year in Period Number.
10. If the report is to be run for a currency other than the legal entity's base currency enter it in Report Currency . The report uses the legal entity's base currency by default.
11. If an alternate currency is entered above, then specify the exchange rate in Exchange Rate. The report uses a default value of 1.0.

You must complete inventory month-end processing in order for this report to reflect accurate month-end balances.

## Batch Yield Variance Report

The Batch Yield Variance Report is available through OPM Process Execution. Please refer to *Oracle Process Manufacturing Process Execution User's Guide* for details.

## Material Usage and Substitution Variance Report

The Material Usage and Substitution Variance Report is available through OPM Process Execution. Please refer to *Oracle Process Manufacturing Process Execution User's Guide* for details.

## OPM Lot Cost Detail Report

The OPM Lot Cost Detail Report lists costs generated by the lot cost process. You can verify the calculated costs.

### Prerequisites

- Run the Lot Cost Process.

### To submit the OPM Lot Cost Details report:

1. Navigate to the OPM Lot Cost Detail Report window.
2. Enter the Legal Entity for which the report is to be generated.

3. Select the appropriate Cost Type.
4. To report for a range of inventory organizations, enter the first inventory organization in the range in From Organization.
5. To report for a range of inventory organizations, enter the last inventory organization in the range in To Organization.
6. To report for a range of items, enter the first item in the range in From Item.
7. To report for a range of items, enter the last item in the range in To Item.
8. To report for a range of lots, enter the first lot in the range in From Lot.
9. To report for a range of lots, enter the last lot in the range in To Lot.
10. To report for a range of item cost category, enter the first item category in the range in From Item Cost Category.
11. To report for a range of item cost category, enter the last item category in the range in To Item Cost Category.
12. If the report is to be run for a currency other than the legal entity's base currency enter it in Currency. The report uses the legal entity's base currency by default.
13. If an alternate currency is entered above, then specify the exchange rate in Exchange Rate. The report uses a default value of 1.0.
14. Click Ok.

## OPM Lot Cost History Report

The OPM Lot Cost History Report displays the lot history to analyze how the costs are calculated. A history of item and lot is maintained for costing purposes. This history detail includes all the receipts of a lot into inventory, all consumptions of the lot, and adjustments.

### Prerequisites

- Run the Lot Cost Process.

### To submit the OPM Lot Cost History report:

1. Navigate to the OPM Lot Cost History Report window.
2. Enter the Legal Entity for which the report is to be generated.

3. Select the appropriate Cost Type.
4. To report for a range of inventory organizations, enter the first inventory organization in the range in From Organization.
5. To report for a range of inventory organizations, enter the last inventory organization in the range in To Organization .
6. To report for a range of items, enter the first item in the range in From Item.
7. To report for a range of items, enter the last item in the range in To Item.
8. To report for a range of lots, enter the first lot in the range in From Lot.
9. To report for a range of lots, enter the last lot in the range in To Lot.
10. To report for a range of item cost category, enter the first item category in the range in From Item Cost Category.
11. To report for a range of item cost category, enter the last item category in the range in To Item Cost Category.
12. To report for a range of dates, enter the first date in the range in From Date.
13. To report for a range of dates, enter the last date in the range in To Date.
14. If the report is run for a currency other than the legal entity's base currency, then enter it in Currency. The report uses the legal entity's base currency by default.
15. If an alternate currency is entered above, then enter the exchange rate in Exchange Rate.
16. Click Ok.

## Running the Detailed Subledger Report

The Detailed Subledger report is run to print accounting transactions and event classes for an organization as specified in the parameters. You must run the OPM Accounting Pre-Processor for an organization and use the reference number generated to run the Detailed Subledger report.

### Prerequisites

- Run the OPM Accounting Pre-Processor.

**To submit the Detailed Subledger report:**

1. Navigate to the Submit Request window.
2. Enter Detailed Subledger Report in the Name field.
3. Enter any of the following fields to narrow the scope of the report:
  - Reference No. that is generated after running the OPM Accounting Pre-Processor.

**Note:** If you enter the Reference No, then the Ledger, Cost Type, Fiscal Year, Period, Start Date, and End Date values default from the associated run of the OPM Accounting Pre-Processor.

- Legal Entity for which the report is to be generated.
  - Ledger for which the report is to be generated.
  - Cost Type for which the report is to be generated.
  - Fiscal Year for which the report is to be generated.
  - Period for which the report is to be generated.
  - Organization Code of the organization for which the report is to be generated.
4. Enter the Start Date and the End Date to run the report for a specific range of dates.
  5. Optionally, enter the Entity Code for which you want to run the report. This is an optional field. Valid values are:
    - Inventory Transactions
    - Order Management
    - Process Execution
    - Purchasing Transactions
    - Inventory Revaluation

For example, if you select Process Execution, then the report shows accounting entries for transactions in OPM Process Execution only.

6. Optionally, enter the Event Class for which you want to run the report. This is an

optional field. The list of values displays only those event classes that belong to the entity code you specify. For example, if you select Process Execution as the entity code then the following event classes display in the list of values:

- Batch Close Variance
  - Batch Material Transactions
  - Batch Resource Transactions
7. Optionally, enter the Event Type for which you want to run the report. The list of values displays only those event types that belong to the event class you specify.
  8. Select Include Zero Amt. Lines as Yes if you want the report to include transactions with zero values also.
  9. Click OK.
  10. Click Submit.

## Running the Accounting Unit Mapping Report

The Accounting Unit Mapping Report prints a list of the accounting unit mappings you have defined for a particular company. You can print the report for all or a range of accounting units, organizations, or warehouses.

### **To run the Accounting Unit Mapping report:**

1. Navigate to the Submit Request window.
2. Enter Accounting Unit Mapping in the Name field. The Parameters window appears.
3. Enter the Company for which you want to print the report. This field defaults to the company associated with your operator code but may be changed. Required.
4. Enter From Accounting Unit and To Accounting Unit to print the report for a range of accounting units. If you want to run the report for all accounting units, then leave the fields blank.
5. Enter From Orgn and To Orgn to run the report for a range of organizations. If you want to run the report for all organizations, then leave the fields blank.
6. Enter From Whse and To Whse to run the report for a range of warehouses. If you want to run the report for all warehouses, then leave the fields blank.
7. Click OK.

8. Click Submit.

**Note:** You can use the Accounting Unit Mapping and Account Mapping reports to review the comparison of account mappings in 11i with new mappings in R12, only if you have migrated from Release 11i to R12. If you are in Release 12, then you can use the SLA Subledger Accounting Rules Detail Listing Report to view the Application Accounting Definitions (AAD), Journal Line Definitions (JLD), and Journal Line Type (JLT) definitions.

## Running the Account Mapping Report

The Account Mapping Report prints a list of the account mappings you have defined for a particular company. You can include all or a range of accounts and account titles.

### To run the Account Mapping report:

1. Navigate to the Submit Request window
2. Enter Account Mapping in the Name field. The Parameters window appears.
3. Enter the Company for which you want to print the report. This field defaults to the company associated with your operator code but may be changed. Required.
4. Enter From Account Title and To Account Title to print the report for a range of account titles. If you want to run the report for all account titles, then leave the fields blank.
5. Enter From Account No and To Account No to print the report for a range of accounts. If you want to run the report for all accounts, then leave the fields blank.
6. Click OK.
7. Click Submit.



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## Accounting Setup

The following chapter describes the accounting setup done in Oracle Subledger Architecture.

This chapter covers the following topics:

- Subledger Accounting
- Application Accounting Definition Hierarchy
- Multiple Subledger Accounting Valuation for a Transaction
- OPM Costing - SLA Accounting Data

### Subledger Accounting

Accounting for all transactions uses Oracle Subledger Accounting (SLA). SLA delivers many benefits, and lets you customize the way accounting is performed for a specific event. You can use accounts derived from custom business logic based on data provided by the application (accounting sources).

SLA is a common rule-based accounting engine used by Oracle products that posts accounting entries into Oracle General Ledger. Rules are user-defined and reside in a common repository for all subledger applications such as OPM Cost Management. The SLA accounting engine is a common engine for all subledger applications and provides you with a single common paradigm for defining your accounting behaviors.

The engine supports multiple currencies, as well as audit tools such as the XML Publisher based Journal Entries report. This report also displays the balance of an Inventory Valuation account within the specified date range. Refer to Journal Entries Report, *Oracle Subledger Accounting Implementation Guide*.

The subledger accounting engine lets the accounting department maintain sophisticated control over accounting and charts of accounts. Accounting rules can be defined against most attributes. For example, you can use an attribute of an item to redirect accounting to the proper category of Cost of Goods Sold within the Chart of Accounts. You can also control and avoid user errors from being entered into the application. Incorrect entries

can be redirected to proper accounts.

Refer to the *Oracle Subledger Accounting Implementation Guide* for details on setting up and using Subledger Accounting.

## Application Accounting Definition Hierarchy

Accounting Methods Builder is a set of programs and utilities with SLA that lets you create the event model. Account Derivation Rule builder is part of the Account Methods Builder that lets you create a rule-based account construction. Transaction Account Builder provides a subset of Accounting Methods Builder features. Journal Line Types are defined in Accounting Methods Builder and include options to convert transaction data into Subledger journal entry. Journal Line Types help to determine whether a Subledger journal entry line is a debit or credit, whether it should be transferred to the GL in summary or detail mode, whether matching lines must be merged and its balance type (actual, encumbrance, or budget). Journal Line Types are defined for an event class and are assigned to Event Class and Event Types. The Journal Line Types to use for an event is defined using Source's. Journal Line Definition associate Journal Line Types and Account Definition Rules. This determines what Account Derivation Rules to use for Journal Line Types.

For example, for Production Batches, OPM maps INV, RCA, RUV, WIP Journal Line Types and assigns them to the appropriate event class and event type. You must create an Account Derivation Rule to use the AAP account during goods receipt. GL Accounts are retrieved using Account Derivation Rules.

Accounting template is setup using Application Accounting Definition. Application Accounting Definition determines how the accounting for events are processed by accounting program. You can setup accounting templates in addition to what is provided as seed data.

Application Accounting Definition ties all the these together. Events, Journal Line Types, Account Definition Rules, and Analytical Criteria collectively define Application Accounting Definition. Account Definition Rules and Analytical Criteria are assigned to Journal Line Types, which are then assigned to Events and these Events are assigned to Application Accounting Definition. You can create multiple Application Accounting Definition for each transaction model. All the Application Accounting Definitions are grouped to form Subledger Accounting Method. To complete the setup, the Subledger Accounting Method is assigned to a Ledger. Refer the *Oracle Subledger Accounting Implementation Guide* for more details. For example, in the case of Application Accounting Definition for Production Batch contains Event Classes (Release, Completion, and Closure), Journal Line Types (INV, WIP, RCA, RUV), Account Definition Rules (user-defined), and journal line descriptions.

## Multiple Subledger Accounting Valuation for a Transaction

You can use the Valuation Cost Method option on the Subledger Applications window

to generate accounting for transactions using multiple cost methods for simulations. SLA supports different accounting for each valuation method. At anytime there can be more than one representation. You must setup secondary ledgers and assign a valuation method to it. Refer to "Assigning Ledgers" topic for more details.

To create multiple accounting representations:

- Create secondary ledgers and other required setup.
- Select Subject to Valuation Method option in the Subledger Applications window of Oracle Subledger Accounting application available from the OPM Financials responsibility.
- Set up Fiscal Policy for the operating unit in OPM Financials.
- Select Valuation Method Assignment window from the Fiscal Policy window Actions menu to assign valuation methods ledgers.
- Assign Valuation Method to each ledger to see the accounting representations.

## OPM Costing - SLA Accounting Data

### Events

Oracle Subledger Architecture Event model consists of Event Entity, Event Class, and Event Type. Events are seeded into SLA to process OPM transactions. SLA calls the extract program during accounting to extract amounts for these transactions that are posted to GL Accounts.

The following table displays the OPM entities:

Entity Type	Entity Name
INVENTORY	Inventory Transaction
ORDER MANAGEMENT	Order Management
PRODUCTION	Process Execution
PURCHASING	Purchasing Transactions
REVALUATION	Inventory Revaluation

The following table displays the OPM entities, event classes, and event type names:

<b>Entity Name</b>	<b>Event Class Name</b>	<b>Entity Type Code</b>	<b>Event Type Name</b>
Inventory Revaluation	Actual Cost Adjustment	ACTCOSTADJ	Actual Cost Adjustment
Inventory Revaluation	Cost Revaluation	COSTREVAL	Cost Revaluation
Inventory Revaluation	Lot Cost Adjustment	LOTCOSTADJ	Lot Cost Adjustment
Inventory Transactions	Direct Interorg Receipt	DIR_INTERORG_RCPT_TP	Direct Interorg Receipt, Transfer Pricing
Inventory Transactions	Direct Interorg Receipt	DIR_INTERORG_RCPT	Direct Interorg Receipt, no Transfer Pricing
Inventory Transactions	Direct Interorg Shipment	DIR_INTERORG_SHIP_TP	Direct Interorg Shipment, Transfer Pricing
Inventory Transactions	Direct Interorg Shipment	DIR_INTERORG_SHIP	Direct Interorg Shipment, no Transfer Pricing
Inventory Transactions	Internal Order to Expense	INT_ORDER_ISSUE	Internal Order Issue to Expense
Inventory Transactions	Internal Order to Expense	EXP_REQ_RCPT	Internal Order Receipt to Expense
Inventory Transactions	Intransit Interorg Receipt for FOB Shipment	FOB_SHIP_RECEIPT_RCPT	Intransit Interorg Receipt for FOB Shipment
Inventory Transactions	Intransit Interorg Shipment for FOB Receipt	FOB_RCPT_SENDER_SHIP	Intransit Interorg Shipment for FOB Receipt
Inventory Transactions	Logical Intercompany	LOG_IC_SHIPMENT_RCPT	Logical InterCompany Receipt

<b>Entity Name</b>	<b>Event Class Name</b>	<b>Entity Type Code</b>	<b>Event Type Name</b>
Inventory Transactions	Logical Intercompany	LOG_IC_RCPT_RET URN	Logical InterCompany Receipt Return
Inventory Transactions	Logical Intercompany	LOG_IC_SALES_RET URN	Logical InterCompany Sales Return
Inventory Transactions	Logical Intercompany	LOG_IC_SALES_ISSU E	Logical Intercompany Sales Issue
Inventory Transactions	Miscellaneous Transactions	ACCT_ALIAS_ISSUE	Account Alias Issue
Inventory Transactions	Miscellaneous Transactions	ACCT_ALIAS_RECEI PT	Account Alias Receipt
Inventory Transactions	Miscellaneous Transactions	ACCT_ISSUE	Account Issue
Inventory Transactions	Miscellaneous Transactions	ACCT_RECEIPT	Account Receipt
Order Management	RMA	LOG_RMA_RECEIPT	Logical RMA Receipt
Order Management	RMA	RMA_RECEIPT	RMA Receipt
Order Management	RMA	RMA_RETURN	RMA Return
Order Management	Shipments	COGS_RECOGNITIO N	COGS Recognition
Order Management	Shipments	COGS_RECOGNITIO N_ADJ	COGS Recognition Adjustment
Order Management	Shipments	LOG_SO_ISSUE	Logical Sales Order Issue
Order Management	Shipments	SO_ISSUE	Sales Order Issue
Process Execution	Batch Close Variances	CLOS	Batch Close

<b>Entity Name</b>	<b>Event Class Name</b>	<b>Entity Type Code</b>	<b>Event Type Name</b>
Process Execution	Batch Material Transactions	CERT	Batch Completion
Process Execution	Batch Material Transactions	RELE	Batch Release
Process Execution	Batch Resource Transactions	STEP	Step Completion
Purchasing Transactions	Deliver to or Return from Inventory	INT_REQ_RECEIPT_ADJ	Internal Requisition Receipt Adjustment
Purchasing Transactions	Deliver to or Return from Inventory	LOG_PO_RECEIPT	Logical PO Receipt
Purchasing Transactions	Deliver to or Return from Inventory	LOG_PO_RCV_ADJ Logical	Logical PO Receipt Adjustment
Purchasing Transactions	Deliver to or Return from Inventory	LOG_RET_TO_RECEIVING	Logical Return to Receiving
Purchasing Transactions	Deliver to or Return from Inventory	PO_RECEIPT PO	PO Receipt
Purchasing Transactions	Deliver to or Return from Inventory	PO_RECEIPT_ADJ	PO Receipt Adjustment
Purchasing Transactions	Deliver to or Return from Inventory	RETRO_PRICE_UPD	Retroactive Price Update
Purchasing Transactions	Deliver to or Return from Inventory	RET_TO_RECEIVING	Return to Receiving from Inventory
Purchasing Transactions	Deliver to or Return from Inventory	XFER_TO_CONSIGN ED	Transfer to Consigned
Purchasing Transactions	Deliver to or Return from Inventory	XFER_TO_REGULAR	Transfer to Regular
Purchasing Transactions	Receiving	DELIVER_EXPENSE	Deliver to Expense

Entity Name	Event Class Name	Entity Type Code	Event Type Name
Purchasing Transactions	Receiving	EXP_RET_TO_RECEIVING	Expense Return to Receiving
Purchasing Transactions	Receiving	LOG_RECEIVE	Logical Receiving
Purchasing Transactions	Receiving	LOG_RET_TO_VENDOR	Logical Return to Vendor
Purchasing Transactions	Receiving	RECEIVE	Receive to Inspection
Purchasing Transactions	Landed Cost Adjustment	LC_ADJUST_DELIVER	Landed Cost Adjustment- Deliver
Purchasing Transactions	Landed Cost Adjustment	LC_ADJUST_EXP_DELIVER	Landed Cost Adjustment- Expense Deliver
Purchasing Transactions	Landed Cost Adjustment	LC_ADJUST_RECEIVE	Landed Cost Adjustment- Receive
Purchasing Transactions	Landed Cost Adjustment	LC_ADJUST_VALUATION	Landed Cost Adjustment- Valuation

## Account Definitions

Account definitions are created in Accounting Methods Builder (AMB) determine the journal line types, descriptions, General Ledger accounts and other elements of subledger journal entries. Each of the components is explained.

Journal Line Types (JLTs) determine basic information about a subledger journal entry line. This information includes whether the line is a debit or credit, whether it must be transferred to the General Ledger in summary or detail mode, whether matching lines should be merged, and its balance type (actual, encumbrance, or budget).

Journal Line Definition associate Journal Line Types and Account Derivation Rules. This determines which account derivation rules to use for journal line types. GL Accounts are retrieved using account derivation rules.

**Note:** The Journal Line Types are specific to Event Classes. In some cases, the Journal Line Type could be repeated under more than one event class.

The following table displays the OPM Costing - SLA Journal Line Types:

Journal Line Type Code	Journal Line Type	Journal Line Code
AAP	Accrued Accounts Payable	Accrued Accounts Payable
ALC	Allocation	Allocation
ALV	Allocation Variance	Allocation Variance
CLEARING	Clearing	Clearing
CLEARING	Clearing Account	Clearing
CLS	Batch Close Variance	Batch Close Variance
COGS	Cost of Goods Sold	Cost of Goods Sold
DCOGS	Deferred Cost of Goods Sold	Deferred Cost of Goods Sold
EXP	Expense	Expense
EXP_SUB_FROM	Expense - Transfer From	Inventory - Transfers
EXP_SUB_TO	Expense - Transfer To	Inventory - Transfers
FRT	Freight Expense	Freight Expense
ICACC	Intercompany Accrual	Intercompany Accrual
ICCOGS	Intercompany COGS	Intercompany Cost of Goods Sold
ICEXP	Intercompany Expense	Intercompany Expense
INV	Inventory Valuation	Inventory Valuation
INV_SUB_FROM	Inventory - Transfer From	Inventory - Transfers

<b>Journal Line Type Code</b>	<b>Journal Line Type</b>	<b>Journal Line Code</b>
INV_SUB_TO	Inventory - Transfer To	Inventory - Transfers
IOP	Inter-Org Payables	Inter-Org Payables
IOPR	Inter-Org Profit	Inter-Org Profit
IOR	Inter-Org Receivables	Inter-Org Receivables
IRV	Inventory Revaluation Variance	Inventory Revaluation Variance
ISP	Receiving Inspection	Receiving Inspection
ITR	Intransit Inventory	Intransit Valuation
IVA	Inventory Adjustments Expense	Inventory Adjustments Expense
OHV	Overhead Variance	Overhead Variance
OVH	Overhead Absorption	Overhead Absorption
PIN	Profit In Inventory	Profit in Inventory
PPV	Purchase Price Variance	Purchase Price Variance
RCA	Resource Control Account	Resource Control Account
RMV	Resource Manning Variance	Resource Manning Variance
RPADJ	Retroactive Price Adjustment	Retroactive Price Adjustment
RSV	Resource Substitution Variance	Resource Substitution/Method Variance
RUV	Resource Usage Variance	Resource Usage/Efficiency Variance
SUB	Substitution Variance	Substitution Variance

<b>Journal Line Type Code</b>	<b>Journal Line Type</b>	<b>Journal Line Code</b>
USG	Usage Variance	Usage Variance
WIP	Work in Process Valuation	Work In Process Valuation
XTC	Interorg Transfer Credit	Inter-Org Transfer Credit
YLD	Yield Variance	Yield Variance
LCA	Landed Cost Absorption	Landed Cost Absorption
LCV	Landed Cost Variance	Landed Cost Variance

The following table displays the OPM Costing - SLA Account Derivation Rules:

<b>Segment Rule Code</b>	<b>Segment Rule Type</b>
AAP	Accrued Accounts Payable
ALC	Allocation
ALV	Allocation Variance
CLEARING	Clearing Account
CLS	Batch Close Variance
COGS	Cost of Goods Sold
DCOGS	Deferred Cost of Goods Sold
EXP	Expense
FRT	Freight Expense
ICACC	Intercompany Accrual
ICCOGS	Intercompany COGS
ICEXP	Intercompany Expense

<b>Segment Rule Code</b>	<b>Segment Rule Type</b>
INV	Inventory Valuation
INV_SUB_FROM	Inventory - Transfer From
INV_SUB_TO	Inventory - Transfer To
IOP	Inter-Org Payables
IOPR	Inter-Org Profit
IOR	Inter-Org Receivables
IRV	Inventory Revaluation Variance
ISP	Receiving Inspection
ITR	Intransit Inventory
IVA	Inventory Adjustments Expense
OHV	Overhead Variance
OVH	Overhead Absorption
PIN	Profit In Inventory
PPV	Purchase Price Variance
RCA	Resource Control Account
RMV	Resource Manning Variance
RPADJ	Retroactive Price Adjustment
RSV	Resource Substitution Variance
RUV	Resource Usage Variance
SUB	Substitution Variance

<b>Segment Rule Code</b>	<b>Segment Rule Type</b>
USG	Usage Variance
WIP	Work in Process Valuation
XTC	Interorg Transfer Credit
YLD	Yield Variance

The following table displays the OPM Costing - SLA Journal Line Definitions:

<b>Journal Line Definition Code</b>	<b>Journal Line Definition Name</b>
ACTCOSTADJ	Actual Cost Adjustments
BATCH_CLOSE	Batch Close
BATCH_COMPLETION	Batch Completion
BATCH_RELEASE	Batch Release
BATCH_STEP	Step Completion
COSTREVAL	Cost Revaluation
INT_REQ_RCPT_ADJ	Internal Requisition Receipt Adjustment
LOG_PO_RCV_ADJ	Logical PO Receipt Adjustment
LOGICAL_PO_RECEIPT	Logical PO Receipt
LOG_RET_TO_RECEIVING	Logical Return to Receiving
DELIVER	PO Receipt
PO_RECEIPT_ADJ PO	Receipt Adjustment
RETRO_PRICE_UPD	Retroactive Price Update
PO_RETURN	Return to Receiving

<b>Journal Line Definition Code</b>	<b>Journal Line Definition Name</b>
XFER_TO_CONSIGN	Transfer to Consigned
XFER_TO_REG	Transfer to Regular
DIRECT_XFER_RECV	Direct Inter-Org Receipt, no Transfer Pricing
DIRECT_XFER_RECV_TP	Direct Interorg Receipt, Transfer Pricing
DIRECT_XFER_SHIP	Direct Interorg Shipment, no Transfer Pricing
DIRECT_XFER_SHIP_TP	Direct Interorg Shipment, Transfer Pricing
FOB_RCPT_RECIPIENT_RCPT_NO_TP	Recipient-side Intransit Interorg Receipt for FOB Receipt, no Transfer Pricing
FOB_RCPT_RECIPIENT_RCPT_TP	Recipient-side Intransit Interorg Receipt for FOB Receipt, Transfer Pricing
FOB_RCPT_SENDER_RCPT_NO_TP	Sender-side Intransit Interorg Receipt for FOB Receipt, no transfer Pricing
FOB_RCPT_SENDER_RCPT_TP	Sender-side Intransit Interorg Receipt for FOB Receipt, Transfer Pricing
FOB_RCPT_SENDER_SHIP	Intransit Interorg Shipment for FOB Receipt
FOB_SHIP_RECIPIENT_RCPT	Intransit Interorg Receipt for FOB Shipment
FOB_SHIP_RECIPIENT_SHIP_NO_TP	Recipient-side Intransit Interorg Shipment for FOB Shipment, no Transfer Pricing
FOB_SHIP_RECIPIENT_SHIP_TP	Recipient-side Intransit Interorg Shipment for FOB Shipment, Transfer Pricing
FOB_SHIP_SENDER_SHIP_NO_TP	Sender-side Intransit Interorg Shipment for FOB Shipment, no Transfer Pricing
FOB_SHIP_SENDER_SHIP_TP	Sender-side Intransit Interorg Shipment for FOB Shipment, Transfer Pricing
EXP_REQ_RCPT	Internal Order Receipt to Expense

<b>Journal Line Definition Code</b>	<b>Journal Line Definition Name</b>
EXP_REQ_RCPT_TP	Internal Order Receipt into Expense, Transfer Pricing
INT_ORDER_ISSUE	Internal Order Issue to Expense
INT_ORDER_ISSUE_TP	Internal Order to Expense, Transfer Pricing
LOG_IC_RCPT_RETURN	Logical InterCompany Receipt Return
LOG_IC_SALES_ISSUE	Logical Intercompany Sales Issue
LOG_IC_SALES_RETURN	Logical InterCompany Sales Return
LOG_IC_SHIPMENT_RCPT	Logical InterCompany Receipt
LOT_COST_ADJ	Lot Cost Adjustments
MISC_TXN	Miscellaneous Transactions
ADJUST_DELIVER	Adjust Deliver
ADJUST_RECEIVE	Adjust Receive
DELIVER_EXPENSE	Deliver to Expense
EXP_RET_TO_RECEIVING	Expense Return to Receiving
LOG_RECEIVE	Logical Receiving
LOG_RET_TO_VENDOR	Logical Return to Vendor
RECEIVE	Receive to Inspection
RETURN	Return to Vendor
RMA	RMA Receipt or Return
COGS_RECOGNITION	COGS Recognition
COGS_RECOGNITION_ADJ	COGS Recognition Adjustment

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<b>Journal Line Definition Code</b>	<b>Journal Line Definition Name</b>
LOGICAL_SO_ISSUE	Logical Sales Order Issue
SO_ISSUE	Sales Order Issue
SUBINV_XFER	Sub-inventory Transfers

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## Accounting Processes and Distributions

This chapter describes the subledger account distribution.

This chapter covers the following topics:

- Running the OPM Accounting Preprocessor
- Viewing the Accounting Preprocessor Results
- SLA Accounting Processes
- Viewing Accounting Events Journal Entries
- Subledger Account Distribution
- Business Rules for Distributions
- Oracle Inventory Distributions
- OPM Costing Distribution
- Production Distribution
- Oracle Order Management Distribution for Process Organization
- Oracle Purchasing Distribution for Process Organization
- Enhanced Drop Shipments and Global Procurement

### Running the OPM Accounting Preprocessor

OPM Financials includes OPM Accounting Preprocessor that lets you create events in SLA tables. SLA identifies eligible events and uses these events to extract data using OPM supplied extract program into extract tables.

#### **To view the accounting preprocessor entries:**

1. Navigate to the OPM Accounting Preprocessor window.
2. Select Submit Process from the Actions menu.

3. Enter the Legal Entity for which you are running the process.
4. Select the Ledger associated to the Legal Entity and to which you are posting the journal entries to.
5. Cost Type associated to the selected legal entity displays.
6. Select the Fiscal Year for which the processor is run.
7. Select the Period of the fiscal year for which the processor is run.
8. Enter the date in the Open Period.
9. OPM retrieves the corresponding Open GL Fiscal Year for the specified date.
10. OPM retrieves the corresponding GL Period for the specified date.
11. Enter the first day of the period of the fiscal year for which the test subsidiary ledger update is being performed in Post Start Date .
12. Enter the last day of the period of the fiscal year for which the test subsidiary ledger update is being performed in Post End Date.
13. Indicate if transaction must be posted when there is no cost.
14. Select the sources to run the process for:
  - Inventory Transactions
  - Order Management Transactions
  - Product Batch Transactions
  - Purchasing Transactions
  - Costing Transactions

When you select Costing Transaction, the Cost Revaluation Parameters tab is enabled.

Select Revaluation Transactions and or Actual Cost Adjustments.
15. Enter the date and time that the preprocessor must start in Start Date.
16. Click Now to start the process immediately.
17. To start the process at a particular date, click the Specific Date radio button.
18. Enter the date you want the preprocessor to run.

19. Click Ok to run the process.

The reference number displays, make a note of it.

## Viewing the Accounting Preprocessor Results

The OPM Accounting Preprocessor window displays the results of the preprocessor run. You can query the result by reference number.

### To view the accounting preprocessor results:

1. Navigate to the OPM Accounting Preprocessor window.
2. Select View Process from the Actions menu.
3. Indicates the reference number assigned for the accounting preprocessor run.
4. Displays the number of Extract Headers Created.
5. Displays the number of Extract Lines Created.
6. Indicates the number of rows posted to the GL table.

### Schedule Status

7. Displays the start date and time of the accounting preprocessor in Started On.
8. Displays the end date and time of the accounting preprocessor in Ended On.
9. Displays whether the accounting preprocessor is scheduled for now or a specific date in Scheduled On.
10. Displays the name of the user who started the accounting preprocessor in Started By.

### Abort Information

1. Displays the name of the user who aborted the accounting preprocessor in By.
2. Displays the reason for aborting the accounting preprocessor in Reason.

### Criteria

11. Displays the Legal Entity for which you are running the process.
12. Displays the Ledger associated to the Legal Entity and to which you are posting the journal entries to.
13. Displays the Cost Type associated to the selected legal entity.

14. Displays the Fiscal Year for which the processor is run.
15. Displays the period of the fiscal year for which the processor is run.
16. Displays the date in the Open Period.
17. OPM retrieves the corresponding Open GL Fiscal Year for the specified date.
18. OPM retrieves the corresponding GL Period for the specified date.
19. Displays the first day of the period of the fiscal year for which the test subsidiary ledger update is being performed in Post Start Date.
20. Displays the last day of the period of the fiscal year for which the test subsidiary ledger update is being performed in Post End Date.
21. Indicates whether transaction was posted when there was no cost.
22. Displays the sources selected to run the process for:
  - Inventory Transactions
  - Order Management Transactions
  - Product Batch Transactions
  - Purchasing Transactions
  - Costing Transactions
  - Revaluation Transactions
  - Actual Cost Adjustments

#### **Cost Revaluation Parameters**

23. Enter the cost calendar you are revaluing inventory from in Prior Calendar.
24. Enter the cost period you are revaluing inventory from in Prior Period.
25. Enter the cost method you are revaluing inventory from in Prior Cost Type.
26. Enter the cost calendar you are revaluing to in Current Calendar.
27. Enter the cost period you are revaluing to in Current Period.
28. Enter the cost method you are revaluing to in Current Cost Type.
29. Enter the date you wish the cost revaluation process to post to when doing a

updating the subsidiary ledger in GL Transaction Date.

## SLA Accounting Processes

In Oracle Applications Release 12, OPM Financials responsibility includes SLA Accounting menu that lets you create all user-defined accounting data. The following illustrates the OPM Cost Management - SLA process of generating and viewing accounting entries.

### Create Accounting

Create Accounting process is run to create accounting journal entries on the transaction data. SLA Create Accounting request is available from the OPM Financials Responsibility. For details, see: Create Accounting Program, Oracle Subledger Accounting Implementation Guide.

**Note:** You must run the Transfer Journal Entries to GL program to transfer accounting entries to GL if the option to transfer them to GL is set to No in the Create Accounting program.

### Transfer Journal Entries to GL

Transfer to GL is an option on the Create Accounting program. If you set this to Yes, Accounting process transfers subledger journal entries to General Ledger. If you select the option, Post in GL, the journal entries are posted to General Ledger.

See: Transfer Journal Entries to GL Program, Oracle Subledger Accounting Implementation Guide.

### Viewing Accounting Events and Journal Entries

You can view accounting events and journal entries associated with transactions using the Subledger Accounting user interface, or view the accounting events and journal entries from the various transaction inquiry windows. See: Viewing Accounting Events.

### Viewing Accounting Events Journal Entries

You can view accounting events and journal entries associated with transactions using the Subledger Accounting user interface (HTML). See: Accounting Events Inquiry, *Oracle Subledger Accounting Implementation Guide*. You can access the Subledger Accounting user interface by navigating to Accounting Events, Journal Entries, and Journal Entry Lines from the OPM Financials responsibility.

You can also view accounting events and journal entries associated with transactions by accessing the Subledger Accounting user interface from the View Transactions

windows. From the View Receiving Transactions, View Material Transactions, or View Resource Transactions windows, choose tools from the menu bar, and then select View Accounting Events. The following illustrates viewing the Subledger Accounting user interface from the Material Transactions window. Other View Transactions windows use similar steps.

### **To view accounting events and journal entries from the Material Transactions window:**

1. Navigate to the Material Transactions window. The Find Material Transactions window appears
2. Enter material transaction search criteria and choose Find. The Material Transactions window displays.
3. Select a transaction and choose Tools from the tool bar. Select View Accounting Events and the Accounting Events User Interface displays. The View Accounting Event and accounting is enabled only after account has been done either in draft or final mode.

From View Events or Journal Entries, you can select an entry and navigate to the transaction window using the View Transaction option.

## **Subledger Account Distribution**

This topic describes the calculations used to build account distributions for process organizations within Oracle Subledger Accounting (SLA).

The account distribution is not impacted by whether you use standard, actual, or lot cost type to develop the item cost except in the case of production. The distribution discussion for production provides specific business cases to illustrate the differences in the journal entries under standard, actual, lot costing.

Tables shown in this topic describe which journal line types are used to create distributions. Each table shows journal line type, credit and debit calculation.

In the case of reverse transactions the same journal line type templates are used; the entries which display debits are reversed and become credits. Similarly, credits become debits.

Usually, when reversing a transaction such as an unrelease of a production batch, the quantities with positive value would now have negative value. The negative debits (negative quantities multiplied by cost) become credits.

## **Business Rules for Distributions**

SLA follows these rules when creating distributions.

## **Cost Organization Associations**

OPM allows you to group individual inventory organizations into associations for costing purposes. These associations reduce the number of cost detail records that the system has to maintain. The accounting process uses these associations when it finds the cost for an item.

The system uses the inventory organization stored on the inventory transaction to determine the appropriate GL item cost per unit. If cost association inventory organizations are used, then the system first looks for that item's cost in the cost association inventory organizations. If the cost does not exist, then the accounting process will not have a cost to use. If a cost for that item exists in the specific inventory organization on the transaction record, it is ignored since that inventory organization is not the cost association inventory organization.

## **GL Posting Date**

Usually, the transaction date on the inventory record is considered as the GL posting date. This is not true in the following cases: For inventory revaluation, also referred to as cost revaluation, you can enter a GL posting date as the GL transaction date on the Fiscal Policy window for inventory revaluation.

## **Currency**

All inventory transactions are valued in both the base or functional currency of the ledger as well as the transaction currency. The decimal precision for all amounts is determined by the currency rules setup in the Oracle General Ledger.

## **Debit/Credit**

Throughout the Subsidiary Ledger, when a negative amount is determined for a debit, it is posted as a credit. The rule used is that a negative debit becomes a credit. Similarly, a negative credit becomes a debit entry.

## **Cost Basis**

On the OPM Fiscal Policy window, you can use an option to specify by legal entity whether the current period or prior period's cost must be used for creating distributions. By default this option creates distributions using the current period's cost. However, if you are using Actual Costing you can choose to use the prior period's cost for building journal entries. Since this option is set at the legal entity level, all of the transactions in that legal entity use the same cost basis.

## Oracle Inventory Distributions

Oracle Inventory contains several types of transactions and the journal entry templates with journal line types used for each of these transactions.

### Miscellaneous Receipts, Account Receipts, Account Alias Receipts

The following table provides the miscellaneous receipt distribution:

Account Title	Debit	Credit
INV	[Transaction Qty x Organization Total Item Cost]	
IVA		[Transaction Qty x Organization Total Item Cost]

### Miscellaneous Issues, Account Issues, Account Alias Issues

The following table provides the miscellaneous issue distribution:

Account Title	Debit	Credit
INV		[Transaction Qty x Organization Total Item Cost]
IVA	[Transaction Qty x Organization Total Item Cost]	

## Inventory Organization Transfers

Inventory transfer functionality lets you transfer material from one organization to another (within the same legal entity or between process to discrete organizations).

In the case of inventory transfers, time taken for moving materials from a source organization to a target organization can be several days.

Inventory transfer creates two transactions one for each organization involved. At the time of shipment, the entries shown in the first table are created for the source organization shipping the material. At the time of receipt, another transaction is created for the target organization receiving the goods.

Transfers of material from one organization to another can be accomplished through

several different ways. The material is transferred directly using a direct transfer where there is no intransit inventory. The transfer can be done as an intransit transfer where the inventory goes through an intransit stage. Intransit inventory is owned by either the sender (FOB Receiving) or the receiver (FOB Shipping) of the goods. The direct or intransit transfer are done through an Internal Sales Order. The following table summarizes the various options and features available within each type of transfer.

Direct Transfer	Intransit Transfer
Material is transferred immediately and is decremented or incremented in the source or destination organization at the same time	Material goes into intransit and must be explicitly received in the destination organization.
Transactions are created using Inventory Transfers and both from and to transactions are created at the same time.	The shipment is created using Inventory Transfers and is received using the Receiving window.
No FOB options are applicable as transfer happens immediately.	FOB option can be either Shipping or Receiving.
Can also be done using Internal Orders.	Can also be done using Internal Orders.
Intercompany Invoicing is not supported.	Intercompany Invoicing is supported for transfers across Operating Units that are done using Internal Orders.
Freight and transfer credits can be used. However, freight is not applicable for Internal Order transfers.	Freight and transfer credits can be used. However, freight is not applicable for Internal Order transfers.
	Transfer Credit is applicable only in the case where the transfer happens within the same Operating Unit or if the invoicing is not used.
	Transfer Price is required in case of Intercompany Invoiced transfers.

In all of the interorganization transfers, the distribution templates shown include both the journal created on the sending side as well as the receiving side. In case of intransit transfers, the intransit entry is also shown along with the owner of the intransit.

## Process to Process Transfers

Interorganization transfers from a process organization to another process organization within the same operating unit use the source organization cost for the transfer. For transfers that go across operating units, a Transfer Price is required and the applicable

transfer price is used as the cost of the transfer in the receiving organization.

## Direct Transfers (within the same Operating Unit)

### Distribution created in the Sending Organization based on the shipping transaction

Journal Line Type	Debit	Credit
IOR	Transaction Qty x Sending Org Cost + Freight + Transfer Credit	
INV		Transaction Qty x Sending Org Cost
FRT		Freight
XFC		Transfer Credit

### Distribution created in the Receiving Organization based on the receipt transaction

In case of standard costing, Inventory account is debited using the receiving organization cost and a PPV is generated irrespective of the option selected for Purchase Price Variance in the Event Fiscal Policy window. In case of average costing, when Purchase Price Variance option is set to Book INV at Receipt Price (i.e NO PPV) Inventory account is debited using the receiving organization cost and a PPV is generated:

Journal Line Type	Debit	Credit
INV	Transaction Qty x Receiving Organization Cost	
IOP		Transaction Qty x Sending Organization Cost + Freight + Transfer Credit
PPV	[Transaction Qty x Sending Organization Cost + Freight + Transfer Credit] – [Transaction Qty x Receiving Organization Cost]	

In the case of actual costing where the Event Fiscal Policy is set to use PO Price for

Inventory account, no PPV is generated and the distribution is created as below.

Journal Line Type	Debit	Credit
INV	Transaction Qty x Sending Organization Cost + Freight +Transfer Credit	
IOP		Transaction Qty x Sending Organization Cost + Freight +Transfer Credit

## Direct Transfers Across Operating Units

### Distribution created in the Sending Organization based on the shipping transaction

The interorg profit account is used to capture the difference between the transfer price and the item cost in the sending organization.

Journal Line Type	Debit	Credit
IOR	Transaction Qty x Transfer Price	
INV		Transaction Qty x Sending Organization Cost
Freight		Freight
IOPR		[Transaction Qty x Transfer Price] – [Transaction Qty x Sending Organization Cost + Freight]

### Distribution created in the Receiving Organization based on the receipt transaction

In case of standard costing, Inventory account is debited using the receiving organization cost and a PPV is generated.

Journal Line Type	Debit	Credit
INV	Transaction Qty x Receiving Organization Cost	
IOP		Transaction Qty x Transfer Price (converted to receiving Legal Entity's currency)
PPV	[Transaction Qty x Transfer Price (converted to receiving Legal Entity's currency)] – [Transaction Qty x Receiving Organization Cost]	

In the case of actual costing where the Event Fiscal Policy is set to use PO Price for Inventory account, PPV is generated and the distribution is created as below.

Journal Line Type	Debit	Credit
INV	Transaction Qty x Transfer Price (converted to receiving Legal Entity's currency)	
IOP		Transaction Qty x Transfer Price (converted to receiving Legal Entity's currency)
PPV	Transaction Qty x (Transfer Price- Item Cost of Receiving Organization)	

## Inventory Transfers Between Process to Discrete Organizations

You can transfer inventory between Discrete and Process Organizations.

Transfers between Discrete and Process Organizations use a transfer price that is set up between the organizations and a new account, interorg profit, captures the difference between the sending organization cost and the transfer price.

## Direct Transfer

**Receiving Organization uses actual costing**

The following table provides the distribution for inventory transfers from process to discrete organization (actual costing):

<b>Organization</b>	<b>Journal Line Type</b>	<b>Debit</b>	<b>Credit</b>
Sending	Interorg Receivables	Transaction Qty x Transfer Price	
Sending	Inventory Valuation		Transaction Qty x Sending Organization Cost
Sending	Freight Expense Account		Freight
Sending	Interorg Profit		[Transaction Qty x Transfer Price] – [Transaction Qty x Transfer Price + Freight]
Receiving	Inventory Valuation	Transaction Qty x Transfer Price	
Receiving	Interorg Payables		Transaction Qty x Transfer Price

**Receiving Organization uses Standard Costing**

<b>Organization</b>	<b>Journal Line Type</b>	<b>Debit</b>	<b>Credit</b>
Sending	Interorg Receivables	Transaction Qty x Transfer Price	
Sending	Inventory Valuation		Transaction Qty x Sending Organization Cost
Sending	Freight Expense Account		Freight

Organization	Journal Line Type	Debit	Credit
Sending	Interorg Profit		[Transaction Qty x Transfer Price] - [Transaction Qty x Sending Org Cost + Freight]
Receiving	Inventory Valuation	Transaction Qty x Receive Organization Cost	
Receiving	Interorg Payables		Transaction Qty x Transfer Price
Receiving	PPV	Transaction Qty x [Transfer Price - Receive Organization Cost]	

### Intransit Transfer (through inventory Transfer or internal Order) FOB Shipping

Receiving Organization uses Actual or Average Costing

Organization	Journal Line Type	Debit	Credit
After Shipment			
Sending	Interorg Receivables	Transaction Qty x Transfer Price	
Sending	Inventory Valuation		Transaction Qty x Sending Organization Cost
Sending	Interorg Profit		Transaction Qty x [Transfer Price - Sending Organization Cost]
Receiving	Intransit Inventory	Transaction Qty x Transfer Price + Freight	

<b>Organization</b>	<b>Journal Line Type</b>	<b>Debit</b>	<b>Credit</b>
Receiving	Interorg Payables		Transaction Qty x Transfer Price
Receiving	Freight Expense Account		Freight
After Receipt			
Receiving	Inventory Valuation	Transaction Qty x Transfer Price + Freight	
Receiving	Intransit Inventory		Transaction Qty x Transfer Price + Freight

#### **Receiving Organization uses Standard Costing**

<b>Organization</b>	<b>Journal Line Type</b>	<b>Debit</b>	<b>Credit</b>
After Shipment			
Sending	Interorg Receivables	Transaction Qty x Transfer Price	
Sending	Inventory Valuation		Transaction Qty x Sending Organization Cost
Sending	Interorg Profit		Transaction Qty x [Transfer Price – Sending Organization Cost]
Receiving	Intransit Inventory	Transaction Qty x Receive Organization Cost	
Receiving	Interorg Payables		Transaction Qty x Transfer Price

Organization	Journal Line Type	Debit	Credit
Receiving	Freight Expense Account		Freight
Receiving	PPV	Transaction Qty x [Transfer Price + Freight - Transaction Qty x Receive Organization Cost]	
After Receipt			
Receiving	Inventory Valuation	Transaction Qty x Receive Organization Cost	
Receiving	Intransit Inventory		Transaction Qty x Receive Organization Cost

## Intransit Transfer (through inventory Transfer or internal Order) FOB Receiving

Receiving Organization uses Actual or Average Costing

Organization	Journal Line Type	Debit	Credit
After Shipment			
Sending	Intransit Inventory	Transaction Qty x Sending Organization Cost	
Sending	Inventory Valuation		Transaction Qty x Sending Organization Cost
After Receipt			
Sending	Interorg Receivables	Transaction Qty x Transfer Price	

Organization	Journal Line Type	Debit	Credit
Sending	Intransit Inventory		Transaction Qty x Sending Organization Cost
Sending	Freight Expense Account		Freight
Sending	Interorg Profit		Transaction Qty x Transfer Price – [Transaction Qty x Sending Organization` Cost + Freight]
Receiving	Inventory Valuation	Transaction Qty x Transfer Price	
Receiving	Interorg Payables		Transaction Qty x Transfer Price

**Receiving Organization uses standard costing**

Organization	Journal Line Type	Debit	Credit
After Shipment			
Sending	Intransit Inventory	Transaction Qty x Sending Organization Cost	
Sending	Inventory Valuation		Transaction Qty x Sending Organization Cost
After Receipt			
Sending	Interorg Receivables	Transaction Qty x Transfer Price	

Organization	Journal Line Type	Debit	Credit
Sending	Intransit Inventory		Transaction Qty x Sending Organization Cost
Sending	Freight Expense Account		Freight
Sending	Interorg Profit		Transaction Qty x Transfer Price – [Transaction Qty x Sending Organization` Cost + Freight]
Receiving	Inventory Valuation	Transaction Qty x Receive Organization Cost	
Receiving	Interorg Payables		Transaction Qty x Transfer Price
Receiving	PPV	Transaction Qty x [Transfer Price – Receiving Organization Cost]	

## Intercompany Transfers Using Internal Orders

### Intercompany Transfers with Invoicing – FOB Shipping

Receiving Organization uses Actual or Average Costing

Organization	Journal Line Type	Debit	Credit
After Shipment			
Sending	COGS	Transaction Qty x Sending Organization Cost	

<b>Organization</b>	<b>Journal Line Type</b>	<b>Debit</b>	<b>Credit</b>
Sending	Inventory Valuation		Transaction Qty x Sending Organization Cost
Receiving	Intransit Inventory	Transaction Qty x Transfer Price	
Receiving	Intercompany Expense		Transaction Qty x Transfer Price
After Receipt			
Receiving	Inventory Valuation	Transaction Qty x Transfer Price	
Receiving	Intransit Inventory		Transaction Qty x Transfer Price

Following Accounting Distributions are created for Internal Orders receipts when you select the Purchase Price Variance - Internal Orders option as Book INV at Item Cost (PPV) on the Event Fiscal Policy window:

**Intercompany Transfers without Invoicing – FOB Shipping**

<b>Organization</b>	<b>Journal Line Type</b>	<b>Debit</b>	<b>Credit</b>
Receiving	Inventory Valuation	Item cost in Receiving Org	
Receiving	Intransit Inventory		Item cost in Receiving Org
Receiving	Intransit Inventory	Item cost in Receiving Org	
Receiving	Purchase Price Variance	Item cost in Receiving Org - Transfer Price	
Receiving	Interorg Payables		Transfer Price
Shipping	Interorg Receivables	Transfer Price	

Organization	Journal Line Type	Debit	Credit
Shipping	Interorg Profit	Item Cost in Shipping Org - Transfer Price	
Shipping	Inventory Valuation		Item Cost in Shipping Org

Following Accounting Distributions are created for Internal Orders receipts when you select the Purchase Price Variance - Internal Orders option as Book INV at Transfer Price (No PPV) on the Event Fiscal Policy window:

Organization	Journal Line Type	Debit	Credit
Receiving	Inventory Valuation	Transfer Price	
Receiving	Intransit Inventory		Transfer Price
Receiving	Intransit Inventory	Transfer Price	
Receiving	Purchase Price Variance	Nil	Nil
Receiving	Interorg Payables		Transfer Price
Shipping	Interorg Receivables	Transfer Price	
Shipping	Interorg Profit	Item Cost in Shipping Org - Transfer Price	
Shipping	Inventory Valuation		Item Cost in Shipping Org

**Intercompany Invoicing Distributions (created by Intercompany Invoicing programs and not by OPM)**

Organization	Journal Line Type	Debit	Credit
Sending	Intercompany Receivables	Transaction Qty x Transfer Price	

Organization	Journal Line Type	Debit	Credit
Sending	Intercompany Revenue		Transaction Qty x Transfer Price
Receiving	Intercompany Expense	Transaction Qty x Transfer Price	
Receiving	Intercompany Payable		Transaction Qty x Transfer Price

**Receiving Organization uses standard Costing**

Organization	Journal Line Type	Debit	Credit
After Shipment			
Sending	COGS	Transaction Qty x Sending Organization Cost	
Sending	Inventory Valuation		Transaction Qty x Sending Organization Cost
Receiving	Intransit Inventory	Transaction Qty x Receiving Organization Cost	
Receiving	Intercompany Expense		Transaction Qty x Transfer Price
After Receipt			
Receiving	Inventory Valuation	Transaction Qty x Transfer Price	
Receiving	Intransit Inventory		Transaction Qty x Transfer Price

**Intercompany Invoicing Distributions (created by Intercompany Invoicing programs and not by OPM)**

Organization	Journal Line Type	Debit	Credit
Sending	Intercompany Receivables	Transaction Qty x Transfer Price	
Sending	Intercompany Revenue		Transaction Qty x Transfer Price
Receiving	Intercompany Expense	Transaction Qty x Transfer Price	
Receiving	Intercompany Payable		Transaction Qty x Transfer Price

## Intercompany Transfers with Invoicing – FOB set to Receiving

Receiving Organization is Actual or Average Costing

Organization	Journal Line Type	Debit	Credit
After Shipment			
Sending	Intransit Inventory	Transaction Qty x Sending Organization Cost	
Sending	Inventory Valuation		Transaction Qty x Sending Organization Cost
After Receipt			
Sending	COGS	Transaction Qty x Sending Organization Cost	
Sending	Inventory Valuation		Transaction Qty x Sending Organization Cost
Receiving	Inventory Valuation	Transaction Qty x Transfer Price	

Organization	Journal Line Type	Debit	Credit
Receiving	Intercompany Expense		Transaction Qty x Transfer Price

**Intercompany Invoicing Distributions (created by Intercompany Invoicing programs and not by OPM)**

Organization	Journal Line Type	Debit	Credit
Sending	Intercompany Receivables	Transaction Qty x Transfer Price	
Sending	Intercompany Revenue		Transaction Qty x Transfer Price
Receiving	Intercompany Expense	Transaction Qty x Transfer Price	
Receiving	Intercompany Payable		Transaction Qty x Transfer Price

**Receiving Organization set to Standard Costing**

Organization	Journal Line Type	Debit	Credit
After Shipment			
Sending	Intransit Inventory	Transaction Qty x Sending Organization Cost	
Sending	Inventory Valuation		Transaction Qty x Sending Organization Cost
After Receipt			
Sending	COGS	Transaction Qty x Sending Organization Cost	

Organization	Journal Line Type	Debit	Credit
Sending	Intransit Inventory		Transaction Qty x Sending Organization Cost
Receiving	Inventory Valuation	Transaction Qty x Receiving Organization Cost	
Receiving	Intercompany Expense		Transaction Qty x Transfer Price
Receiving	PPV	Transaction Qty x [Transfer Price – Receiving Organization Cost]	

**Intercompany Invoicing Distributions (created by Intercompany Invoicing programs and not by OPM)**

Organization	Journal Line Type	Debit	Credit
Sending	Intercompany Receivables	Transaction Qty x Transfer Price	
Sending	Intercompany Revenue		Transaction Qty x Transfer Price
Receiving	Intercompany Expense	Transaction Qty x Transfer Price	
Receiving	Intercompany Payable		Transaction Qty x Transfer Price

## OPM Costing Distribution

### Inventory Revaluation also known as Cost Revaluation

OPM lets you revalue inventory account balances as a result of a change in item cost between two costing periods. It is done by building additional GL journal entries in the Subsidiary Ledger to update the INV account balance in the current period.

Unlike other transactions, the posting date for cost revaluation is determined by the GL transaction date (entered in the Fiscal Policy of legal entity) when the accounting preprocessor is run.

Each journal entry is created so that there is an association back to the respective item and organization. As a result, when the accounting process books entries to the table, individual entries are created for every item and organization combinations.

When the accounting process is run, the period balance entries are marked as posted. Once the transactions are posted, they are marked as posted and are not picked up again.

The following table provides the inventory revaluation distribution:

Journal Line Type	Debit	Credit
INV	[(Prior Period Inventory Balance) × (Current Period Total Item Cost - Prior Period Total Item Cost)]	
IRV		[(Prior Period Inventory Balance) × (Current Period Total Item Cost - Prior Period Total Item Cost)]

If the current period cost is less than the prior period cost, then reverse entries are created.

#### Subledger Entries for Average Cost Adjustment Type

The following table shows the distribution for Actual Cost Adjustment with the Average Cost Adjustment type:

Account Title	Debit	Credit	Maintain Quantity
INV	Adjustment Quantity * (Adjustment Cost - Item Cost)		Yes
CAD		Adjustment Quantity * (Adjustment Cost - Item Cost)	No

#### Subledger Entries for Value Adjustment Type

The following table shows the distribution for Actual Cost Adjustment with the Value

Adjustment type:

Account Title	Debit	Credit	Maintain Quantity
INV	Adjustment Value		Yes
CAD		Adjustment Value	No

### Subledger Entries for Unit Cost Adjustment Type

The following table shows the distribution for Actual Cost Adjustment with the Unit Cost Adjustment type:

Account Title	Debit	Credit	Maintain Quantity
INV	Actual Cost Calculation Quantity * Unit Cost Adjustment		
CAD		Actual Cost Calculation Quantity * Unit Cost Adjustment	

## Production Distribution

There are several stages in a production cycle; Batch Release, Step Completion, Batch Completion, and Batch Close. At each stage, different types of transactions are generated. This topic shows the event type and journal line types distribution templates used for each of these transactions.

Release represents the release of a production batch, the process in which the batch status is changed from Pending to WIP.

**Note:** The unrelease of a production batch is represented by the same event RELE with the debits and credits reversed. This process withdraws the batch from WIP and reinstates it as Pending.

Step is used for completing a routing step in a production batch. The resources used on the step are recorded with Routing.

Completion represents the certification of a production batch, the process of confirming an output and changing the status from WIP to Completed.

The Step and Completion are not the final reporting of usage and yield in a production batch. Even after these events occur, adjustments can still be made to ingredients, byproducts, coproducts, and product quantities. The same is the case with resource count and resource usage of production routing. The adjustments made after Step and Completion, but before the batch close, are reported as additional entries to Step and Completion at the time they occur.

Close represents the final close of a production batch indicating that all transactions have been completed. This prevents any further transactions against the closed batch and the status is changed to Close.

At each event, distributions are created for each of the ingredients, products, byproducts, and coproducts. Every activity line with Routing within an operation step has its own distribution as well.

Distributions for items that are non-stockable and non-transactable will not appear in the accounting entries in OPM.

### **Cost Formula Scaled Amounts versus Actual Amounts**

When calculating variances at batch close, the system compares the actual amounts to the cost formula scaled amounts. The variances are only calculated for batches in legal entities using standard costs, which requires that a Cost Rollup process was performed. These variances measure differences between the actual production reported and a legal entity's cost standard for that production.

The actual amount is derived from the actual usage of ingredients, byproducts, products, and coproduct quantities in batch records. However, the actual amounts are not compared to planned quantities in batch records, but to cost formula scaled quantities for financial variance calculations.

To determine the cost formula scaled quantity, the system finds the cost formula used to rollup the cost of the primary product. The system determines the scaling factor by comparing the planned or actual output based on a profile. After the scaling factor is determined, all ingredients, byproducts, and coproducts are scaled appropriately depending on their scale type.

However, if any ingredients, byproducts, or coproducts are not scaled proportionally, then a different method is used. First, all quantities are converted to the yield type standard unit of measure. Next, the product quantity in the batch is compared with the cost formula to determine the scaling factor. Finally, the ingredients, byproducts, and coproducts are scaled proportionally. These cost formula scaled quantities are used for variance calculations. See: *Oracle Process Manufacturing Product Development User's Guide* for details on scaling functionality.

### **Cost Type**

Each legal entity has a corresponding fiscal policy in OPM. Within that fiscal policy record, you can define the Cost Type to be used for building account distributions. Whether the specified cost method is a standard cost, an actual cost, or a lot cost type changes how the production event distributions are generated.

## Variance Types

The accounting journal entries for Process Execution consists of the following variance types:

- Scale the costing formula to planned quantity of the primary product in the batch and compare with the actual batch (hereafter referred to as Scale to Plan)  
The accounting process uses this method to calculate variances. This is the existing method.
- Scale the costing formula to actual quantity of the primary product in the batch and compare with the actual batch (hereafter referred to as Scale to Actual)  
This method is similar to the Scale to Plan except for the costing formula scaling. The costing formula is scaled to the actual output of the primary product in the batch. As a result, there are no yield or usage variances for the primary product.
- Use the aggregate type variances (hereafter referred to as Aggregate)

Two profile options, GMF: Subledger Variance Type for Production Bookings and GMF: Log All Subledger Variances to a Separate Table, are added to calculate production variances using the three variance types or log all variances to a separate table.

GMF: Subledger Variance Type: This profile option contains the variance type which the subledger process uses to calculate and post variances for the production transactions. Specify any of the listed variance types as a value. The valid values are, Scale to Plan, Scale to Actual, or Aggregate. The default value is Scale to Plan.

GMF: Log All Subledger Variances: This profile option calculates variances for all of the above variance types and stores them in a separate table for analysis. If this profile value is set to Yes, then the subledger process calculates variances for all of the three variance types and stores them in a separate table. If the profile value is set to No, then the subledger variances are not logged to the separate table. The default value is No.

The subsequent paragraphs provide an example of the Scale to Plan and Scale to Actual variance types.

### Example:

This example describes how using the same formula and same batch yields you can achieve different results when using two variance types.

Consider that you are creating product A that consists of ingredients B and C. The costing formula for making Product A with ingredients B and C is:

$100 (A) = 50 (B) + 50 (C)$  Costing formula

Create a planned batch for 1000 quantity for product A with 500 quantity of ingredients B and C.

$1000 (A) = 500 (B) + 500 (C)$  Planned batch

The actual output of Product A is 900 with 450 quantity usage of ingredients B and C.

$900 (A) = 450 (B) + 450 (C)$  Actual batch

In the case of Scaled to Plan variance type, the costing formula is scaled to the planned quantity of the primary batch and compared with the actual batch. The resulting variance is calculated as follows for this example:

Scaled Costing Formula =  $1000 (A) = 500 (B) + 500 (C)$

Yield Variance =  $(1000 - 900) \times \text{Product Cost (A)}$

Usage Variance =  $(500 - 450) \times \text{Ingredient Cost (B)}$

Usage Variance =  $(500 - 450) \times \text{Ingredient Cost (C)}$

In the case of Scaled to Actual variance type, the costing formula is scaled to the actual quantity of the primary batch and compared with the actual batch. Since the costing formula is scaled to actual batch and compared with the actual batch, there is no yield variance or usage variance for both product and ingredients.

The subsequent paragraphs describe the subledger postings for the Scale to Plan and Scale to Actual variance types. The subledger posting for Aggregate variance type is explained later in this topic.

In Process Execution, when a lab batch is created you can specify whether to update inventory by checking the Update Inventory box. If you do not check this box, then the work-in-process organization is set to null. In this case, no inventory transactions are created and the subledger process ignores these batches. As a result, the variances are not calculated.

#### **Validity Rule Override**

You can override the planned process loss at the validity rule level. The planned process loss value is taken from the validity rule, if available. Otherwise, it is calculated from the recipe along with the theoretical loss table for the validity rule standard quantity. The Accounting process considers the planned process loss override during variance calculations.

## **Production Distribution without Routing using Standard Costing**

### **Batch Release**

Several transactions can occur within this event. These transactions include:

- Release production batches
- Adjustments to released quantities
- Unrelease production batches

The unrelease process creates a reverse entry. Debits become credits and credits become debits, using the same template.

The following table provides the distribution for production batch release without routing using standard costing:

<b>Journal Line Type</b>	<b>Debit</b>	<b>Credit</b>
INV		[Actual Ingredient Input Qty x Batch Organization Total Item Cost]
WIP	[Actual Ingredient Input Qty x WIP Warehouse Item Material Cost + WIP Warehouse Item Burden Cost]	
RCA	[Actual Ingredient Input Qty x (WIP Warehouse Item Resource Cost + WIP Warehouse Item StandardCost Adjustment Cost)]	

### **Batch Completion**

Within OPM production batches, several inventory transactions can occur during and after a batch completion. These transactions include:

- Completing production batch on the material side
- Adjustment to quantities consumed and yielded which are ingredients, byproduct, and coproducts

The following table provides the distribution for production batch certification without Routing using standard costing:

<b>Journal Line Type</b>	<b>Debit</b>	<b>Credit</b>
INV	[Actual Product Output Qty x Item Total Cost]	
WIP	Actual Product	Actual Product Output Qty x [Item Lower Level Costs + Item This Level Material Cost]
OVH		Actual Product Output Qty x Item This Level Overhead Cost

Journal Line Type	Debit	Credit
RCA		[Actual Product Output Qty x (WIP Warehouse Item Resource Cost + WIP Warehouse Item Standard Cost Adjustment Cost)]

Batch Completion journal entries are posted for products, coproducts, and byproducts only.

### Batch Close

After a production batch is closed, variances are calculated and reported in the journal entries if standard costing is used. These variances include:

- Usage Variance (USG)
- Substitution Variance (SUB)
- Yield Variance (YLD)
- Closing Variance (CLS)

The Actual Total Product Output Quantity is calculated as the sum of the yield of all products, byproducts, and coproducts.

In some cases, there can be a batch close variance if ingredient consumptions and product yields are recorded in a period, and in the next period the ingredient, resource, or byproduct consumptions for these batches are updated without any further product yields.

### Usage Variance

When the Actual Ingredient Input quantity is greater than the Cost Formula Scaled Ingredient Input.

If the quantity difference is negative, then the template is reversed. The debits become credits and the credits shown below become debits.

The following table provides the distribution for production batch close usage variance without Routing using standard costing:

Journal Line Type	Debit	Credit
USG	[(Actual Ingredient Input Qty - Cost Formula Scaled Ingredient Input Qty) x Batch Organization Total Item Cost]	
WIP		[(Actual Ingredient Input Qty - Cost Formula Scaled Ingredient Input Qty) x Batch Organization Total Item Cost]

### Substitution Variance

When different ingredients not on the cost formula are added to a batch, the following journal entries are posted.

The following table provides the distribution for production batch close substitution variance when different ingredients (not on the cost formula) are added to a batch:

Journal Line Type	Debit	Credit
SUB	[Actual Substituted Ingredient Input Qty x Batch Organization Total Item Cost]	
WIP		[Actual Substituted Ingredient Input Qty x Batch Organization Total Item Cost]

The following table provides the distribution for production batch close substitution variance when cost formula ingredients are missing from a batch:

Journal Line Type	Debit	Credit
SUB		[Missing Cost Formula Scaled Ingredient Input Qty x Batch Organization Total Item Cost]
WIP	[Missing Cost Formula Scaled Ingredient Input Qty x Batch Organization Total Item Cost]	

### Yield Variance

The following table provides the distribution for production batch close substitution variance when the quantity yielded is different from the cost formula scaled amount:

Journal Line Type	Debit	Credit
YLD		[(Actual Product Output Qty - Cost Formula Scaled Product Qty) x Batch Organization Total Item Cost]
WIP	[(Actual Product Output Qty - Cost Formula Scaled Product Qty) x Batch Organization Item Material Cost + Lower Level Costs + This Level Standard Adjustment Cost]	
RUV	[(Actual Product Output Qty - Cost Formula Scaled Product Qty) x (Batch Organization Item Resource Cost + This Level Resource Component Cost)]	
OVH	[(Actual Product Output Qty - Cost Formula Scaled Product Qty) x This Level Overhead Component Cost]	

The following table provides the distribution for production batch variance when products, coproducts, or byproducts are added to a batch that are not on formula:

Journal Line Type	Debit	Credit
YLD		[Actual Product Output Qty x Batch Organization Total Item Cost]
WIP	[(Actual Product Output Qty + This Level Standard Adjustment x Batch Organization Item Material Cost + Item Lower Level Cost]	

Journal Line Type	Debit	Credit
RUV	[(Actual Product Output Qty x (WIP Organization Item Resource Cost + This Level Resource Cost)]	
OVH	[(Actual Product Output Qty x (This Level Overhead Component Cost)]	

The following table provides the distribution for production batch close substitution variance when the cost formula product, coproducts, or byproducts are missing from the batch:

Journal Line Type	Debit	Credit
YLD	[(Actual Product Output Qty - Cost Formula Scaled Product Qty) x Batch Organization Total Item Cost]	
WIP		[(Actual Product Output Qty - Cost Formula Scaled Product Qty) x Batch Organization Item Material Cost + Lower Level Costs + This Level Standard Adjustment Cost]
RUV		[(Actual Product Output Qty - Cost Formula Scaled Product Qty) x (Batch Organization Item Resource Cost + This Level Resource Component Cost)]

### Closing Variance

The following table provides the distribution for production batch close closing variance without Process Operation Control using standard costing:

Journal Line Type	Debit	Credit
WIP		Amount to clear out the WIP generated by all the transactions in Release and Completion events
CLS	Offset to WIP entry	

There are reasons why an amount remains in WIP and is posted to the CLS variance. One of the typical reasons for getting a non-zero Close Variance is that the batch was released in one cost period when the debit to WIP would be valued at one cost, but the batch was completed in a later cost period when the credit to WIP for the same quantities would be at a different value. So there is a remaining balance in WIP that is entirely due to cost change but that needs to be cleared out.

## With Routing using Standard Costing

### Batch Release with POC

Within process manufacturing production batches, several transactions can occur during a batch release step:

- Release production batch
- Adjustment to quantities released
- Unrelease production batch

The unrelease process creates an opposite entry. Debits become credits and credits become debits, using the same template.

For a batch release process, when Process Operation Control is enabled the postings are different. There is no posting to RCA because this is now done for each STEP process and the posting to WIP is at the total of material and resource cost elements.

The following table provides the distribution for production batch release with Process Operation Control using standard costing:

Journal Line Type	Debit	Credit
INV		[Actual Ingredient Input Qty x Batch Organization Total Item Cost]

Journal Line Type	Debit	Credit
WIP	[Actual Ingredient Input Qty x WIP Warehouse Item Material Cost + WIP Warehouse Item Resource Cost +WIP Warehouse Item Burden Cost]	
RCA	[Actual Ingredient Input Qty x (WIP Warehouse Item Standard Cost Adjustment Cost)]	

### Batch Completion with Routing

Within Process Manufacturing production batches, various inventory transactions can occur during and after a batch is completed:

- Production batch completion on the material side
- Adjustment to quantities consumed and yielded which are ingredients, byproduct, coproducts

The Actual Product Output Quantity is calculated as the sum of the yield of all products, byproducts, and coproducts.

For the certify process, the postings are slightly different when Process Operation Control is enabled. There is no posting to RCA because it is done for each STEP process. The posting to WIP is calculated as the total of material and resource cost elements.

The following table provides the distribution for production batch completion with Routing using standard costing:

Journal Line Type	Debit	Credit
INV	[Actual Product Output Qty x Item Total Cost]	
WIP		[Actual Product Output Qty x WIP Warehouse Item Material Cost + WIP Warehouse Lower level Item Burden Cost]

Journal Line Type	Debit	Credit
OVH		[Actual Product Output Qty x WIP Warehouse This Level Burden Cost Component]
RCA		[Actual Product Output Qty x (WIP Warehouse Item Standard Cost Adjustment Cost)]

### Step Completion with Routing

Within Process Manufacturing production batches, several transactions related to resource consumption can occur during and after the Completion phase:

- Complete production batch step on the resource side
- Adjustment to quantities consumed and yielded on the resource side

The following table provides the distribution for production step completion with Routing using standard costing:

Journal Line Type	Debit	Credit
WIP	[Actual Total Resource Usage x Resource Cost]	
RCA		[Actual Total Resource Usage x Resource Cost]

If the batch has step dependent release of ingredients, the application also creates entries to the INV, WIP, (for the ingredients) and IVV accounts. These entries will appear as RELE entries.

### Batch Close with Routing

After a production batch is closed, variances are calculated and reported through journal entries if standard cost is used:

- Usage Variance (USG)
- Substitution Variance (SUB)
- Yield Variance (YLD)

- Closing Variance (CLS)

The following three additional variances are calculated when Process Operation Control is used:

- Resource Usage or Efficiency Variance (RUV)
- Resource Substitution or Method Variance (RSV)
- Resource Manning Variance (RMV)

The Actual Product Output Quantity is calculated as the sum of the yield of all products, byproducts, and coproducts.

### Usage Variance

When the actual ingredient input quantity is greater than the cost formula scaled ingredient input:

The following table provides the distribution for production batch close usage variance with Routing using standard costing:

Journal Line Type	Debit	Credit
USG	[(Actual Ingredient Input Qty - Cost Formula Scaled Ingredient Input Qty) x Batch Organization Total Item Cost]	
WIP		[(Actual Ingredient Input Quantity - Cost Formula Scaled Ingredient Input Qty) x (Batch Organization Item This Level Material Cost + Batch Organization This Level Item Resource Cost + Item Lower Level Cost)]
OVH		[(Actual Ingredient Input Quantity - Cost Formula Scaled Ingredient Input Qty) x (Batch Organization Item This Level Overhead Cost)]

Journal Line Type	Debit	Credit
RCA	[(Actual Ingredient Input Quantity - Cost Formula Scaled Ingredient Input Qty) x (This Level Standard Cost Adjustment)]	

If the quantity difference is negative, then the postings are reversed. Debits become credits and credits become debits.

### Substitution Variance

The following table provides the distribution for production batch close substitution variance when different ingredients not on the cost formula are added to a batch:

Journal Line Type	Debit	Credit
SUB	[Actual Substituted Ingredient Input Qty x Batch Organization Total Item Cost]	
WIP		[Actual Substituted Ingredient Input Qty x (Batch Organization Item This Level Material Cost + WIP Organization Item This Level Resource Cost)]
RUV		[Actual Substituted Ingredient Input Qty x (Organization Item This Level Standard Cost Adjustment)]
OVH		[Actual Substituted Ingredient Input Qty x This Level Overhead Component Cost]

The following table provides the distribution for production batch close substitution variance when the cost formula ingredients are missing from the batch:

<b>Journal Line Type</b>	<b>Debit</b>	<b>Credit</b>
SUB		[Missing Cost Formula Scaled Ingredient Input Qty x Batch Organization Total Item Cost]
WIP	[Missing Cost Formula Scaled Ingredient Input Qty x (Batch Organization Item This Level Material Cost + Organization Item This Level Resource Cost + Item Lower Level Cost)]	
RCA	[Missing Cost Formula Scaled Ingredient Input Qty x (Organization Item This Level Standard Cost Adjustment)]	
OVH	[Missing Cost Formula Scaled Ingredient Input Qty x Item This Level Overhead Cost]	

### Yield Variance

The following table provides the distribution for production batch close yield variance when the quantity yielded is different from the cost formula scaled amount:

<b>Journal Line Type</b>	<b>Debit</b>	<b>Credit</b>
YLD		[(Actual Product Output Qty - Cost Formula Scaled Product Qty) x Batch Organization Total Item Cost]
WIP	[(Actual Product Output Qty - Cost Formula Scaled Product Qty) x Batch Organization Item This Level Material Cost + Lower Level Cost]	

Journal Line Type	Debit	Credit
OVH	[(Actual Product Output Qty - Cost Formula Scaled Product Qty) × Batch Organization Item This Level Material Cost + Lower Level Cost + Item This Level Overhead Cost]	
RUV	[(Actual Product Output Qty - Cost Formula Scaled Product Qty) × (Organization Item This Level Resource Cost + Organization Item This Level Standard Cost Adjustment)]	

The following table provides the distribution for production batch yield variance when different products, coproducts, or byproducts are added to a batch:

Journal Line Type	Debit	Credit
YLD		[Actual Product Output Qty x Batch Organization Total Item Cost]
WIP	[Actual Product Output Qty x Batch Organization Item This Level Material Cost + Lower Level Cost]	
RUV	[(Actual Product Output Qty x (Organization Item This Level Resource Cost + Organization Item This Level Standard Cost Adjustment)]	
OVH	[(Actual Product Output Qty x (Organization Item This Level Resource Cost + Organization Item This Level Overhead Cost)]	

The following table provides the distribution for production batch close substitution variance when the cost formula product, coproducts, or byproducts are missing from the batch:

Journal Line Type	Debit	Credit
YLD	[Cost Formula Scaled Product Qty x Batch Organization Total Item Cost]	
WIP		[Cost Formula Scaled Product Qty x Organization Item This Level Material Cost + Lower Level Cost]
RUV		[Cost Formula Scaled Product Qty x (Organization Item This Level Resource Cost + Organization Item This Level Standard Cost Adjustment)]
OVH		[Cost Formula Scaled Product Qty x (Organization Item This Level Resource Cost + Organization Item This Level Overhead Cost)]

#### Resource Usage or Efficiency Variance

The following table provides the distribution for production batch close resource usage or efficiency variance when the cost formula products, coproducts, or byproducts are missing from the batch:

Journal Line Type	Debit	Credit
RUV		[(Actual Total Resource Usage - (Actual Resource Count x Cost Formula Activity Factor x Cost Formula Scaled Resource Usage)) x Resource Cost]
WIP	[(Actual Total Resource Usage - (Actual Resource Count x Cost Formula Activity Factor x Cost Formula Scaled Resource Usage)) x Resource Cost]	

### Resource Substitution Variance

The following table provides the distribution for production batch close resource substitution variance when new resources are added to the batch routing:

Journal Line Type	Debit	Credit
RSV		[Substitute Resource Total Resource Usage x Resource Cost]
WIP	[Substitute Resource Total Resource Usage x Resource Cost]	

The following table provides the distribution for production batch close resource substitution or method variance when the resources on the cost formula are not in the batch routing:

Journal Line Type	Debit	Credit
RSV	[(Cost Formula Count x Cost Formula Activity Factor x Cost Formula Scaled Resource Usage) x Resource Cost]	
WIP		[(Cost Formula Count x Cost Formula Activity Factor x Cost Formula Scaled Resource Usage) x Resource Cost]

### Resource Manning Variance

The following table provides the distribution for production batch close resource manning variance:

Journal Line Type	Debit	Credit
RMV		[(Actual Resource Count - Cost Formula Resource Count) x Cost Formula Scaled Resource Usage x Activity Factor x Resource Cost]

Journal Line Type	Debit	Credit
WIP	[(Actual Resource Count - Cost Formula Resource Count) x Cost Formula Scaled Resource Usage x Activity Factor x Resource Cost]	

### Closing Variance

The following table provides the distribution for production batch close closing variance with Process Operation Control using standard costing:

Journal Line Type	Debit	Credit
WIP		Amount to clear out the WIP generated by all the transactions in Release, Certification, Step and Close events
CLS	Offset to WIP entry	

One of the typical reasons for getting a non-zero Close Variance is that the batch was Released in one cost period when the debit to WIP would be valued at one cost, but the batch was Completed in a later cost period when the credit to WIP for the same quantities would be at a different value. So you have a balance left in WIP that is entirely due to cost change but that needs to be cleared out.

## Aggregate Variance Posting using Standard Costing

This method calculates the Aggregate type variances. The aggregate type variances are applicable to certain industries that might need the average unit cost of Ingredients or Products used in variance computations. These industries could also have substandard product items (SSP items) and want to record the usage of these items in producing a batch. This allows variances to be considered on a per unit of products yielded regardless of individual products.

The Aggregate method initiates the following types of variances calculation.

### Evolution Variance (ECO)

Evolution Variance is the difference between the actual costing formula and the planned formula. This variance considers changes to ingredients, batch size, routing, operation, activity factor, charges, and step quantities.

The following table provides the distribution for production batch close with Routing using standard costing:

Journal Line Type	Debit	Credit
ECO		(Planned Product Cost per Unit - Standard Product Cost per Unit) x Total Actual Product Qty
WIP	(Planned Product Cost per Unit - Standard Product Cost per Unit) x Total Actual Product Qty	

The subsequent paragraphs describe the details of the calculations.

**Planned Product Cost per Unit** The planned product cost is calculated as:

Planned Product Cost per Unit = (Planned Material Cost per Unit + Planned Conversion Cost per Unit)

The following paragraphs describe how the planned material cost and conversion costs per unit are calculated:

- Planned Material Cost per Unit = (Total Planned Regular Ingredient Amount - Total Planned Byproduct Amount) x (Total Planned Regular Ingredient Qty / Total Planned Yield Qty) / Planned Standard Size
- Planned Conversion Cost per Unit = (Total Planned Conversion Cost / Planned Batch Size) x (Total Planned Regular Ingredient Qty / Total Planned Yield Qty)

### **Standard Product Cost per Unit**

The standard product cost is calculated as:

Standard Product Cost per Unit = (Standard Material Cost per Unit + Standard Conversion Cost per Unit)

The following paragraphs describe how the standard material cost and conversion costs per unit are calculated:

- Standard Material Cost per Unit = (Total Standard Regular Ingredient Amount - Total Standard Byproduct Amount) x (Total Standard Regular Ingredient Qty / Total Standard Yield Qty) / Standard Batch Size
- Standard Conversion Cost per Unit = (Total Standard Conversion Cost / Standard Batch Size) x (Total Standard Regular Ingredient Qty / Total Standard Yield Qty)

### **Total Actual Product Quantity**

The total actual product quantity is calculated as:

Total Actual Product Quantity = Total Actual Regular Ingredient Qty - Total Actual Byproduct Qty - (Total Actual Regular Ingredient Qty x Actual Process Loss)

**Gain on Usage Variance (GOU)**

Occasionally, materials lose their financial value over a period of time. When such materials are used in production, you have a gain. This gain is posted as the gain on usage variance. The amount of gain is the difference between the cost of devalued material and the cost of the same material if obtained at the time of batch consumption.

The following table provides the distribution for production batch close with Routing using standard costing:

Journal Line Type	Debit	Credit
GOU		(Total Planned SSP Item Amount - Total Actual SSP Item Amount) x Total Actual SSP Item Qty
WIP	(Total Planned SSP Ingredient Amount - Total Actual SSP Ingredient Amount) x Total Actual SSP Ingredient Qty	

- The substandard product (SSP) items are set up as new item category set in the Oracle Process Manufacturing Inventory Management application.
- The byproducts are ignored.

The subsequent paragraphs describe the details of the calculations.

**Total Planned SSP Item Amount**

The total planned SSP Item amount is calculated as:

Total Planned SSP Item Amount = (Total Planned SSP Item Amount + Total Planned SSP Item Qty) / Total Planned SSP Item Qty

**Total Actual SSP Item Amount**

The total actual SSP Item amount is calculated as:

Total Actual SSP Item Amount = Total Actual SSP Item Amount / Total Actual SSP Item Qty

**Substitution Usage Variance (SUB)**

Substitution Usage Variance is the difference between the cost of planned ingredients and the cost of actual ingredients used in a batch. When ingredient cost is calculated, the substandard product item is valued at the regular ingredient cost. This is because the gain of SSP material usage is already recorded as the Gain on Usage variance.

The following table provides the distribution for production batch close with Routing using standard costing:

Journal Line Type	Debit	Credit
SUB		(Actual Ingredient Cost per Unit- Planned Ingredient Cost per Unit) x Actual Net Ingredient Quantity
WIP	(Actual Ingredient Cost per Unit- Planned Ingredient Cost per Unit) x Actual Net Ingredient Quantity	

The subsequent paragraphs describe the details of the calculations.

#### **Actual Ingredient Cost per Unit**

The actual ingredient cost per unit is calculated as:

Actual Ingredient Cost per Unit = Total Actual Regular Ingredient Amount / ((Total Actual Regular Ingredient Qty + Total Actual SSP Item Qty) - Total Actual Byproduct Qty)

The following paragraphs describe how the total actual regular ingredient amount and cost are calculated:

- Total Actual Ingredient Total Amount = ((Actual Regular Ingredient Cost) x Total Actual SSP Item Qty) + Total Actual Regular Ingredient Amount - Total Actual Byproduct
- Amount Total Actual Regular Ingredient Cost = (Total Actual Regular Ingredient Amount - Total Actual By product Amount) / (Total Actual Regular Ingredient Qty - Total Actual Byproduct Qty)

#### **Planned Ingredient Cost per Unit**

The planned ingredient cost per unit is calculated as:

Planned Ingredient Cost per Unit = Total Planned Regular Ingredient Amount / ((Total Planned Regular Ingredient Qty + Total Planned SSP Item Qty) - Total Planned Byproduct Qty)

The following paragraphs describe how the total planned regular ingredient amount

and cost are calculated:

- Total Planned Ingredient Total Amount = ((Planned Regular Ingredient Cost) x Total Planned SSP Item Qty) + Total Planned Regular Ingredient Amount - Total Planned Byproduct Amount
- Total Planned Regular Ingredient Cost = (Total Planned Regular Ingredient Amount - Total Planned Byproduct Amount) / (Total Planned Regular Ingredient Qty - Total Planned Byproduct Qty)

**Net Ingredient Qty**

The net ingredient quantity is calculated as:

$$\text{Net Ingredient Qty} = \text{Total Actual Regular Ingredient Qty} + \text{Total Actual SSP Item Qty} - \text{Total Actual Byproduct Qty}$$

**Yield Variance (YLD)**

Yield Variance is the difference between the cost of planned ingredients and the actual output.

The following table provides the distribution for production batch close with Routing using standard costing:

Journal Line Type	Debit	Credit
YLD	$\{[\text{Total Actual Input Qty} - (\text{Total Actual Input Qty} \times \text{Planned Process Loss})] - \text{Total Actual Output Qty}\} \times \text{Average Planned Ingredient Cost}$	
WIP		$\{[\text{Total Actual Input Qty} - (\text{Total Actual Input Qty} \times \text{Planned Process Loss})] - \text{Total Actual Output Qty}\} \times \text{Average Planned Ingredient Cost}$

The subsequent paragraphs describe the details of the calculations.

**Total Actual Input Qty**

The total actual input quantity is calculated as:

$$\text{Total Actual Input Qty} = \text{Total Actual Regular Ingredient Qty} + \text{Total Actual SSP Item Qty} - \text{Total Actual Byproduct Qty}$$

**Planned Process Loss**

The planned process loss is calculated as:  $\text{Planned Process Loss} = (\text{Total Planned Input Qty} - \text{Total Planned Output Qty}) / \text{Total Planned Input Qty}$

The following paragraphs describe how the total planned input and output quantities are calculated:

- $\text{Total Planned Input Qty} = \text{Total Planned Regular Ingredient Qty} + \text{Total Planned SSP Item Qty} - \text{Total Planned Byproduct Qty}$
- Total Planned Output Qty is the total of planned output quantity for all the products

**Total Actual Output Qty**

The total actual output quantity is calculated as:

Total Planned Output Qty is the total of planned output quantity for all the products

**Average Planned Ingredient Cost**

The average planned ingredient cost is calculated as:

$\text{Average Planned Ingredient Cost} = \text{Total Planned Regular Ingredient Amount} / ((\text{Total Planned Regular Ingredient Qty} + \text{Total Planned SSP Item Qty}) - \text{Total Planned Byproduct Qty})$

**Batch Size Variance (RUV)**

Batch Size Variance captures the difference in resource usages by comparing the actual conversion cost at actual batch size with the planned batch size.

The following table provides the distribution for production batch close with Routing using standard costing:

Journal Line Type	Debit	Credit
RUV	[(Actual Conversion Cost per Unit at Actual Batch Size - Actual Conversion Cost per Unit at Planned Batch Size) x Total Actual Product Qty]	
WIP		[(Actual Conversion Cost per Unit at Actual Batch Size - Actual Conversion Cost per Unit at Planned Batch Size) x Total Actual Product Qty]

The subsequent paragraphs describe the details of the calculations.

**Actual Conversion Cost per Unit at Actual Batch Size**

The actual conversion cost per unit at the actual batch size is calculated as:

Actual Conversion Cost per Unit = Total Actual Conversion Amount / Total Actual Output Qty

**Actual Conversion Cost per Unit at Planned Batch Size**

The actual conversion cost per unit at the planned batch size is calculated as:

Actual Conversion Cost per Unit = Total Planned Conversion Cost / Total Actual Output Qty

**Nonstandard Routing Variance (RSV)**

The Nonstandard Routing Variance captures the substitution of resources by comparing the actual conversion cost at the actual batch size and planned conversion cost at the actual batch size.

The following table provides the distribution for production batch close with Routing using standard costing:

Journal Line Type	Debit	Credit
RSV	[(Actual Conversion Cost per Unit - Planned Conversion Cost per Unit) x Total Actual Product Qty] - RUV	
WIP		[(Actual Conversion Cost per Unit - Planned Conversion Cost per Unit) x Total Actual Product Qty] - RUV

The subsequent paragraphs describe the details of the calculations.

**Actual Conversion Cost per Unit**

The actual conversion cost per unit at the actual batch size is calculated as:

Actual Conversion Cost per Unit = Total Actual Conversion Amount / Total Actual Output Qty

**Planned Conversion Cost per Unit**

The planned conversion cost per unit at the actual batch size is calculated as:

Planned Conversion Cost per Unit = Total Planned Conversion Cost / Total Actual Output Qty

**Batch Variance Rounding (CLS)**

The following table provides the distribution for production batch close closing variance with Process Operation Control using standard costing:

Journal Line Type	Debit	Credit
WIP		Amount to clear out the WIP generated by all the transactions in Release, Certification, Step, and Close events.
CLS	Offset to WIP entry.	

One of the typical reasons for getting a non-zero Close Variance is that the batch was released in one cost period when the debit to WIP is valued at one cost. The batch was completed in a later cost period when the credit to WIP for the same quantities is at a different value. As a result, you have a balance left in WIP that is entirely due to a cost change but it needs to be cleared out.

### Batch Release without Routing in Actual Costing

Within OPM production batches, several transactions can occur during a batch release:

- Production batch release
- Adjustment to quantities released
- Production batch unrelease

The unrelease process creates an opposite entry. Debits become credits and credits become debits, using the same template.

The following table provides the distribution for production batch releases without Routing using actual costing:

Journal Line Type	Debit	Credit
INV		[Actual Ingredient Input Qty x Batch Organization Total Item Cost]
WIP	[Actual Ingredient Input Qty x (Organization Item Total Material Cost)]	

### Batch Completion

Within OPM production batches, inventory transactions occur during and after a batch

is certified:

- Completion of production batch on the material side
- Adjustment to quantities consumed and yielded which are ingredients, byproduct, and coproducts

The Actual Product Output Quantity is calculated as the sum of the yield of all products, byproducts, and coproducts.

The following table provides the distribution for production batch completion without Routing using actual costing:

<b>Journal Line Type</b>	<b>Debit</b>	<b>Credit</b>
INV	[Actual Product Output Qty x Organization Total Item Cost]	
WIP		[Actual Product Output Qty x (Organization Item Material Cost + Ingredient Cost + Organization Item Resource Cost)]
RCA		[Actual Product Output Qty x (Organization Item Material Cost + Ingredient Cost + Organization Item Resource Cost)]
OVH	[Actual Product Output Qty x (Organization Item Overhead Cost)]	
ALC	[Actual Product Output Qty x (Organization Item GL Allocation Cost)]	

### **Batch Close**

When a production batch is closed, no detailed variances are calculated for companies using actual costing. The remaining WIP amount is cleared and posted as the CLS account, Closing Variance (CLS).

### **Closing Variance**

The following table provides the distribution for production batch close closing variance without Process Operation Control using actual costing:

Journal Line Type	Debit	Credit
WIP		Amount to clear out the WIP generated by all the transactions in Release and Certification events
CLS	Offset to WIP entry	

There are reasons why amounts are posted to the close variance:

- You can get a non-zero close variance if the batch was released in one cost period and the debit to WIP is valued at one cost, but the batch was completed in a later cost period when the credit to WIP for the same quantities is valued at a different cost. This results in a left over balance WIP due to the cost change and must be cleared out.
- If you book batches using average cost with PWAC, then batches will have either a positive or a negative difference. During the period, they balance each other out.
- If you select an average actual costing with PMAC, then the costs include period ending balance which results in a variance.

## Batch Release With Routing using Actual Costing

### Batch Release with Routing

Within OPM production batches, transactions can occur during a batch release:

- Release production batch
- Adjustment to quantities released
- Unrelease production batch

Adjustment to quantities released Unrelease production batch The unrelease process creates an opposite entry. Debits become credits and credits become debits, using the same template.

For the release process, the postings are slightly different when Process Operation Control is enabled. There is no posting to RCA because it is done for each STEP process. The posting to WIP is calculated at the total of material and resource cost elements.

The following table provides the distribution for production batch release with Routing using actual costing:

Journal Line Type	Debit	Credit
INV		[Actual Ingredient Input Qty x Organization Total Item Cost]
WIP	[Actual Ingredient Input Qty x (Organization Item Total Material Cost)]	

### Batch Completion with Routing

Within OPM production batches, inventory transactions can occur during and after a batch is certified:

- Completion of production batch on the material side
- Adjustment to quantities consumed and yielded which are ingredients, byproduct, coproducts

For the certify process, the postings are slightly different when Routing is enabled. There is no posting to RCA because it is done for each STEP process. The posting to WIP is calculated at the total of material and resource cost elements.

The Actual Product Output Quantity is calculated as the sum of the yield of all products, byproducts, and coproducts.

The following table provides the distribution for production batch completion with Routing using actual costing:

Journal Line Type	Debit	Credit
INV	[Actual Product Output Qty x Organization Total Item Cost]	
WIP		[Actual Product Output Qty x (Organization Item Material Cost + Organization Item Resource Cost)]
OVH		[Actual Product Output Qty x (Organization Item Overhead Cost)]

Journal Line Type	Debit	Credit
ALC		[Actual Product Output Qty x (Organization Item GL Allocation Cost)]

### Step Certification with POC

Within OPM production batches, several transactions related to resource consumption can occur during and after the certification phase:

- Step completion of production batch on the resource side
- Adjustment to quantities consumed and yielded on the resource side

The following table provides the distribution for production step certification with Routing using actual costing:

Journal Line Type	Debit	Credit
WIP	[Actual Resource Count x Actual Resource Usage x Resource Cost]	
RCA		[Actual Resource Count x Actual Resource Usage x Resource Cost]

If the batch has step dependent release of ingredients, the application also creates entries to the INV, WIP for the ingredients, and IVV accounts.

### Batch Close with Routing

When a production batch is closed, variances are not calculated for Actual Costing companies. Any remaining WIP amount is cleared and posted to the CLS account: Closing Variance (CLS)

The following table provides the distribution for production batch close with Routing using actual costing:

Journal Line Type	Debit	Credit
WIP		Amount to clear out the WIP generated by all the transactions in Release and Certification events
CLS	Offset to WIP entry	

There are three reasons why amounts are posted to the close variance:

- You might get a non-zero close variance if the batch was released in one cost period and the debit to WIP is valued at one cost, but the batch was completed in a later cost period when the credit to WIP for the same quantities is valued at a different cost. This results in a left over balance WIP due to the cost change and must be cleared out.
- If you book batches using average cost with PWAC, then batches will have either a positive or a negative difference. During the period, they balance each other out.
- If you select an average actual costing with PMAC, then the costs include period ending balance which results in a variance.

## Oracle Order Management Distribution for Process Organization

### Order Management Shipments

For Order Management, accounts for revenue are done through AutoAccounting in Oracle Receivables since Invoicing is done in Oracle Receivables. Oracle Receivables builds the journal entries for Sales, Accounts Receivable, Tax, Discounts, Allowances, and Freight. SLA is responsible for posting journal entries for the inventory impact of the shipment. Similarly, returns, credit memos, and debit memos are processed through Oracle Receivables. SLA also reports the financial impact on inventory for returns affecting inventory balances.

Depending on your business needs, you may require deferred accounting rules, which you can create by selecting the Deferred Revenue check box during Accounting Rule definition in Oracle Receivables. Deferred accounting rules let you defer revenue to an unearned revenue account until you are ready to specify the revenue recognition schedule.

**At the time of shipment with COGS (OPM):**

Journal Line Type	Debit	Credit
INV		[Shipment Qty x Source Organization Total Item Cost]
COGS	[Shipment Qty x Source Organization Total Item Cost]	

**At the time of shipment with DCOGS (OPM):**

Journal Line Type	Debit	Credit
INV		[Shipment Qty x Source Organization Total Item Cost]
DCOGS	[Shipment Qty x Source Organization Total Item Cost]	

## Deferred Cost of Goods Sold (COGS) and Revenue

Recent guidelines is to consider the contractual terms of the sale in deciding when and what part of the revenue related to a sale can be recognized in the books. The contract terms may include acceptance provisions, cancellation provisions, refund clauses, fiscal funding clauses, delivery clauses, and others. These are together called as contingencies that hold back revenue recognition. The key principle is that the revenue and expenses matching should only happen in the period in which the contingencies are removed and revenue is actually earned. Both the cost of sales and revenue are deferred until the revenue is actually earned.

The material at the customer site is still owned by the supplier and hence the supplier cannot recognize revenue and cost of sales. When customer consumes the material or transfers it to their inventory, then it is considered as removal of the contingency thereby releasing the hold on the revenue for the supplier.

You can run a set of concurrent processes to record sales order and revenue recognition transactions and to create and cost COGS recognition transactions. These COGS recognition transactions adjust deferred and earned COGS in an amount that synchronizes the percentage of earned COGS to earned revenue on sales order shipment lines. Run the following concurrent programs:

- Record Order Management Transactions concurrent program that records new sales order transaction activity such as shipments and RMA returns in Oracle Order Management.

- Revenue Recognition concurrent program determines the percentage of recognized or earned revenue related to invoiced sales order shipment lines in Oracle Receivables.
  - Generate COGS Recognition Events concurrent program creates and costs COGS recognition events for new sales order shipments/returns and changes in revenue recognition and credits for invoiced sales order shipment lines.
- Refer to the *Oracle Receivables User's Guide* for more information on the concurrent programs.

The following are the changes to the accounting entries created at various stages.

**At the time of shipment [OPM]**

Journal Line Type	Debit	Credit
Deferred COGS	Transaction Qty x Item Cost	
INV		Transaction Qty x Item Cost

When customer is billed for the entire quantity (distribution created in AR and not in OPM)

Journal Line Type	Debit	Credit
Receivables	Transaction Qty x Item Sale Price	
Deferred Revenue		Transaction Qty x Item Sale Price

When a portion of revenue is recognized a revenue recognition event is created using the Revenue Accounting Module in AR.

**Accounting entry in AR**

Journal Line Type	Debit	Credit
Deferred Revenue	Transaction Qty x Item Sale Price x Recognition %	

Journal Line Type	Debit	Credit
Revenue		Transaction Qty x Item Sale Price x RMA Qty x Item Cost x Recognized %

An additional entry is also created OPM to reflect the earned revenue.

Journal Line Type	Debit	Credit
COGS	Transaction Qty x Item Cost x Recognition %	
Deferred COGS		Transaction Qty x Item Cost x RMA Qty x Item Cost x Recognized %

## RMA

### Before any revenue recognition

Journal Line Type	Debit	Credit
INV	RMA Qty x Item Cost	
DCOGS		RMA Qty x Item Cost

### After a portion of revenue is recognized

Journal Line Type	Debit	Credit
INV	RMA Qty x Item Cost	
COGS		RMA Qty x Item Cost x Recognized %
DCOGS		RMA Qty x Item Cost x Recognized %

## Internal Orders

These orders represent a shipment in Order Management with a corresponding receipt raised in Oracle Receivables to record the transfer of items from one organization to another. The transfer can either be Direct or Intransit. When an intransit transfer is shipped, the inventory is held in an intransit account until the goods are received.

The Accounting process considers interorganization transfer charges when booking internal order shipments. Transfer credit is defined in the Inventory Shipping Network as a percentage which is applied to the cost of the shipped quantity. The Accounting process books this value under XFC (transfer credit in internal orders) while posting Oracle Order Management and Oracle Purchasing entries in OPM. Only a predefined percentage (a predefined percentage of the sending organization's cost) is supported for internal orders. If the predefined percentage is set up in the shipping networks, then the Accounting process uses it to calculate transfer credits.

If the INV: Intercompany Invoice for Internal Orders profile option is set to No, then the entries are booked as uninvoiced internal orders.

### Internal Orders - Direct Transfer with Order Management

The following table shows the distribution for direct internal orders when the accounting process is run after the order has shipped:

Journal Line Type	Debit	Credit
INV		[Shipment Qty x Ship Organization Item Cost]
IOR	[Shipment Qty x Ship Organization Item Cost]	

### Internal Orders - Direct with Purchasing

The following table provides the distribution for direct internal orders when the item is received and the accounting process is run for Purchasing:

Journal Line Type	Debit	Credit
INV	[Receipt Qty x Receive Organization Item Cost]	

Journal Line Type	Debit	Credit
IOP		[Receipt Qty x Ship Organization Item Cost converted to Receive Organization Currency]
PPV	[Receipt Qty x (Ship Organization Item Cost - Receive Organization Item Cost)]	

### Internal Orders - Intransit Transfer

#### FOB Receiving

Shipping Organization to Intransit Inventory (Uninvoiced) The FOB point is established between the from and to organizations in the Inventory Shipping Network window. FOB point determines the owner of the intransit inventory and the transport, and transfer expenses.

The bookings are posted for the Shipping legal entity.

The following table provides the distribution for internal orders with intransit inventory when the accounting process is run for Order Management after shipment of the material:

Journal Line Type	Debit	Credit
INV		[Shipment Qty x Ship Organization Item Cost]
ITR	[Shipment Qty x Ship Organization Item Cost]	

#### Intransit Inventory to Receiving (Uninvoiced)

The bookings are posted for the Shipping legal entity.

The following table provides the distribution for received intransit orders when the accounting process is run for Purchasing:

Journal Line Type	Debit	Credit
IOR	[Receipt Qty x Ship Organization Item Cost] + Transfer Credit	
ITR		[Receipt Qty x Ship Organization Item Cost]
XFC		Transfer Credit

### Intransit Inventory to Receiving Organization (Uninvoiced)

The bookings are posted for the Receiving legal entity.

The following table provides the distribution for received intransit orders when the accounting process is run for Purchasing:

Journal Line Type	Debit	Credit
INV	[Receipt Qty x Receive Organization Item Cost]	
IOP		[Receipt Qty x Ship Organization Item Cost converted to Receive Organization Currency] + Transfer Credit
PPV	[Receipt Qty x (Ship Organization Item Cost Converted to Receive Organization Currency- Receive Organization Item Cost)] - Transfer Credit	

### FOB Shipping

#### Shipping Organization to Intransit Inventory (Uninvoiced)

The bookings are posted for the Shipping legal entity.

The following table provides the distribution for shipped internal orders with intransit inventory when the accounting process is run for Order Management:

Journal Line Type	Debit	Credit
IOR	[Shipment Qty x Ship Organization Item Cost] +Transfer Credit	
XFC		Transfer Credit
INV		[Shipment Qty x Ship Organization Item Cost]

### Shipping to Intransit Inventory (Uninvoiced)

The bookings are posted for the Receiving legal entity.

The following table provides the distribution for shipped internal orders with intransit inventory when the accounting process is run for Order Management:

Journal Line Type	Debit	Credit
ITR	[Shipment Qty x Receive Organization Item Cost]	
IOP		[Shipment Qty x Ship Organization Item Cost] + Transfer Credit
PPV		[Receipt Qty x (Receive Organization Item Cost - Ship Organization Item Cost converted to Receive Organization Currency)] - Transfer Credit

### Intransit Inventory to Receiving Organization (Uninvoiced)

The bookings are posted for the Receiving OPM Legal Entity.

The following table provides the distribution for received internal orders with intransit inventory when the subledger is run for the Purchasing entity:

Journal Line Type	Debit	Credit
INV	[Receipt Qty x Receive Item Cost]	
ITR		[Receipt Qty x Receive Organization Item Cost]

## Intercompany Invoicing

The Intercompany Invoicing routines are modified to retrieve information on internal orders containing OPM items. Invoicing of internal orders is done only for those orders that cross operating units. The Accounting process books entries for internal orders differently when such orders are invoiced with invoicing between two different operating units. The subsequent topics describe the templates used for recording journal entries for invoiced internal orders. Refer to the *Oracle Inventory User's Guide* for more details on Intercompany Invoicing functionality.

If the INV: Intercompany Invoice for Internal Orders profile option is set to Yes, then the entries are booked as invoiced internal orders.

The profile options, INV: Intercompany Invoice for Internal Orders and CST: Transfer Pricing Option, work closely with one another. If the INV: Intercompany Invoice for Internal Orders profile value is set to either Yes or No, and the CST: Transfer Price Option profile value is set to No, then the Accounting process books the entries as uninvoiced internal orders.

If the INV: Intercompany Invoice for Internal Orders profile value is set to Yes and the CST: Transfer Price Option profile value is set to Yes - price as not incoming cost, then the Accounting process books different entries along with the generated Profit in Inventory (PIN) account. If the INV: Intercompany Invoice for Internal Orders profile value is set to Yes and the CST: Transfer Price Option profile value is set to Yes - price as incoming cost, then the Accounting process books different entries and does not include the Profit in Inventory (PIN) account.

### Invoiced Orders and FOB Receiving

#### Shipping Organization to Intransit Inventory (Invoiced)

The FOB point is established between the from and to organizations in the Inventory Shipping Network window. The FOB point determines the owner of the intransit inventory and the transport, and transfer expenses.

The bookings are posted for the Shipping OPM Legal Entity.

The following table provides the distribution for internal orders with intransit inventory when the subledger is run for Order Management after shipment of the material:

Journal Line Type	Debit	Credit
INV		[Shipment Qty x Ship Organization Item Cost]
ITR	[Shipment Qty x Ship Organization Item Cost]	

#### Intransit Inventory to Receiving Organization (Invoiced)

The bookings are posted for the Shipping legal entity.

The following table provides the distribution for received intransit orders when the accounting process is run for Purchasing:

Journal Line Type	Debit	Credit
COGS	[Shipment Qty x Ship Organization Item Cost]	
ITR		[Shipment Qty x Ship Organization Item Cost]

#### Intransit Inventory to Receiving Organization (Invoiced)

The bookings are posted for the Receiving legal entity.

The following table provides the distribution for received intransit orders when the accounting process is run for Purchasing:

Journal Line Type	Debit	Credit
INV	[Receipt Qty x Receive Organization Item Cost]	
AAP		[Receipt Qty x Transfer Price]
PPV		[Receipt Qty x (Receive Organization Item Cost - Ship Organization Item Cost)]
PIN	Receipt Qty x [Transfer Price - Ship Organization Item Cost]	

**Note:** The profit in inventory (PIN) is booked only when the CST: Transfer Pricing Option profile option is set to price as not incoming.

The Transfer Price is referred to as the price that is charged by one part of a legal entity for products and services it provides to another part of the same legal entity, in order to calculate each division's profit and loss separately. To use the Advanced Pricing feature, set up the INV: Advanced Pricing for Inter Company Invoicing profile option to Yes. Refer to the Oracle Inventory User's Guide, Oracle Order Management User's Guide, and Oracle Advanced Pricing User's Guide for more details on setting up the transfer pricing.

**Intransit Inventory to Receiving Organization (Invoiced)**

**Note:** Refer to this topic when the CST: Transfer Pricing Option profile option is set to price as incoming.

The bookings are posted for the Receiving OPM Legal Entity.

The following table provides the distribution for received intransit orders when the accounting process is run for Purchasing:

Journal Line Type	Debit	Credit
INV	[Receipt Qty x Receive Organization Item Cost]	
AAP		[Receipt Qty x Transfer Price]
PPV		[Receipt Qty x (Receive Organization Item Cost - Ship Organization Item Cost)]

**FOB Shipping**

**Shipping Organization to Intransit Inventory (Invoiced)**

The bookings are posted for the Shipping legal entity.

The following table provides the distribution for shipped internal orders with intransit inventory when the accounting process is run for Order Management:

Journal Line Type	Debit	Credit
COGS	[Shipment Qty x Ship Organization Item Cost]	
INV		[Shipment Qty x Ship Organization Item Cost]

### Shipping to Intransit Inventory (Invoiced)

**Note:** Refer to this topic when the CST: Transfer Pricing Option profile option is set to price as not incoming.

The bookings are posted for the Receiving legal entity.

The following table provides the distribution for shipped internal orders with intransit inventory when the accounting process is run for Order Management:

Journal Line Type	Debit	Credit
ITR	[Shipment Qty x Receive Organization Item Cost]	
IOP		[Shipment Qty x Transfer Price converted to Receive Organization Currency]
PPV		[Shipment Qty x (Receive Organization Item Cost - Ship Organization Item Cost converted to Receive Organization Currency)]
PIN	[Shipment Qty x (Transfer Price converted to Receive Organization Currency - Ship Organization Item Cost)]	

**Note:** The profit in inventory (PIN) is booked only when the CST: Transfer Pricing Option profile option is set to price as not incoming.

### Shipping to Intransit Inventory (Invoiced)

**Note:** Refer to this topic when the CST: Transfer Pricing Option profile option is set to price as incoming.

The bookings are posted for the Receiving legal entity.

The following table provides the distribution for shipped internal orders with intransit inventory when the accounting process is run for Order Management:

Journal Line Type	Debit	Credit
ITR	[Shipment Qty x Receive Organization Item Cost]	
IOP		[Shipment Qty x Transfer Price]
PPV	Shipment Qty x [Transfer Price - Receive Organization Item Cost]	

#### **Intransit Inventory to Receiving Organization (Invoiced)**

The bookings are posted for the Receiving legal entity.

The following table provides the distribution for received internal orders with intransit inventory when the accounting process is run for Purchasing:

Journal Line Type	Debit	Credit
INV	[Receipt Qty x Receive Organization Item Cost]	
ITR		[Receipt Qty x Receive Organization Item Cost]

## **Oracle Purchasing Distribution for Process Organization**

Purchase order receipts from Oracle Purchasing result in two accounting entries. The first entry records the receipt of goods into receiving inspection.

Journal Line Type	Debit	Credit
ISP	Qty Received x PO price	
AAP		Qty Received x PO Price

For returns and corrections or adjustments, the amount is included as a debit or credit depending on the sign of the amount.

The following table provides the distribution for purchasing vendor receipts including vendor returns and adjustments to receipts when the Book at Item Cost is enabled in the Event Fiscal Policy:

Journal Line Type	Debit	Credit
INV	Qty Received x Item Cost	
ISP		Qty Received x PO Price
PPV	(PO Price - Unit Cost) x Qty Received	

When the Event Fiscal Policy is set at Book at PO Price, then the following distribution is created:

Journal Line Type	Debit	Credit
INV	Qty Received x PO Price	
ISP		Qty Received x PO Price

### Landed Cost Adjustments

Landed cost adjustments in an LCM-enabled organization are posted to the LCA account.

The following table provides the distribution in an LCM-enabled organization for a PO at receipt, when the Book at Receipt is enabled in the Event Fiscal Policy:

<b>Journal Line Type</b>	<b>Debit</b>	<b>Credit</b>
ISP	Qty Received x Receipt Price	
AAP		Qty Received x PO Price
LCA		Qty Received x (Receipt Price - PO Price)

The following table provides the distribution in an LCM-enabled organization for a PO at delivery, when the Book at PO Price is enabled in the Event Fiscal Policy:

<b>Journal Line Type</b>	<b>Debit</b>	<b>Credit</b>
ISP		Qty Received x Receipt Price
INV	Qty Received x Receipt Price	

The following table provides the distribution in an LCM-enabled organization for a PO at receipt, when the Book at Item Cost is enabled in the Event Fiscal Policy:

<b>Journal Line Type</b>	<b>Debit</b>	<b>Credit</b>
ISP	Qty Received x Receipt Price	
AAP		Qty Received x PO Price
LCA		Qty Received x (Receipt Price - PO Price)

The following table provides the distribution in an LCM-enabled organization for a PO at delivery, when the Book at Item Cost is enabled in the Event Fiscal Policy:

<b>Journal Line Type</b>	<b>Debit</b>	<b>Credit</b>
ISP		Qty Received x Receipt Price
INV	Qty Received x Item Cost	

Journal Line Type	Debit	Credit
LCA		Qty Received x (Item Cost-Receipt Price)

## Enhanced Drop Shipments and Global Procurement

This supports centralized procurement, volume discounts, and consolidation of interactions with the user's suppliers and customers and so on. These are supported for process organizations.

Drop shipment is a process where goods are shipped from a company's supplier directly to the company's customer. The goods do not physically pass through the company's warehouse facilities. Drop shipment is a major business trend and businesses expect their ERP systems to support and streamline the processes to meet their needs in this area. Oracle's existing drop shipment support is limited to one operating unit, and assumes that both the supplier and the customer are external parties.

There is a need for an extension of the current solution to support internal parties. Accordingly, drop shipments should be possible where the supplier is a related party (another organization of the same enterprise). Drop shipment should also be possible where the customer is a related party (another organization of the same enterprise). All intercompany accounting to transfer the liability for goods and related costs should be automated.

With Global Procurement, Oracle Purchasing enables material requested by an organization in one Operating Unit, Legal Entity, and Ledger to be procured through a different Operating Unit, Legal Entity, and Ledger. Receiving allows receipts in an organization against Post originating in any Operating Unit, Legal Entity, Ledger, if the ship-to organization on the PO is that organization.

In external drop shipment scenarios where shipments are made directly from the supplier to the customer, intercompany revenue and COGS are fully recognized. The revenue and COGS deferrals take place only in the customer-facing booking operating unit.

OPM Cost Management supports and performs the accounting for both physical and financial flows in intercompany transactions. Many companies distribute goods from a central location to parties located in other locations. These goods, or drop shipments, can pass to a controlled entity or subsidiary in the country of sales before shipping to the customer.

Corporations create a diverse set of operating unit, organization, entity, and ledger combinations to facilitate this business flow. Global procurement enables Oracle Purchasing to request material from these operating unit combinations to other operating units. Oracle Inventory creates transactions that do not generate material

movements, but are used for invoicing and accounting purposes. Procurement and sales transactions are performed across these operating units.

Transactions can impact several organizations and operating units requiring a complex sequence of linked accounting entries. This functionality supports:

- **Shared procurement services:** If a purchase order is placed by one operating unit, and shipped to another operating unit, then the procurement operating can invoice the receiving operating unit. The invoice is posted at either the purchase order price or the transfer price. The accounting transactions represents a transfer of ownership between the operating units.
- **Ownership transfer for shipments:** You can generate a transfer of ownership when shipping a sales order where the operating units are separate for selling and shipping. The intercompany invoice uses the transfer price.
- **Drop ship across ledgers:** On a drop shipment sales order, the warehouse organization and sales order organization can use different ledgers. Intercompany relationships: You can define chains of operating units for selling, procurement, shipping, and receiving. Ownership of the goods is transferred during transactions.
- Intercompany invoices are generated between all operating units, and accounting transactions represent ownership transfer between all operating units in the chain.

**Account Distribution for Dropship and Global Procurement:**

The following flow of activities demonstrates this scenario for drop shipment and global procurement:

**A Simple Supplier**

Receipt Receiving and then delivering or direct delivery. Only the receive transaction is recorded. The deliver to inventory transaction goes to material transaction table and is accounted as the PO Receipt transaction.

The following accounting entries are recorded:

Journal Line Type	Debit	Credit
ISP	Receipt Qty x PO price	
AAP		Receipt Qty x PO Price

**A Return to Vendor Transaction for the above receipt**

Only the return to vendor transaction creates a row. The return to receiving transaction will not have a row in this table.

The following accounting entries are recorded:

Journal Line Type	Debit	Credit
ISP	Adjustment Qty x PO price	
AAP		Receipt Qty x PO Price

## A Global Procurement Flow

Procuring Operating Unit (OU) is PRU and Receiving Operating Unit (OU) is Vision.

The owning organization in the transaction flow are both process organizations. The procuring owner organization is PR1 and receiving owner organization is PL1.

There are two journals created, one for the procuring organization and another for the receiving organization.

Entry 1: Against PR1 (Procuring OU = PRU) Logical Receiving in PR1

Journal Line Type	Debit	Credit
Clearing Account	Receipt Qty x PO price	
AAP		Receipt Qty x PO Price

Entry 2: Against PL1 (Receiving OU = Vision)

If the intercompany entries are created using the PO Price, then the entries are as follows (Receive in PL1):

Journal Line Type	Debit	Credit
ISP	Receipt Qty x PO price	
ICACC		Receipt Qty x PO Price

If the intercompany entries are created using the Transfer Price, then the entries are as follows:

Journal Line Type	Debit	Credit
ISP	Receipt Qty x Transfer price	
ICACC		Receipt Qty x Transfer price

If the intercompany entries are created either Transfer Price or PO Price, then the following entries are created:

#### Logical Receipt to Inventory in PR1

Journal Line Type	Debit	Credit
INV	Receipt Qty x PO price	
Clearing		Receipt Qty x PO price

#### Logical Interorganization to Inventory in PR1

Journal Line Type	Debit	Credit
INV		Receipt Qty x PO price
ICCOGS	Receipt Qty x PO price	

#### Physical Receipt in PL1

Journal Line Type	Debit	Credit
INV	Receipt Qty x PO price or Transfer Price	
ISP		Receipt Qty x PO price or Transfer Price

## A Retroactive Pricing Adjustment for the PO

Two transactions are created. One for adjusting the receive transaction and another to adjust the already accounted delivery line.

The accounting entries for the adjustment to the receive line are as follows:

<b>Journal Line Type</b>	<b>Debit</b>	<b>Credit</b>
ISP	Receipt Qty x Price Adjustment	
AAP		Receipt Qty x Price Adjustment

The accounting entries for the adjustment to the delivery line are as follows:

<b>Journal Line Type</b>	<b>Debit</b>	<b>Credit</b>
Retroactive Price Adjustment Account (on Receiving Options for the Org)	Receipt Qty x Price Adjustment	
ISP		Receipt Qty x Price Adjustment

#### Receipt and Delivery of an Expense Item

Both receipt and delivery lines are created as there is no impact to inventory from receiving an expense item.

<b>Journal Line Type</b>	<b>Debit</b>	<b>Credit</b>
ISP	Receipt Qty x PO Price	
AAP		Receipt Qty x PO Price
EXP	Receipt Qty x PO Price	
ISP		Receipt Qty x PO Price



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## Navigator Paths

This topic provides the default navigation path for Accounting Setup and the cost management profile options.

This appendix covers the following topics:

- Oracle Process Manufacturing Cost Management Navigator Paths

### Oracle Process Manufacturing Cost Management Navigator Paths

Although your System Administrator may have customized your Navigator, typical navigation paths are described in the following tables. In some cases, there is more than one way to navigate to a window. These tables provide the most typical default path.

Window	Path
Actual Cost Adjustments	OPM Financials:Actual Costs:Adjustments
Actual Cost Adjustments	OPM Financials:Reports: Standard:Run
Actual Cost Process	OPM Financials:Actual Costs:Actual Cost Process
Actual Cost Process	OPM Financials:Actual Costs:View Transactions
Actual Cost Transaction View	OPM Financials:Cost Details:Actions:Actual Cost Transaction View

<b>Window</b>	<b>Path</b>
Actual Cost Transaction View	OPM Financials:Actual Costs:View Transactions or Cost Management:Actual Costs:Adjustments:Actions:Actual Transactions View
Actual Costs Adjustment Codes	OPM Financials:Setup:Actual Costs:Expense Allocations: Adjustment Reasons
Allocation Codes	OPM Financials:Setup:Actual Costs:Expense Allocations:Codes
Allocation Definitions	OPM Financials:Setup:Actual Costs:Expense Allocations:Codes
Component Groups	OPM Financials:Setup: Component Groups
Copy Item Costs	OPM Financials:Copy Costs: Copy Items Cost
Copy Percentage Overheads	OPM Financials:Setup:Copy Percentage Overheads
Copy Resource Costs	OPM Financials:Copy Costs: Copy Resource Cost
Copy Overheads	OPM Financials:Setup:Copy Overheads
Cost Allocation Maintenance	OPM Financials:Actual Costs: Expenses:Maintenance
Cost Allocation Processing OPM Financials	OPM Financials:Actual Costs: Expenses:Allocations:Special:Start
Cost Analysis Codes	OPM Financials:Setup:Analysis Codes
Cost Overheads	OPM Financials:Fixed Overhead
Cost Calendars	OPM Financials:Setup: Calendars
Cost Component Classes	OPM Financials:Setup: Component Classes
Cost Details	OPM Financials:Item Costs

<b>Window</b>	<b>Path</b>
Costed Bill of Materials Report	OPM Financials:Reports:Standard: Run
Cost Factors	OPM Financials:Setup:Cost Factors
Cost Method Codes	OPM Financials:Setup:Cost Types
Cost Rollup Error Messages	OPM Financials:Standard Costs:Cost Rollup:Actions:View Error Messages
Cost Rollup Process	OPM Financials:Standard Costs:Cost Rollup
Cost Rollup Process StatusOPM Financials	OPM Financials:Standard Costs: Cost Rollup:Actions:Process Status
Cost Inventory Organization Association Report	OPM Financials:Reports: Standard:Run
Costing Warehouse Associations	OPM Financials:Setup:Cost Warehouses
Display Cost Burden	OPM Financials:Item Costs: Actions:Overheads Details
Expenses to Allocate	OPM Financials:Setup:Actual Costs:Expense Allocations: Expenses
Find Actual Cost Adjustments	OPM Financials:Actual Costs: Adjustments:Query:Find
Find Actual Cost Transaction View	OPM Financials:Item Costs: Actions:Actual Cost Transaction View:Query Find
Find Actual Cost Transactions	OPM Financials:Actual Costs: View Transactions:Query: Find or Cost Management:Actual Costs: Adjustments:Actions:Actual Transactions View:Query:Find
Find Actual Costs Adjustment Codes	OPM Financials:Setup:Actual Costs:Expense Allocations: Adjustment Reasons:Query:Find
Find Allocation Codes	OPM Financials:Setup:Actual Costs:Expense Allocations:Codes: Query:Find

<b>Window</b>	<b>Path</b>
Find Allocation Definitions	OPM Financials:Setup:Actual Costs:Expense Allocations:Codes: Query:Find
Find Overhead Details	OPM Financials:Overhead Details: Query:Find
Find Component Groups	OPM Financials:Setup: Component Groups:Query:Find
Find Cost Allocation Maintenance	OPM Financials:Actual Costs: Expenses:Maintenance:Query:Find
Find Cost Analysis Codes	OPM Financials:Setup:Analysis Codes:Query:Find
Find Cost Calendars	OPM Financials:Setup: Calendars:Query:Find
Find Cost Component Classes	OPM Financials:Setup: Component Classes:Query:Find
Find Cost Details	OPM Financials:Item Costs: Query:Find
Find Cost Method Codes	OPM Financials:Setup:Cost Method Codes:Query:Find
Find Costing Warehouse Associations	OPM Financials:Setup:Cost Warehouses:Query:Find
Find Expenses to Allocate	OPM Financials:Setup:Actual Costs:Expense Allocations: Expenses:Query:Find
Find Invoice Lines	OPM Financials:Actual Costs: AP Invoice Prices:Query:Find
Find Material Cost Component Class	OPM Financials:Setup:Actual Costs:Matl Cost Components: Query:Find
Find Resource Costs	OPM Financials:Resource Costs: Query:Find
Find Rollup Source Warehouses	OPM Financials:Setup:Standard Costs:Source Organization:Query: Find

<b>Window</b>	<b>Path</b>
Formula Details	OPM Financials:Item Costs: Actions:Formula Details
GL Expense Allocation Definition	OPM Financials:Reports: Standard:Run
GL Expense Allocation Detail Report	OPM Financials:Reports: Standard:Run
GL Item Cost Detail Report	OPM Financials:Reports: Standard:Run
Invoice Price Maintenance	OPM Financials:Actual Costs: AP Invoice Prices
Item Cost Detail Report	OPM Financials:Reports: Standard:Run
Item Cost Selection	OPM Financials:Cost Details: Special:Item Cost List
Lot Cost Items	OPM Financials:Setup:Lot Costs:Lot Cost Items
Lot Cost Burdens	OPM Financials:Setup:Lot Costs:Overheads
Lot Cost Details	OPM Financials:Lot Cost:Lot Cost Details
Lot Cost Process	OPM Financials:Lot Cost:Setup:Lot Cost Process
Lot Cost Adjustment	OPM Financials:Setup:Lot Costs:Lot Cost Adjustment
Lot Cost History Report	OPM Financials:Reports: Standard:Run
Cost Management:Lot Cost:Reports:Lot Cost History	
Item Lot Cost Detail Report	OPM Financials:Reports: Standard:Run
Material Cost Component Class	OPM Financials:Setup:Actual Costs:Matl Cost Components
Percentage Burden Codes	OPM Financials:Setup:Percentage Overheads:Codes

<b>Window</b>	<b>Path</b>
Burden Priorities	OPM Financials:Setup:Percentage Overheads:Priorities
Burden Percentage	OPM Financials:Setup:Percentage Overheads:Percentages
Source and Target Percentage Burden Components	OPM Financials:Setup:Percentage Overheads:Associations
Resource Cost Selection	OPM Financials:Resource Costs:Actions:Resource Cost List
Resource Costs	OPM Financials:Resource Costs
Rollup Source Warehouses	OPM Financials:Setup:Standard Costs:Source Warehouses
Routing Details	OPM Financials:Cost Details:Actions:Routing Details
Start Actual Cost Process	OPM Financials:Actual Costs: Actual Cost Process:Actions:Start
Start Cost Rollup	OPM Financials:Standard Costs: Cost Rollup:SpeActions:Start
View Error Messages (Actual Cost Process)	OPM Financials:Actual Costs: Actual Cost Process:Actions:View Error Messages

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# Glossary

## **Actual Costing**

The method by which OPM uses the actual cost of production components (resources, raw material purchase prices, and so on) to calculate the cost of production.

## **Analysis Codes**

Categories by which different costs for the same item (such as value-added or standard costs) or a class of items, may be stored and reported.

## **Burden**

A cost added to production to cover overhead expenses (such as facility rental).

## **Closed Calendar Period**

A period in the current cost calendar which is locked against any further postings, or changes to existing postings.

## **Component Classes**

Classifications by which production resources may be grouped for reporting.

## **Component Groups**

Groupings by which resource or material costs (for example, raw materials and production machinery) may be collected for reporting.

## **Cost Calendar**

A calendar comprised of the periods to which costing transactions will post.

## **Cost Methods**

The methods by which OPM will calculate the costs of production (for example, actual costs of production). Cost Rollup

A procedure in which changes in product component costs (resource, material) are incorporated into the product's total cost.

**Cost Update**

The process by which all component costs are updated to the proper general ledger accounts.

**Frozen Cost Period**

A period in the current cost calendar in which no cost rollups and/or cost updates can be made to existing cost pistons. Newly-created cost postings may be entered, rolled up, and updated.

**General Ledger Expense Allocations**

Third-party general ledger accrual expenses that may be allocated to designated items for addition to production component costs.

**Nominal Cost**

The cost of using a resource to produce a single production unit.

**Open Costing Period**

A period in the current cost calendar to which daily cost transactions can post.

**Routing Costs**

The costs of resources used in operations and activities in a particular production routing.

**Standard Costing**

The method of defining the static cost of items, formulas, formula ingredients, and resources used during production.

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