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Oracle Manufacturing APIs and Open Interfaces Manual, Release 11i

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# Preface

Welcome to the Oracle Manufacturing APIs and Open Interfaces Manual, Release 11*i*.

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

- The principles and customary practices of your business area.
- Oracle Manufacturing APIs and Open Interfaces.

If you have never used Oracle Manufacturing APIs and Open Interfaces, Oracle suggests you attend one or more of the Oracle Applications training classes available through Oracle University.

- The Oracle Applications graphical user interface.

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

See Other Information Sources for more information about Oracle Applications product information.

## How To Use This Guide

The Oracle Manufacturing APIs and Open Interfaces Manual contains the information you need to understand and use Oracle Manufacturing APIs and Open Interfaces. This guide contains fifteen chapters:

- Chapter 1 gives you an overview of Manufacturing integration tools and explains how to use these tools to integrate Oracle Manufacturing products with one another and with non-Oracle systems.
- Chapter 2 contains information about Oracle ASCP and Oracle Global ATP Server.
- Chapter 3 contains information about Oracle Bills of Material open interfaces.
- Chapter 4 contains information about Oracle Cost Management open interfaces.
- Chapter 5 contains information about Oracle Enterprise Asset Management open interfaces.
- Chapter 6 contains information about Oracle Engineering open interfaces.
- Chapter 7 contains information about Oracle Inventory open interfaces.
- Chapter 8 contains information about Oracle Master Scheduling/MRP and Oracle Supply Chain Planning open interfaces.
- Chapter 9 contains information about Oracle Shop Floor Management open interfaces.
- Chapter 10 contains information about Oracle Purchasing or Oracle Public Sector Purchasing open interfaces.
- Chapter 11 contains information about Oracle Quality open interfaces.
- Chapter 12 contains information about Oracle Work in Process open interfaces.
- Chapter 13 contains information about Oracle Warehouse Management Systems open interfaces.
- Chapter 14 contains information about Oracle Flow Manufacturing open interfaces.
- Chapter 15 contains information about Oracle Complex Maintenance Repair and Overhaul open interfaces.

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- **Online Help** - Oracle Manufacturing APIs and Open Interfaces is part of the suite of Oracle Self-Service applications, which has an intuitive interface designed to guide users without end user documentation. Oracle iReceivables does not have an end user guide, or separate online HTML help.
- **11i Release Content Document** - Refer to the Release Content Document for new features listed release. The Release Content Document is available on *OracleMetaLink*.
- **About document** - Refer to the About document for patches that you have installed to learn about new documentation or documentation patches that you can download. The new About document is available on *OracleMetaLink*.

### Related Guides

Oracle Manufacturing APIs and Open Interfaces shares business and setup information with other Oracle Applications products. Therefore, you may want to refer to other guides when you set up and use Oracle Manufacturing APIs and Open Interfaces.

You can read the guides online by choosing Library from the expandable menu on your HTML help window, by reading from the Oracle Applications Document Library CD included in your media pack, or by using a Web browser with a URL that your system administrator provides.

If you require printed guides, you can purchase them from the Oracle Store at <http://oraclestore.oracle.com>.

## Guides Related to All Products

### **Oracle Applications User's Guide**

This guide explains how to enter data, query, run reports, and navigate using the graphical user interface (GUI) available with this release of *Oracle Manufacturing* (and any other Oracle Applications products). This guide also includes information on setting user profiles, as well as running and reviewing reports and concurrent processes.

You can access this user's guide online by choosing "Getting Started with Oracle Applications" from any Oracle Applications help file.

## Guides Related to This Product

**Oracle Applications User's Guide** This guide explains how to enter data, query, run reports, and navigate using the graphical user interface (GUI) available with this release of Oracle Applications products. This guide also includes information on setting user profiles, as well as running and reviewing reports and concurrent processes.

You can access this user's guide online by choosing "Getting Started with Oracle Applications" from any Oracle Applications help file.

**Oracle Applications Demonstration User's Guide** This guide documents the functional storyline and product flows for Global Computers, a fictional manufacturer of personal computers products and services. As well as including product overviews, the book contains detailed discussions and examples across each of the major product flows. Tables, illustrations, and charts summarize key flows and data elements.

## Reference Manuals

**Oracle Automotive Implementation Manual** This manual describes the setup and implementation of the Oracle Applications used for the Oracle Automotive solution.

**Oracle Applications Message Reference Manual** This manual describes all Oracle Applications messages. This manual is available in HTML format on the documentation CD-ROM for Release 11*i*.

**Oracle Project Manufacturing Implementation Manual** This manual describes the setup steps and implementation for Oracle Project Manufacturing.

**Oracle Self-Service Web Applications Implementation Manual** This manual describes the setup steps for Oracle Self-Service Web Applications and 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 Applications data.

**Multiple Reporting Currencies in Oracle Applications** If you use the Multiple Reporting Currencies feature to record transactions in more than one currency, use this manual before implementing the Oracle Applications product. This manual details additional steps and setup considerations for implementation.

**Multiple Organizations in Oracle Applications** If you use the Oracle Applications Multiple Organization Support feature to use multiple sets of books for one product installation, this guide describes all you need to know about setting up and using the product with this feature.

**Oracle Applications Implementation Wizard User's Guide** If you are implementing more than one Oracle product, you can use the Oracle Applications Implementation Wizard to coordinate your setup activities. This guide describes how to use the wizard.

**Oracle Applications Developer's Guide** This guide contains the coding standards followed by the Oracle Applications development staff. It describes the Oracle Application Object Library components needed to implement the Oracle Applications user interface described in the *Oracle Applications User Interface Standards*. It also provides information to help you build your custom Developer/2000 forms so that they integrate with Oracle Applications.

**Oracle Applications Flexfields Guide** This guide provides flexfields planning, setup and reference information for the implementation team, as well as for users responsible for the ongoing maintenance of Oracle Applications product data. This manual also provides information on creating custom reports on flexfields data.

**Oracle Applications Installation Manual for Windows Clients** This guide provides information you need to successfully install Oracle Financials, Oracle Public Sector Financials, Oracle Manufacturing, or Oracle Human Resources in your specific hardware and operating system software environment.

**Oracle Applications Product Update Notes** If you are upgrading your Oracle Applications, refer to the product update notes appropriate to your update and product(s) to see summaries of new features as well as changes to database objects, profile options and seed data added for each new release.

**Oracle Applications Upgrade Preparation Manual** This guide explains how to prepare your Oracle Applications products for an upgrade. It also contains information on completing the upgrade procedure for each product. Refer to this manual and the *Oracle Applications Installation Manual* when you plan to upgrade your products.

**Oracle Applications System Administrator's Guide** This manual provides planning and reference information for the System Administrator.

## **Oracle Applications Concepts**

This guide provides an introduction to the concepts, features, technology stack, architecture, and terminology for Oracle Applications Release 11*i*. It provides a useful first book to read before an installation of Oracle Applications. This guide also introduces the concepts behind Applications-wide features such as Business Intelligence (BIS), languages and character sets, and Self-Service Web Applications.

## **Installing Oracle Applications**

This guide provides instructions for managing the installation of Oracle Applications products. In Release 11*i*, much of the installation process is handled using Oracle Rapid Install, which minimizes the time to install Oracle Applications, the Oracle8 technology stack, and the Oracle8*i* Server technology stack by automating many of the required steps. This guide contains instructions for using Oracle Rapid Install and lists the tasks you need to perform to finish your installation. You should use this guide in conjunction with individual product user's guides and implementation guides.

## **Upgrading Oracle Applications**

Refer to this guide if you are upgrading your Oracle Applications Release 10.7 or Release 11.0 products to Release 11*i*. This guide describes the upgrade process and lists database and product-specific upgrade tasks. You must be either at Release 10.7 (NCA, SmartClient, or character mode) or Release 11.0, to upgrade to Release 11*i*. You cannot upgrade to Release 11*i* directly from releases prior to 10.7.

## **Maintaining Oracle Applications**

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

### **Oracle Applications System Administrator's Guide**

This guide provides planning and reference information for the Oracle Applications System Administrator. It contains information on how to define security, customize menus and online help, and manage concurrent processing.

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

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

### **Oracle Applications Developer's Guide**

This guide contains the coding standards followed by the Oracle Applications development staff. It describes the Oracle Application Object Library components needed to implement the Oracle Applications user interface described in the *Oracle Applications User Interface Standards for Forms-Based Products*. It also provides information to help you build your custom Oracle Forms Developer 6i forms so that they integrate with Oracle Applications.

### **Oracle Applications User Interface Standards for Forms-Based Products**

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

## **Other Implementation Documentation**

### **Oracle Applications Product Update Notes**

Use this guide as a reference for upgrading an installation of Oracle Applications. It provides a history of the changes to individual Oracle Applications products between Release 11.0 and Release 11*i*. It includes new features, enhancements, and changes made to database objects, profile options, and seed data for this interval.

### **Multiple Reporting Currencies in Oracle Applications**

If you use the Multiple Reporting Currencies feature to record transactions in more than one currency, use this manual before implementing *Oracle Manufacturing*. This manual details additional steps and setup considerations for implementing *Oracle Manufacturing* with this feature.

## **Multiple Organizations in Oracle Applications**

This guide describes how to set up and use *Oracle Manufacturing* with Oracle Applications' Multiple Organization support feature, so you can define and support different organization structures when running a single installation of *Oracle Manufacturing*.

## **Oracle Workflow Guide**

This guide explains how to define new workflow business processes as well as customize existing Oracle Applications-embedded workflow processes. You also use this guide to complete the setup steps necessary for any Oracle Applications product that includes workflow-enabled processes.

## **Oracle Applications Flexfields Guide**

This guide provides flexfields planning, setup and reference information for the *Oracle Manufacturing* implementation team, as well as for users responsible for the ongoing maintenance of Oracle Applications product data. This manual also provides information on creating custom reports on flexfields data.

## **Oracle eTechnical Reference Manuals**

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

## **Oracle Manufacturing APIs and Open Interfaces Manual**

This manual contains up-to-date information about integrating with other Oracle Manufacturing applications and with your other systems. This documentation includes API's and open interfaces found in Oracle Manufacturing.

## **Oracle Order Management Suite APIs and Open Interfaces Manual**

This manual contains up-to-date information about integrating with other Oracle Manufacturing applications and with your other systems. This documentation includes API's and open interfaces found in Oracle Order Management Suite.

## **Oracle Applications Message Reference Manual**

This manual describes all Oracle Applications messages. This manual is available in HTML format on the documentation CD-ROM for Release 11*i*.

# Training and Support

## Training

Oracle offers a complete set of training courses to help you and your staff master *Oracle Manufacturing* and reach full productivity quickly. These courses are organized into functional learning paths, so you take only those courses appropriate to your job or area of responsibility.

You have a choice of educational environments. You can attend courses offered by Oracle University at any one of our many Education Centers, you can arrange for our trainers to teach at your facility, or you can use Oracle Learning Network (OLN), Oracle University's online education utility. In addition, Oracle training professionals can tailor standard courses or develop custom courses to meet your needs. For example, you may want to use your organization structure, terminology, and data as examples in a customized training session delivered at your own facility.

## Support

From on-site support to central support, our team of experienced professionals provides the help and information you need to keep *Oracle Manufacturing* working for you. This team includes your Technical Representative, Account Manager, and Oracle's large staff of consultants and support specialists with expertise in your business area, managing an Oracle8i server, and your hardware and software environment.

# Do Not Use Database Tools to Modify Oracle Applications Data

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

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

Because Oracle Applications tables are interrelated, any change you make using Oracle Applications can update many tables at once. But when you modify Oracle Applications data using anything other than Oracle Applications, you may change a row in one table without making corresponding changes in related tables. If your

tables get out of synchronization with each other, you risk retrieving erroneous information and you risk unpredictable results throughout Oracle Applications.

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

## About Oracle

Oracle Corporation develops and markets an integrated line of software products for database management, applications development, decision support, and office automation, as well as Oracle Applications, an integrated suite of more than 160 software modules for financial management, supply chain management, manufacturing, project systems, human resources and customer relationship management.

Oracle products are available for mainframes, minicomputers, personal computers, network computers and personal digital assistants, allowing organizations to integrate different computers, different operating systems, different networks, and even different database management systems, into a single, unified computing and information resource.

Oracle is the world's leading supplier of software for information management, and the world's second largest software company. Oracle offers its database, tools, and applications products, along with related consulting, education, and support services, in over 145 countries around the world.

## Your Feedback

Thank you for using Oracle Manufacturing APIs and Open Interfaces and this user guide.

Oracle values your comments and feedback. In this guide is a reader's comment form that you can use to explain what you like or dislike about Oracle Manufacturing APIs and Open Interfaces or this user guide. Mail your comments to the following address or call us directly at (650) 506-7200.

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Oracle Corporation  
500 Oracle Parkway  
Redwood Shores, CA 94065  
U.S.A.

Or, send electronic mail to [appsdoc\\_us@oracle.com](mailto:appsdoc_us@oracle.com).

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# Integrating Your Systems

This chapter gives you an overview of Manufacturing integration tools and explains how to use these tools to integrate Oracle Manufacturing products with one another and with your existing non-Oracle systems.

Oracle Manufacturing integration tools are powerful, flexible tools that enable you to capture data from other Oracle applications or your own applications, define necessary format conversions, and direct data to your Oracle Manufacturing products. Topics covered here include:

- [Overview of Oracle Manufacturing APIs and Open Interfaces](#) on page 1-2

## Overview of Oracle Manufacturing APIs and Open Interfaces

Oracle Manufacturing products provide a number of open interfaces so you can link them with non-Oracle applications, applications you build, applications on other computers, and even the applications of your suppliers and customers.

The purpose of this essay is to help you understand the general model Oracle Manufacturing products use for open application interfaces. Other essays in this chapter provide specific information on how to use each of the open interfaces. Additional functional information on these interfaces is available in each product's User's Guide. Additional technical information on these interfaces is available in each product's Technical Reference Manual.

### Basic Business Needs

Oracle Manufacturing product APIs and open interfaces provide you with the features you need to support the following basic business needs:

- Connect to data collection devices. This lets you collect material movement transactions such as receipts, issues, quality data, movements, completions, and shipments. This speeds data entry and improves transaction accuracy.
- Connect to other systems — such as finite scheduling packages, computer-aided design systems, custom, and legacy manufacturing systems — to create integrated enterprise wide systems.
- Connect to external systems — such as the customer's purchasing system and the supplier's order entry system — to better integrate the supply chain via electronic commerce.
- Control processing of inbound data imported from outside Oracle applications.
- Validate imported data to ensure integrity of Oracle Manufacturing products.
- Review, update, and resubmit imported data that failed validation.
- Export data from Oracle Manufacturing products

### Oracle Manufacturing Interfaces

#### Open Interface Architectures

Oracle Manufacturing products have three different methods to import and export data:

- Interface Tables

- Interface Views (Business Views)
- Function Calls or Programmatic Interfaces (Processes)

### Interface Tables

Interface tables, both inbound and outbound, normally require some validation through a concurrent program. These tables are fully documented in the essays that follow this chapter.

In several instances, interfaces do not require an intermediate validation step — you can write directly to the product's tables after you consult the product's Technical Reference Manual.

### Interface Views (Business Views)

Views simplify the data relationships for easier processing, whether for reporting or data export. Oracle Manufacturing and Distribution products have defined *business views* that identify certain areas of key business interest. You can access this data using your tool of choice. The MTL\_ITEM\_QUANTITIES\_VIEW is an example of a key business view.

Product views are defined in the Technical Reference Manuals. The view definitions also briefly describe how they are used. Many views, such as shortage reporting views in Oracle Work in Process, have been added specifically for easier reporting. Dynamic Views have also been added in Oracle Quality. Dynamic Views are views that are dynamically created and re-created as you create and modify collection plans in Oracle Quality.

### Function Calls or Programmatic Interfaces (Processes)

Some open interfaces are more fundamental to the architecture of Oracle Manufacturing products. They are not *interfaces* as much as *open integration*.

For example, note flexfield validation by table/view. In this class of inbound interfaces, the addition of views automatically imports data into an existing function. This provides tight integration without adding a batch process to move data.

Another example is modifying open stored procedures. In the Oracle Bills of Material concurrent program AutoCreate Configuration, you can add business specific logic to match configurations (check for duplicate configurations) by modifying the stored procedures provided for this purpose.

Summary: Beyond Published Interfaces

The Oracle Cooperative Applications Initiative references many third party products which provide import and export capabilities and allow loose to tight integration with legacy systems, other supplier systems, and so on. Contact your Oracle consultant for more information about system integration.

Current Documentation For Open Interfaces

Below are the actual names of the tables, views, and modules:

Table 1–1 Key

Key	-
Data Flow Direction	<i>Inbound</i> means into Oracle Manufacturing; <i>Outbound</i> means out from Oracle Manufacturing
Iface Man	The interface is documented in detail in the <i>Oracle Manufacturing and Distribution Open Interfaces Manual</i>
TRM	The tables, views, or modules are described in the product’s Technical Reference Manual

Table 1–2 Oracle Manufacturing Interfaces/APIs

Interface/API Name	Data Flow Direction	Table, View, Process, or Procedure	Iface Man	TRM	Table, View, Module Name, or Procedure Name
INV	INV	INV	INV	INV	INV
Transactions	Inbound	Table	Yes	Yes	MTL_TRANSACTIONS_INTERFACE MTL_SERIAL_NUMBERS_INTERFACE MTL_TRANSACTION_LOTS_INTERFACE
Demand Interface	Inbound	Table	Yes	Yes	MTL_DEMAND_INTERFACE
On-Hand Balances	Outbound	View		Yes	MTL_ITEM_QUANTITIES_VIEW
User-Defined Supply	Inbound	Table		Yes	MTL_USER_SUPPLY
User-Defined Demand	Inbound	Table		Yes	MTL_USER_DEMAND
Replenishment	Inbound	Table	Yes	Yes	MTL_REPLENISH_HEADERS_INT MTL_REPLENISH_LINES_INT

**Table 1–2 Oracle Manufacturing Interfaces/APIs**

<b>Interface/API Name</b>	<b>Data Flow Direction</b>	<b>Table, View, Process, or Procedure</b>	<b>Interface Manager</b>	<b>TRM</b>	<b>Table, View, Module Name, or Procedure Name</b>
Item	Inbound	Table	Yes	Yes	MTL_SYSTEM_ITEMS_INTERFACE MTL_ITEMS_REVISIONS_INTERFACE
Customer Item	Inbound	Table	Yes	Yes	MTL_CI_INTERFACE
Customer Item Cross-References	Inbound	Table	Yes	Yes	MTL_CI_XREFS_INTERFACE
Material	Inbound	Table	Yes	Yes	MTL_TRANSACTIONS_INTERFACE MTL_SERIAL_NUMBERS_INTERFACE MTL_TRANSACTION_LOTS_INTERFACE
<b>ENG/BOM</b>	<b>ENG/BOM</b>	<b>ENG/BOM</b>	<b>ENG/BOM</b>	<b>ENG/BOM</b>	<b>ENG/BOM</b>
MFG Calendar	Outbound	View		Yes	BOM_CALENDAR_MONTHS_VIEW
Bill of Material	Inbound	Table	Yes	Yes	BOM_BILL_OF_MTL_INTERFACE BOM_INVENTORY_COMPS_INTERFACE BOM_REF_DESGS_INTERFACE BOM_SUB_COMPS_INTERFACE MTL_ITEMS_REVISIONS_INTERFACE BOM_EXPORT_TAB BOM_SMALL_EXPL_TEMP
Routings	Inbound	Table	Yes	Yes	BOM_OP_ROUTINGS_INTERFACE BOM_OP_SEQUENCES_INTERFACE BOM_OP_RESOURCES_INTERFACE MTL_RTG_ITEM_REVS_INTERFACE
ECO	Inbound	Table	Yes	Yes	ENG_ENG_CHANGES_INTERFACE ENG_ECO_REVISIONS_INTERFACE ENG_REVISED_ITEMS_INTERFACE BOM_INVENTORY_COMPS_INTERFACE BOM_REF_DESGS_INTERFACE BOM_SUB_COMPS_INTERFACE
<b>eAM</b>	<b>eAM</b>	<b>eAM</b>	<b>eAM</b>	<b>eAM</b>	<b>eAM</b>

**Table 1–2 Oracle Manufacturing Interfaces/APIs**

<b>Interface/API Name</b>	<b>Data Flow Direction</b>	<b>Table, View, Process, or Procedure</b>	<b>Iface Man</b>	<b>TRM</b>	<b>Table, View, Module Name, or Procedure Name</b>
eAM Item Open Interface	Inbound	Table	Yes	Yes	MTL_SYSTEM_ITEMS_INTERFACE MTL_ITEM_REVISIONS_INTERFACE MTL_ITEM_CATEGORIES_INTERFACE MTL_INTERFACE_ERRORS
eAM Asset Number Open Interface	Inbound	Table	Yes	Yes	MTL_EAM_ASSET_NUM_INTERFACE MTL_EAM_ATTR_VAL_INTERFACE MTL_EAM_ATTR_VAL_INTERFACE
eAM Asset Genealogy Open Interface	Inbound	Table	Yes	Yes	MTL_OBJECT_GENEALOGY_INTERFACE
eAM Work Order Open Interface	Inbound	Table	Yes	Yes	WIP_JOB_SCHEDULE_INTERFACE WIP_DISCRETE_JOBS
eAM Meter Reading Open Interface	Inbound	Table	Yes	Yes	EAM_METER_READING_INTERFACE
<b>Oracle Cost Management (see <i>Oracle Bills of Material Technical Reference Manual</i>)</b>	-	-	-	-	-
Item Cost Inquiry	Outbound	View		Yes	CST_INQUIRY_TYPES CSTFQVIC (View Item Cost Information)
MFG Cost Reporting	Outbound	View		Yes	CST_REPORT_TYPES CSTRFICR (Inventory Valuation Report)
<b>MRP/SCP</b>	<b>MRP/SCP</b>	<b>MRP/SCP</b>	<b>MRP/SCP</b>	<b>MRP/SCP</b>	<b>MRP/SCP</b>
Forecast Interface	Inbound	Table	Yes	Yes	MRP_FORECAST_INTERFACE
Forecast Entries API	Inbound	Process PL/SQL Table	Yes	Yes	T_FORECAST_INTERFACE T_FORECAST_DESIGNATOR

**Table 1–2 Oracle Manufacturing Interfaces/APIs**

<b>Interface/API Name</b>	<b>Data Flow Direction</b>	<b>Table, View, Process, or Procedure</b>	<b>Interface Manager</b>	<b>TRM</b>	<b>Table, View, Module Name, or Procedure Name</b>
Master Schedule Interface	Inbound	Table	Yes	Yes	MRP_SCHEDULE_INTERFACE
Master Schedule Relief Interface	Inbound	Table		Yes	MRP_RELIEF_INTERFACE
Planner Workbench Interface	Outbound	Process		Yes	Stored Procedure MRPPL06, or WIP_JOB_SCHEDULE_INTERFACE PO_REQUISITIONS_INTERFACE PO_RESCHEDULE_INTERFACE
Projected Requirements Interface	Outbound	Table		Yes	MRP_RECOMMENDATIONS
Projected Supply Interface	Outbound	Table		Yes	MRP_GROSS_REQUIREMENTS
Sourcing Rule API	Outbound	Procedure	Yes	Yes	MRP_SOURCING_RULE_ PUB.PROCESS_SOURCING_RULE MRP_SRC_ASSIGNMENT_ PUB.PROCESS_ASSIGNMENT
<b>PO</b>	<b>PO</b>	<b>PO</b>	<b>PO</b>	<b>PO</b>	<b>PO</b>
Requisitions	Inbound	Table	Yes	Yes	PO_REQUISITIONS_INTERFACE PO_REQ_DIST_INTERFACE
Requisition Reschedule	Inbound	Table	Yes	Yes	PO_RESCHEDULE_INTERFACE
Purchasing Documents	Inbound	Table	Yes	Yes	PO_HEADERS_INTERFACE PO_LINES_INTERFACE PO_DISTRIBUTIONS_INTERFACE
Receiving	Inbound	Table	Yes	Yes	RCV_HEADERS_INTERFACE RCV_TRANSACTIONS_INTERFACE
<b>QA</b>	<b>QA</b>	<b>QA</b>	<b>QA</b>	<b>QA</b>	<b>QA</b>
Collection Import	Inbound	Table	Yes	Yes	QA_RESULTS_INTERFACE
Dynamic Collection Plan View	Outbound	View	Yes	Yes	Q_COLLECTION_PLAN_NAME_V
Dynamic Collection Import View	Inbound	View	Yes	Yes	Q_COLLECTION_PLAN_NAME_IV

**Table 1–2 Oracle Manufacturing Interfaces/APIs**

<b>Interface/API Name</b>	<b>Data Flow Direction</b>	<b>Table, View, Process, or Procedure</b>	<b>Iface Man</b>	<b>TRM</b>	<b>Table, View, Module Name, or Procedure Name</b>
<b>WSM</b>	<b>WSM</b>	<b>WSM</b>	<b>WSM</b>	<b>WSM</b>	<b>WSM</b>
Import Lot Jobs	Inbound	Table	Yes	Yes	WSM_LOT_JOB_INTERFACE
Lot Move Transactions	Inbound	Table	Yes	Yes	WSM_LOT_MOVE_TXN_INTERFACE
WIP Lot Transactions	Inbound	Table	Yes	Yes	WSM_SPLIT_MERGE_TXN_INTERFACE WSM_STARTING_JOBS_INTERFACE WSM_RESULTING_JOBS_INTERFACE
Inventory Lot Transactions	Inbound	Table	Yes	Yes	WSM_LOT_SPLIT_MERGES_INTERFACE WSM_STARTING_LOTS_INTERFACE WSM_RESULTING_LOTS_INTERFACE
<b>WIP</b>	<b>WIP</b>	<b>WIP</b>	<b>WIP</b>	<b>WIP</b>	<b>WIP</b>
Move Transaction	Inbound	Table	Yes	Yes	WIP_MOVE_TXN_INTERFACE CST_COMP_SNAP_INTERFACE (if organization uses average costing)
Resource Transaction	Inbound	Table	Yes	Yes	WIP_COST_TXN_INTERFACE
Work Order Interface	Inbound	Table	Yes	Yes	WIP_JOB_SCHEDULE_INTERFACE WIP_JOB_DTLS_INTERFACE
<b>WMS</b>	<b>WMS</b>	<b>WMS</b>	<b>WMS</b>	<b>WMS</b>	<b>WMS</b>
Compliance Label	Inbound	Procedure	Yes	Yes	PRINT_LABEL_MANUAL_WRAP PRINT_LABEL PRINT_LABEL_WRAP
Device Integration	Inbound	Procedure	Yes	Yes	WMS_DEVICE_INTEGRATION_PVT.DEVICE_REQUEST WMS_DEVICE_INTEGRATION_PUB.SYNC_DEVICE_REQUEST

**Table 1–2 Oracle Manufacturing Interfaces/APIs**

<b>Interface/API Name</b>	<b>Data Flow Direction</b>	<b>Table, View, Process, or Procedure</b>	<b>Iface Man</b>	<b>TRM</b>	<b>Table, View, Module Name, or Procedure Name</b>
Locator Maintenance	Inbound	Procedure	Yes	Yes	CREATE_LOCATOR UPDATE_LOCATOR CREATE_LOC_ITEM_TIE DELETE_LOCATOR
Container	Inbound	Procedure	Yes	Yes	GENERATE_LPN_CP GENERATE_LPN ASSOCIATE_LPN CREATE_LPN MODIFY_LPN MODIFY_LPN_WRAPPER PACKUNPACK_CONTAINER PACK_PREPACK_CONTAINER VALIDATE_UPDATE_WT_VOLUME PURGE_LPN EXPLODE_LPN TRANSFER_LPN_CONTENTS CONTAINER_REQUIRED_QTY GET_OUTERMOST_LPN GET_LPN_LIST PREPACK_LPN_CP PREPACK_LPN PRINT_CONTENT_REPORT LPN_PACK_COMPLETE
WMS Installation	Inbound	Procedure	Yes	Yes	CHECK_INSTALL

## Inbound Open Interface Model

Oracle Manufacturing products provide both inbound and outbound interfaces. For inbound interfaces, where these products are the destination, interface tables as well as supporting validation, processing, and maintenance programs are provided. For outbound interfaces, where these products are the source, database views are

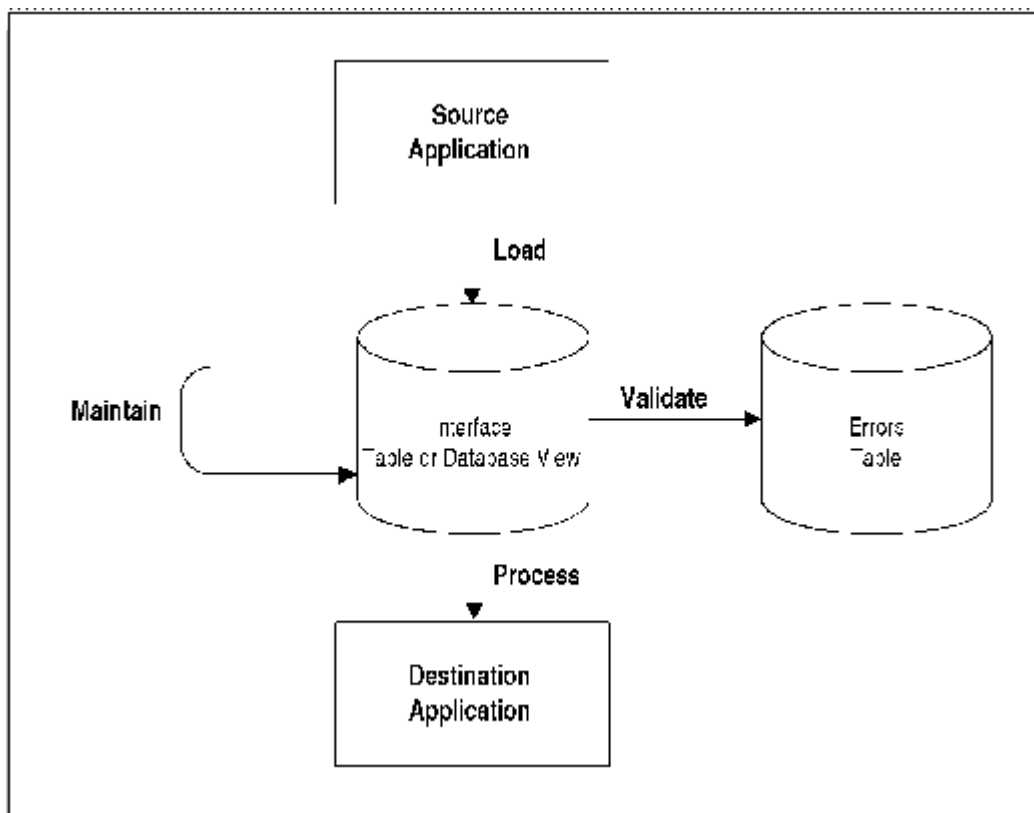
provided and the destination application should provide the validation, processing, and maintenance programs.

### **Discussion of Inbound Interfaces Only**

This overview and the rest of the documents in this chapter discuss only inbound interfaces in detail. You can find information about the tables, views, and processes involved in outbound interfaces in the product's Technical Reference Manual. Note that the Technical Reference Manuals do *not* contain detailed, narrative discussions about the outbound interfaces.

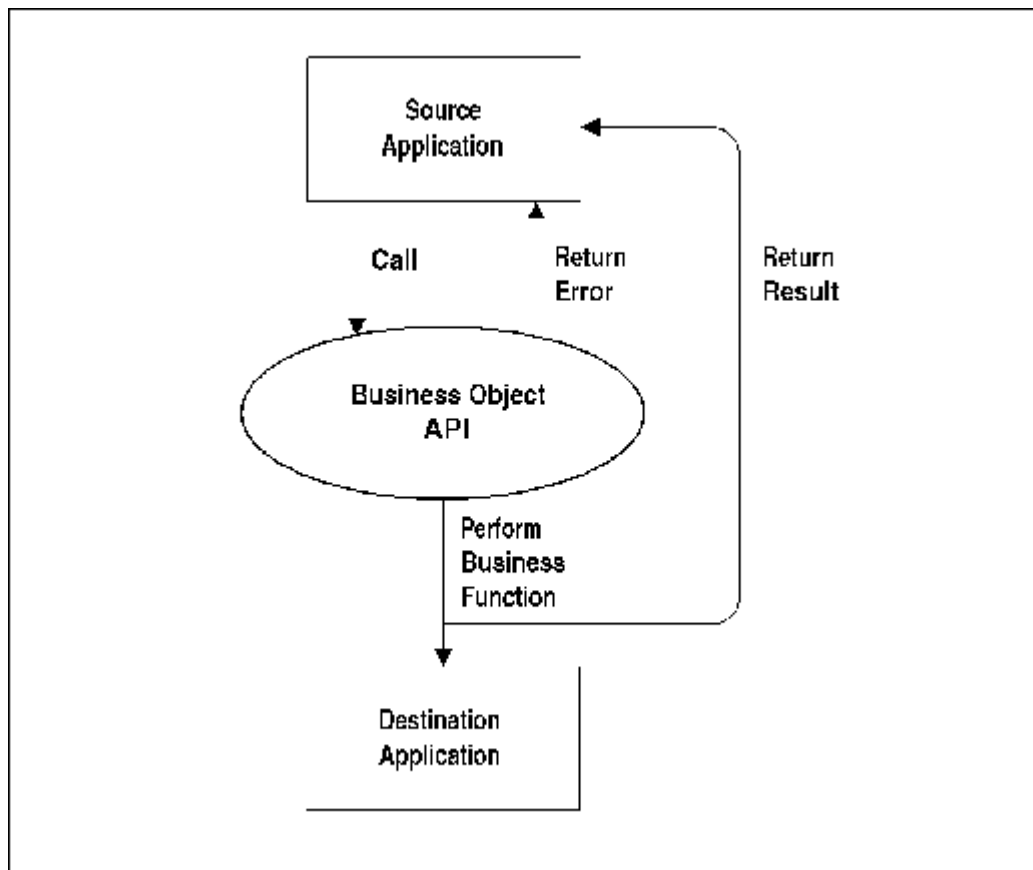
### **Open Interface Diagram**

The general model for open application interfaces is as follows:

**Figure 1–1 Open Interface Diagram****Open Application Programmatic Interface (API) Diagram**

The model used by APIs such as the Service Request interfaces (Oracle Service) is as follows:

**Figure 1–2 Open Application Programmatic Interface (API) Diagram**



## Components of an Open Interface

There are a number of components that are generally common to all open interfaces. These components are described below. However, all open interfaces do not include every component, and in some cases the component may be implemented slightly differently than described below.

## Source Application

You obtain data from a source application to pass on to a destination application for further processing and/or storage. Typically the data has completed processing in the source application before being passed.

Oracle Manufacturing products are the source for outbound interfaces. For example, Oracle Inventory is the source for the On-Hand Balances Interface. This interface is used to export on-hand balances from Oracle Inventory for use by other planning and distribution destination applications.

## Destination Application

You send data to a destination application so that the application can perform further processing and/or storage.

Oracle Manufacturing products are the destinations for inbound interfaces. For example, Oracle Purchasing is the destination for receiving transactions imported using the Receiving Open Interface. Oracle Purchasing updates purchase orders for each receiving transaction, and creates and stores the receiving transaction history.

## Interface Table

For inbound interfaces, the interface table is the intermediary table where the data from the source application temporarily resides until it is validated and processed into an Oracle Manufacturing product. The various types of interface columns, with examples from the Oracle Work in Process Move Transaction Interface, are listed below:

**Identifier Columns** Identifier columns uniquely identify rows in the interface table and provide foreign key reference to both the source and destination applications. For example, typical identifier columns for a move transaction would identify:

- The source application, such as the bar code device identifier
- The row's unique identifier in the source application, such as the job name
- The destination application's unique identifier, such as the Work in Process entity ID.

**Control Columns** Control columns track the status of each row in the interface table as it is inserted, validated, errored, processed, and ultimately deleted. Additional control columns identify who last updated the row and the last update date.

**Data Columns** Data columns store the specific attributes that the source application is sending to the Oracle Manufacturing product. For example, transaction quantity is one attribute of a move transaction.

**Required Columns** Required columns store the minimum information needed by the Oracle Manufacturing product to successfully process the interface row. For example, organization code is required for all move transactions.

Some columns are conditionally required based on the specifics of the interface. For example, repetitive move transactions require production line information, whereas discrete move transactions do not.

**Derived Columns** Derived columns are created by the destination product from information in the required columns. For example, on a move transaction, the primary unit of measure is derived from the assembly being moved.

**Optional Columns** Optional columns are not necessarily required by Oracle Manufacturing products but can be used for additional value-added functionality. For example, for move transactions the reason code is not required, but can optionally be used to collect additional transaction information.

## Errors Table

For inbound interfaces, the errors table stores all errors found by the validation and processing functions. In some cases, the errors table is a child of the interface table. This allows each row in the interface table to have many errors, so that you can manage multiple errors at once. In other cases, the errors are stored in a column within the interface table, which requires you to fix each error independently.

For example, in the Oracle Work in Process Open Resource Transaction Interface, the validation program inserts an error into an errors table when resource transaction records fail validation because of a missing piece of required data, such as the resource transaction quantity. In contrast, Order Import in Oracle Order Management/Shipping inserts errors into a single errors column in the interface table when rows fail validation.

## Database View

Database views are database objects that make data from the Oracle Manufacturing source products available for selection and use by destination applications.

Oracle Manufacturing products provide predefined views of key data that is likely to be used by destination applications. In addition to the predefined views that these products use, Oracle Quality also provides non-predefined, dynamic views.

These views join related tables within source products so that the data can be selected by the destination application.

For example, Oracle Cost Management provides work in process valuation and transaction distribution database views for use by other cost reporting destination products.

### **Load Function**

For inbound interfaces, the load function is the set of programs that selects and accumulates data from the source application and inserts it into Oracle Manufacturing interface tables. The programming languages and tools used in the load function are highly dependent on the hardware and system software of the source application.

For example, if you are passing data between an Oracle based source application and an Oracle Manufacturing product, you would likely use a tool such as Pro\*C or PL/SQL since these tools work in both environments. If you are bringing data from a non-Oracle based application into a product's interface table, you would likely use a procedural language available on the source application to select the data and convert it into an ASCII file. Then you could use SQL\*Loader to insert that file into the destination product's interface table.

For outbound interfaces, the load function is the SQL that creates the database view. For example, the Item Cost Interface in Oracle Cost Management uses SQL to create several database views of the item cost information for use by other budgeting and cost analysis destination applications.

### **Validate Function**

The validate function is the set of programs that Oracle Manufacturing destination products use to insure the integrity of inbound data. In the source application, you can typically validate data upon entry using techniques such as forms triggers, not null columns, data types, and so on. However, since Oracle Manufacturing products are not the source of this data, validation programs ensure data integrity.

In addition, the validate function can derive additional columns based on the required columns and foreign key relationships with other data elsewhere in the Oracle Manufacturing destination application.

The validation programs check the interface table for rows requiring validation, then validates and updates each row indicating either validation complete or errors found. If errors are found, validation programs need to write errors to the destination application's errors table or to the interface table's error column.

For example, several validation tasks are performed by the move transaction validation program within the Oracle Work in Process Open Move Transaction Interface. These tasks include:

- checking the accuracy of specific columns such as the job or schedule name
- checking the completeness of each row such as the transaction unit of measure and transaction quantity
- checking the relationship between columns in the same row such as the from and to operation sequence numbers

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# Oracle ASCP and Oracle Global ATP Server Open Interfaces

This section explains how to use the ODS Load API and how it functions in Oracle ASCP and Oracle Global ATP Server. Topics included are:

- [ODS Load API Features](#) on page 2-2
- [Functional Overview](#) on page 2-7
- [Setting Up the ODS Load API](#) on page 2-7

## ODS Load API Features

The ODS API consists of the following entities (staging tables):

- Inventory Items information

In complete refresh mode, you can renew all entries. In incremental refresh mode, you can create new entries, and update information for existing items.

The following staging tables are used:

- MSC\_ST\_SYSTEM\_ITEMS
- MSC\_ST\_SAFETY\_STOCKS

- Sourcing Rules

In complete refresh mode, you can renew all entries. In incremental refresh mode, you can create new entries, and update existing sourcing information.

The following tables are used:

- MSC\_ST\_ASSIGNMENT\_SETS
- MSC\_ST\_SOURCING\_RULES
- MSC\_ST\_SR\_ASSIGNMENTS
- MSC\_ST\_SR\_RECEIPT\_ORG
- MSC\_ST\_SR\_SOURCE\_ORG

In complete refresh mode, you can renew all entries using the table, MSC\_ST\_INTERORG\_SHIP\_METHODS

In both complete and refresh mode, you can update the sourcing history information using the table, MSC\_ST\_SOURCING\_HISTORY

- ATP Rules

In complete refresh mode, you can renew all entries using the table, MSC\_ST\_ATP\_RULES

- Bill of Resources

In complete refresh mode, you can renew all entries. The following tables are used:

- MSC\_ST\_BILL\_OF\_RESOURCES
- MSC\_ST\_BOR\_REQUIREMENTS

- BOMs/Routings

In complete refresh mode, you can renew all entries. In incremental refresh mode, you can create new entries, and update existing BOM/Routing data.

The following tables are used:

- MSC\_ST\_PROCESS\_EFFECTIVITY
- MSC\_ST\_BOMS
- MSC\_ST\_BOM\_COMPONENTS
- MSC\_ST\_COMPONENT\_SUBSTITUTES
- MSC\_ST\_ROUTINGS
- MSC\_ST\_ROUTING\_OPERATIONS
- MSC\_ST\_OPERATION\_RESOURCE\_SEQS
- MSC\_ST\_OPERATION\_RESOURCES
- MSC\_ST\_OPERATION\_COMPONENTS

- Calendar system

In complete refresh mode, you can renew all entries. The following tables are used:

- MSC\_ST\_CALENDAR\_DATES
- MSC\_ST\_CAL\_YEAR\_START\_DATES
- MSC\_ST\_CAL\_WEEK\_START\_DATES
- MSC\_ST\_PERIOD\_START\_DATES
- MSC\_ST\_CALENDAR\_SHIFTS
- MSC\_ST\_SHIFT\_DATES
- MSC\_ST\_SHIFT\_TIMES
- MSC\_ST\_SHIFT\_EXCEPTIONS
- MSC\_ST\_SIMULATION\_SETS
- MSC\_ST\_RESOURCE\_SHIFTS

- Categories

In complete refresh mode, you can renew all entries. In incremental refresh mode, you can create new entries, and update existing categories information.

The following tables are used:

- MSC\_ST\_CATEGORY\_SETS
- MSC\_ST\_ITEM\_CATEGORIES
- MDS/MPS designators

In complete refresh mode, you can renew all entries. In incremental refresh mode, you can create new entries, and update existing designators information.

These operations use the table, MSC\_ST\_DESIGNATORS

- Demands and Sales Orders

In complete refresh mode, you can renew all entries. In incremental refresh mode, you can create new entries, and update existing demands and sales orders information.

The following tables are used:

- MSC\_ST\_DEMANDS
- MSC\_ST\_RESERVATIONS
- MSC\_ST\_SALES\_ORDERS
- Supplies

In complete refresh mode, you can renew all entries. In incremental refresh mode, you can create new entries, and update existing supplies information.

These operations use the table, MSC\_ST\_SUPPLIES

- Resources

In complete refresh mode, you can renew all entries. The following tables are used:

- MSC\_ST\_RESOURCE\_GROUPS
- MSC\_ST\_DEPARTMENT\_RESOURCES

In complete refresh mode, you can renew all entries. In incremental refresh mode, you can create new entries, and update existing resources information.

The following tables are used:

- MSC\_ST\_NET\_RESOURCE\_AVAIL
- MSC\_ST\_RESOURCE\_REQUIREMENTS
- MSC\_ST\_RESOURCE\_CHANGES

- Approved Suppliers Information

In complete refresh mode, you can renew all entries. The following tables are used:

- MSC\_ST\_ITEM\_SUPPLIERS
- MSC\_ST\_SUPPLIER\_FLEX\_FENCES

In complete refresh mode, you can renew all entries. In incremental refresh mode, you can create new entries, and update existing supplier capacities information.

These operations use the table, MSC\_ST\_SUPPLIER\_CAPACITIES

- Trading Partners Information

In complete refresh mode, you can renew all entries. The following tables are used:

- MSC\_ST\_TRADING\_PARTNERS
- MSC\_ST\_TRADING\_PARTNER\_SITES
- MSC\_ST\_LOCATION\_ASSOCIATIONS
- MSC\_ST\_PARAMETERS
- MSC\_ST\_SUB\_INVENTORIES
- MSC\_ST\_PARTNER\_CONTACTS

- Planner Information

In complete refresh mode, you can renew all entries using the table, MSC\_ST\_PLANNERS

- Units Of Measure

In complete refresh mode, you can renew all entries. The following tables are used:

- MSC\_ST\_UNITS\_OF\_MEASURE
- MSC\_ST\_UOM\_CONVERSIONS
- MSC\_ST\_UOM\_CLASS\_CONVERSIONS

- Unit Number, Projects, and Tasks Information

In complete refresh mode, you can renew all entries. The following tables are used:

- MSC\_ST\_UNIT\_NUMBERS
- MSC\_ST\_PROJECTS
- MSC\_ST\_PROJECT\_TASKS
- BIS Objects

In complete refresh mode, you can renew all entries.

  - MSC\_ST\_BIS\_BUSINESS\_PLANS
  - MSC\_ST\_BIS\_PERIODS
  - MSC\_ST\_BIS\_PPMC\_MEASURES
  - MSC\_ST\_BIS\_TARGET\_LEVELS
  - MSC\_ST\_BIS\_TARGETS
- Demand Classes

In complete refresh mode, you can renew all entries using the table, MSC\_ST\_DEMAND\_CLASSES

### **See Also**

*The Oracle ASCP and Oracle Global ATP Server Technical Reference Manual.*

## Functional Overview

The ODS Load API provides a public procedure, `Launch_Monitor`, for loading the data into the ODS tables.

The `Launch_Monitor` procedure performs the following major processes:

- Generate new local ID for the global attributes such as item, category set, vendor, vendor site, customer, and customer site.
- Launch the ODS Load Workers to perform Create, Update, and Delete Operation for each entity in ODS.
- Recalculate the sourcing history based on the latest sourcing information and the data from the transaction systems.
- Recalculate the net resource availability based on the calendars, shifts, and department resources information.
- Purge the data in the staging tables.

## Setting Up the ODS Load API

The ODS Load API is a stored PL/SQL function. You need to define certain data before you create or update ODS data. Before using the API, set up and/or activate the following parameters:

- Instance Code
- Number of Workers
- Recalculate Net Resource Availability (Yes/No)
- Recalculate Sourcing History (Yes/No)

Parameter Descriptions

The following charts describe all staging tables used by the ODS Load API. All of the inbound and outbound parameters are listed for these table. Additional information on these parameters follows each chart.

MSC\_ST\_ASSIGNMENT\_SETS

The staging table used by the collection program to valid and process data for table MSC\_ASSIGNMENT\_SETS.

Table 2–1 MSC\_ASSIGNMENT\_SETS

Parameter	Usage	Type	Required	Derived	Optional
SR_ASSIGNMENT_SET_ID	IN	NUMBER	x		
ASSIGNMENT_SET_NAME	IN	VARCHAR2(34)	x		
DESCRIPTION	IN	VARCHAR2(80)			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE	x		
SR_INSTANCE_ID	IN	NUMBER			x
REFRESH_ID	IN	NUMBER			x

SR\_ASSIGNMENT\_SET\_ID

Assignment set identifier from source application instance

ASSIGNMENT\_SET\_NAME

Assignment set name

**DESCRIPTION**

Description

**DELETED\_FLAG**

Flag to indicate whether the row is no longer valid. SYS\_YES means the row will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**MSC\_ST\_ATP\_RULES**

The staging table used by the collection program to validate and process data for table MSC\_ATP\_RULES.

**Table 2–2 MSC\_ATP\_RULES**

Parameter	Usage	Type	Required	Derived	Optional
RULE_ID	IN	NUMBER	x		
SR_INSTANCE_ID	IN	NUMBER	x		
RULE_NAME	IN	VARCHAR2(80)	x		
DESCRIPTION	IN	VARCHAR2(240)			x
ACCUMULATE_AVAILABLE_FLAG	IN	NUMBER	x		
BACKWARD_CONSUMPTION_FLAG	IN	NUMBER	x		
FORWARD_CONSUMPTION_FLAG	IN	NUMBER	x		
PAST_DUE_DEMAND_CUTOFF_FENCE	IN	NUMBER			x
PAST_DUE_SUPPLY_CUTOFF_FENCE	IN	NUMBER			x
INFINITE_SUPPLY_FENCE_CODE	IN	NUMBER	x		
INFINITE_SUPPLY_TIME_FENCE	IN	NUMBER			x
ACCEPTABLE_EARLY_FENCE	IN	NUMBER			x
ACCEPTABLE_LATE_FENCE	IN	NUMBER			x
DEFAULT_ATP_SOURCES	IN	NUMBER			x
INCLUDE_SALES_ORDERS	IN	NUMBER	x		
INCLUDE_DISCRETE_WIP_DEMAND	IN	NUMBER	x		
INCLUDE_REP_WIP_DEMAND	IN	NUMBER	x		
INCLUDE_NONSTD_WIP_DEMAND	IN	NUMBER	x		
INCLUDE_DISCRETE_MPS	IN	NUMBER	x		
INCLUDE_USER_DEFINED_DEMAND	IN	NUMBER	x		
INCLUDE_PURCHASE_ORDERS	IN	NUMBER	x		
INCLUDE_DISCRETE_WIP_RECEIPTS	IN		x		

**Table 2–2 MSC\_ATP\_RULES**

Parameter	Usage	Type	Required	Derived	Optional
INCLUDE_REP_WIP_RECEIPTS	IN	NUMBER	x		
INCLUDE_NONSTD_WIP_RECEIPTS	IN	NUMBER	x		
INCLUDE_INTERORG_TRANSFERS	IN	NUMBER	x		
INCLUDE_ONHAND_AVAILABLE	IN	NUMBER	x		
INCLUDE_USER_DEFINED_SUPPLY	IN	NUMBER	x		
ACCUMULATION_WINDOW	IN	NUMBER			x
INCLUDE_REP_MPS	IN	NUMBER	x		
INCLUDE_INTERNAL_REQS	IN	NUMBER			x
INCLUDE_SUPPLIER_REQS	IN	NUMBER			x
INCLUDE_INTERNAL_ORDERS	IN	NUMBER			x
INCLUDE_FLOW_SCHEDULE_DEMAND	IN	NUMBER			x
USER_ATP_SUPPLY_TABLE_NAME	IN	VARCHAR2(30)			x
USER_ATP_DEMAND_TABLE_NAME	IN	VARCHAR2(30)			x
MPS_DESIGNATOR	IN	VARCHAR2(10)			x
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
REFRESH_ID	IN	NUMBER		x	
DEMAND_CLASS_ATP_FLAG	IN	NUMBER	x		
INCLUDE_FLOW_SCHEDULE_RECEIPTS	IN	NUMBER	x		

**RULE\_ID**

ATP rule identifier

**SR\_INSTANCE\_ID**

Instance id

**RULE\_NAME**

Name of ATP rule

**DESCRIPTION**

Description for ATP rule

**ACCUMULATE\_AVAILABLE\_FLAG**

Flag for ATP computation to accumulate quantity availability

**BACKWARD\_CONSUMPTION\_FLAG**

Flag for ATP computation to backwardly consume shortage

**FORWARD\_CONSUMPTION\_FLAG**

Flag for ATP computation to forwardly consume shortage

**PAST\_DUE\_DEMAND\_CUTOFF\_FENCE**

Demand before the specified number of days are not to be considered in ATP computation

**PAST\_DUE\_SUPPLY\_CUTOFF\_FENCE**

Supplies before the specified number of days are not to be considered in ATP computation

**INFINITE\_SUPPLY\_FENCE\_CODE**

Source code for infinite supply time fence

**INFINITE\_SUPPLY\_TIME\_FENCE**

Infinite supply time fence days only when user-defined is specified in the time fence code

**ACCEPTABLE\_EARLY\_FENCE**

Acceptable early fence

**ACCEPTABLE\_LATE\_FENCE**

Acceptable late fence

**DEFAULT\_ATP\_SOURCES**

Indicate which subinventories to use for on-hand quantities

**INCLUDE\_SALES\_ORDERS**

Yes/No flag for ATP computation to include demand from sales orders

**INCLUDE\_DISCRETE\_WIP\_DEMAND**

Yes/No flag for ATP computation to include demand from WIP discrete jobs

**INCLUDE\_REP\_WIP\_DEMAND**

Yes/No flag for ATP computation to include demand from WIP repetitive discrete jobs

**INCLUDE\_NONSTD\_WIP\_DEMAND**

Yes/No flag for ATP computation to include demand from WIP non-standard jobs'

**INCLUDE\_DISCRETE\_MPS**

Yes/No flag for ATP computation to include supply from discrete MPS schedule

**INCLUDE\_USER\_DEFINED\_DEMAND**

Yes/No flag for ATP computation to include user defined demand

**INCLUDE\_PURCHASE\_ORDERS**

Yes/No flag for ATP computation to include supply from purchase orders

**INCLUDE\_DISCRETE\_WIP\_RECEIPTS**

Yes/No flag for ATP computation to include supply from WIP discrete jobs

**INCLUDE\_REP\_WIP\_RECEIPTS**

Yes/No flag for ATP computation to include supply from WIP repetitive schedule jobs

**INCLUDE\_NONSTD\_WIP\_RECEIPTS**

Yes/No flag for ATP computation to include supply from WIP non-standard jobs

**INCLUDE\_INTERORG\_TRANSFERS**

Yes/No flag for ATP computation to include supply from inter-organization transfers

**INCLUDE\_ONHAND\_AVAILABLE**

Yes/No flag for ATP computation to include supply from on-hand inventory

**INCLUDE\_USER\_DEFINED\_SUPPLY**

Yes/No flag for ATP computation to include supply from user defined source

**ACCUMULATION\_WINDOW**

Maximum number of days that available supply should be accumulated

**INCLUDE\_REP\_MPS**

Yes/No flag for ATP computation to include supply from repetitive MPS schedules

**INCLUDE\_INTERNAL\_REQS**

Yes/No flag for ATP computation include from internal requisitions

**INCLUDE\_SUPPLIER\_REQS**

Yes/No flag for ATP computation include from internal orders

**INCLUDE\_INTERNAL\_ORDERS**

Yes/No flag for ATP computation to include demand from internal orders

**INCLUDE\_FLOW\_SCHEDULE\_DEMAND**

Yes/No flag for ATP computation to include demand from flow schedule

**USER\_ATP\_SUPPLY\_TABLE\_NAME**

Not currently used

**USER\_ATP\_DEMAND\_TABLE\_NAME**

Not currently used

**MPS\_DESIGNATOR**

Not currently used

**LAST\_UPDATE\_DATE**

Standard Who Column

**LAST\_UPDATED\_BY**

Standard Who Column

**CREATION\_DATE**

Standard Who Column

**CREATED\_BY**

Standard Who Column

**LAST\_UPDATE\_LOGIN**

Standard Who Column

**REQUEST\_ID**

Concurrent Who Column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who Column

**PROGRAM\_ID**

Concurrent Who Column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who Column

**REFRESH\_ID**

Refresh identifier

**DEMAND\_CLASS\_ATP\_FLAG**

Yes/No flag for ATP computation to consider Demand Class when selecting supply and demand

**INCLUDE\_FLOW\_SCHEDULE\_RECEIPTS**

Yes/No flag for ATP computation to include supply from repetitive MPS schedules

**MSC\_ST\_BILL\_OF\_RESOURCES**

The staging table used by the collection program to validate and process data for table MSC\_BILL\_OF\_RESOURCES.

**Table 2–3 MSC\_BILL\_OF\_RESOURCES**

Parameter	Usage	Type	Required	Derived	Optional
ORGANIZATION_ID	IN	NUMBER	x		
BILL_OF_RESOURCES	IN	VARCHAR2(10)	x		
DESCRIPTION	IN	VARCHAR2(50)			x
DISABLE_DATE	IN	DATE			x
ROLLUP_START_DATE	IN	DATE			x
ROLLUP_COMPLETION_DATE	IN	DATE			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**ORGANIZATION\_ID**

Organization identifier

**BILL\_OF\_RESOURCES**

Source application bill of resource identifier

**DESCRIPTION**

Bill of resource description

**DISABLE\_DATE**

Bill of resource disable date

**ROLLUP\_START\_DATE**

Bill of resources load start date

**ROLLUP\_COMPLETION\_DATE**

Bill of resources load completion date

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID NULL**

Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**MSC\_ST\_BIS\_BUSINESS\_PLANS**

The staging table used by the collection program to validate and process data for table MSC\_BIS\_BUSINESS\_PLANS.

**Table 2–4 MSC\_BIS\_BUSINESS\_PLANS**

Parameter	Usage	Type	Required	Derived	Optional
BUSINESS_PLAN_ID	IN	NUMBER	x		
SHORT_NAME	IN	VARCHAR2(30)	x		
NAME	IN	VARCHAR2(80)	x		
DESCRIPTION	IN	VARCHAR2(240)			x
VERSION_NO	IN	NUMBER	x		
CURRENT_PLAN_FLAG	IN	VARCHAR2(1)			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	

**Table 2–4 MSC\_BIS\_BUSINESS\_PLANS**

Parameter	Usage	Type	Required	Derived	Optional
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE			x
REFRESH_ID	IN	NUMBER			x
SR_INSTANCE_ID	IN	NUMBER	x		

**BUSINESS\_PLAN\_ID**

Business plan identifier

**SHORT\_NAME**

Business plan short name

**NAME**

Business plan name

**DESCRIPTION**

Describe the business plan

**VERSION\_NO**

Version number

**CURRENT\_PLAN\_FLAG**

Yes/No flag indicating whether the business plan is current

**DELETED\_FLAG**

Yes/No flag indicating whether the row will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**REFRESH\_ID**

Refresh identifier

**SR\_INSTANCE\_ID**

Source application instance identifier

**MSC\_ST\_BIS\_PERIODS**

The staging table used by the collection program to validate and process data for table MSC\_BIS\_PERIODS.

**Table 2–5 MSC\_BIS\_PERIODS**

Parameter	Usage	Type	Required	Derived	Optional
ORGANIZATION_ID	IN	NUMBER	x		
PERIOD_SET_NAME	IN	VARCHAR2(15)	x		
PERIOD_NAME	IN	VARCHAR2(15)	x		

**Table 2–5 MSC\_BIS\_PERIODS**

<b>Parameter</b>	<b>Usage</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
START_DATE	IN	DATE	x		
END_DATE	IN	DATE	x		
PERIOD_TYPE	IN	VARCHAR2(15)	x		
PERIOD_YEAR	IN	NUMBER(15)	x		
PERIOD_NUM	IN	NUMBER(15)	x		
QUARTER_NUM	IN	NUMBER(15)	x		
ENTERED_PERIOD_NAME	IN	VARCHAR2(15)	x		
ADJUSTMENT_PERIOD_FLAG	IN	VARCHAR2(1)	x		
DESCRIPTION	IN	VARCHAR2(240)			x
CONTEXT	IN	VARCHAR2(150)			x
YEAR_START_DATE	IN	DATE			x
QUARTER_START_DATE	IN	DATE			x
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
REFRESH_ID	IN	NUMBER			x
SR_INSTANCE_ID	IN	NUMBER	x		

**ORGANIZATION\_ID**

Organization identifier

**PERIOD\_SET\_NAME**

Accounting calendar name

**PERIOD\_NAME**

Accounting calendar name

**START\_DATE**

Date on which accounting period begins

**END\_DATE**

Date on which accounting period ends

**PERIOD\_TYPE**

Accounting period type

**PERIOD\_YEAR**

Accounting period year

**PERIOD\_NUM**

Accounting period number

**QUARTER\_NUM**

Accounting period number

**ENTERED\_PERIOD\_NAME**

User entered accounting period name

**ADJUSTMENT\_PERIOD\_FLAG**

Calendar period adjustment status

**DESCRIPTION**

Accounting period description

**CONTEXT**

Descriptive flexfield segment

**YEAR\_START\_DATE**

Date on which the year containing this accounting period starts

**QUARTER\_START\_DATE**

Date on which the quarter containing this accounting period starts

**LAST\_UPDATE\_DATE**

Standard Who Column

**LAST\_UPDATED\_BY**

Standard Who Column

**CREATION\_DATE**

Standard Who Column

**CREATED\_BY**

Standard Who Column

**LAST\_UPDATE\_LOGIN**

Standard Who Column

**REQUEST\_ID**

Concurrent Who Column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who Column

**PROGRAM\_ID**

Concurrent Who Column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who Column

**REFRESH\_ID**

Refresh identifier

**SR\_INSTANCE\_ID**

Source application instance identifier

**MSC\_ST\_BIS\_PPMC\_MEASURES**

The staging table used by the collection program to validate and process data for table MSC\_BIS\_PPMC\_MEASURES.

**Table 2–6 MSC\_BIS\_PPMC\_MEASURES**

Parameter	Usage	Type	Required	Derived	Optional
MEASURE_ID	IN	NUMBER	x		
MEASURE_SHORT_NAME	IN	VARCHAR2(30)	x		
MEASURE_NAME	IN	VARCHAR2(80)	x		
DESCRIPTION	IN	VARCHAR2 (240)			x
ORG_DIMENSION_ID	IN	NUMBER			x
TIME_DIMENSION_ID	IN	NUMBER			x
DIMENSION1_ID	IN	NUMBER			x
DIMENSION2_ID	IN	NUMBER			x
DIMENSION3_ID	IN	NUMBER			x
DIMENSION4_ID	IN	NUMBER			x
DIMENSION5_ID	IN	NUMBER			x
UNIT_OF_MEASURE_CLASS	IN	VARCHAR2(10)			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	

**Table 2–6 MSC\_BIS\_PPMC\_MEASURES**

Parameter	Usage	Type	Required	Derived	Optional
PROGRAM_UPDATE_DATE	IN	DATE		x	
REFRESH_ID	IN	NUMBER			x
SR_INSTANCE_ID	IN	NUMBER	x		

**MEASURE\_ID**

Measure identifier

**MEASURE\_SHORT\_NAME**

Source application instance identifier

**MEASURE\_NAME**

Measure short name

**DESCRIPTION**

Describe the performance measure

**ORG\_DIMENSION\_ID**

Organization dimension identifier

**TIME\_DIMENSION\_ID**

Time dimension identifier

**DIMENSION1\_ID**

First dimension identifier

**DIMENSION2\_ID**

Second dimension identifier

**DIMENSION3\_ID**

Third dimension identifier

**DIMENSION4\_ID**

Forth dimension identifier

**DIMENSION5\_ID**

Fifth dimension identifier

**UNIT\_OF\_MEASURE\_CLASS**

Unit of measure class

**DELETED\_FLAG**

Yes/No flag indicates whether the row will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**REFRESH\_ID**

Refresh identifier

**SR\_INSTANCE\_ID**

Source application instance identifier

**MSC\_ST\_BIS\_TARGETS**

The staging table used by the collection program to validate and process data for table MSC\_BIS\_TARGETS.

**Table 2–7 MSC\_BIS\_TARGETS**

Parameter	Usage	Type	Required	Derived	Optional
TARGET_ID	IN	NUMBER	x		
TARGET_LEVEL_ID	IN	NUMBER	x		
BUSINESS_PLAN_ID	IN	NUMBER	x		
ORG_LEVEL_VALUE_ID	IN	VARCHAR2(80)	x		
TIME_LEVEL_VALUE_ID	IN	VARCHAR2(80)			x
DIM1_LEVEL_VALUE_ID	IN	VARCHAR2(80)			x
DIM2_LEVEL_VALUE_ID	IN	VARCHAR2(80)			x
DIM3_LEVEL_VALUE_ID	IN	VARCHAR2(80)			x
DIM4_LEVEL_VALUE_ID	IN	VARCHAR2(80)			x
DIM5_LEVEL_VALUE_ID	IN	VARCHAR2(80)			x
TARGET	IN	NUMBER			x
RANGE1_LOW	IN	NUMBER			x
RANGE1_HIGH	IN	NUMBER			x
RANGE2_LOW	IN	NUMBER			x
RANGE2_HIGH	IN	NUMBER			x
RANGE3_LOW	IN	NUMBER			x
RANGE3_HIGH	IN	NUMBER			x
NOTIFY_RESP1_ID	IN	NUMBER			x
NOTIFY_RESP1_SHORT_NAME	IN	VARCHAR2(100)			x

Table 2–7 MSC\_BIS\_TARGETS

Parameter	Usage	Type	Required	Derived	Optional
NOTIFY_RESP2_ID	IN	NUMBER			x
NOTIFY_RESP2_SHORT_NAME	IN	VARCHAR2(100)			x
NOTIFY_RESP3_ID	IN	NUMBER			x
NOTIFY_RESP3_SHORT_NAME	IN	VARCHAR2(100)			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
REFRESH_ID	IN	NUMBER			x
SR_INSTANCE_ID	IN	NUMBER	x		

**TARGET\_ID**

Target identifier

**TARGET\_LEVEL\_ID**

Target level identifier

**BUSINESS\_PLAN\_ID**

Business plan identifier

**ORG\_LEVEL\_VALUE\_ID**

Org level value identifier

**TIME\_LEVEL\_VALUE\_ID**

Time level value identifier

**DIM1\_LEVEL\_VALUE\_ID**

First dimension level value identifier

**DIM2\_LEVEL\_VALUE\_ID**

Second dimension level value identifier

**DIM3\_LEVEL\_VALUE\_ID**

Third dimension level value identifier

**DIM4\_LEVEL\_VALUE\_ID**

Forth dimension level value identifier

**DIM5\_LEVEL\_VALUE\_ID**

Fifth dimension level value identifier

**TARGET**

Target number

**RANGE1\_LOW**

Low number of the first range

**RANGE1\_HIGH**

High number of the first range

**RANGE2\_LOW**

Low number of the second range

**RANGE2\_HIGH**

High number of the second range

**RANGE3\_LOW**

Low number of the third range

**RANGE3\_HIGH**

High number of the third range

**NOTIFY\_RESP1\_ID**

First notify identifier

**NOTIFY\_RESP1\_SHORT\_NAME**

Short name of the first notify

**NOTIFY\_RESP2\_ID**

Second notify identifier

**NOTIFY\_RESP2\_SHORT\_NAME**

Short name of the second notify

**NOTIFY\_RESP3\_ID**

Third notify identifier

**NOTIFY\_RESP3\_SHORT\_NAME**

Short name of the third notify

**DELETED\_FLAG**

Yes/No flag indicating whether the row will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**REFRESH\_ID**

Refresh identifier

**SR\_INSTANCE\_ID**

Source application instance identifier

**MSC\_ST\_BIS\_TARGET\_LEVELS**

The staging table used by the collection program to validate and process data for table MSC\_BIS\_TARGET\_LEVELS.

**Table 2–8 MSC\_BIS\_TARGET\_LEVELS**

Parameter	Usage	Type	Required	Derived	Optional
TARGET_LEVEL_ID	IN	NUMBER	x		
TARGET_LEVEL_SHORT_NAME	IN	VARCHAR2(30)	x		
TARGET_LEVEL_NAME	IN	VARCHAR2(80)	x		
DESCRIPTION	IN	VARCHAR2(240)	x		
MEASURE_ID	IN	NUMBER	x		
ORG_LEVEL_ID	IN	NUMBER	x		
TIME_LEVEL_ID	IN	NUMBER	x		

**Table 2–8 MSC\_BIS\_TARGET\_LEVELS**

Parameter	Usage	Type	Required	Derived	Optional
DIMENSION1_LEVEL_ID	IN	NUMBER			x
DIMENSION2_LEVEL_ID	IN	NUMBER			x
DIMENSION3_LEVEL_ID	IN	NUMBER			x
DIMENSION4_LEVEL_ID	IN	NUMBER			x
DIMENSION5_LEVEL_ID	IN	NUMBER			x
WORKFLOW_ITEM_TYPE	IN	VARCHAR2(8)			x
WORKFLOW_PROCESS_SHORT_NAME	IN	VARCHAR2(30)			x
DEFAULT_NOTIFY_RESP_ID	IN	NUMBER			x
DEFAULT_NOTIFY_RESP_SHORT_NAME	IN	VARCHAR2(100)			x
COMPUTING_FUNCTION_ID	IN	NUMBER			x
REPORT_FUNCTION_ID	IN	NUMBER			x
UNIT_OF_MEASURE	IN	VARCHAR2(25)			x
SYSTEM_FLAG	IN	VARCHAR2(1)			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
REFRESH_ID	IN	NUMBER			x
SR_INSTANCE_ID	IN	NUMBER	x		

**TARGET\_LEVEL\_ID**

Target level identifier

**TARGET\_LEVEL\_SHORT\_NAME**

Short name identifying the target level

**TARGET\_LEVEL\_NAME**

Target level name

**DESCRIPTION**

Describe the target level

**MEASURE\_ID**

Performance measure identifier

**ORG\_LEVEL\_ID**

Organization level identifier

**TIME\_LEVEL\_ID**

Time level identifier

**DIMENSION1\_LEVEL\_ID**

First dimension level identifier

**DIMENSION2\_LEVEL\_ID**

Second dimension level identifier

**DIMENSION3\_LEVEL\_ID**

Third dimension level identifier

**DIMENSION4\_LEVEL\_ID**

Forth dimension level identifier

**DIMENSION5\_LEVEL\_ID**

Fifth dimension level identifier

**WORKFLOW\_ITEM\_TYPE**

Workflow item type

**WORKFLOW\_PROCESS\_SHORT\_NAME**

Workflow process short name

**DEFAULT\_NOTIFY\_RESP\_ID**

Default notify identifier

**DEFAULT\_NOTIFY\_RESP\_SHORT\_NAME**

Name of the default notify

**COMPUTING\_FUNCTION\_ID**

Computing function identifier

**REPORT\_FUNCTION\_ID**

Report function identifier

**UNIT\_OF\_MEASURE**

Unit of measure

**SYSTEM\_FLAG**

System flag

**DELETED\_FLAG**

Yes/No flag indicating whether the row will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**REFRESH\_ID**

Refresh identifier

**SR\_INSTANCE\_ID**

Source application instance identifier

**MSC\_ST\_BOMS**

The staging table used by the collection program to valid and process data for table MSC\_BOMS.

**Table 2–9 MSC\_BOMS**

Parameter	Usage	Type	Required	Derived	Optional
BILL_SEQUENCE_ID	IN	NUMBER	x		
ORGANIZATION_ID	IN	NUMBER	x		
ASSEMBLY_ITEM_ID	IN	NUMBER	x		
ASSEMBLY_TYPE	IN	NUMBER	x		
ALTERNATE_BOM_DESIGNATOR	IN	VARCHAR2(10)			x

**Table 2–9 MSC\_BOMS**

Parameter	Usage	Type	Required	Derived	Optional
SPECIFIC_ASSEMBLY_COMMENT	IN	VARCHAR2(240)			x
PENDING_FROM_ECN	IN	VARCHAR2(10)			x
COMMON_BILL_SEQUENCE_ID	IN	NUMBER			x
SCALING_TYPE	IN	NUMBER			x
BOM_SCALING_TYPE	IN	NUMBER			x
ASSEMBLY_QUANTITY	IN	NUMBER			x
UOM	IN	VARCHAR2(3)			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**BILL\_SEQUENCE\_ID**

Bill sequence identifier in the source application instance

**ORGANIZATION\_ID**

Organization identifier of the item

**ASSEMBLY\_ITEM\_ID**

Identifier of the item being assembled

**ASSEMBLY\_TYPE**

Manufacturing Bill(1), or Engineering(2). Used for UI and reports.

**ALTERNATE\_BOM\_DESIGNATOR**

Name of the bill for alternate bills (null for the primary bill)

**SPECIFIC\_ASSEMBLY\_COMMENT**

Comments for specific assembly

**PENDING\_FROM\_ECN**

Change notice that created this bill of material

**COMMON\_BILL\_SEQUENCE\_ID**

Common bill sequence identifier

**SCALING\_TYPE**

Controls scaling behavior

**BOM\_SCALING\_TYPE**

BOM scaling type

**ASSEMBLY\_QUANTITY**

Assembly quantity

**UOM**

Unit of measure code

**DELETED\_FLAG**

Yes/No flag indicating whether the row will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**MSC\_ST\_BOM\_COMPONENTS**

The staging table used by the collection program to valid and process data for table MSC\_BOM\_COMPONENTS.

**Table 2–10 MSC\_BOM\_COMPONENTS**

Parameter	Usage	Type	Required	Derived	Optional
COMPONENT_SEQUENCE_ID	IN	NUMBER	x		
ORGANIZATION_ID	IN	NUMBER	x		
INVENTORY_ITEM_ID	IN	NUMBER	x		

**Table 2–10 MSC\_BOM\_COMPONENTS**

Parameter	Usage	Type	Required	Derived	Optional
USING_ASSEMBLY_ID	IN	NUMBER			x
BILL_SEQUENCE_ID	IN	NUMBER	x		
COMPONENT_TYPE	IN	NUMBER			x
SCALING_TYPE	IN	NUMBER			x
CHANGE_NOTICE	IN	VARCHAR2(10)			x
REVISION	IN	VARCHAR2(3)			x
UOM_CODE	IN	VARCHAR2(3)			x
USAGE_QUANTITY	IN	NUMBER			x
EFFECTIVITY_DATE	IN	DATE			x
DISABLE_DATE	IN	DATE			x
FROM_UNIT_NUMBER	IN	VARCHAR2(30)			x
TO_UNIT_NUMBER	IN	VARCHAR2(30)			x
USE_UP_CODE	IN	NUMBER			x
SUGGESTED_EFFECTIVITY_DATE	IN	DATE			x
DRIVING_ITEM_ID	IN	NUMBER			x
OPERATION_OFFSET_PERCENT	IN	NUMBER			x
OPTIONAL_COMPONENT	IN	NUMBER			x
OLD_EFFECTIVITY_DATE	IN	DATE			x
WIP_SUPPLY_TYPE	IN	NUMBER			x
PLANNING_FACTOR	IN	NUMBER			x
ATP_FLAG	IN	NUMBER			x
COMPONENT_YIELD_FACTOR	IN	NUMBER	x		
REVISED_ITEM_SEQUENCE_ID	IN	NUMBER			x
STATUS_TYPE	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	

Table 2–10 MSC\_BOM\_COMPONENTS

Parameter	Usage	Type	Required	Derived	Optional
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**COMPONENT\_SEQUENCE\_ID**

Component identifier on the source application instance

**ORGANIZATION\_ID**

Organization identifier

**INVENTORY\_ITEM\_ID**

Identifier of the component item

**USING\_ASSEMBLY\_ID**

Identifier of the item being assembled

**BILL\_SEQUENCE\_ID**

Identifier of the BOM

**COMPONENT\_TYPE**

Component (1), Ingredient component (–1), by-product (2)

**SCALING\_TYPE**

Scaling type

**CHANGE\_NOTICE**

Code for ECO. Use for UI and reporting

**REVISION**

Inventory item revision code

**UOM\_CODE**

Unit of measure code

**USAGE\_QUANTITY**

Quantity of the component to build one unit of item

**EFFECTIVITY\_DATE**

Date of effectivity for this component

**DISABLE\_DATE**

End of effectivity

**FROM\_UNIT\_NUMBER**

Effective from this unit number

**TO\_UNIT\_NUMBER**

Effective up to this unit number

**USE\_UP\_CODE**

Yes/No flag indicating whether the component is effective

**SUGGESTED\_EFFECTIVITY\_DATE**

Calculated use-up-date (if Use-up-code is yes)

**DRIVING\_ITEM\_ID**

Item which consumption determine the switch to this component

**OPERATION\_OFFSET\_PERCENT**

Operation offset percent

**OPTIONAL\_COMPONENT**

Yes/No flag – if optional use planning factor to determine demand

**OLD\_EFFECTIVITY\_DATE**

Old effectivity date

**WIP\_SUPPLY\_TYPE**

Used mainly for phantoms

**PLANNING\_FACTOR**

Planning factor for this component (percent)

**ATP\_FLAG**

Yes/No flag used for ATP

**COMPONENT\_YIELD\_FACTOR**

Factor used to multiply component quantity with to obtain component quantity

**REVISED\_ITEM\_SEQUENCE\_ID**

Revised item sequence identifier

**STATUS\_TYPE**

Status type

**DELETED\_FLAG**

Yes/No flag indicating whether the row will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**MSC\_ST\_BOR\_REQUIREMENTS**

The staging table used by the collection program to valid and process data for table MSC\_BOR\_REQUIREMENTS.

**Table 2–11 MSC\_BOR\_REQUIREMENTS**

Parameter	Usage	Type	Required	Derived	Optional
BILL_OF_RESOURCES	IN	VARCHAR2(10)	x		
ORGANIZATION_ID	IN	NUMBER	x		
ASSEMBLY_ITEM_ID	IN	NUMBER	x		
SR_TRANSACTION_ID	IN	NUMBER			x
SOURCE_ITEM_ID	IN	NUMBER	x		

**Table 2–11 MSC\_BOR\_REQUIREMENTS**

Parameter	Usage	Type	Required	Derived	Optional
RESOURCE_ID	IN	NUMBER			x
RESOURCE_DEPARTMENT_HOURS	IN	NUMBER			x
OPERATION_SEQUENCE_ID	IN	NUMBER			x
OPERATION_SEQ_NUM	IN	NUMBER			x
RESOURCE_SEQ_NUM	IN	NUMBER			x
SETBACK_DAYS	IN	NUMBER			x
DEPARTMENT_ID	IN	NUMBER			x
LINE_ID	IN	NUMBER			x
ASSEMBLY_USAGE	IN	NUMBER			x
ORIGINATION_TYPE	IN	NUMBER			x
RESOURCE_UNITS	IN	NUMBER			x
BASIS	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**BILL\_OF\_RESOURCES**

Bill of resources name

**ORGANIZATION\_ID**

Organization identifier

**ASSEMBLY\_ITEM\_ID**

Assembly item identifier

**SR\_TRANSACTION\_ID**

Source application transaction identifier

**SOURCE\_ITEM\_ID**

Source item identifier

**RESOURCE\_ID**

Resource identifier

**RESOURCE\_DEPARTMENT\_HOURS**

Require resource hours

**OPERATION\_SEQUENCE\_ID**

Operation sequence identifier

**OPERATION\_SEQ\_NUM**

Operation sequence number

**RESOURCE\_SEQ\_NUM**

Resource sequence number

**SETBACK\_DAYS**

Resource set back days from assembly due date

**DEPARTMENT\_ID**

Department identifier

**LINE\_ID**

Line identifier

**ASSEMBLY\_USAGE**

Resource hours multiplier for assembly usage

**ORIGINATION\_TYPE**

Load(1), Manual update(2), Manual addition(3)

**RESOURCE\_UNITS**

Operation resource units

**BASIS**

Operation Basis. Item(1), Lot(2), Resource Units(3), Resource value(4), Total value(5), Activity units(6)

**DELETED\_FLAG**

Yes/No flag indicating whether the row will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**MSC\_ST\_CALENDAR\_DATES**

The staging table used by the collection program to valid and process data for table MSC\_CALENDAR\_DATES.

**Table 2–12 MSC\_CALENDAR\_DATES**

Parameter	Usage	Type	Required	Derived	Optional
CALENDAR_DATE	IN	DATE	x		
CALENDAR_CODE	IN	VARCHAR2(14)	x		
EXCEPTION_SET_ID	IN	NUMBER	x		
SEQ_NUM	IN	NUMBER	x		
NEXT_SEQ_NUM	IN	NUMBER	x		
PRIOR_SEQ_NUM	IN	NUMBER	x		
NEXT_DATE	IN	DATE	x		
PRIOR_DATE	IN	DATE	x		
CALENDAR_START_DATE	IN	DATE	x		
CALENDAR_END_DATE	IN	DATE	x		
DESCRIPTION	IN	VARCHAR2(240)			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	

Table 2–12 MSC\_CALENDAR\_DATES

Parameter	Usage	Type	Required	Derived	Optional
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**CALENDAR\_DATE**

Calendar date

**CALENDAR\_CODE**

Calendar code

**EXCEPTION\_SET\_ID**

Exception set identifier

**SEQ\_NUM**

Sequence number (for working days only)

**NEXT\_SEQ\_NUM**

Next sequence number

**PRIOR\_SEQ\_NUM**

Prior sequence number

**NEXT\_DATE**

Date corresponding to next sequence number

**PRIOR\_DATE**

Date corresponding to prior sequence number

**CALENDAR\_START\_DATE**

Beginning date for the calendar

**CALENDAR\_END\_DATE**

Ending date for the calendar

**DESCRIPTION**

Calendar description

**DELETED\_FLAG**

Yes/No flag indicating whether the row will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**MSC\_ST\_CALENDAR\_SHIFTS**

The staging table used by the collection program to validate and process data for table MSC\_CALENDAR\_SHIFTS.

**Table 2–13 MSC\_CALENDAR\_SHIFTS**

Parameter	Usage	Type	Required	Derived	Optional
CALENDAR_CODE	IN	VARCHAR2(14)	x		
SHIFT_NUM	IN	NUMBER	x		
DAYS_ON	IN	NUMBER			x
DAYS_OFF	IN	NUMBER			x
DESCRIPTION	IN	VARCHAR2(240)			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	

**Table 2–13 MSC\_CALENDAR\_SHIFTS**

Parameter	Usage	Type	Required	Derived	Optional
PROGRAM_UPDATE_DATE	IN	DATE		x	
REFRESH_ID	IN	NUMBER			x
SR_INSTANCE_ID	IN	NUMBER	x		

**CALENDAR\_CODE**

Calendar code

**SHIFT\_NUM**

Shift number

**DAYS\_ON**

Number of consecutive working days

**DAYS\_OFF**

Number of consecutive non-working days

**DESCRIPTION**

Description

**DELETED\_FLAG**

Yes/No flag indicating whether the row will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**REFRESH\_ID**

Refresh identifier

**SR\_INSTANCE\_ID**

Source application instance identifier

**MSC\_ST\_CAL\_WEEK\_START\_DATES**

The staging table used by the collection program to validate and process data for table MSC\_CAL\_WEEK\_START\_DATES.

**Table 2–14 MSC\_CAL\_WEEK\_START\_DATES**

Parameter	Usage	Type	Required	Derived	Optional
CALENDAR_CODE	IN	VARCHAR2(14)	x		
EXCEPTION_SET_ID	IN	NUMBER	x		
WEEK_START_DATE	IN	DATE	x		
NEXT_DATE	IN	DATE	x		
PRIOR_DATE	IN	DATE	x		
SEQ_NUM	IN	NUMBER	x		
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	

**Table 2–14 MSC\_CAL\_WEEK\_START\_DATES**

Parameter	Usage	Type	Required	Derived	Optional
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
REFRESH_ID	IN	NUMBER			x
SR_INSTANCE_ID	IN	NUMBER	x		

**CALENDAR\_CODE**

Workday calendar identifier

**EXCEPTION\_SET\_ID**

Exception set identifier

**WEEK\_START\_DATE**

Week start date

**NEXT\_DATE**

Date corresponding to the next working date

**PRIOR\_DATE**

Date corresponding to the prior working date

**SEQ\_NUM**

Sequence number (for working days)

**DELETED\_FLAG**

Yes/No flag indicating whether the row will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**REFRESH\_ID**

Refresh identifier

**SR\_INSTANCE\_ID**

Source application instance identifier

**MSC\_ST\_CAL\_YEAR\_START\_DATES**

The staging table used by the collection program to validate and process data for table MSC\_YEAR\_START\_DATES.

**Table 2–15 MSC\_YEAR\_START\_DATES**

Parameter	Usage	Type	Required	Derived	Optional
CALENDAR_CODE	IN	VARCHAR2(14)	x		
EXCEPTION_SET_ID	IN	NUMBER	x		
YEAR_START_DATE	IN	DATE	x		
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
REFRESH_ID	IN	NUMBER			x
SR_INSTANCE_ID	IN	NUMBER	x		

**CALENDAR\_CODE**

Workday calendar identifier

**EXCEPTION\_SET\_ID**

Exception set unique identifier

**YEAR\_START\_DATE**

Year start date

**DELETED\_FLAG**

Yes/No flag indicating whether the row will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**REFRESH\_ID**

Refresh identifier

**SR\_INSTANCE\_ID**

Source application instance identifier

**MSC\_ST\_CATEGORY\_SETS**

The staging table used by the collection program to validate and process data for table MSC\_CATEGORY\_SETS.

**Table 2–16 MSC\_CATEGORY\_SETS**

Parameter	Usage	Type	Required	Derived	Optional
CATEGORY_SET_ID	IN	NUMBER			x
SR_CATEGORY_SET_ID	IN	NUMBER	x		
CATEGORY_SET_NAME	IN	VARCHAR2(30)	x		
DESCRIPTION	IN	VARCHAR2(240)			x
CONTROL_LEVEL	IN	NUMBER	x		
DEFAULT_FLAG	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**CATEGORY\_SET\_ID**

Category set identifier

**SR\_CATEGORY\_SET\_ID**

Category set identifier from source application instance

**CATEGORY\_SET\_NAME**

Category set name

**DESCRIPTION**

Category set description

**CONTROL\_LEVEL**

Control level

**DEFAULT\_FLAG**

Default flag

**DELETED\_FLAG**

Yes/No flag indicating whether the row will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh Identifier

**MSC\_ST\_COMPONENT\_SUBSTITUTES**

The staging table used by the collection program to validate and process data for table MSC\_COMPONENT\_SUBSTITUTES.

**Table 2–17 MSC\_COMPONENT\_SUBSTITUTES**

Parameter	Usage	Type	Required	Derived	Optional
COMPONENT_SEQUENCE_ID	IN	NUMBER	x		
SUBSTITUTE_ITEM_ID	IN	NUMBER	x		
USAGE_QUANTITY	IN	NUMBER	x		
ORGANIZATION_ID	IN	NUMBER	x		
PRIORITY	IN	NUMBER	x		
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	

**Table 2–17    *MSC\_COMPONENT\_SUBSTITUTES***

Parameter	Usage	Type	Required	Derived	Optional
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x
BILL_SEQUENCE_ID	IN	NUMBER	x		

**COMPONENT\_SEQUENCE\_ID**

Component sequence identifier

**SUBSTITUTE\_ITEM\_ID**

Substitute item identifier

**USAGE\_QUANTITY**

Usage quantity for the substitute component

**ORGANIZATION\_ID**

Organization identifier

**PRIORITY**

Priority code

**DELETED\_FLAG**

Yes/No flag indicating whether the row will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**BILL\_SEQUENCE\_ID**

Bill sequence identifier

**MSC\_ST\_DEMANDS**

The staging table used by the collection program to validate and process data for table MSC\_DEMANDS.

**Table 2–18 MSC\_DEMANDS**

Parameter	Usage	Type	Required	Derived	Optional
ORDER_PRIORITY	IN	NUMBER			x
DEMAND_ID	IN	NUMBER			x
INVENTORY_ITEM_ID	IN	NUMBER	x		
ORGANIZATION_ID	IN	NUMBER	x		
USING_ASSEMBLY_ITEM_ID	IN	NUMBER	x		

**Table 2–18 MSC\_DEMANDS**

Parameter	Usage	Type	Required	Derived	Optional
USING_ASSEMBLY_DEMAND_DATE	IN	DATE	x		
USING_REQUIREMENT_QUANTITY	IN	NUMBER	x		
ASSEMBLY_DEMAND_COMP_DATE	IN	DATE			
DEMAND_TYPE	IN	NUMBER	x		
DAILY_DEMAND_RATE	IN	NUMBER			x
ORIGINATION_TYPE	IN	NUMBER			x
SOURCE_ORGANIZATION_ID	IN	NUMBER			x
DISPOSITION_ID	IN	NUMBER			x
RESERVATION_ID	IN	NUMBER			x
DEMAND_SCHEDULE_NAME	IN	VARCHAR2(10)			x
PROJECT_ID	IN	NUMBER(15)			x
TASK_ID	IN	NUMBER(15)			x
PLANNING_GROUP	IN	VARCHAR2(30)			x
END_ITEM_UNIT_NUMBER	IN	VARCHAR2(30)			x
SCHEDULE_DATE	IN	DATE			x
OPERATION_SEQ_NUM	IN	NUMBER			x
QUANTITY_ISSUED	IN	NUMBER			x
DEMAND_CLASS	IN	VARCHAR2(34)			x
SALES_ORDER_NUMBER	IN	VARCHAR2(122)			x
SALES_ORDER_PRIORITY	IN	NUMBER			x
FORECAST_PRIORITY	IN	NUMBER			x
MPS_DATE_REQUIRED	IN	DATE			x
PO_NUMBER	IN	VARCHAR2(62)			x
WIP_ENTITY_NAME	IN	VARCHAR2(240)			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	

**Table 2–18 MSC\_DEMANDS**

Parameter	Usage	Type	Required	Derived	Optional
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x
REPETITIVE_SCHEDULE_ID	IN	NUMBER			x
WIP_ENTITY_ID	IN	NUMBER			x
SELLING_PRICE	IN	NUMBER			x
DMD_LATENESS_COST	IN	NUMBER			x
DMD_SATISFIED_DATE	IN	DATE			x
DMD_SPLIT_FLAG	IN	NUMBER			x
REQUEST_DATE	IN	DATE			x
ORDER_NUMBER	IN	VARCHAR2(240)			x
WIP_STATUS_CODE	IN	NUMBER			x
WIP_SUPPLY_TYPE	IN	NUMBER			x
ATTRIBUTE1	IN	VARCHAR2(150)			x
ATTRIBUTE2	IN	VARCHAR2(150)			x
ATTRIBUTE3	IN	VARCHAR2(150)			x
ATTRIBUTE4	IN	VARCHAR2(150)			x
ATTRIBUTE5	IN	VARCHAR2(150)			x
ATTRIBUTE6	IN	VARCHAR2(150)			x
ATTRIBUTE7	IN	VARCHAR2(150)			x
ATTRIBUTE8	IN	VARCHAR2(150)			x

**Table 2–18 MSC\_DEMANDS**

Parameter	Usage	Type	Required	Derived	Optional
ATTRIBUTE9	IN	VARCHAR2(150)			x
ATTRIBUTE10	IN	VARCHAR2(150)			x
ATTRIBUTE11	IN	VARCHAR2(150)			x
ATTRIBUTE12	IN	VARCHAR2(150)			x
ATTRIBUTE13	IN	VARCHAR2(150)			x
ATTRIBUTE14	IN	VARCHAR2(150)			x
ATTRIBUTE15	IN	VARCHAR2(150)			x
SALES_ORDER_LINE_ID	IN	NUMBER			x
CONFIDENCE_PERCENTAGE	IN	NUMBER			x
BUCKET_TYPE	IN	NUMBER			x
BILL_ID	IN	NUMBER			x

**ORDER\_PRIORITY**

Order priority

**DEMAND\_ID**

Demand identifier

**INVENTORY\_ITEM\_ID**

Inventory item identifier

**ORGANIZATION\_ID**

Organization identifier

**USING\_ASSEMBLY\_ITEM\_ID**

Using assembly item identifier (item generates demand for dependent demands)

**USING\_ASSEMBLY\_DEMAND\_DATE**

Demand date (due date)

**USING\_REQUIREMENT\_QUANTITY**

Required quantity

**ASSEMBLY\_DEMAND\_COMP\_DATE**

Using assembly completion date

**DEMAND\_TYPE**

Discrete Demand(1), Rate-based demand(2)

**DAILY\_DEMAND\_RATE**

Repetitive demand rate

**ORIGINATION\_TYPE**

Origin of the demand: Planned order, hard reversation, etc...

**SOURCE\_ORGANIZATION\_ID**

Source organization identifier

**DISPOSITION\_ID**

Identifier reference to the supply generating the demand

**RESERVATION\_ID**

Reservation identifier

**DEMAND\_SCHEDULE\_NAME**

Demand schedule name

**PROJECT\_ID**

Project identifier to which the demand applies

**TASK\_ID**

Task identifier to which the demand applies

**PLANNING\_GROUP**

Planning group

**END\_ITEM\_UNIT\_NUMBER**

End item unit number

**SCHEDULE\_DATE**

Schedule date

**OPERATION\_SEQ\_NUM**

Operation sequence number

**QUANTITY\_ISSUED**

Quantity issued

**DEMAND\_CLASS**

Demand class code

**SALES\_ORDER\_NUMBER**

Sales order number

**SALES\_ORDER\_PRIORITY**

Sales order priority

**FORECAST\_PRIORITY**

Forecast priority

**MPS\_DATE\_REQUIRED**

MPS date required

**PO\_NUMBER**

Purchase order number

**WIP\_ENTITY\_NAME**

Wip job name

**DELETED\_FLAG**

Yes/No flag indicating whether the row will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier populated by the collection program

**REPETITIVE\_SCHEDULE\_ID**

Repetitive schedule identifier

**WIP\_ENTITY\_ID**

WIP job identifier

**SELLING\_PRICE**

Selling price

**DMD\_LATENESS\_COST**

Demand lateness cost for independent demands

**DMD\_SATISFIED\_DATE**

Date demand is satisfied

**DMD\_SPLIT\_FLAG**

Demand split flag

**REQUEST\_DATE**

Request date

**ORDER\_NUMBER**

WIP entity name

**WIP\_STATUS\_CODE**

WIP job status code

**WIP\_SUPPLY\_TYPE**

WIP supply type

**ATTRIBUTE1**

Descriptive flexfield segment

**ATTRIBUTE2**

Descriptive flexfield segment

**ATTRIBUTE3**

Descriptive flexfield segment

**ATTRIBUTE4**

Descriptive flexfield segment

**ATTRIBUTE5**

Descriptive flexfield segment

**ATTRIBUTE6**

Descriptive flexfield segment

**ATTRIBUTE7**

Descriptive flexfield segment

**ATTRIBUTE8**

Descriptive flexfield segment

**ATTRIBUTE9**

Descriptive flexfield segment

**ATTRIBUTE10**

Descriptive flexfield segment

**ATTRIBUTE11**

Descriptive flexfield segment

**ATTRIBUTE12**

Descriptive flexfield segment

**ATTRIBUTE13**

Descriptive flexfield segment

**ATTRIBUTE14**

Descriptive flexfield segment

**ATTRIBUTE15**

Descriptive flexfield segment

**SALES\_ORDER\_LINE\_ID**

Sales order line identifier

**CONFIDENCE\_PERCENTAGE**

Forecast confidence percentage

**BUCKET\_TYPE**

Bucket type

**BILL\_ID**

Forecast billing address identifier

**MSC\_ST\_DEMAND\_CLASSES**

The staging table used by the collection program to validate and process data for demand classes.

**Table 2–19    Staging Table**

Parameter	Usage	Type	Required	Derived	Optional
DEMAND_CLASS	IN	VARCHAR2(30)	x		
MEANING	IN	VARCHAR2(80)	x		
DESCRIPTION	IN	VARCHAR2(250)			x
FROM_DATE	IN	DATE			x
TO_DATE	IN	DATE			x
ENABLED_FLAG	IN	NUMBER	x		
SR_INSTANCE_ID	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
ATTRIBUTE_CATEGORY	IN	VARCHAR2(30)			x

**Table 2–19 Staging Table**

Parameter	Usage	Type	Required	Derived	Optional
ATTRIBUTE1	IN	VARCHAR2(150)			x
ATTRIBUTE2	IN	VARCHAR2(150)			x
ATTRIBUTE3	IN	VARCHAR2(150)			x
ATTRIBUTE4	IN	VARCHAR2(150)			x
ATTRIBUTE5	IN	VARCHAR2(150)			x
ATTRIBUTE6	IN	VARCHAR2(150)			x
ATTRIBUTE7	IN	VARCHAR2(150)			x
ATTRIBUTE8	IN	VARCHAR2(150)			x
ATTRIBUTE9	IN	VARCHAR2(150)			x
ATTRIBUTE10	IN	VARCHAR2(150)			x
ATTRIBUTE11	IN	VARCHAR2(150)			x
ATTRIBUTE12	IN	VARCHAR2(150)			x
ATTRIBUTE13	IN	VARCHAR2(150)			x
ATTRIBUTE14	IN	VARCHAR2(150)			x
ATTRIBUTE15	IN	VARCHAR2(150)			x
DELETED_FLAG	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**DEMAND\_CLASS NOT**

Demand class code

**MEANING NOT**

Demand class meaning

**DESCRIPTION**

Describe the demand class

**FROM\_DATE**

Start date

**TO\_DATE**

End date

**ENABLED\_FLAG**

Enabled flag

**SR\_INSTANCE\_ID NOT**

Source application instance identifier

**LAST\_UPDATE\_DATE**

Standard Who Column

**LAST\_UPDATED\_BY**

Standard Who Column

**CREATION\_DATE**

Standard Who Column

**CREATED\_BY**

Standard Who Column

**LAST\_UPDATE\_LOGIN**

Standard Who Column

**REQUEST\_ID**

Concurrent Who Column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who Column

**PROGRAM\_ID**

Concurrent Who Column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who Column

**ATTRIBUTE\_CATEGORY**

Descriptive flexfield structure defining column

**ATTRIBUTE1**

Descriptive flexfield segment

**ATTRIBUTE2**

Descriptive flexfield segment

**ATTRIBUTE3**

Descriptive flexfield segment

**ATTRIBUTE4**

Descriptive flexfield segment

**ATTRIBUTE5**

Descriptive flexfield segment

**ATTRIBUTE6**

Descriptive flexfield segment

**ATTRIBUTE7**

Descriptive flexfield segment

**ATTRIBUTE8**

Descriptive flexfield segment

**ATTRIBUTE9**

Descriptive flexfield segment

**ATTRIBUTE10**

Descriptive flexfield segment

**ATTRIBUTE11**

Descriptive flexfield segment

**ATTRIBUTE12**

Descriptive flexfield segment

**ATTRIBUTE13**

Descriptive flexfield segment

**ATTRIBUTE14**

Descriptive flexfield segment

**ATTRIBUTE15**

Descriptive flexfield segment

**DELETED\_FLAG**

Deleted flag

**REFRESH\_ID**

Refresh identifier

**MSC\_ST\_DEPARTMENT\_RESOURCES**

The staging table used by the collection program to validate and process data for table MSC\_DEPARTMENT\_RESOURCES.

**Table 2–20 MSC\_DEPARTMENT\_RESOURCES**

Parameter	Usage	Type	Required	Derived	Optional
ORGANIZATION_ID	IN	NUMBER	x		
RESOURCE_ID	IN	NUMBER	x		
RESOURCE_CODE	IN	VARCHAR2(10)			x
DEPARTMENT_ID	IN	NUMBER	x		
DEPARTMENT_CODE	IN	VARCHAR2(10)			x
DEPARTMENT_CLASS	IN	VARCHAR2(10)			x
LINE_FLAG	IN	VARCHAR2(1)	x		
OWNING_DEPARTMENT_ID	IN	NUMBER			x
CAPACITY_UNITS	IN	NUMBER			x
MAX_RATE	IN	NUMBER			x

**Table 2–20 MSC\_DEPARTMENT\_RESOURCES**

Parameter	Usage	Type	Required	Derived	Optional
MIN_RATE	IN	NUMBER			x
AGGREGATED_RESOURCE_ID	IN	NUMBER			x
AGGREGATED_RESOURCE_FLAG	IN	NUMBER	x		
RESOURCE_GROUP_NAME	IN	VARCHAR2(30)			x
RESOURCE_GROUP_CODE	IN	VARCHAR2(10)			x
RESOURCE_BALANCE_FLAG	IN	NUMBER			x
BOTTLENECK_FLAG	IN	NUMBER			x
START_TIME	IN	NUMBER			x
STOP_TIME	IN	NUMBER			x
DEPARTMENT_DESCRIPTION	IN	VARCHAR2(240)			x
RESOURCE_DESCRIPTION	IN	VARCHAR2(240)			x
OVER_UTILIZED_PERCENT	IN	NUMBER			x
UNDER_UTILIZED_PERCENT	IN	NUMBER			x
RESOURCE_SHORTAGE_TYPE	IN	NUMBER			x
RESOURCE_EXCESS_TYPE	IN	NUMBER			x
USER_TIME_FENCE	IN	NUMBER			x
UTILIZATION	IN	NUMBER			x
EFFICIENCY	IN	NUMBER			x
RESOURCE_INCLUDE_FLAG	IN	NUMBER			x
CRITICAL_RESOURCE_FLAG	IN	NUMBER			x
RESOURCE_TYPE	IN	NUMBER			x
DISABLE_DATE	IN	DATE			x
LINE_DISABLE_DATE	IN	DATE			x
AVAILABLE_24_HOURS_FLAG	IN	NUMBER	x		
CTP_FLAG	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	

Table 2–20 MSC\_DEPARTMENT\_RESOURCES

Parameter	Usage	Type	Required	Derived	Optional
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x
DEPT_OVERHEAD_COST	IN	NUMBER			x
RESOURCE_COST	IN	NUMBER			x
RESOURCE_OVER_UTIL_COST	IN	NUMBER			x

**ORGANIZATION\_ID**

Organization identifier

**RESOURCE\_ID**

Source application resource identifier

**RESOURCE\_CODE**

Resource code

**DEPARTMENT\_ID**

Source application department identifier or line identifier

**DEPARTMENT\_CODE**

Department code, also holds line code

**DEPARTMENT\_CLASS**

Department class

**LINE\_FLAG**

Flag to indicate whether or not this resource is a line

**OWNING\_DEPARTMENT\_ID**

Owning department identifier

**CAPACITY\_UNITS**

Resource capacity

**MAX\_RATE**

Hourly minimum rate of production line

**MIN\_RATE**

Hourly maximum rate of production line

**AGGREGATED\_RESOURCE\_ID**

Reference to aggregate resource, if aggregated

**AGGREGATED\_RESOURCE\_FLAG**

Yes/No flag to indicate whether this is an aggregated resource

**RESOURCE\_GROUP\_NAME**

Resource group name

**RESOURCE\_GROUP\_CODE**

Resource group code

**RESOURCE\_BALANCE\_FLAG**

Flag to indicate if the resource needs to load balanced

**BOTTLENECK\_FLAG**

Flag to indicate if the resource is a known bottleneck

**START\_TIME**

Start time of the line

**STOP\_TIME**

Stop time of the line

**DEPARTMENT\_DESCRIPTION**

Describes of the line or department

**RESOURCE\_DESCRIPTION**

Describes the resource

**OVER\_UTILIZED\_PERCENT**

Overutilization tolerance

**UNDER\_UTILIZED\_PERCENT**

Underutilization tolerance

**RESOURCE\_SHORTAGE\_TYPE**

Resource shortage type

**RESOURCE\_EXCESS\_TYPE**

Resource excess type

**USER\_TIME\_FENCE**

User time fence

**UTILIZATION**

Utilization

**EFFICIENCY**

Efficiency

**RESOURCE\_INCLUDE\_FLAG**

Resource include flag

**CRITICAL\_RESOURCE\_FLAG**

Critical resource flag

**RESOURCE\_TYPE**

Resource type

**DISABLE\_DATE**

Disable date

**LINE\_DISABLE\_DATE**

Line disable date

**AVAILABLE\_24\_HOURS\_FLAG**

Resource is available 24 hours or by shifts

**CTP\_FLAG**

Flag indicating whether the department resource is used for ATP or not

**DELETED\_FLAG**

Yes/No flag indicating whether the row will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier populated by the collection program

**DEPT\_OVERHEAD\_COST**

Department overhead cost

**RESOURCE\_COST**

Resource cost

**RESOURCE\_OVER\_UTIL\_COST**

Resource overutilization cost

**MSC\_ST\_DESIGNATORS**

The staging table used by the collection program to validate and process data for table MSC\_DESIGNATORS.

**Table 2–21 MSC\_DESIGNATORS**

Parameter	Usage	Type	Required	Derived	Optional
DESIGNATOR_ID	IN	NUMBER	x		
DESIGNATOR	IN	VARCHAR2(10)	x		
SR_DESIGNATOR	IN	VARCHAR2(10)			x
ORGANIZATION_ID	IN	NUMBER	x		
SR_ORGANIZATION_ID	IN	NUMBER			x

**Table 2–21 MSC\_DESIGNATORS**

Parameter	Usage	Type	Required	Derived	Optional
MPS_RELIEF	IN	NUMBER	x		
INVENTORY_ATP_FLAG	IN	NUMBER	x		
DESCRIPTION	IN	VARCHAR2(50)			x
DISABLE_DATE	IN	DATE			x
DEMAND_CLASS	IN	VARCHAR2(34)			x
ORGANIZATION_SELECTION	IN	NUMBER			x
PRODUCTION	IN	NUMBER			x
RECOMMENDATION_RELEASE	IN	NUMBER			x
DESIGNATOR_TYPE	IN	NUMBER	x		
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x
CONSUME_FORECAST	IN	NUMBER			x
UPDATE_TYPE	IN	NUMBER			x
FORWARD_UPDATE_TIME_FENCE	IN	NUMBER			x
BACKWARD_UPDATE_TIME_FENCE	IN	NUMBER			x
OUTLIER_UPDATE_PERCENTAGE	IN	NUMBER			x
FORECAST_SET_ID	IN	VARCHAR2(10)			x

**Table 2–21    *MSC\_DESIGNATORS***

Parameter	Usage	Type	Required	Derived	Optional
CUSTOMER_ID	IN	NUMBER			x
SHIP_ID	IN	NUMBER			x
BILL_ID	IN	NUMBER			x
BUCKET_TYPE	IN	NUMBER			x

**DESIGNATOR\_ID**

Designator identifier

**DESIGNATOR**

Source application schedule name

**SR\_DESIGNATOR**

Source designator identifier

**ORGANIZATION\_ID**

Organization identifier

**SR\_ORGANIZATION\_ID**

Source organization identifier

**MPS\_RELIEF**

Flag to indicate whether MPS relief performed against this designator

**INVENTORY\_ATP\_FLAG**

ATP supply flag

**DESCRIPTION**

Description of the this designator

**DISABLE\_DATE**

Designator disable date

**DEMAND\_CLASS**

Demand class code

**ORGANIZATION\_SELECTION**

Single/Multiple organizations

**PRODUCTION**

Production flag

**RECOMMENDATION\_RELEASE**

Planned order release flag

**DESIGNATOR\_TYPE**

Schedule type

**DELETED\_FLAG**

Yes/No flag indicating whether the row will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh number populated by the collection program

**CONSUME\_FORECAST**

Consume forecast flag

**UPDATE\_TYPE**

Forecast update type code

**FORWARD\_UPDATE\_TIME\_FENCE**

Forward consumption days

**BACKWARD\_UPDATE\_TIME\_FENCE**

Backward consumption days

**OUTLIER\_UPDATE\_PERCENTAGE**

Forecast outlier update percentage

**FORECAST\_SET\_ID**

Forecast set identifier

**CUSTOMER\_ID**

Customer identifier

**SHIP\_ID**

Forecast ship code identifier

**BILL\_ID**

Forecast billing address identifier

**BUCKET\_TYPE**

Forecast bucket type – days, weeks or periods

**MSC\_ST\_INTERORG\_SHIP\_METHODS**

The staging table used by the collection program to validate and process data for table MSC\_INTERORG\_SHIP\_METHODS.

**Table 2–22 MSC\_INTERORG\_SHIP\_METHODS**

Parameter	Usage	Type	Required	Derived	Optional
FROM_ORGANIZATION_ID	IN	NUMBER	x		
TO_ORGANIZATION_ID	IN	NUMBER	x		
SHIP_METHOD	IN	VARCHAR2(30)	x		
TIME_UOM_CODE	IN	VARCHAR2(10)			x
INSTRANSIT_TIME	IN	NUMBER			x
DEFAULT_FLAG	IN	NUMBER	x		
FROM_LOCATION_ID	IN	NUMBER	x		
TO_LOCATION_ID	IN	NUMBER	x		
AVAILABILITY_DATE	IN	DATE			x
WEIGHT_CAPACITY	IN	NUMBER			x
WEIGHT_UOM	IN	VARCHAR2(3)			x
VOLUME_CAPACITY	IN	NUMBER			x
VOLUME_UOM	IN	VARCHAR2(3)			x
COST_PER_WEIGHT_UNIT	IN	NUMBER			x
COST_PER_VOLUME_UNIT	IN	NUMBER			x
INTRANSIT_TIME	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		

Table 2–22 MSC\_INTERORG\_SHIP\_METHODS

Parameter	Usage	Type	Required	Derived	Optional
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY		NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
REFRESH_ID	IN	NUMBER			x
SR_INSTANCE_ID	IN	NUMBER	x		
TRANSPORT_CAP_OVER_UTIL_COST	IN	NUMBER			x
SR_INSTANCE_ID2	IN	NUMBER	x		

**FROM\_ORGANIZATION\_ID**

Organization identifier for the origin organization

**TO\_ORGANIZATION\_ID**

Organization identifier for the destination organization'

**SHIP\_METHOD**

Ship method

**TIME\_UOM\_CODE**

Unit of measure used to specify the intransit lead time

**INSTRANSIT\_TIME**

Intransit time

**DEFAULT\_FLAG**

Flag to indicate if this is a default ship method

**FROM\_LOCATION\_ID**

Location identifier of the origin location

**TO\_LOCATION\_ID**

Location identifier of the destination location

**AVAILABILITY\_DATE**

Availability date

**WEIGHT\_CAPACITY**

Weight capacity of this ship method

**WEIGHT\_UOM**

Weight unit of measure

**VOLUME\_CAPACITY**

Weight capacity

**VOLUME\_UOM**

Volume unit of measure

**COST\_PER\_WEIGHT\_UNIT**

Cost per weight unit

**COST\_PER\_VOLUME\_UNIT**

Cost per volume unit

**INTRANSIT\_TIME**

Intransit time

**DELETED\_FLAG**

Deleted flag

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**REFRESH\_ID**

Refresh identifier

**SR\_INSTANCE\_ID**

Source application instance identifier of the source org

**TRANSPORT\_CAP\_OVER\_UTIL\_COST**

Transport cap over utilized cost

**SR\_INSTANCE\_ID2**

Source application instance identifier of the destination org

## MSC\_ST\_ITEM\_CATEGORIES

The staging table used by the collection program to validate and process data for table MSC\_ITEM\_CATEGORIES.

**Table 2–23 MSC\_ITEM\_CATEGORIES**

Parameter	Usage	Type	Required	Derived	Optional
INVENTORY_ITEM_ID	IN	NUMBER	x		
ORGANIZATION_ID	IN	NUMBER	x		
SR_CATEGORY_SET_ID	IN	NUMBER	x		
SR_CATEGORY_ID	IN	NUMBER			x
CATEGORY_NAME	IN	VARCHAR2(163)	x		
DESCRIPTION	IN	VARCHAR2(240)			x
DISABLE_DATE	IN	DATE			x
SUMMARY_FLAG	IN	VARCHAR2(1)	x		
ENABLED_FLAG	IN	VARCHAR2(1)	x		
START_DATE_ACTIVE	IN	DATE			x
END_DATE_ACTIVE	IN	DATE			x
CATEGORY_SET_NAME	IN	VARCHAR2(30)			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**INVENTORY\_ITEM\_ID**

Inventory item identifier

**ORGANIZATION\_ID**

Organization identifier

**SR\_CATEGORY\_SET\_ID**

Category set identifier from source application

**SR\_CATEGORY\_ID**

Category identifier from source application

**CATEGORY\_NAME**

Category name

**DESCRIPTION**

Description

**DISABLE\_DATE**

Disable date

**SUMMARY\_FLAG**

Summary flag

**ENABLED\_FLAG**

Enabled flag

**START\_DATE\_ACTIVE**

Start date

**END\_DATE\_ACTIVE**

End date

**CATEGORY\_SET\_NAME**

Category set name

**DELETED\_FLAG**

Deleted flag

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**MSC\_ST\_ITEM\_SUPPLIERS**

The staging table used by the collection program to validate and process data for table MSC\_ITEM\_SUPPLIERS.

**Table 2–24 MSC\_ITEM\_SUPPLIERS**

Parameter	Usage	Type	Required	Derived	Optional
INVENTORY_ITEM_ID	IN	NUMBER	x		
ORGANIZATION_ID	IN	NUMBER	x		
SUPPLIER_ID	IN	NUMBER	x		
SUPPLIER_SITE_ID	IN	NUMBER			x
USING_ORGANIZATION_ID	IN	NUMBER	x		
ASL_ID	IN	NUMBER			x
PROCESSING_LEAD_TIME	IN	NUMBER			x
MINIMUM_ORDER_QUANTITY	IN	NUMBER			x
FIXED_LOT_MULTIPLE	IN	NUMBER			x
DELIVERY_CALENDAR_CODE	IN	VARCHAR2(14)			x
VENDOR_NAME	IN	VARCHAR2(80)			x
VENDOR_SITE_CODE	IN	VARCHAR2(15)			x
SUPPLIER_CAP_OVER_UTIL_COST	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		

**Table 2–24 MSC\_ITEM\_SUPPLIERS**

Parameter	Usage	Type	Required	Derived	Optional
SR_INSTANCE_ID2	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x
PURCHASING_UNIT_OF_MEASURE	IN	VARCHAR2(25)			x

**INVENTORY\_ITEM\_ID**

Inventory item identifier

**ORGANIZATION\_ID**

Organization identifier

**SUPPLIER\_ID**

Supplier identifier

**SUPPLIER\_SITE\_ID**

Supplier site identifier

**USING\_ORGANIZATION\_ID**

Using organization identifier

**ASL\_ID**

ASL identifier

**PROCESSING\_LEAD\_TIME**

Processing lead time

**MINIMUM\_ORDER\_QUANTITY**

Minimum order quantity

**FIXED\_LOT\_MULTIPLE**

Fixed lot multiple

**DELIVERY\_CALENDAR\_CODE**

Delivery calendar code

**VENDOR\_NAME**

Supplier name

**VENDOR\_SITE\_CODE**

Supplier site code

**SUPPLIER\_CAP\_OVER\_UTIL\_COST**

Supplier cap over util cost

**DELETED\_FLAG**

Deleted flag

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**SR\_INSTANCE\_ID2**

Source application instance identifier of using organization

**REFRESH\_ID**

Refresh identifier

**PURCHASING\_UNIT\_OF\_MEASURE**

Purchasing unit of measure

**MSC\_ST\_LOCATION\_ASSOCIATIONS**

The staging table used by the collection program to validate and process data for table MSC\_LOCATION\_ASSOCIATIONS.

**Table 2–25 MSC\_LOCATION\_ASSOCIATIONS**

Parameter	Usage	Type	Required	Derived	Optional
LOCATION_ID	IN	NUMBER	x		
SR_INSTANCE_ID	IN	NUMBER	x		
LOCATION_CODE	IN	VARCHAR2(20)			x
ORGANIZATION_ID	IN	NUMBER			x
PARTNER_ID	IN	NUMBER			x
PARTNER_SITE_ID	IN	NUMBER			x
SR_TP_ID	IN	NUMBER	x		
SR_TP_SITE_ID	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	

Table 2–25 MSC\_LOCATION\_ASSOCIATIONS

Parameter	Usage	Type	Required	Derived	Optional
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
ORGANIZATION_ID	IN	NUMBER			x
REFRESH_ID	IN	NUMBER			x
PARTNER_TYPE	IN	NUMBER	x		

**LOCATION\_ID**

Location identifier

**SR\_INSTANCE\_ID**

Source application instance identifier

**LOCATION\_CODE**

Location code

**ORGANIZATION\_ID**

Organization identifier

**PARTNER\_ID**

Partner identifier

**PARTNER\_SITE\_ID**

Partner site identifier

**SR\_TP\_ID**

Trading partner identifier from source application

**SR\_TP\_SITE\_ID**

Trading partner site identifier from source application

**LAST\_UPDATE\_DATE**

Standard Who Column

**LAST\_UPDATED\_BY**

Standard Who Column

**CREATION\_DATE**

Standard Who Column

**CREATED\_BY**

Standard Who Column

**LAST\_UPDATE\_LOGIN**

Standard Who Column

**REQUEST\_ID**

Concurrent Who Column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who Column

**PROGRAM\_ID**

Concurrent Who Column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who Column

**ORGANIZATION\_ID**

Organization identifier

**REFRESH\_ID**

Refresh identifier

**PARTNER\_TYPE**

Partner type

**MSC\_ST\_NET\_RESOURCE\_AVAIL**

The staging table used by the collection program to validate and process data for table MSC\_NET\_RESOURCE\_AVAIL.

**Table 2–26 MSC\_NET\_RESOURCE\_AVAIL**

Parameter	Usage	Type	Required	Derived	Optional
ORGANIZATION_ID	IN	NUMBER	x		
DEPARTMENT_ID	IN	NUMBER	x		
RESOURCE_ID	IN	NUMBER	x		
SHIFT_NUM	IN	NUMBER			x
SHIFT_DATE	IN	DATE	x		
FROM_TIME	IN	NUMBER			x
TO_TIME	IN	NUMBER			x
CAPACITY_UNITS	IN	NUMBER	x		
SIMULATION_SET	IN	VARCHAR2(10)			x
AGGREGATE_RESOURCE_ID	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**DEPARTMENT\_ID**

Department identifier (–1 for lines)

**RESOURCE\_ID**

Resource identifier

**SHIFT\_NUM**

Shift number

**SHIFT\_DATE**

Calendar date

**FROM\_TIME**

Shift start time

**TO\_TIME**

Shift end time

**CAPACITY\_UNITS**

Number of units available during the time interval

**SIMULATION\_SET**

Simulation set identifier

**AGGREGATE\_RESOURCE\_ID**

Reference to aggregate resource, if resource aggregated (denormalized column)

**DELETED\_FLAG**

Yes/No flag indicating whether the row will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier populate by the collection program

**MSC\_ST\_OPERATION\_COMPONENTS**

The staging table used by the collection program to validate and process data for table MSC\_OPERATION\_COMPONENTS.

**Table 2–27 MSC\_OPERATION\_COMPONENTS**

Parameter	Usage	Type	Required	Derived	Optional
ORGANIZATION_ID	IN	NUMBER	x		
OPERATION_SEQUENCE_ID	IN	NUMBER	x		
COMPONENT_SEQUENCE_ID	IN	NUMBER	x		
BILL_SEQUENCE_ID	IN	NUMBER	x		
ROUTING_SEQUENCE_ID	IN	NUMBER	x		

**Table 2–27 MSC\_OPERATION\_COMPONENTS**

Parameter	Usage	Type	Required	Derived	Optional
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
REFRESH_ID	IN	NUMBER			x
SR_INSTANCE_ID	IN	NUMBER	x		

**ORGANIZATION\_ID**

Organization identifier

**OPERATION\_SEQUENCE\_ID**

Operation sequence identifier

**COMPONENT\_SEQUENCE\_ID**

Component sequence identifier

**BILL\_SEQUENCE\_ID**

Bill sequence identifier

**ROUTING\_SEQUENCE\_ID**

Routing sequence identifier

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS to be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**REFRESH\_ID**

Refresh number populated by the collection program

**SR\_INSTANCE\_ID**

Source application instance identifier

**MSC\_ST\_OPERATION\_RESOURCES**

The staging table used by the collection program to validate and process data for table MSC\_OPERATION\_RESOURCES.

**Table 2–28 MSC\_OPERATION\_RESOURCES**

Parameter	Usage	Type	Required	Derived	Optional
ROUTING_SEQUENCE_ID	IN	NUMBER	x		
RESOURCE_TYPE	IN	NUMBER			x
OPERATION_SEQUENCE_ID	IN	NUMBER	x		
RESOURCE_SEQ_NUM	IN	NUMBER	x		
RESOURCE_ID	IN	NUMBER	x		
ALTERNATE_NUMBER	IN	NUMBER	x		
PRINCIPAL_FLAG	IN	NUMBER	x		
BASIS_TYPE	IN	NUMBER	x		
RESOURCE_USAGE	IN	NUMBER	x		
MAX_RESOURCE_UNITS	IN	NUMBER			x
RESOURCE_UNITS	IN	NUMBER			x
UOM_CODE	IN	VARCHAR2(3)	x		
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**ROUTING\_SEQUENCE\_ID**

Routing sequence identifier

**RESOURCE\_TYPE**

Resource type

**OPERATION\_SEQUENCE\_ID**

Operation sequence identifier

**RESOURCE\_SEQ\_NUM**

Resource sequence number

**RESOURCE\_ID**

Resource identifier

**ALTERNATE\_NUMBER**

Alternate number

**PRINCIPAL\_FLAG**

Flag to indicate whether the resource is the principal resource

**BASIS\_TYPE**

Basis type

**RESOURCE\_USAGE**

Resource usage

**MAX\_RESOURCE\_UNITS**

Maximum number of resource units consumed by this operation resource

**RESOURCE\_UNITS**

Operation resource units (capacity)

**UOM\_CODE**

Unit of measure

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh number populated by the collection program

**MSC\_ST\_OPERATION\_RESOURCE\_SEQS**

The staging table used by the collection program to validate and process data for table MSC\_OPERATION\_RESOURCE\_SEQS.

Table 2–29 MSC\_OPERATION\_RESOURCE\_SEQS

Parameter	Usage	Type	Required	Derived	Optional
ROUTING_SEQUENCE_ID	IN	NUMBER	x		
OPERATION_SEQUENCE_ID	IN	NUMBER	x		
RESOURCE_SEQ_NUM	IN	NUMBER	x		
SCHEDULE_FLAG	IN	NUMBER	x		
RESOURCE_OFFSET_PERCENT	IN	NUMBER			x
DEPARTMENT_ID	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**ROUTING\_SEQUENCE\_ID**

Routing sequence identifier

**OPERATION\_SEQUENCE\_ID**

Operation sequence identifier

**RESOURCE\_SEQ\_NUM**

Resource sequence number

**SCHEDULE\_FLAG**

Schedule

**RESOURCE\_OFFSET\_PERCENT**

Resource offset percent

**DEPARTMENT\_ID**

Department identifier

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh number populated by the collection program

**MSC\_ST\_PARAMETERS**

The staging table used by the collection program to validate and process data for table MSC\_PARAMETERS.

**Table 2–30 MSC\_PARAMETERS**

Parameter	Usage	Type	Required	Derived	Optional
ORGANIZATION_ID	IN	NUMBER	x		
DEMAND_TIME_FENCE_FLAG	IN	NUMBER	x		
PLANNING_TIME_FENCE_FLAG	IN	NUMBER	x		
OPERATION_SCHEDULE_TYPE	IN	NUMBER	x		
CONSIDER_WIP	IN	NUMBER	x		
CONSIDER_PO	IN	NUMBER	x		
SNAPSHOT_LOCK	IN	NUMBER	x		
PLAN_SAFETY_STOCK	IN	NUMBER	x		
CONSIDER_RESERVATIONS	IN	NUMBER	x		
PART_INCLUDE_TYPE	IN	NUMBER	x		
DEFAULT_ABC_ASSIGNMENT_GROUP	IN	VARCHAR2(40)			x
PERIOD_TYPE	IN	NUMBER	x		
RESCHED_ASSUMPTION	IN	NUMBER			x
PLAN_DATE_DEFAULT_TYPE	IN	NUMBER			x
INCLUDE_REP_SUPPLY_DAYS	IN	NUMBER			x

**Table 2–30 MSC\_PARAMETERS**

Parameter	Usage	Type	Required	Derived	Optional
INCLUDE_MDS_DAYS	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x
REPETITIVE_HORIZON1	IN	NUMBER(38)			x
REPETITIVE_HORIZON2	IN	NUMBER(38)			x
REPETITIVE_BUCKET_SIZE1	IN	NUMBER(38)			x
REPETITIVE_BUCKET_SIZE2	IN	NUMBER(38)			x
REPETITIVE_BUCKET_SIZE3	IN	NUMBER(38)			x
REPETITIVE_ANCHOR_DATE	IN	DATE			x

**ORGANIZATION\_ID****DEMAND\_TIME\_FENCE\_FLAG**

Flag to indicate whether to consider demand time fence

**PLANNING\_TIME\_FENCE\_FLAG**

IS Flag to indicate whether to consider planning time fence

**OPERATION\_SCHEDULE\_TYPE**

Operation schedule type

**CONSIDER\_WIP**

Flag to indicate whether to consider WIP

**CONSIDER\_PO**

Flag to indicate whether to consider PO

**SNAPSHOT\_LOCK**

Flag to indicate whether the snapshot should try to lock tables

**PLAN\_SAFETY\_STOCK**

Flag to indicate whether to plan safety stock

**CONSIDER\_RESERVATIONS**

Flag to indicate whether to plan material reservations

**PART\_INCLUDE\_TYPE**

Flag to indicate which part to include

**DEFAULT\_ABC\_ASSIGNMENT\_GROUP**

VARCHAR2(40)

**PERIOD\_TYPE**

Calculate periods based on work dates or calendar dates

**RESCHED\_ASSUMPTION**

Reschedule assumption

**PLAN\_DATE\_DEFAULT\_TYPE**

Plan date default type

**INCLUDE\_REP\_SUPPLY\_DAYS**

Flag to indicate whether to include Supply days

**INCLUDE\_MDS\_DAYS**

Flag to indicate whether to include MDS days

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier populated by the collection program

**REPETITIVE\_HORIZON1**

First repetitive horizon

**REPETITIVE\_HORIZON2**

Second repetitive horizon

**REPETITIVE\_BUCKET\_SIZE1**

First repetitive bucket size

**REPETITIVE\_BUCKET\_SIZE2**

Second repetitive bucket size

**REPETITIVE\_BUCKET\_SIZE3**

Third repetitive bucket size

**REPETITIVE\_ANCHOR\_DATE**

Repetitive anchor date

**MSC\_ST\_PARTNER\_CONTACTS**

The staging table used by the collection program to validate and process data for table MSC\_PARTNER\_CONTACTS.

**Table 2–31 MSC\_PARTNER\_CONTACTS**

Parameter	Usage	Type	Required	Derived	Optional
NAME	IN	VARCHAR2(100)			x
DISPLAY_NAME	IN	VARCHAR2(240)			x
PARTNER_ID	IN	NUMBER			x
PARTNER_SITE_ID	IN	NUMBER			x
PARTNER_TYPE	IN	NUMBER	x		
EMAIL	IN	VARCHAR2(240)			x
FAX	IN	VARCHAR2(240)			x
ENABLED_FLAG	IN	VARCHAR2(1)			x

**Table 2–31 MSC\_PARTNER\_CONTACTS**

Parameter	Usage	Type	Required	Derived	Optional
DELETED_FLAG	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x
SR_INSTANCE_ID	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	

**NAME**

Partner's user name

**DISPLAY\_NAME**

Partner's display name

**PARTNER\_ID**

Partner Identifier

**PARTNER\_SITE\_ID**

Partner site identifier

**PARTNER\_TYPE**

Indicate type of partner, supplier, customer, or buyer

**EMAIL**

Partner's email address

**FAX**

Partner's FAX number

**ENABLED\_FLAG**

Flag indicating contact is enabled

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**REFRESH\_ID**

Refresh ID populated by the pull program

**SR\_INSTANCE\_ID**

Source application instance identifier

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**MSC\_ST\_PERIOD\_START\_DATES**

The staging table used by the collection program to validate and process data for table MSC\_PERIOD\_START\_DATES.

**Table 2–32 MSC\_PERIOD\_START\_DATES**

Parameter	Usage	Type	Required	Derived	Optional
CALENDAR_CODE	IN	VARCHAR2(14)	x		
EXCEPTION_SET_ID	IN	NUMBER	x		
PERIOD_START_DATE	IN	DATE	x		
PERIOD_SEQUENCE_NUM	IN	NUMBER			x
PERIOD_NAME	IN	VARCHAR2(3)			x
NEXT_DATE	IN	DATE	x		
PRIOR_DATE	IN	DATE	x		
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
REFRESH_ID	IN	NUMBER			x
SR_INSTANCE_ID	IN	NUMBER	x		

**CALENDAR\_CODE**

Calendar code

**EXCEPTION\_SET\_ID**

Exception set unique identifier

**PERIOD\_START\_DATE**

Period start date

**PERIOD\_SEQUENCE\_NUM**

Sequence number

**PERIOD\_NAME**

Period Name (depends on quarterly calendar type chosen)

**NEXT\_DATE**

Next calendar date corresponding to next sequence number

**PRIOR\_DATE**

Period start date

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**REFRESH\_ID**

Refresh identifier populated by the collection program

**SR\_INSTANCE\_ID**

Source application instance identifier

**MSC\_ST\_PLANNERS**

The staging table used by the collection program to validate and process data for table MSC\_PLANNERS.

**Table 2–33 MSC\_PLANNERS**

Parameter	Usage	Type	Required	Derived	Optional
ORGANIZATION_ID	IN	NUMBER	x		
SR_INSTANCE_ID	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE	x		
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	

**Table 2–33 MSC\_PLANNERS**

Parameter	Usage	Type	Required	Derived	Optional
DESCRIPTION	IN	VARCHAR2(50)			x
DISABLE_DATE	IN	DATE			x
ATTRIBUTE_CATEGORY	IN	VARCHAR2(30)			x
ATTRIBUTE1	IN	VARCHAR2(150)			x
ATTRIBUTE2	IN	VARCHAR2(150)			x
ATTRIBUTE3	IN	VARCHAR2(150)			x
ATTRIBUTE4	IN	VARCHAR2(150)			x
ATTRIBUTE5	IN	VARCHAR2(150)			x
ATTRIBUTE6	IN	VARCHAR2(150)			x
ATTRIBUTE7	IN	VARCHAR2(150)			x
ATTRIBUTE8	IN	VARCHAR2(150)			x
ATTRIBUTE9	IN	VARCHAR2(150)			x
ATTRIBUTE10	IN	VARCHAR2(150)			x
ATTRIBUTE11	IN	VARCHAR2(150)			x
ATTRIBUTE12	IN	VARCHAR2(150)			x
ATTRIBUTE13	IN	VARCHAR2(150)			x
ATTRIBUTE14	IN	VARCHAR2(150)			x
ATTRIBUTE15	IN	VARCHAR2(150)			x
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
ELECTRONIC_MAIL_ADDRESS	IN	VARCHAR2(240)		x	
EMPLOYEE_ID	IN	NUMBER		x	
CURRENT_EMPLOYEE_FLAG	IN	NUMBER	x		

**Table 2–33 MSC\_PLANNERS**

Parameter	Usage	Type	Required	Derived	Optional
REFRESH_ID	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER			x
USER_NAME	IN	VARCHAR2(100)			x

**ORGANIZATION\_ID**

Organization identifier

**SR\_INSTANCE\_ID**

Source application instance identifier

**LAST\_UPDATE\_DATE**

Standard Who Column

**LAST\_UPDATED\_BY**

Standard Who Column

**CREATION\_DATE**

Standard Who Column

**CREATED\_BY**

Standard Who Column

**LAST\_UPDATE\_LOGIN**

Standard Who Column

**DESCRIPTION**

Describe the planner

**DISABLE\_DATE**

Date on which the planner record is disable

**ATTRIBUTE\_CATEGORY**

Descriptive flexfield structure defining column

**ATTRIBUTE1**

Descriptive flexfield segment

**ATTRIBUTE2**

Descriptive flexfield segment

**ATTRIBUTE3**

Descriptive flexfield segment

**ATTRIBUTE4**

Descriptive flexfield segment

**ATTRIBUTE5**

Descriptive flexfield segment

**ATTRIBUTE6**

Descriptive flexfield segment

**ATTRIBUTE7**

Descriptive flexfield segment

**ATTRIBUTE8**

Descriptive flexfield segment

**ATTRIBUTE9**

Descriptive flexfield segment

**ATTRIBUTE10**

Descriptive flexfield segment

**ATTRIBUTE11**

Descriptive flexfield segment

**ATTRIBUTE12**

Descriptive flexfield segment

**ATTRIBUTE13**

Descriptive flexfield segment

**ATTRIBUTE14**

Descriptive flexfield segment

**ATTRIBUTE15**

Descriptive flexfield segment

**REQUEST\_ID**

Concurrent Who Column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who Column

**PROGRAM\_ID**

Concurrent Who Column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who Column

**ELECTRONIC\_MAIL\_ADDRESS**

Electronic mail address

**EMPLOYEE\_ID**

Employee identifier assigned to the planner

**CURRENT\_EMPLOYEE\_FLAG**

Flag indicate whether the planner is current employee

**REFRESH\_ID**

Refresh identifier

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**USER\_NAME****MSC\_ST\_PROCESS\_EFFECTIVITY**

The staging table used by the collection program to validate and process data for table MSC\_PROCESS\_EFFECTIVITY.

**Table 2–34 MSC\_PROCESS\_EFFECTIVITY**

Parameter	Usage	Type	Required	Derived	Optional
PROCESS_SEQUENCE_ID	IN	NUMBER	x		
ITEM_ID	IN	NUMBER	x		
ORGANIZATION_ID	IN	NUMBER	x		
EFFECTIVITY_DATE	IN	DATE	x		
DISABLE_DATE	IN	DATE			x
MINIMUM_QUANTITY	IN	NUMBER			x
MAXIMUM_QUANTITY	IN	NUMBER			x
PREFERENCE	IN	NUMBER			x
ROUTING_SEQUENCE_ID	IN	NUMBER			x
BILL_SEQUENCE_ID	IN	NUMBER			x
TOTAL_PRODUCT_CYCLE_TIME	IN	NUMBER			x
ITEM_PROCESS_COST	IN	NUMBER			x
LINE_ID	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	

**Table 2–34 MSC\_PROCESS\_EFFECTIVITY**

Parameter	Usage	Type	Required	Derived	Optional
PROGRAM_UPDATE_DATE	IN	DATE		x	
REFRESH_ID	IN	NUMBER			x
SR_INSTANCE_ID	IN	NUMBER	x		
PRIMARY_LINE_FLAG	IN	NUMBER			x
PRODUCTION_LINE_RATE	IN	NUMBER			x
LOAD_DISTRIBUTION_PRIORITY	IN	NUMBER			x

**PROCESS\_SEQUENCE\_ID**

Process sequence identifier

**ITEM\_ID**

Inventory item identifier

**ORGANIZATION\_ID**

Organization identifier

**EFFECTIVITY\_DATE**

Effectivity date of the process

**DISABLE\_DATE**

Disable date of the process

**MINIMUM\_QUANTITY**

Minimum quantity for which the process can be used to produce the item

**MAXIMUM\_QUANTITY**

Maximum quantity for which the process can be used to produce the item

**PREFERENCE**

Preference

**ROUTING\_SEQUENCE\_ID**

Routing sequence identifier

**BILL\_SEQUENCE\_ID**

Bill sequence identifier

**TOTAL\_PRODUCT\_CYCLE\_TIME**

Total time that an assembly takes along the primary path in the operation network calculated by flow manufacturing

**ITEM\_PROCESS\_COST**

Cost of alternate BOM and routing

**LINE\_ID**

Line identifier

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**REFRESH\_ID**

Refresh identifier populated by the collection program

**SR\_INSTANCE\_ID**

Source application instance identifier

**PRIMARY\_LINE\_FLAG**

Flag indicating whether the line is used for lead time calculations

**PRODUCTION\_LINE\_RATE**

Number of assemblies which run down the line per hour

**LOAD\_DISTRIBUTION\_PRIORITY****MSC\_ST\_PROJECTS**

The staging table used by the collection program to validate and process data for table MSC\_PROJECTS.

**Table 2–35 MSC\_PROJECTS**

Parameter	Usage	Type	Required	Derived	Optional
PROJECT_ID	IN	NUMBER(15)	x		
ORGANIZATION_ID	IN	NUMBER(15)	x		
PLANNING_GROUP	IN	VARCHAR2(30)			x
COSTING_GROUP_ID	IN	NUMBER			x
WIP_ACCT_CLASS_CODE	IN	VARCHAR2(10)			x
SEIBAN_NUMBER_FLAG	IN	NUMBER(1)	x		
PROJECT_NAME	IN	VARCHAR2(30)	x		
PROJECT_NUMBER	IN	VARCHAR2(25)	x		

**Table 2–35 MSC\_PROJECTS**

Parameter	Usage	Type	Required	Derived	Optional
PROJECT_NUMBER_SORT_ORDER	IN	VARCHAR2(25)			x
PROJECT_DESCRIPTION	IN	VARCHAR2(250)			x
START_DATE	IN	DATE			x
COMPLETION_DATE	IN	DATE			x
OPERATING_UNIT	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x
MATERIAL_ACCOUNT	IN	NUMBER			x
MANAGER_CONTACT	IN	VARCHAR2(100)			x

**PROJECT\_ID**

Project identifier or Seiban identifier

**ORGANIZATION\_ID**

Organization identifier

**PLANNING\_GROUP**

Planning group code

**COSTING\_GROUP\_ID**

Costing group identifier

**WIP\_ACCT\_CLASS\_CODE**

Default WIP accounting class assigned to this project

**SEIBAN\_NUMBER\_FLAG**

Flag indicates whether project\_id identifies a project or a seiban

**PROJECT\_NAME**

Project name

**PROJECT\_NUMBER**

Project number or seiban number

**PROJECT\_NUMBER\_SORT\_ORDER**

Sort order

**PROJECT\_DESCRIPTION**

Describe the project

**START\_DATE**

Project start date

**COMPLETION\_DATE**

Project completion date

**OPERATING\_UNIT**

Operating unit

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**MATERIAL\_ACCOUNT**

Material account

**MANAGER\_CONTACT****MSC\_ST\_PROJECT\_TASKS**

The staging table used by the collection program to validate and process data for table MSC\_PROJECT\_TASKS.

**Table 2–36 MSC\_PROJECT\_TASKS**

Parameter	Usage	Type	Required	Derived	Optional
PROJECT_ID	IN	NUMBER(15)	x		
TASK_ID	IN	NUMBER(15)	x		
ORGANIZATION_ID	IN	NUMBER	x		
TASK_NUMBER	IN	VARCHAR2(25)	x		
TASK_NAME	IN	VARCHAR2(20)	x		
DESCRIPTION	IN	VARCHAR2(250)			x
MANAGER	IN	VARCHAR2(240)			x
START_DATE	IN	DATE			x
END_DATE	IN	DATE			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x
MANAGER_CONTACT	IN	VARCHAR2(100)			x

**PROJECT\_ID**

Project identifier

**TASK\_ID**

Task identifier

**ORGANIZATION\_ID**

Organization identifier

**TASK\_NUMBER**

Task number

**TASK\_NAME**

Task name

**DESCRIPTION**

Task description

**MANAGER**

Manager

**START\_DATE**

Task start date

**END\_DATE**

Task end date

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier populated by the collection program

**MANAGER\_CONTACT****MSC\_ST\_RESERVATIONS**

The staging table used by the collection program to validate and process data for table MSC\_RESERVATIONS.

**Table 2–37 MSC\_RESERVATIONS**

Parameter	Usage	Type	Required	Derived	Optional
INVENTORY_ITEM_ID	IN	NUMBER	x		
ORGANIZATION_ID	IN	NUMBER	x		
TRANSACTION_ID	IN	NUMBER	x		
PARENT_DEMAND_ID	IN	NUMBER			x
DISPOSITION_ID	IN	NUMBER	x		
REQUIREMENT_DATE	IN	DATE	x		
REVISION	IN	VARCHAR2(3)			x
RESERVED_QUANTITY	IN	NUMBER	x		
DISPOSITION_TYPE	IN	NUMBER	x		
SUBINVENTORY	IN	VARCHAR2(10)			x
RESERVATION_TYPE	IN	NUMBER			x
DEMAND_CLASS	IN	VARCHAR2(34)			x
AVAILABLE_TO_MRP	IN	NUMBER			x
RESERVATION_FLAG	IN	NUMBER			x
PROJECT_ID	IN	NUMBER(15)			x
TASK_ID	IN	NUMBER(15)			x
PLANNING_GROUP	IN	VARCHAR2(30)			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	

**Table 2–37 MSC\_RESERVATIONS**

Parameter	Usage	Type	Required	Derived	Optional
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**INVENTORY\_ITEM\_ID**

Inventory item identifier

**ORGANIZATION\_ID**

Organization identifier

**TRANSACTION\_ID**

Unique identifier generated from the source application instance

**PARENT\_DEMAND\_ID**

Parent demand identifier

**DISPOSITION\_ID**

Disposition identifier

**REQUIREMENT\_DATE**

Date of need

**REVISION**

Inventory item revision code

**RESERVED\_QUANTITY**

Quantity reserved

**DISPOSITION\_TYPE**

Disposition type

**SUBINVENTORY**

Subinventory identifier

**RESERVATION\_TYPE**

Reservation type

**DEMAND\_CLASS**

Demand class code

**AVAILABLE\_TO\_MRP**

Available-to-MRP flag

**RESERVATION\_FLAG**

Reservation flag

**PROJECT\_ID**

Project identifier

**TASK\_ID**

Task identifier

**PLANNING\_GROUP**

Planning group code

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier populated by the collection program

**MSC\_ST\_RESOURCE\_CHANGES**

The staging table used by the collection program to validate and process data for table MSC\_RESOURCE\_CHANGES.

**Table 2–38 MSC\_RESOURCE\_CHANGES**

Parameter	Usage	Type	Required	Derived	Optional
DEPARTMENT_ID	IN	NUMBER	x		
RESOURCE_ID	IN	NUMBER	x		
SHIFT_NUM	IN	NUMBER	x		
FROM_DATE	IN	DATE	x		
TO_DATE	IN	DATE			x
FROM_TIME	IN	NUMBER			x
TO_TIME	IN	NUMBER			x

Table 2–38 MSC\_RESOURCE\_CHANGES

Parameter	Usage	Type	Required	Derived	Optional
CAPACITY_CHANGE	IN	NUMBER			x
SIMULATION_SET	IN	VARCHAR2(10)	x		
ACTION_TYPE	IN	NUMBER	x		
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
REFRESH_ID	IN	NUMBER			x
SR_INSTANCE_ID	IN	NUMBER	x		

**DEPARTMENT\_ID**  
Department identifier (-1 for lines)

**RESOURCE\_ID**  
Resource identifier

**SHIFT\_NUM**  
Shift number

**FROM\_DATE**  
Capacity exception from date

**TO\_DATE**  
Capacity exception to date

**FROM\_TIME**

Capacity exception from time

**TO\_TIME**

Capacity exception to time

**CAPACITY\_CHANGE**

Capacity change

**SIMULATION\_SET**

Simulation set identifier

**ACTION\_TYPE**

Type of capacity modification

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**REFRESH\_ID**

Refresh identifier populated by the collection program

**SR\_INSTANCE\_ID**

Source application instance identifier

**MSC\_ST\_RESOURCE\_GROUPS**

The staging table used by the collection program to validate and process data for table MSC\_ST\_RESOURCE\_CHANGES.

**Table 2–39 MSC\_ST\_RESOURCE\_CHANGES**

Parameter	Usage	Type	Required	Derived	Optional
GROUP_CODE	IN	VARCHAR2(30)	x		
MEANING	IN	VARCHAR2(80)	x		
DESCRIPTION	IN	VARCHAR2(250)			x
FROM_DATE	IN	DATE			x
TO_DATE	IN	DATE			x
ENABLED_FLAG	IN	NUMBER	x		
SR_INSTANCE_ID	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	

**Table 2–39 MSC\_ST\_RESOURCE\_CHANGES**

Parameter	Usage	Type	Required	Derived	Optional
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
ATTRIBUTE_CATEGORY	IN	VARCHAR2(30)			x
ATTRIBUTE1	IN	VARCHAR2(150)			x
ATTRIBUTE2	IN	VARCHAR2(150)			x
ATTRIBUTE3	IN	VARCHAR2(150)			x
ATTRIBUTE4	IN	VARCHAR2(150)			x
ATTRIBUTE5	IN	VARCHAR2(150)			x
ATTRIBUTE6	IN	VARCHAR2(150)			x
ATTRIBUTE7	IN	VARCHAR2(150)			x
ATTRIBUTE8	IN	VARCHAR2(150)			x
ATTRIBUTE9	IN	VARCHAR2(150)			x
ATTRIBUTE10	IN	VARCHAR2(150)			x
ATTRIBUTE11	IN	VARCHAR2(150)			x
ATTRIBUTE12	IN	VARCHAR2(150)			x
ATTRIBUTE13	IN	VARCHAR2(150)			x
ATTRIBUTE14	IN	VARCHAR2(150)			x
ATTRIBUTE15	IN	VARCHAR2(150)			x
DELETED_FLAG	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**GROUP\_CODE**

Resource group code

**MEANING**

Meaning

**DESCRIPTION**

Resource group description

**FROM\_DATE**

Resource start date

**TO\_DATE**

Resource end date

**ENABLED\_FLAG**

Flag indicates whether resource group is enable

**SR\_INSTANCE\_ID**

Source application instance identifier

**LAST\_UPDATE\_DATE**

Standard Who Column

**LAST\_UPDATED\_BY**

Standard Who Column

**CREATION\_DATE**

Standard Who Column

**CREATED\_BY**

Standard Who Column

**LAST\_UPDATE\_LOGIN**

Standard Who Column

**REQUEST\_ID**

Concurrent Who Column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who Column

**PROGRAM\_ID**

Concurrent Who Column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who Column

**ATTRIBUTE\_CATEGORY**

Descriptive flexfield structure defining column

**ATTRIBUTE1**

Descriptive flexfield segment

**ATTRIBUTE2**

Descriptive flexfield segment

**ATTRIBUTE3**

Descriptive flexfield segment

**ATTRIBUTE4**

Descriptive flexfield segment

**ATTRIBUTE5**

Descriptive flexfield segment

**ATTRIBUTE6**

Descriptive flexfield segment

**ATTRIBUTE7**

Descriptive flexfield segment

**ATTRIBUTE8**

Descriptive flexfield segment

**ATTRIBUTE9**

Descriptive flexfield segment

**ATTRIBUTE10**

Descriptive flexfield segment

**ATTRIBUTE11**

Descriptive flexfield segment

**ATTRIBUTE12**

Descriptive flexfield segment

**ATTRIBUTE13**

Descriptive flexfield segment

**ATTRIBUTE14**

Descriptive flexfield segment

**ATTRIBUTE15**

Descriptive flexfield segment

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**REFRESH\_ID**

Refresh identifier

**MSC\_ST\_RESOURCE\_REQUIREMENTS**

The staging table used by the collection program to validate and process data for table MSC\_RESOURCE\_REQUIREMENTS.

**Table 2–40 MSC\_RESOURCE\_REQUIREMENTS**

Parameter	Usage	Type	Required	Derived	Optional
DEPARTMENT_ID	IN	NUMBER	x		
RESOURCE_ID	IN	NUMBER	x		
ORGANIZATION_ID	IN	NUMBER	x		
INVENTORY_ITEM_ID	IN	NUMBER			x
SUPPLY_ID	IN	NUMBER			x

**Table 2–40 MSC\_RESOURCE\_REQUIREMENTS**

Parameter	Usage	Type	Required	Derived	Optional
OPERATION_SEQ_NUM	IN	NUMBER			x
OPERATION_SEQUENCE_ID	IN	NUMBER			x
RESOURCE_SEQ_NUM	IN	NUMBER	x		
START_DATE	IN	DATE	x		
OPERATION_HOURS_REQUIRED	IN	NUMBER	x		
HOURS_EXPENDED	IN	NUMBER			x
DEMAND_CLASS	IN	VARCHAR2(34)			x
BASIS_TYPE	IN	NUMBER			x
ASSIGNED_UNITS	IN	NUMBER	x		
END_DATE	IN	DATE			x
WIP_JOB_TYPE	IN	NUMBER			x
SCHEDULED_COMPLETION_DATE	IN	DATE			x
SCHEDULED_QUANTITY	IN	NUMBER			x
QUANTITY_COMPLETED	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

Table 2–40 MSC\_RESOURCE\_REQUIREMENTS

Parameter	Usage	Type	Required	Derived	Optional
WIP_ENTITY_ID	IN	NUMBER			x
STD_OP_CODE	IN	VARCHAR2(4)			x
SUPPLY_TYPE	IN	NUMBER			x

**DEPARTMENT\_ID**

Department identifier

**RESOURCE\_ID**

Resource identifier

**ORGANIZATION\_ID**

Organization identifier

**INVENTORY\_ITEM\_ID**

Inventory item identifier

**SUPPLY\_ID**

Supply identifier

**OPERATION\_SEQ\_NUM**

Operation sequence number

**OPERATION\_SEQUENCE\_ID**

Operation sequence identifier

**RESOURCE\_SEQ\_NUM**

Resource sequence number

**START\_DATE**

Start date of the resource requirement

**OPERATION\_HOURS\_REQUIRED**

Operation hours required

**HOURS\_EXPENDED**

Hours expended

**DEMAND\_CLASS**

Demand class code

**BASIS\_TYPE**

Basis type

**ASSIGNED\_UNITS**

Assigned units

**END\_DATE**

End date of the resource requirement

**WIP\_JOB\_TYPE**

WIP job type

**SCHEDULED\_COMPLETION\_DATE**

Schedule completion date

**SCHEDULED\_QUANTITY**

Quantity scheduled

**QUANTITY\_COMPLETED**

Quantity completed

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**WIP\_ENTITY\_ID**

WIP job identifier

**STD\_OP\_CODE**

Standard OP code

**SUPPLY\_TYPE**

Supply type

**MSC\_ST\_RESOURCE\_SHIFTS**

The staging table used by the collection program to validate and process data for table MSC\_RESOURCE\_SHIFTS.

**Table 2–41 MSC\_RESOURCE\_SHIFTS**

Parameter	Usage	Type	Required	Derived	Optional
DEPARTMENT_ID	IN	NUMBER	x		
RESOURCE_ID	IN	NUMBER	x		
SHIFT_NUM	IN	NUMBER	x		
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
REFRESH_ID	IN	NUMBER			x
SR_INSTANCE_ID	IN	NUMBER	x		

**DEPARTMENT\_ID**

Department identifier

**RESOURCE\_ID**

Resource identifier

**SHIFT\_NUM**

Shift number

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**REFRESH\_ID**

Refresh identifier

**SR\_INSTANCE\_ID**

Source application instance identifier

**MSC\_ST\_ROUTINGS**

The staging table used by the collection program to validate and process data for table MSC\_ROUTINGS.

**Table 2–42 MSC\_ROUTINGS**

Parameter	Usage	Type	Required	Derived	Optional
ROUTING_SEQUENCE_ID	IN	NUMBER	x		
ASSEMBLY_ITEM_ID	IN	NUMBER	x		
ROUTING_TYPE	IN	NUMBER	x		
ROUTING_COMMENT	IN	VARCHAR2(240)			x
PRIORITY	IN	NUMBER			x
ALTERNATE_ROUTING_ DESIGNATOR	IN	VARCHAR2(10)			x
PROJECT_ID	IN	NUMBER			x
TASK_ID	IN	NUMBER			x
LINE_ID	IN	NUMBER			x
UOM_CODE	IN	VARCHAR2(3)			x
CFM_ROUTING_FLAG	IN	NUMBER			x
CTP_FLAG	IN	NUMBER			x
ROUTING_QUANTITY	IN	NUMBER			x
COMPLETION_SUBINVENTORY	IN	VARCHAR2(10)			x
COMPLETION_LOCATOR_ID	IN	NUMBER			x
COMMON_ROUTING_SEQUENCE_ID	IN	NUMBER			x
MIXED_MODEL_MAP_FLAG	IN	NUMBER			x
TOTAL_PRODUCT_CYCLE_TIME	IN	NUMBER			x
ORGANIZATION_ID	IN	NUMBER	x		
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	

Table 2–42 MSC\_ROUTINGS

Parameter	Usage	Type	Required	Derived	Optional
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**ROUTING\_SEQUENCE\_ID**

Routing sequence identifier

**ASSEMBLY\_ITEM\_ID**

Assembly item identifier

**ROUTING\_TYPE**

Routing type

**ROUTING\_COMMENT**

Routing comment

**PRIORITY**

Routing priority

**ALTERNATE\_ROUTING\_DESIGNATOR**

Name of the alternate routing. Null for primary routing

**PROJECT\_ID**

Project identifier

**TASK\_ID**

Task identifier

**LINE\_ID**

Manufacturing line identifier

**UOM\_CODE**

Unit of measure code

**CFM\_ROUTING\_FLAG**

CFM routing flag

**CTP\_FLAG**

CTP flag

**ROUTING\_QUANTITY**

Routing quantity

**COMPLETION\_SUBINVENTORY**

Completion subinventory

**COMPLETION\_LOCATOR\_ID**

Completion locator identifier

**COMMON\_ROUTING\_SEQUENCE\_ID**

Common routing sequence identifier

**MIXED\_MODEL\_MAP\_FLAG**

Mix model map flag

**TOTAL\_PRODUCT\_CYCLE\_TIME**

Total product cycle time

**ORGANIZATION\_ID**

Organization identifier

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**MSC\_ST\_ROUTING\_OPERATIONS**

The staging table used by the collection program to validate and process data for table MSC\_ROUTING\_OPERATIONS.

**Table 2–43 MSC\_ROUTING\_OPERATIONS**

Parameter	Usage	Type	Required	Derived	Optional
OPERATION_SEQUENCE_ID	IN	NUMBER	x		
ROUTING_SEQUENCE_ID	IN	NUMBER	x		
OPERATION_SEQ_NUM	IN	NUMBER	x		
OPERATION_DESCRIPTION	IN	VARCHAR2(240)			x
EFFECTIVITY_DATE	IN	DATE	x		
DISABLE_DATE	IN	DATE			x
FROM_UNIT_NUMBER	IN	VARCHAR2(30)			x
TO_UNIT_NUMBER	IN	VARCHAR2(30)			x
OPTION_DEPENDENT_FLAG	IN	NUMBER	x		
OPERATION_TYPE	IN	NUMBER			x
MINIMUM_TRANSFER_QUANTITY	IN	NUMBER			x
YIELD	IN	NUMBER			x
DEPARTMENT_ID	IN	NUMBER	x		
DEPARTMENT_CODE	IN	VARCHAR2(10)			x
OPERATION_LEAD_TIME_PERCENT	IN	NUMBER			x
CUMULATIVE_YIELD	IN	NUMBER			x
REVERSE_CUMULATIVE_YIELD	IN	NUMBER			x
NET_PLANNING_PERCENT	IN	NUMBER			x
TEAR_DOWN_DURATION	IN	NUMBER			x
SETUP_DURATION	IN	NUMBER			x
UOM_CODE	IN	VARCHAR2(3)			x
STANDARD_OPERATION_CODE	IN	VARCHAR2(4)			x
ORGANIZATION_ID	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	

Table 2–43 MSC\_ROUTING\_OPERATIONS

Parameter	Usage	Type	Required	Derived	Optional
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**OPERATION\_SEQUENCE\_ID**

Operation sequence identifier

**ROUTING\_SEQUENCE\_ID**

Routing sequence identifier

**OPERATION\_SEQ\_NUM**

Operation sequence number

**OPERATION\_DESCRIPTION**

Operation description

**EFFECTIVITY\_DATE**

Date operation is effective

**DISABLE\_DATE**

End of effectivity

**FROM\_UNIT\_NUMBER**

Effective from this unit number

**TO\_UNIT\_NUMBER**

Effective up to this unit number

**OPTION\_DEPENDENT\_FLAG**

Flag to indicate whether this operation option dependent

**OPERATION\_TYPE**

Indicate operation type: Process, Line, or Event.

**MINIMUM\_TRANSFER\_QUANTITY**

Minimum operation transfer quantity

**YIELD**

Process yield at this operation

**DEPARTMENT\_ID**

Department identifier

**DEPARTMENT\_CODE**

Department code

**OPERATION\_LEAD\_TIME\_PERCENT**

Indicates the amount of overlap its lead time has with the parent lead time

**CUMULATIVE\_YIELD**

Cumulative process yield from the beginning of routing to this operation

**REVERSE\_CUMULATIVE\_YIELD**

Cumulative process yield from the end of routing to comparable operation

**NET\_PLANNING\_PERCENT**

Cumulative planning percents derived from the operation network

**TEAR\_DOWN\_DURATION**

Duration of the tear down for this operation

**SETUP\_DURATION**

Duration of the set-up

**UOM\_CODE**

Unit of measure code

**STANDARD\_OPERATION\_CODE**

Code of the standard operation on which this operation is based

**ORGANIZATION\_ID**

Organization identifier

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**MSC\_ST\_SAFETY\_STOCKS**

The staging table used by the collection program to validate and process data for table MSC\_SAFETY\_STOCKS.

**Table 2–44 MSC\_SAFETY\_STOCKS**

Parameter	Usage	Type	Required	Derived	Optional
ORGANIZATION_ID	IN	NUMBER	x		
INVENTORY_ITEM_ID	IN	NUMBER	x		
PERIOD_START_DATE	IN	DATE	x		
SAFETY_STOCK_QUANTITY	IN	NUMBER	x		
UPDATED	IN	NUMBER			x
STATUS	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	

Table 2–44 MSC\_SAFETY\_STOCKS

Parameter	Usage	Type	Required	Derived	Optional
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**ORGANIZATION\_ID**

Organization identifier

**INVENTORY\_ITEM\_ID**

Inventory item identifier

**PERIOD\_START\_DATE**

Period start date

**SAFETY\_STOCK\_QUANTITY**

Safety stock quantity

**UPDATED**

Updated flag

**STATUS**

Status flag

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**MSC\_ST\_SALES\_ORDERS**

The staging table used by the collection program to validate and process data for table MSC\_SAFETY\_STOCKS.

**Table 2–45 MSC\_SAFETY\_STOCKS**

Parameter	Usage	Type	Required	Derived	Optional
INVENTORY_ITEM_ID	IN	NUMBER	x		
ORGANIZATION_ID	IN	NUMBER	x		
DEMAND_ID	IN	NUMBER	x		

**Table 2–45 MSC\_SAFETY\_STOCKS**

Parameter	Usage	Type	Required	Derived	Optional
PRIMARY_UOM_QUANTITY	IN	NUMBER	x		
RESERVATION_TYPE	IN	NUMBER			x
RESERVATION_QUANTITY	IN	NUMBER			x
DEMAND_SOURCE_TYPE	IN	NUMBER	x		
DEMAND_SOURCE_HEADER_ID	IN	NUMBER	x		
COMPLETED_QUANTITY	IN	NUMBER	x		
SUBINVENTORY	IN	VARCHAR2(10)			x
DEMAND_CLASS	IN	VARCHAR2(34)			x
REQUIREMENT_DATE	IN	DATE	x		
DEMAND_SOURCE_LINE	IN	VARCHAR2(40)			x
DEMAND_SOURCE_DELIVERY	IN	VARCHAR2(30)			x
DEMAND_SOURCE_NAME	IN	VARCHAR2(30)			x
PARENT_DEMAND_ID	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
REFRESH_ID	IN	NUMBER			x
SR_INSTANCE_ID	IN	NUMBER	x		
SALES_ORDER_NUMBER	IN	VARCHAR2(122)			x
SALESREP_CONTACT	IN	VARCHAR2(100)			x

**Table 2–45 MSC\_SAFETY\_STOCKS**

Parameter	Usage	Type	Required	Derived	Optional
ORDERED_ITEM_ID	IN	NUMBER			x
AVAILABLE_TO_MRP	IN	VARCHAR2(1)			x
CUSTOMER_ID	IN	NUMBER			x
SHIP_TO_SITE_USE_ID	IN	NUMBER			x
BILL_TO_SITE_USE_ID	IN	NUMBER			x
LINE_NUM	IN	NUMBER			x
TERRITORY_ID	IN	NUMBER			x
UPDATE_SEQ_NUM	IN	NUMBER			x
DEMAND_TYPE	IN	NUMBER			x
PROJECT_ID	IN	NUMBER			x
TASK_ID	IN	NUMBER			x
PLANNING_GROUP	IN	VARCHAR2(30)			x
END_ITEM_UNIT_NUMBER	IN	VARCHAR2(30)			x
DEMAND_PRIORITY	IN	NUMBER			x

**INVENTORY\_ITEM\_ID**

Inventory item identifier

**ORGANIZATION\_ID**

Organization identifier

**DEMAND\_ID**

Unique identifier of a demand row from source application instance

**PRIMARY\_UOM\_QUANTITY**

Primary UOM quantity

**RESERVATION\_TYPE**

Code for type of reservation

**RESERVATION\_QUANTITY**

Total quantity reserved expressed in primary unit of measure

**DEMAND\_SOURCE\_TYPE**

Demand source type

**DEMAND\_SOURCE\_HEADER\_ID**

Header ID for the source of the demand

**COMPLETED\_QUANTITY**

Completed quantity

**SUBINVENTORY**

Subinventory code

**DEMAND\_CLASS**

Demand class code

**REQUIREMENT\_DATE**

Planned ship date for summary demand

**DEMAND\_SOURCE\_LINE**

Line id of demand source

**DEMAND\_SOURCE\_DELIVERY**

For Sales Order demand, Line id of Sales order line detail row (SO\_LINE\_DETAILS.LINE\_DETAIL\_ID) from source application instance

**DEMAND\_SOURCE\_NAME**

Identifier for user-defined Source Type

**PARENT\_DEMAND\_ID**

Parent demand identifier

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**REFRESH\_ID**

Refresh number populated by the collection program

**SR\_INSTANCE\_ID**

Source application instance identifier

**SALES\_ORDER\_NUMBER**

Sales order number

**SALESREP\_CONTACT**

**ORDERED\_ITEM\_ID**

Ordered item identifier

**AVAILABLE\_TO\_MRP**

Available to MRP flag

**CUSTOMER\_ID**

Customer identifier

**SHIP\_TO\_SITE\_USE\_ID**

Ship to identifier of the sales order

**BILL\_TO\_SITE\_USE\_ID**

Bill to identifier of the sales order

**LINE\_NUM**

Sales order line number

**TERRITORY\_ID**

Territory identifier of the sales order

**UPDATE\_SEQ\_NUM**

Update sequence number

**DEMAND\_TYPE**

Demand type

**PROJECT\_ID**

Project identifier

**TASK\_ID**

Task identifier

**PLANNING\_GROUP**

Planning group

**END\_ITEM\_UNIT\_NUMBER**

Unit number identifier

**DEMAND\_PRIORITY**

Demand priority

**MSC\_ST\_SHIFT\_DATES**

The staging table used by the collection program to validate and process data for table MSC\_SHIFT\_DATES.

**Table 2–46 MSC\_SHIFT\_DATES**

Parameter	Usage	Type	Required	Derived	Optional
CALENDAR_CODE	IN	VARCHAR2(14)	x		
EXCEPTION_SET_ID	IN	NUMBER	x		
SHIFT_NUM	IN	NUMBER	x		
SHIFT_DATE	IN	DATE	x		
SEQ_NUM	IN	NUMBER			x
NEXT_SEQ_NUM	IN	NUMBER	x		
PRIOR_SEQ_NUM	IN	NUMBER	x		
NEXT_DATE	IN	DATE	x		
PRIOR_DATE	IN	DATE	x		
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	

Table 2–46 MSC\_SHIFT\_DATES

Parameter	Usage	Type	Required	Derived	Optional
PROGRAM_UPDATE_DATE	IN	DATE		x	
REFRESH_ID	IN	NUMBER			x
SR_INSTANCE_ID	IN	NUMBER	x		

**CALENDAR\_CODE**

Calendar code

**EXCEPTION\_SET\_ID**

Exception set identifier

**SHIFT\_NUM**

Calendar shift number

**SHIFT\_DATE**

Calendar date

**SEQ\_NUM**

Sequence number for shift date (only for working dates)

**NEXT\_SEQ\_NUM**

Next sequence number for calendar date (working day)

**PRIOR\_SEQ\_NUM**

Prior sequence number for calendar date (working day)

**NEXT\_DATE**

Next date corresponding to next sequence number

**PRIOR\_DATE**

Prior date corresponding to prior sequence number

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**REFRESH\_ID**

Refresh identifier

**SR\_INSTANCE\_ID**

Source application instance identifier

**MSC\_ST\_SHIFT\_EXCEPTIONS**

The staging table used by the collection program to validate and process data for table MSC\_SHIFT\_EXCEPTIONS.

Table 2–47 MSC\_SHIFT\_EXCEPTIONS

Parameter	Usage	Type	Required	Derived	Optional
CALENDAR_CODE	IN	VARCHAR2(14)	x		
SHIFT_NUM	IN	NUMBER	x		
EXCEPTION_SET_ID	IN	NUMBER	x		
EXCEPTION_DATE	IN	DATE	x		
EXCEPTION_TYPE	IN	NUMBER	x		
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
REFRESH_ID	IN	NUMBER			x
SR_INSTANCE_ID	IN	NUMBER	x		

**CALENDAR\_CODE**

Calendar code

**SHIFT\_NUM**

Calendar shift number

**EXCEPTION\_SET\_ID**

Exception set identifier

**EXCEPTION\_DATE**

Exception date

**EXCEPTION\_TYPE**

Exception type

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**REFRESH\_ID**

Refresh identifier

**SR\_INSTANCE\_ID**

Source application instance identifier

**MSC\_ST\_SHIFT\_TIMES**

The staging table used by the collection program to validate and process data for table MSC\_SHIFT\_TIMES.

**Table 2–48 MSC\_SHIFT\_TIMES**

Parameter	Usage	Type	Required	Derived	Optional
CALENDAR_CODE	IN	VARCHAR2(14)	x		
SHIFT_NUM	IN	NUMBER	x		
FROM_TIME	IN	NUMBER	x		
TO_TIME	IN	NUMBER	x		
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
REFRESH_ID	IN	NUMBER			x
SR_INSTANCE_ID	IN	NUMBER	x		

**CALENDAR\_CODE**

Calendar code

**SHIFT\_NUM**

Shift number

**FROM\_TIME**

Shift start time

**TO\_TIME**

Shift end time

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**REFRESH\_ID**

Refresh identifier

**SR\_INSTANCE\_ID**

Source application instance identifier

**MSC\_ST\_SIMULATION\_SETS**

The staging table used by the collection program to validate and process data for table MSC\_SIMULATION\_SETS.

**Table 2–49 MSC\_SIMULATION\_SETS**

Parameter	Usage	Type	Required	Derived	Optional
ORGANIZATION_ID	IN	NUMBER	x		
SIMULATION_SET	IN	VARCHAR2(10)	x		
DESCRIPTION	IN	VARCHAR2(50)			x
USE_IN_WIP_FLAG	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**ORGANIZATION\_ID**

Organization identifier

**SIMULATION\_SET**

Simulation set

**DESCRIPTION**

Describe simulation set

**USE\_IN\_WIP\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**DELETED\_FLAG**

LAST\_UPDATE\_DATE

**Standard Who column**

LAST\_UPDATED\_BY

**Standard Who column**

CREATION\_DATE

**Standard Who column**

CREATED\_BY

**Standard Who column**

LAST\_UPDATE\_LOGIN

**Standard Who column****REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**MSC\_ST\_SOURCING\_HISTORY**

The staging table used by the collection program to validate and process data for table MSC\_SOURCING\_HISTORY.

**Table 2–50 MSC\_SOURCING\_HISTORY**

Parameter	Usage	Type	Required	Derived	Optional
INVENTORY_ITEM_ID	IN	NUMBER	x		
ORGANIZATION_ID	IN	NUMBER	x		
SR_INSTANCE_ID	IN	NUMBER	x		
SOURCING_RULE_ID	IN	NUMBER	x		
SOURCE_ORG_ID	IN	NUMBER			x
SOURCE_SR_INSTANCE_ID	IN	NUMBER			x
SUPPLIER_ID	IN	NUMBER			x
SUPPLIER_SITE_ID	IN	NUMBER			x
HISTORICAL_ALLOCATION	IN	NUMBER	x		
REFRESH_NUMBER	IN	NUMBER			x
LAST_CALCULATED_DATE	IN	DATE			x
LAST_UPDATED_BY	IN	NUMBER		x	
LAST_UPDATE_DATE	IN	DATE		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	

**Table 2–50 MSC\_SOURCING\_HISTORY**

Parameter	Usage	Type	Required	Derived	Optional
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	

**Table 2–51 Index**

Index Name	Index Type	Sequence	Column Name
MSC_ST_SOURCING_HISTORY_U1	UNIQUE	1	SOURCING_RULE_ID
		2	INVENTORY_ITEM_ID
		3	ORGANIZATION_ID
		4	SR_INSTANCE_ID

**INVENTORY\_ITEM\_ID**

Inventory Item Id

**ORGANIZATION\_ID**

Organization Id

**SR\_INSTANCE\_ID**

sr instance Id

**SOURCING\_RULE\_ID**

Sourcing Rule/Bill of Distribution identifier

**SOURCE\_ORG\_ID**

Source Org Id

**SOURCE\_SR\_INSTANCE\_ID**

source org sr instance Id

**SUPPLIER\_ID**

Supplier identifier

**SUPPLIER\_SITE\_ID**

Supplier site identifier

**HISTORICAL\_ALLOCATION**

Historical Allocation

**REFRESH\_NUMBER**

Refresh Number

**LAST\_CALCULATED\_DATE**

Last Calculated Date

**LAST\_UPDATED\_BY**

Standard Who Column

**LAST\_UPDATE\_DATE**

Standard Who Column

**CREATION\_DATE**

Standard Who Column

**CREATED\_BY**

Standard Who Column

**LAST\_UPDATE\_LOGIN**

Standard Who Column

**REQUEST\_ID**

Concurrent Who Column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who Column

**PROGRAM\_ID**

Concurrent Who Column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who Column

**MSC\_ST\_SOURCING\_RULES**

The staging table used by the collection program to validate and process data for table MSC\_SOURCING\_RULES.

**Table 2–52 MSC\_SOURCING\_RULES**

Parameter	Usage	Type	Required	Derived	Optional
SOURCING_RULE_ID	IN	NUMBER			x
SR_SOURCING_RULE_ID	IN	NUMBER	x		
SOURCING_RULE_NAME	IN	VARCHAR2(30)	x		
ORGANIZATION_ID	IN	NUMBER			x
DESCRIPTION	IN	VARCHAR2(80)			x
STATUS	IN	NUMBER	x		
SOURCING_RULE_TYPE	IN	NUMBER	x		
PLANNING_ACTIVE	IN	NUMBER	x		
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	

**Table 2–52    *MSC\_SOURCING\_RULES***

Parameter	Usage	Type	Required	Derived	Optional
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**SOURCING\_RULE\_ID**

Sourcing rule / Bill of Distribution identifier

**SR\_SOURCING\_RULE\_ID**

Sourcing rule / Bill of Distribution identifier from source application

**SOURCING\_RULE\_NAME**

Sourcing rule / Bill of Distribution name

**ORGANIZATION\_ID**

Organization identifier

**DESCRIPTION**

Describe Sourcing rule / Bill of Distribution

**STATUS**

Status flag

**SOURCING\_RULE\_TYPE**

Flag indicates whether the row is sourcing rule or bill of distribution

**PLANNING\_ACTIVE**

Flag indicates whether the row is planning active

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**MSC\_ST\_SR\_ASSIGNMENTS**

The staging table used by the collection program to validate and process data for table MSC\_SR\_ASSIGNMENTS.

**Table 2–53 MSC\_SR\_ASSIGNMENTS**

Parameter	Usage	Type	Required	Derived	Optional
ASSIGNMENT_ID	IN	NUMBER			x
SR_ASSIGNMENT_ID	IN	NUMBER	x		
ASSIGNMENT_SET_ID	IN	NUMBER	x		
ASSIGNMENT_TYPE	IN	NUMBER	x		
SOURCING_RULE_ID	IN	NUMBER	x		
SOURCING_RULE_TYPE	IN	NUMBER			x
INVENTORY_ITEM_ID	IN	NUMBER			x
PARTNER_ID	IN	NUMBER			x
SHIP_TO_SITE_ID	IN	NUMBER			x
CUSTOMER_NAME	IN	VARCHAR2(50)			x
SITE_USE_CODE	IN	VARCHAR2(30)			x
LOCATION	IN	VARCHAR2(40)			x
ORGANIZATION_ID	IN	NUMBER			x
CATEGORY_ID	IN	NUMBER			x
CATEGORY_NAME	IN	VARCHAR2(163)			x
CATEGORY_SET_IDENTIFIER	IN	NUMBER			x
CATEGORY_SET_NAME	IN	VARCHAR2(30)			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	

**Table 2–53 MSC\_SR\_ASSIGNMENTS**

Parameter	Usage	Type	Required	Derived	Optional
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x
SR_ASSIGNMENT_INSTANCE_ID	IN	NUMBER			x

**ASSIGNMENT\_ID**

Unique identifier for the row

**SR\_ASSIGNMENT\_ID**

Unique identifier for the row from the source application

**ASSIGNMENT\_SET\_ID**

Assignment set unique identifier

**ASSIGNMENT\_TYPE**

Assignment set type

**SOURCING\_RULE\_ID**

Sourcing rule / Bill of Distribution identifier

**SOURCING\_RULE\_TYPE**

Sourcing rule type

**INVENTORY\_ITEM\_ID**

Inventory item identifier

**PARTNER\_ID**

Trading partner identifier

**SHIP\_TO\_SITE\_ID**

Ship to site identifier

**CUSTOMER\_NAME**

Customer name

**SITE\_USE\_CODE**

Site use code

**LOCATION**

Location

**ORGANIZATION\_ID**

Organization identifier

**CATEGORY\_ID**

Category identifier

**CATEGORY\_NAME**

Category name

**CATEGORY\_SET\_IDENTIFIER**

Category set identifier

**CATEGORY\_SET\_NAME**

Category set name

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**SR\_ASSIGNMENT\_INSTANCE\_ID**

Source application instance identifier for the source assignment record

**MSC\_ST\_SR\_RECEIPT\_ORG**

The staging table used by the collection program to validate and process data for table MSC\_SR\_RECEIPT\_ORG.

**Table 2–54 MSC\_SR\_RECEIPT\_ORG**

Parameter	Usage	Type	Required	Derived	Optional
SR_RECEIPT_ID	IN	NUMBER	x		
SR_SR_RECEIPT_ORG	IN	NUMBER			x
SOURCING_RULE_ID	IN	NUMBER	x		
RECEIPT_PARTNER_ID	IN	NUMBER			x
RECEIPT_PARTNER_SITE_ID	IN	NUMBER			x

**Table 2–54 MSC\_SR\_RECEIPT\_ORG**

Parameter	Usage	Type	Required	Derived	Optional
EFFECTIVE_DATE	IN	DATE	x		
DISABLE_DATE	IN	DATE			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x
RECEIPT_ORG_INSTANCE_ID	IN	NUMBER			x

**SR\_RECEIPT\_ID**

Unique identifier for a row generated at planning server

**SR\_SR\_RECEIPT\_ORG**

Receiving org from source application instance

**SOURCING\_RULE\_ID**

Sourcing rule / Bill of Distribution identifier

**RECEIPT\_PARTNER\_ID**

Trading partner unique identifier

**RECEIPT\_PARTNER\_SITE\_ID**

Trading partner site unique identifier

**EFFECTIVE\_DATE**

Date of effectivity

**DISABLE\_DATE**

Disable date

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**RECEIPT\_ORG\_INSTANCE\_ID**

Source application instance identifier associated with the receiving org

**MSC\_ST\_SR\_SOURCE\_ORG**

The staging table used by the collection program to validate and process data for table MSC\_SR\_SOURCE\_ORG.

**Table 2–55 MSC\_SR\_SOURCE\_ORG**

Parameter	Usage	Type	Required	Derived	Optional
SR_SOURCE_ID	IN	NUMBER			x
SR_SR_SOURCE_ID	IN	NUMBER	x		
SR_RECEIPT_ID	IN	NUMBER	x		
SOURCE_ORGANIZATION_ID	IN	NUMBER			x
SOURCE_PARTNER_ID	IN	NUMBER			x
SOURCE_PARTNER_SITE_ID	IN	NUMBER			x
SECONDARY_INVENTORY	IN	VARCHAR2(10)			x
SOURCE_TYPE	IN	NUMBER			x
ALLOCATION_PERCENT	IN	NUMBER	x		
RANK	IN	NUMBER			x
VENDOR_NAME	IN	VARCHAR2(80)			x
VENDOR_SITE_CODE	IN	VARCHAR2(15)			x
SHIP_METHOD	IN	VARCHAR2(30)			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	

**Table 2–55 MSC\_SR\_SOURCE\_ORG**

Parameter	Usage	Type	Required	Derived	Optional
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x
SOURCE_ORG_INSTANCE_ID	IN	NUMBER			x

**SR\_SOURCE\_ID**

Unique identifier for a row generated at planning server

**SR\_SR\_SOURCE\_ID**

Unique identifier for the row generated at the source application

**SR\_RECEIPT\_ID**

SR receipt unique identifier

**SOURCE\_ORGANIZATION\_ID**

Source organization identifier

**SOURCE\_PARTNER\_ID**

Source trading partner identifier

**SOURCE\_PARTNER\_SITE\_ID**

Source trading partner site identifier

**SECONDARY\_INVENTORY**

Secondary inventory code (not currently used)

**SOURCE\_TYPE**

Source type

**ALLOCATION\_PERCENT**

Percent of supply allocated to this source

**RANK**

Rank of source

**VENDOR\_NAME**

Supplier name

**VENDOR\_SITE\_CODE**

Supplier site code

**SHIP\_METHOD**

Ship method

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier associated with the sr source org record

**REFRESH\_ID**

Refresh identifier

**SOURCE\_ORG\_INSTANCE\_ID**

Source application instance identifier associated with the source organization

**MSC\_ST\_SUB\_INVENTORIES**

The staging table used by the collection program to validate and process data for table MSC\_SUB\_INVENTORIES.

**Table 2–56 MSC\_SUB\_INVENTORIES**

Parameter	Usage	Type	Required	Derived	Optional
ORGANIZATION_ID	IN	NUMBER	x		
SUB_INVENTORY_CODE	IN	VARCHAR2(10)	x		
DESCRIPTION	IN	VARCHAR2(50)			x
DISABLE_DATE	IN	DATE			x
NETTING_TYPE	IN	NUMBER			x
DEMAND_CLASS	IN	VARCHAR2(34)			x
PROJECT_ID	IN	NUMBER(15)			x

Table 2–56 MSC\_SUB\_INVENTORIES

Parameter	Usage	Type	Required	Derived	Optional
TASK_ID	IN	NUMBER(15)			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x
INVENTORY_ATP_CODE	IN	NUMBER			x

**ORGANIZATION\_ID**

Organization identifier

**SUB\_INVENTORY\_CODE**

Sub-inventory code

**DESCRIPTION**

Describe sub-inventory

**DISABLE\_DATE**

Date on which the row is no longer in used

**NETTING\_TYPE**

Netting type

**DEMAND\_CLASS**

Demand class code

**PROJECT\_ID**

Project identifier

**TASK\_ID**

Task identifier

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**INVENTORY\_ATP\_CODE**

Inventory ATP code

**MSC\_ST\_SUPPLIER\_CAPACITIES**

The staging table used by the collection program to validate and process data for table MSC\_SUPPLIER\_CAPACITIES.

**Table 2–57 MSC\_SUPPLIER\_CAPACITIES**

Parameter	Usage	Type	Required	Derived	Optional
SUPPLIER_ID	IN	NUMBER	x		
SUPPLIER_SITE_ID	IN	NUMBER			x
ORGANIZATION_ID	IN	NUMBER	x		
USING_ORGANIZATION_ID	IN	NUMBER	x		
INVENTORY_ITEM_ID	IN	NUMBER	x		
VENDOR_NAME	IN	VARCHAR2(80)			x
VENDOR_SITE_CODE	IN	VARCHAR2(15)			x
FROM_DATE	IN	DATE	x		
TO_DATE	IN	DATE			x
CAPACITY	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	

**Table 2–57 MSC\_SUPPLIER\_CAPACITIES**

Parameter	Usage	Type	Required	Derived	Optional
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**SUPPLIER\_ID**

Supplier identifier

**SUPPLIER\_SITE\_ID**

Supplier site identifier

**ORGANIZATION\_ID**

Organization identifier

**USING\_ORGANIZATION\_ID**

Using organization identifier

**INVENTORY\_ITEM\_ID**

Inventory item identifier

**VENDOR\_NAME**

Supplier name

**VENDOR\_SITE\_CODE**

Supplier site code

**FROM\_DATE**

First date of valid capacity

**TO\_DATE**

Last date of valid capacity

**CAPACITY**

Capacity

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**MSC\_ST\_SUPPLIER\_FLEX\_FENCES**

The staging table used by the collection program to validate and process data for table MSC\_SUPPLIER\_FLEX\_FENCES.

**Table 2–58 MSC\_SUPPLIER\_FLEX\_FENCES**

Parameter	Usage	Type	Required	Derived	Optional
SUPPLIER_ID	IN	NUMBER	x		
SUPPLIER_SITE_ID	IN	NUMBER			x
ORGANIZATION_ID	IN	NUMBER	x		
USING_ORGANIZATION_ID	IN	NUMBER	x		
INVENTORY_ITEM_ID	IN	NUMBER	x		
VENDOR_NAME	IN	VARCHAR2(80)			x
VENDOR_SITE_CODE	IN	VARCHAR2(15)			x
FENCE_DAYS	IN	NUMBER	x		
TOLERANCE_PERCENTAGE	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	

**Table 2–58 MSC\_SUPPLIER\_FLEX\_FENCES**

Parameter	Usage	Type	Required	Derived	Optional
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**SUPPLIER\_ID**

Supplier identifier

**SUPPLIER\_SITE\_ID**

Supplier site identifier

**ORGANIZATION\_ID**

Organization identifier

**USING\_ORGANIZATION\_ID**

Using organization identifier

**INVENTORY\_ITEM\_ID**

Inventory item identifier

**VENDOR\_NAME**

Supplier name

**VENDOR\_SITE\_CODE**

Supplier site code

**FENCE\_DAYS**

Number of advance days

**TOLERANCE\_PERCENTAGE**

Capacity tolerance percentage

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**MSC\_ST\_SUPPLIES**

The staging table used by the collection program to validate and process data for table MSC\_SUPPLIES.

**Table 2–59 MSC\_SUPPLIES**

Parameter	Usage	Type	Required	Derived	Optional
PLAN_ID	IN	NUMBER			x
TRANSACTION_ID	IN	NUMBER			x
INVENTORY_ITEM_ID	IN	NUMBER	x		
ORGANIZATION_ID	IN	NUMBER	x		
SCHEDULE_DESIGNATOR_ID	IN	NUMBER			x
SOURCE_SCHEDULE_NAME	IN	VARCHAR2(10)			x
REVISION	IN	VARCHAR2(10)			x
UNIT_NUMBER	IN	VARCHAR2(30)			x
NEW_SCHEDULE_DATE	IN	DATE	x		
OLD_SCHEDULE_DATE	IN	DATE			x
NEW_WIP_START_DATE	IN	DATE			x
OLD_WIP_START_DATE	IN	DATE			x
FIRST_UNIT_COMPLETION_DATE	IN	DATE			x
LAST_UNIT_COMPLETION_DATE	IN	DATE			x
FIRST_UNIT_START_DATE	IN	DATE			x
LAST_UNIT_START_DATE	IN	DATE			x
DISPOSITION_ID	IN	NUMBER			x
DISPOSITION_STATUS_TYPE	IN	NUMBER			x
ORDER_TYPE	IN	NUMBER	x		
SUPPLIER_ID	IN	NUMBER			x
NEW_ORDER_QUANTITY	IN	NUMBER	x		
OLD_ORDER_QUANTITY	IN	NUMBER			x
NEW_ORDER_PLACEMENT_DATE	IN	DATE			x
OLD_ORDER_PLACEMENT_DATE	IN	DATE			x
RESCHEDULE_DAYS	IN	NUMBER			x
RESCHEDULE_FLAG	IN	NUMBER			x
SCHEDULE_COMPRESS_DAYS	IN	NUMBER			x

**Table 2–59 MSC\_SUPPLIES**

Parameter	Usage	Type	Required	Derived	Optional
NEW_PROCESSING_DAYS	IN	NUMBER			x
PURCH_LINE_NUM	IN	NUMBER			x
QUANTITY_IN_PROCESS	IN	NUMBER			x
IMPLEMENTED_QUANTITY	IN	NUMBER			x
FIRM_PLANNED_TYPE	IN	NUMBER	x		
FIRM_QUANTITY	IN	NUMBER			x
FIRM_DATE	IN	DATE			x
IMPLEMENT_DEMAND_CLASS	IN	VARCHAR2(34)			x
IMPLEMENT_DATE	IN	DATE			x
IMPLEMENT_QUANTITY	IN	NUMBER			x
IMPLEMENT_FIRM	IN	NUMBER			x
IMPLEMENT_WIP_CLASS_CODE	IN	VARCHAR2(10)			x
IMPLEMENT_JOB_NAME	IN	VARCHAR2(240)			x
IMPLEMENT_DOCK_DATE	IN	DATE			x
IMPLEMENT_STATUS_CODE	IN	NUMBER			x
IMPLEMENT_UOM_CODE	IN	VARCHAR2(3)			x
IMPLEMENT_LOCATION_ID	IN	NUMBER			x
IMPLEMENT_SOURCE_ORG_ID	IN	NUMBER			x
IMPLEMENT_SUPPLIER_ID	IN	NUMBER			x
IMPLEMENT_SUPPLIER_SITE_ID	IN	NUMBER			x
IMPLEMENT_AS	IN	NUMBER			x
RELEASE_STATUS	IN	NUMBER			x
LOAD_TYPE	IN	NUMBER			x
PROCESS_SEQ_ID	IN	NUMBER			x
SCO_SUPPLY_FLAG	IN	NUMBER			x
ALTERNATE_BOM_DESIGNATOR	IN	VARCHAR2(10)			x
ALTERNATE_ROUTING_DESIGNATOR	IN	VARCHAR2(10)			x

**Table 2–59 MSC\_SUPPLIES**

Parameter	Usage	Type	Required	Derived	Optional
OPERATION_SEQ_NUM	IN	NUMBER			x
SOURCE	IN	NUMBER			x
BY_PRODUCT_USING_ASSY_ID	IN	NUMBER			x
SOURCE_ORGANIZATION_ID	IN	NUMBER			x
SOURCE_SR_INSTANCE_ID	IN	NUMBER			x
SOURCE_SUPPLIER_SITE_ID	IN	NUMBER			x
SOURCE_SUPPLIER_ID	IN	NUMBER			x
SHIP_METHOD	IN	NUMBER			x
WEIGHT_CAPACITY_USED	IN	NUMBER			x
VOLUME_CAPACITY_USED	IN	NUMBER			x
SOURCE_SUPPLY_SCHEDULE_NAME	IN	NUMBER			x
NEW_SHIP_DATE	IN	DATE			x
NEW_DOCK_DATE	IN	DATE			x
LINE_ID	IN	NUMBER			x
PROJECT_ID	IN	NUMBER(15)			x
TASK_ID	IN	NUMBER(15)			x
PLANNING_GROUP	IN	VARCHAR2(30)			x
IMPLEMENT_PROJECT_ID	IN	NUMBER(15)			x
IMPLEMENT_TASK_ID	IN	NUMBER(15)			x
IMPLEMENT_SCHEDULE_GROUP_ID	IN	NUMBER			x
IMPLEMENT_BUILD_SEQUENCE	IN	NUMBER			x
IMPLEMENT_ALTERNATE_BOM	IN	VARCHAR2(10)			x
IMPLEMENT_ALTERNATE_ROUTING	IN	VARCHAR2(10)			x
IMPLEMENT_UNIT_NUMBER	IN	VARCHAR2(30)			x
IMPLEMENT_LINE_ID	IN	NUMBER			x
RELEASE_ERRORS	IN	VARCHAR2(1)			x
NUMBER1	IN	NUMBER			x

**Table 2–59 MSC\_SUPPLIES**

Parameter	Usage	Type	Required	Derived	Optional
SOURCE_ITEM_ID	IN	NUMBER			x
ORDER_NUMBER	IN	VARCHAR2(240)			x
SCHEDULE_GROUP_ID	IN	NUMBER			x
SCHEDULE_GROUP_NAME	IN	VARCHAR2(30)			x
BUILD_SEQUENCE	IN	NUMBER			x
WIP_ENTITY_ID	IN	NUMBER			x
WIP_ENTITY_NAME	IN	VARCHAR2(240)			x
WO_LATENESS_COST	IN	NUMBER			x
IMPLEMENT_PROCESSING_DAYS	IN	NUMBER			x
DELIVERY_PRICE	IN	NUMBER			x
LATE_SUPPLY_DATE	IN	DATE			x
LATE_SUPPLY_QTY	IN	NUMBER			x
SUBINVENTORY_CODE	IN	VARCHAR2(10)			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
SCHEDULE_DESIGNATOR	IN	VARCHAR2(10)			x
VENDOR_ID	IN	NUMBER			x
VENDOR_SITE_ID	IN	NUMBER			x

**Table 2–59 MSC\_SUPPLIES**

<b>Parameter</b>	<b>Usage</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
SUPPLIER_SITE_ID	IN	NUMBER			x
PURCH_ORDER_ID	IN	NUMBER			x
EXPECTED_SCRAP_QTY	IN	NUMBER			x
QTY_SCRAPPED	IN	NUMBER			x
QTY_COMPLETED	IN	NUMBER			x
LOT_NUMBER	IN	VARCHAR2(30)			x
EXPIRATION_DATE	IN	DATE			x
WIP_STATUS_CODE	IN	NUMBER			x
DAILY_RATE	IN	NUMBER			x
LOCATOR_ID	IN	NUMBER			x
SERIAL_NUMBER	IN	VARCHAR2(30)			x
REFRESH_ID	IN	NUMBER			x
LOCATOR_NAME	IN	VARCHAR2(204)			x
ONHAND_SOURCE_TYPE	IN	NUMBER			x
SR_MTL_SUPPLY_ID	IN	NUMBER			x
DEMAND_CLASS	IN	VARCHAR2(34)			
FROM_ORGANIZATION_ID	IN	NUMBER			
WIP_SUPPLY_TYPE	IN	NUMBER			
PO_LINE_ID	IN	NUMBER			

**PLAN\_ID**

Plan identifier

**TRANSACTION\_ID**

Transaction unique identifier

**INVENTORY\_ITEM\_ID**

Inventory item identifier

**ORGANIZATION\_ID**

Organization identifier

**SCHEDULE\_DESIGNATOR\_ID**

Schedule designator identifier

**SOURCE\_SCHEDULE\_NAME**

Source schedule name

**REVISION**

Inventory item revision code

**UNIT\_NUMBER**

Unit number

**NEW\_SCHEDULE\_DATE**

End date of the supply (completion date of first unit)

**OLD\_SCHEDULE\_DATE**

Old schedule date

**NEW\_WIP\_START\_DATE**

New WIP schedule start date

**OLD\_WIP\_START\_DATE**

Old WIP schedule start date

**FIRST\_UNIT\_COMPLETION\_DATE**

First unit completion date for recommended repetitive schedules

**LAST\_UNIT\_COMPLETION\_DATE**

Last unit completion date for recommended repetitive schedules

**FIRST\_UNIT\_START\_DATE**

First unit start date for repetitive schedule

**LAST\_UNIT\_START\_DATE**

Last unit start date for repetitive schedule

**DISPOSITION\_ID**

Identifier which references to source of supply

**DISPOSITION\_STATUS\_TYPE**

Disposition type code

**ORDER\_TYPE**

Specifies type of order: planned order, purchase order, etc...

**SUPPLIER\_ID**

Supplier identifier

**NEW\_ORDER\_QUANTITY**

Supply quantity

**OLD\_ORDER\_QUANTITY**

Old order quantity

**NEW\_ORDER\_PLACEMENT\_DATE**

New order placement date

**OLD\_ORDER\_PLACEMENT\_DATE**

Old order placement date

**RESCHEDULE\_DAYS**

Different between old and new schedule dates

**RESCHEDULE\_FLAG**

Flag indicating if this row been rescheduled

**SCHEDULE\_COMPRESS\_DAYS**

Schedule compress days

**NEW\_PROCESSING\_DAYS**

Repetitive schedule processing days

**PURCH\_LINE\_NUM**

Purchase order line number (for purchase order)

**QUANTITY\_IN\_PROCESS**

Quantity being processed by the WIP/PO interface processes

**IMPLEMENTED\_QUANTITY**

Planned order implemented quantity

**FIRM\_PLANNED\_TYPE**

Flag indicating whether the order is firm

**FIRM\_QUANTITY**

Firm quantity

**FIRM\_DATE**

Firm date

**IMPLEMENT\_DEMAND\_CLASS**

Implement demand class

**IMPLEMENT\_DATE**

Implement due date

**IMPLEMENT\_QUANTITY**

Planned order implemented quantity

**IMPLEMENT\_FIRM**

Implement firm flag

**IMPLEMENT\_WIP\_CLASS\_CODE**

Implement WIP class code

**IMPLEMENT\_JOB\_NAME**

Implement job name

**IMPLEMENT\_DOCK\_DATE**

Implement dock date

**IMPLEMENT\_STATUS\_CODE**

Implement status code

**IMPLEMENT\_UOM\_CODE**

Implement unit of measure code

**IMPLEMENT\_LOCATION\_ID**

Implement location identifier

**IMPLEMENT\_SOURCE\_ORG\_ID**

Implement source organization identifier

**IMPLEMENT\_SUPPLIER\_ID**

Implement supplier identifier

**IMPLEMENT\_SUPPLIER\_SITE\_ID**

Implement supplier site identifier

**IMPLEMENT\_AS**

Implement order type

**RELEASE\_STATUS**

Release status code

**LOAD\_TYPE**

Load program to execute

**PROCESS\_SEQ\_ID**

Process sequence identifier

**SCO\_SUPPLY\_FLAG**

Flag to indicate if supply was suggested by SCO

**ALTERNATE\_BOM\_DESIGNATOR**

Alternate BOM designator

**ALTERNATE\_ROUTING\_DESIGNATOR**

Alternate routing designator

**OPERATION\_SEQ\_NUM**

Operation sequence number

**SOURCE****BY\_PRODUCT\_USING\_ASSY\_ID****SOURCE\_ORGANIZATION\_ID**

Source organization identifier

**SOURCE\_SR\_INSTANCE\_ID**

Source org instance identifier

**SOURCE\_SUPPLIER\_SITE\_ID**

Source supplier site identifier

**SOURCE\_SUPPLIER\_ID**

Source supplier identifier

**SHIP\_METHOD**

Ship method

**WEIGHT\_CAPACITY\_USED**

Weight capacity used

**VOLUME\_CAPACITY\_USED**

Volume capacity used

**SOURCE\_SUPPLY\_SCHEDULE\_NAME**

Source supply schedule name

**NEW\_SHIP\_DATE**

New ship date

**NEW\_DOCK\_DATE**

New suggested dock date

**LINE\_ID**

Manufacturing line identifier

**PROJECT\_ID**

Project identifier

**TASK\_ID**

Task identifier

**PLANNING\_GROUP**

Planning group code

**IMPLEMENT\_PROJECT\_ID**

Implement project identifier

**IMPLEMENT\_TASK\_ID**

Implement task identifier

**IMPLEMENT\_SCHEDULE\_GROUP\_ID**

Implement schedule group identifier

**IMPLEMENT\_BUILD\_SEQUENCE**

Implement build sequence for the planned order to be implemented as a discrete job

**IMPLEMENT\_ALTERNATE\_BOM**

Implement alternate BOM designator

**IMPLEMENT\_ALTERNATE\_ROUTING**

Implement alternate routing

**IMPLEMENT\_UNIT\_NUMBER**

Implement unit number

**IMPLEMENT\_LINE\_ID**

Implement line identifier

**RELEASE\_ERRORS****NUMBER1****SOURCE\_ITEM\_ID**

Source item identifier

**ORDER\_NUMBER**

Order number

**SCHEDULE\_GROUP\_ID**

Schedule group identifier

**SCHEDULE\_GROUP\_NAME**

Schedule group name

**BUILD\_SEQUENCE**

Build Sequence for the Planned Order

**WIP\_ENTITY\_ID**

WIP entity identifier

**WIP\_ENTITY\_NAME**

WIP entity name

**WO\_LATENESS\_COST**

Work order lateness cost

**IMPLEMENT\_PROCESSING\_DAYS**

Implement processing days

**DELIVERY\_PRICE**

Supply unit price for purchasing supply

**LATE\_SUPPLY\_DATE**

Supply date for the shadow part of the split supplies

**LATE\_SUPPLY\_QTY**

Shadow supply quantity

**SUBINVENTORY\_CODE**

Sub-inventory code

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**SCHEDULE\_DESIGNATOR**

Schedule designator

**VENDOR\_ID**

Supplier identifier

**VENDOR\_SITE\_ID**

Supplier site identifier

**SUPPLIER\_SITE\_ID**

Supplier site identifier

**PURCH\_ORDER\_ID**

Purchase order identifier

**EXPECTED\_SCRAP\_QTY**

Expected scrap qty

**QTY\_SCRAPPED**

Current job scrapped units

**QTY\_COMPLETED**

Current job quantity completed

**LOT\_NUMBER**

Lot number for on-hand quantities

**EXPIRATION\_DATE**

Expiration date

**WIP\_STATUS\_CODE**

WIP job status code

**DAILY\_RATE**

Daily rate for recommended repetitive schedules

**LOCATOR\_ID**

Locator identifier

**SERIAL\_NUMBER**

Serial number

**REFRESH\_ID**

Refresh identifier

**LOCATOR\_NAME**

Locator name

**ONHAND\_SOURCE\_TYPE**

Onhand source type

**SR\_MTL\_SUPPLY\_ID**

Supply identifier from the source

**DEMAND\_CLASS**

Demand class code

**FROM\_ORGANIZATION\_ID**

From organization identifier

**WIP\_SUPPLY\_TYPE**

WIP supply type

**PO\_LINE\_ID**

Purchase order line identifier

**MSC\_ST\_SYSTEM\_ITEMS**

The staging table used by the collection program to validate and process data for table MSC\_SYSTEM\_ITEMS.

**Table 2–60 MSC\_SYSTEM\_ITEMS**

Parameter	Usage	Type	Required	Derived	Optional
ORGANIZATION_ID	IN	NUMBER	x		
SR_ORGANIZATION_ID	IN	NUMBER			x
INVENTORY_ITEM_ID	IN	NUMBER			x
SR_INVENTORY_ITEM_ID	IN	NUMBER	x		
ITEM_NAME	IN	VARCHAR2(40)			x
LOTS_EXPIRATION	IN	NUMBER			x
LOT_CONTROL_CODE	IN	NUMBER	x		
SHRINKAGE_RATE	IN	NUMBER			x
FIXED_DAYS_SUPPLY	IN	NUMBER			x
FIXED_ORDER_QUANTITY	IN	NUMBER			x
FIXED_LOT_MULTIPLIER	IN	NUMBER			x
MINIMUM_ORDER_QUANTITY	IN	NUMBER			x
MAXIMUM_ORDER_QUANTITY	IN	NUMBER			x
ROUNDING_CONTROL_TYPE	IN	NUMBER	x		
PLANNING_TIME_FENCE_DAYS	IN	NUMBER			x
DEMAND_TIME_FENCE_DAYS	IN	NUMBER			x
RELEASE_TIME_FENCE_CODE	IN	NUMBER			x
RELEASE_TIME_FENCE_DAYS	IN	NUMBER			x
DESCRIPTION	IN	VARCHAR2(240)			x

**Table 2–60 MSC\_SYSTEM\_ITEMS**

Parameter	Usage	Type	Required	Derived	Optional
IN_SOURCE_PLAN	IN	NUMBER	x		
REVISION	IN	VARCHAR2(3)			x
SR_CATEGORY_ID	IN	NUMBER			x
CATEGORY_NAME	IN	VARCHAR2(200)			x
ABC_CLASS_ID	IN	NUMBER			x
ABC_CLASS_NAME	IN	VARCHAR2(40)			x
MRP_PLANNING_CODE	IN	NUMBER	x		
FIXED_LEAD_TIME	IN	NUMBER			x
VARIABLE_LEAD_TIME	IN	NUMBER			x
PREPROCESSING_LEAD_TIME	IN	NUMBER			x
POSTPROCESSING_LEAD_TIME	IN	NUMBER			x
FULL_LEAD_TIME	IN	NUMBER	x		
CUMULATIVE_TOTAL_LEAD_TIME	IN	NUMBER			x
CUM_MANUFACTURING_LEAD_TIME	IN	NUMBER			x
UOM_CODE	IN	VARCHAR2(3)	x		
UNIT_WEIGHT	IN	NUMBER			x
UNIT_VOLUME	IN	NUMBER			x
WEIGHT_UOM	IN	VARCHAR2(3)			x
VOLUME_UOM	IN	VARCHAR2(3)			x
PRODUCT_FAMILY_ID	IN	NUMBER			x
ATP_RULE_ID	IN	NUMBER			x
MRP_CALCULATE_ATP_FLAG	IN	NUMBER	x		
ATP_COMPONENTS_FLAG	IN	VARCHAR2(1)	x		
BUILT_IN_WIP_FLAG	IN	NUMBER	x		
PURCHASING_ENABLED_FLAG	IN	NUMBER	x		
PLANNING_MAKE_BUY_CODE	IN	NUMBER	x		
REPETITIVE_TYPE	IN	NUMBER	x		

**Table 2–60 MSC\_SYSTEM\_ITEMS**

Parameter	Usage	Type	Required	Derived	Optional
STANDARD_COST	IN	NUMBER			x
CARRYING_COST	IN	NUMBER			x
ORDER_COST	IN	NUMBER			x
DMD_LATENESS_COST	IN	NUMBER			x
SS_PENALTY_COST	IN	NUMBER			x
SUPPLIER_CAP_OVERUTIL_COST	IN	NUMBER			x
LIST_PRICE	IN	NUMBER			x
AVERAGE_DISCOUNT	IN	NUMBER			x
END_ASSEMBLY_PEGGING_FLAG	IN	VARCHAR2(1)			x
END_ASSEMBLY_PEGGING	IN	NUMBER			x
FULL_PEGGING	IN	NUMBER	x		
ENGINEERING_ITEM_FLAG	IN	NUMBER	x		
WIP_SUPPLY_TYPE	IN	NUMBER	x		
MRP_SAFETY_STOCK_CODE	IN	NUMBER			x
MRP_SAFETY_STOCK_PERCENT	IN	NUMBER			x
SAFETY_STOCK_BUCKET_DAYS	IN	NUMBER			x
INVENTORY_USE_UP_DATE	IN	DATE			x
BUYER_NAME	IN	VARCHAR2(240)			x
PLANNER_CODE	IN	VARCHAR2(10)			x
PLANNING_EXCEPTION_SET	IN	VARCHAR2(10)			x
EXCESS_QUANTITY	IN	NUMBER			x
EXCEPTION_SHORTAGE_DAYS	IN	NUMBER			x
EXCEPTION_EXCESS_DAYS	IN	NUMBER			x
EXCEPTION_OVERPROMISED_DAYS	IN	NUMBER			x
REPETITIVE_VARIANCE_DAYS	IN	NUMBER			x
BASE_ITEM_ID	IN	NUMBER			x
BOM_ITEM_TYPE	IN	NUMBER			x

**Table 2–60 MSC\_SYSTEM\_ITEMS**

Parameter	Usage	Type	Required	Derived	Optional
ATO_FORECAST_CONTROL	IN	NUMBER			x
ORGANIZATION_CODE	IN	VARCHAR2(7)			x
EFFECTIVITY_CONTROL	IN	NUMBER	x		
ACCEPTABLE_EARLY_DELIVERY	IN	NUMBER			x
INVENTORY_PLANNING_CODE	IN	NUMBER	x		
INVENTORY_TYPE	IN	NUMBER			x
ACCEPTABLE_RATE_INCREASE	IN	NUMBER			x
ACCEPTABLE_RATE_DECREASE	IN	NUMBER			x
PRIMARY_SUPPLIER_ID	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x
ATP_FLAG	IN	VARCHAR2(1)	x		
INVENTORY_ITEM_FLAG	IN	NUMBER			x
REVISION_QTY_CONTROL_CODE	IN	NUMBER			x
EXPENSE_ACCOUNT	IN	NUMBER			x
INVENTORY_ASSET_FLAG	IN	VARCHAR2(1)			x
BUYER_ID	IN	NUMBER(9)			x

**Table 2–60 MSC\_SYSTEM\_ITEMS**

Parameter	Usage	Type	Required	Derived	Optional
MATERIAL_COST	IN	NUMBER			x
RESOURCE_COST	IN	NUMBER			x
SOURCE_ORG_ID	IN	NUMBER			x
PICK_COMPONENTS_FLAG	IN	VARCHAR2(1)			x

**ORGANIZATION\_ID**

Organization identifier

**SR\_ORGANIZATION\_ID**

Source organization identifier

**INVENTORY\_ITEM\_ID**

Inventory item identifier

**SR\_INVENTORY\_ITEM\_ID**

Source inventory item identifier

**ITEM\_NAME**

Item name

**LOTS\_EXPIRATION**

Lots expiration

**LOT\_CONTROL\_CODE**

Flag indicating if lots\_expiration is used or not

**SHRINKAGE\_RATE**

Percentage of shrinkage for this item

**FIXED\_DAYS\_SUPPLY**

Period of the supply days

**FIXED\_ORDER\_QUANTITY**

Fixed order quantity

**FIXED\_LOT\_MULTIPLIER**

Fixed lot multiplier

**MINIMUM\_ORDER\_QUANTITY**

Minimum size of an order

**MAXIMUM\_ORDER\_QUANTITY**

Maximum size of an order

**ROUNDING\_CONTROL\_TYPE**

Flag indicating if rounding of the quantity is allowed

**PLANNING\_TIME\_FENCE\_DAYS**

Planning time fences days of the item

**DEMAND\_TIME\_FENCE\_DAYS**

Demand time fence days

**RELEASE\_TIME\_FENCE\_CODE**

Release time fence code

**RELEASE\_TIME\_FENCE\_DAYS**

Release time fence days

**DESCRIPTION**

Item description

**IN\_SOURCE\_PLAN**

Flag indicating whether the item is in the plan

**REVISION**

Item revision code

**SR\_CATEGORY\_ID**

Source category identifier

**CATEGORY\_NAME**

Category name

**ABC\_CLASS\_ID**

ABC class identifier

**ABC\_CLASS\_NAME**

ABC class name

**MRP\_PLANNING\_CODE**

MRP planning code

**FIXED\_LEAD\_TIME**

Fixed lead time

**VARIABLE\_LEAD\_TIME**

Variable lead time

**PREPROCESSING\_LEAD\_TIME**

Preprocessing lead time

**POSTPROCESSING\_LEAD\_TIME**

Postprocessing lead time

**FULL\_LEAD\_TIME**

Full lead time

**CUMULATIVE\_TOTAL\_LEAD\_TIME**

Cumulative total lead time

**CUM\_MANUFACTURING\_LEAD\_TIME**

Cumulative manufacturing lead time

**UOM\_CODE**

Unit of measure code

**UNIT\_WEIGHT**

Weight of the item

**UNIT\_VOLUME**

Volume of the item

**WEIGHT\_UOM**

Unit of measure for the weight

**VOLUME\_UOM**

Unit of measure for the volume

**PRODUCT\_FAMILY\_ID**

Product family identifier

**ATP\_RULE\_ID**

ATP rule identifier

**MRP\_CALCULATE\_ATP\_FLAG**

Flag indication whether to calculate ATP in MRP

**ATP\_COMPONENTS\_FLAG**

Flag indicating whether to calculate components ATP

**BUILT\_IN\_WIP\_FLAG**

Flag to indicate if the item can be built in WIP

**PURCHASING\_ENABLED\_FLAG**

Flag to indicate if the item can be purchased

**PLANNING\_MAKE\_BUY\_CODE**

Plan this item as either a make item or buy item

**REPETITIVE\_TYPE**

Flag indicates if this item build repetitively

**STANDARD\_COST**

Standard cost

**CARRYING\_COST**

Actual carrying cost

**ORDER\_COST**

Order cost

**DMD\_LATENESS\_COST**

DMD lateness cost

**SS\_PENALTY\_COST**

SS penalty cost

**SUPPLIER\_CAP\_OVERUTIL\_COST**

Supplier capacity over-utilization cost

**LIST\_PRICE**

Item list price

**AVERAGE\_DISCOUNT**

Item average discount

**END\_ASSEMBLY\_PEGGING\_FLAG**

Peg to the end assembly on reports

**END\_ASSEMBLY\_PEGGING**

Peg to the end assembly on reports (value is populated by the plan)

**FULL\_PEGGING**

Full pegging flag

**ENGINEERING\_ITEM\_FLAG**

Engineering item flag

**WIP\_SUPPLY\_TYPE**

WIP supply type

**MRP\_SAFETY\_STOCK\_CODE**

Safety stock code

**MRP\_SAFETY\_STOCK\_PERCENT**

Safety stock percent

**SAFETY\_STOCK\_BUCKET\_DAYS**

Safety stock bucket days

**INVENTORY\_USE\_UP\_DATE**

Use up date

**BUYER\_NAME**

Buyer name

**PLANNER\_CODE**

Planner code

**PLANNING\_EXCEPTION\_SET**

Exception control set

**EXCESS\_QUANTITY**

Excess quantity

**EXCEPTION\_SHORTAGE\_DAYS**

Exception shortage days

**EXCEPTION\_EXCESS\_DAYS**

Exception excess days

**EXCEPTION\_OVERPROMISED\_DAYS**

Exception overpromised days

**REPETITIVE\_VARIANCE\_DAYS**

Repetitive variance days

**BASE\_ITEM\_ID**

Inventory base item identifier

**BOM\_ITEM\_TYPE**

BOM item type

**ATO\_FORECAST\_CONTROL**

ATO forecast control

**ORGANIZATION\_CODE**

Organization code

**EFFECTIVITY\_CONTROL**

Effectivity control code

**ACCEPTABLE\_EARLY\_DELIVERY**

Acceptable early delivery

**INVENTORY\_PLANNING\_CODE**

Inventory planning code

**INVENTORY\_TYPE**

Inventory type

**ACCEPTABLE\_RATE\_INCREASE**

Acceptable rate increase

**ACCEPTABLE\_RATE\_DECREASE**

Acceptable rate increase

**PRIMARY\_SUPPLIER\_ID**

Primary supplier identifier

**DELETED\_FLAG**

Peg to the end assembly on reports

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**ATP\_FLAG**

ATP flag

**INVENTORY\_ITEM\_FLAG**

Inventory item identifier

**REVISION\_QTY\_CONTROL\_CODE**

Revision quantity control

**EXPENSE\_ACCOUNT**

Expense account

**INVENTORY\_ASSET\_FLAG**

Inventory asset flag

**BUYER\_ID**

Buyer identifier

**MATERIAL\_COST**

Material cost

**RESOURCE\_COST**

Resource cost

**SOURCE\_ORG\_ID**

Source organization identifier

**PICK\_COMPONENTS\_FLAG**

Flag indicating whether all shippable components should be picked

**MSC\_ST\_TRADING\_PARTNERS**

The staging table used by the collection program to validate and process data for table MSC\_TRADING\_PARTNERS.

**Table 2–61 MSC\_TRADING\_PARTNERS**

Parameter	Usage	Type	Required	Derived	Optional
PARTNER_ID	IN	NUMBER			x
ORGANIZATION_CODE	IN	VARCHAR2(7)			x
SR_TP_ID	IN	NUMBER	x		
DISABLE_DATE	IN	DATE			x
STATUS	IN	VARCHAR2(1)			x
MASTER_ORGANIZATION	IN	NUMBER			x
PARTNER_TYPE	IN	NUMBER	x		
PARTNER_NAME	IN	VARCHAR2(80)			x
PARTNER_NUMBER	IN	VARCHAR2(154)			x
CALENDAR_CODE	IN	VARCHAR2(14)			x
CALENDAR_EXCEPTION_SET_ID	IN	NUMBER			x
OPERATING_UNIT	IN	NUMBER			x
MAXIMUM_WEIGHT	IN	NUMBER			x
MAXIMUM_VOLUME	IN	NUMBER			x
WEIGHT_UOM	IN	VARCHAR2(3)			x
VOLUME_UOM	IN	VARCHAR2(3)			x
PROJECT_REFERENCE_ENABLED	IN	NUMBER			x
PROJECT_CONTROL_LEVEL	IN	NUMBER			x
DEMAND_LATENESS_COST	IN	NUMBER			x
SUPPLIER_CAP_OVERUTIL_COST	IN	NUMBER			x
RESOURCE_CAP_OVERUTIL_COST	IN	NUMBER			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	

**Table 2–61 MSC\_TRADING\_PARTNERS**

Parameter	Usage	Type	Required	Derived	Optional
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x
MODELED_CUSTOMER_ID	IN	NUMBER			x
MODELED_CUSTOMER_SITE_ID	IN	NUMBER			x
MODELED_SUPPLIER_ID	IN	NUMBER			x
MODELED_SUPPLIER_SITE_ID	IN	NUMBER			x
TRANSPORT_CAP_OVER_UTIL_COST	IN	NUMBER			x
USE_PHANTOM_ROUTINGS	IN	NUMBER			x
INHERIT_PHANTOM_OP_SEQ	IN	NUMBER			x
DEFAULT_ATP_RULE_ID	IN	NUMBER			x
DEFAULT_DEMAND_CLASS	IN	VARCHAR2(34)			x
MATERIAL_ACCOUNT	IN	NUMBER			x
EXPENSE_ACCOUNT	IN	NUMBER			x
SOURCE_ORG_ID	IN	NUMBER			x
ORGANIZATION_TYPE	IN	NUMBER			x

**PARTNER\_ID**

Unique partner identifier which can be customer id, supplier id, or inventory organization id

**ORGANIZATION\_CODE**

Organization code

**SR\_TP\_ID**

Unique partner identifier in the source application instance

**DISABLE\_DATE**

Disable date of the trading partner

**STATUS**

Status of the trading partner

**MASTER\_ORGANIZATION**

Master organization identifier

**PARTNER\_TYPE**

Specify the type of partner: Customer, Supplier, or organization

**PARTNER\_NAME**

Name of the supplier or customer

**PARTNER\_NUMBER**

Number of the supplier or customer

**CALENDAR\_CODE**

Calendar used for this partner. The code includes instance code and calendar code from the source apps.

**CALENDAR\_EXCEPTION\_SET\_ID**

Calendar exception set identifier

**OPERATING\_UNIT**

Operating unit

**MAXIMUM\_WEIGHT**

Maximum weight

**MAXIMUM\_VOLUME**

Maximum volume

**WEIGHT\_UOM**

Weight unit of measure

**VOLUME\_UOM**

Volume unit of measure

**PROJECT\_REFERENCE\_ENABLED**

Project reference enabled flag

**PROJECT\_CONTROL\_LEVEL**

Project control level

**DEMAND\_LATENESS\_COST**

Demand lateness cost

**SUPPLIER\_CAP\_OVERUTIL\_COST**

Supplier over-utilization cost

**RESOURCE\_CAP\_OVERUTIL\_COST**

Resource over-utilization cost

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**MODELED\_CUSTOMER\_ID**

Customer identifier which is modeled as inventory organization

**MODELED\_CUSTOMER\_SITE\_ID**

Customer site identifier which is modeled as inventory organization

**MODELED\_SUPPLIER\_ID**

Supplier identifier which is modeled as inventory organization

**MODELED\_SUPPLIER\_SITE\_ID**

Supplier site identifier which is modeled as inventory organization

**TRANSPORT\_CAP\_OVER\_UTIL\_COST**

Transportation over-utilization cost

**USE\_PHANTOM\_ROUTINGS**

Use phantom routings

**INHERIT\_PHANTOM\_OP\_SEQ**

Inherit phantom op sequence

**DEFAULT\_ATP\_RULE\_ID**

Default ATP rule identifier

**DEFAULT\_DEMAND\_CLASS**

Default demand class

**MATERIAL\_ACCOUNT**

Material account

**EXPENSE\_ACCOUNT**

Expense account

**SOURCE\_ORG\_ID**

Organization to source items from

**ORGANIZATION\_TYPE**

Organization

**MSC\_ST\_TRADING\_PARTNER\_SITES**

The staging table used by the collection program to validate and process data for table MSC\_TRADING\_PARTNER\_SITES.

**Table 2–62 MSC\_TRADING\_PARTNER\_SITES**

Parameter	Usage	Type	Required	Derived	Optional
PARTNER_ID	IN	NUMBER			x
PARTNER_SITE_ID	IN	NUMBER			x
PARTNER_ADDRESS	IN	VARCHAR2(1600)			x
SR_TP_ID	IN	NUMBER(15)	x		
SR_TP_SITE_ID	IN	NUMBER	x		
TP_SITE_CODE	IN	VARCHAR2(30)			x
LOCATION	IN	VARCHAR2(40)			x

**Table 2–62 MSC\_TRADING\_PARTNER\_SITES**

Parameter	Usage	Type	Required	Derived	Optional
PARTNER_TYPE	IN	NUMBER	x		
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x
LONGITUDE	IN	NUMBER(10,7)			x
LATITUDE	IN	NUMBER(10,7)			x
OPERATING_UNIT_NAME	IN	VARCHAR2(60)			x

**PARTNER\_ID**

Trading partner unique identifier

**PARTNER\_SITE\_ID**

Trading partner site unique identifier

**PARTNER\_ADDRESS**

Trading partner address

**SR\_TP\_ID**

Trading partner unique identifier from source application

**SR\_TP\_SITE\_ID**

Trading partner site unique identifier from source application

**TP\_SITE\_CODE**

Site code

**LOCATION**

Partner location

**PARTNER\_TYPE**

Indicate type of partner: Customer, Supplier, or Organization

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**LONGITUDE**

Longitude

**LATITUDE**

Latitude

**OPERATING\_UNIT\_NAME**

**MSC\_ST\_UNITS\_OF\_MEASURE**

The staging table used by the collection program to validate and process data for table MSC\_UNITS\_OF\_MEASURE.

**Table 2–63 MSC\_UNITS\_OF\_MEASURE**

Parameter	Usage	Type	Required	Derived	Optional
UNIT_OF_MEASURE	IN	VARCHAR2(25)	x		
UOM_CODE	IN	VARCHAR2(3)	x		
UOM_CLASS	IN	VARCHAR2(10)	x		
BASE_UOM_FLAG	IN	VARCHAR2(1)	x		
DISABLE_DATE	IN	DATE			x
DESCRIPTION	IN	VARCHAR2(50)			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	

**Table 2–63 MSC\_UNITS\_OF\_MEASURE**

Parameter	Usage	Type	Required	Derived	Optional
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**UNIT\_OF\_MEASURE**

Unit of measure name

**UOM\_CODE**

Abbreviated unit of measure code

**UOM\_CLASS**

Unit of measure class

**BASE\_UOM\_FLAG**

Base unit of measure flag

**DISABLE\_DATE**

Date when the unit can no longer be used to define conversions

**DESCRIPTION**

Unit of measure description

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**MSC\_ST\_UNIT\_NUMBERS**

The staging table used by the collection program to validate and process data for table MSC\_UNIT\_NUMBERS.

**Table 2–64 MSC\_UNIT\_NUMBERS**

Parameter	Usage	Type	Required	Derived	Optional
UNIT_NUMBER	IN	VARCHAR2(30)	x		
END_ITEM_ID	IN	NUMBER	x		
MASTER_ORGANIZATION_ID	IN	NUMBER	x		
COMMENTS	IN	VARCHAR2(240)			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**UNIT\_NUMBER**

Unit number

**END\_ITEM\_ID**

End item unique identifier

**MASTER\_ORGANIZATION\_ID**

Master organization identifier

**COMMENTS**

Comments

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

## MSC\_ST\_UOM\_CLASS\_CONVERSIONS

The staging table used by the collection program to validate and process data for table MSC\_UOM\_CLASS\_CONVERSIONS.

**Table 2–65 MSC\_UOM\_CLASS\_CONVERSIONS**

Parameter	Usage	Type	Required	Derived	Optional
INVENTORY_ITEM_ID	IN	NUMBER	x		
FROM_UNIT_OF_MEASURE	IN	VARCHAR2(25)	x		
FROM_UOM_CODE	IN	VARCHAR2(3)	x		
FROM_UOM_CLASS	IN	VARCHAR2(10)	x		
TO_UNIT_OF_MEASURE	IN	VARCHAR2(25)	x		
TO_UOM_CODE	IN	VARCHAR2(3)	x		
TO_UOM_CLASS	IN	VARCHAR2(10)	x		
CONVERSION_RATE	IN	NUMBER	x		
DISABLE_DATE	IN	DATE			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

## INVENTORY\_ITEM\_ID

The inventory item for which the conversion factors between base units of measure

**FROM\_UNIT\_OF\_MEASURE**

Base unit of measure of the items base class

**FROM\_UOM\_CODE**

Base unit of measure short name for the items base class

**FROM\_UOM\_CLASS**

Base class of the item

**TO\_UNIT\_OF\_MEASURE**

Base unit of the class to which the conversion is defined

**TO\_UOM\_CODE**

Base unit short name of the class to which the conversion is defined

**TO\_UOM\_CLASS**

Class to which the conversion is defined

**CONVERSION\_RATE**

Conversion rate from the items class base unit to the “to” class base unit

**DISABLE\_DATE**

Date when the defined inter-class conversion can no longer be used

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

**MSC\_ST\_UOM\_CONVERSIONS**

The staging table used by the collection program to validate and process data for table MSC\_UOM\_CONVERSIONS.

**Table 2–66 MSC\_UOM\_CONVERSIONS**

Parameter	Usage	Type	Required	Derived	Optional
UNIT_OF_MEASURE	IN	VARCHAR2(25)	x		
UOM_CODE	IN	VARCHAR2(3)	x		
UOM_CLASS	IN	VARCHAR2(10)	x		
INVENTORY_ITEM_ID	IN	NUMBER	x		
CONVERSION_RATE	IN	NUMBER	x		

Table 2–66 MSC\_UOM\_CONVERSIONS

Parameter	Usage	Type	Required	Derived	Optional
DEFAULT_CONVERSION_FLAG	IN	VARCHAR2(1)	x		
DISABLE_DATE	IN	DATE			x
DELETED_FLAG	IN	NUMBER	x		
LAST_UPDATE_DATE	IN	DATE		x	
LAST_UPDATED_BY	IN	NUMBER		x	
CREATION_DATE	IN	DATE		x	
CREATED_BY	IN	NUMBER		x	
LAST_UPDATE_LOGIN	IN	NUMBER		x	
REQUEST_ID	IN	NUMBER		x	
PROGRAM_APPLICATION_ID	IN	NUMBER		x	
PROGRAM_ID	IN	NUMBER		x	
PROGRAM_UPDATE_DATE	IN	DATE		x	
SR_INSTANCE_ID	IN	NUMBER	x		
REFRESH_ID	IN	NUMBER			x

**UNIT\_OF\_MEASURE**

Primary unit of measure long name

**UOM\_CODE**

Unit of measure code

**UOM\_CLASS**

Destination class of conversion

**INVENTORY\_ITEM\_ID**

Inventory item identifier

**CONVERSION\_RATE**

Conversion rate from conversion unit to base unit of class

**DEFAULT\_CONVERSION\_FLAG**

Indicates whether the conversion factor applies for this item or it is defined as standard conversion factor

**DISABLE\_DATE**

Date when the conversion is no longer valid to be used in the system (transactions, etc.)

**DELETED\_FLAG**

Yes/No flag indicates whether corresponding record in ODS will be deleted

**LAST\_UPDATE\_DATE**

Standard Who column

**LAST\_UPDATED\_BY**

Standard Who column

**CREATION\_DATE**

Standard Who column

**CREATED\_BY**

Standard Who column

**LAST\_UPDATE\_LOGIN**

Standard Who column

**REQUEST\_ID**

Concurrent Who column

**PROGRAM\_APPLICATION\_ID**

Concurrent Who column

**PROGRAM\_ID**

Concurrent Who column

**PROGRAM\_UPDATE\_DATE**

Concurrent Who column

**SR\_INSTANCE\_ID**

Source application instance identifier

**REFRESH\_ID**

Refresh identifier

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## Bills of Material Business Object Interface

Topics covered in this chapter include:

- [Bill of Materials API Overview](#) on page 3-2
- [Bills of Material Entity Diagram](#) on page 3-3
- [Bill of Material Import Description](#) on page 3-6
- [Bill of Material Parameter Descriptions](#) on page 3-11
- [Bill of Material Package Interaction](#) on page 3-33
- [Bill of Material Import Error Handling and Messaging](#) on page 3-35
- [Bill of Material Export API](#) on page 3-45
- [Routing API Overview](#) on page 3-50
- [Routing Import Description](#) on page 3-55
- [Routing Parameter Descriptions](#) on page 3-60
- [Launching the Routing Import](#) on page 3-89
- [Routing Package Interaction](#) on page 3-94
- [Routing Import Error Handling and Messaging](#) on page 3-96

## Bill of Materials API Overview

The Bills of Material API enables you to import your Bills of Material information from a legacy or product data management (PDM) system into Oracle Bills of Material. When you import a bill of material, you can include revision information, bill comments, components, substitute component and reference designator information in a very user friendly manner without using cryptic ID's and system specific information. The Bills of Material API can process all types of bills. The Bills of Material Object Interface insure that your imported bills of material contain the same detail as those you enter manually in the Define Bill of Material form.

This document describes the basic business needs, major features, business object architecture and components for the Insert, Update and Delete features for the Bills of Material API.

### Features

- Creating, Updating, and Deleting Bills of Material Information.

The Bills of Material API enables you import your bills of material from external system into Oracle Bills of Material. You can update bills of material information to mimic the updates in the external system by identifying the bills of material record as an update. Similarly, when you wish to delete bill of material information, identify the record as a delete.

- Bills of Material Business Object Data Encapsulation

When you import bills of material from an external system you are not required to provide system specific information. The Bills of material API requires business specific data that is required to define a bill.

- Synchronous Processing of information within a Bill.

The Bills of Material API processes the information within a bill synchronously. Following the business hierarchy, it processes bill header information before components.

- Asynchronous Processing of Bills of Material

You can process multiple bills simultaneously.

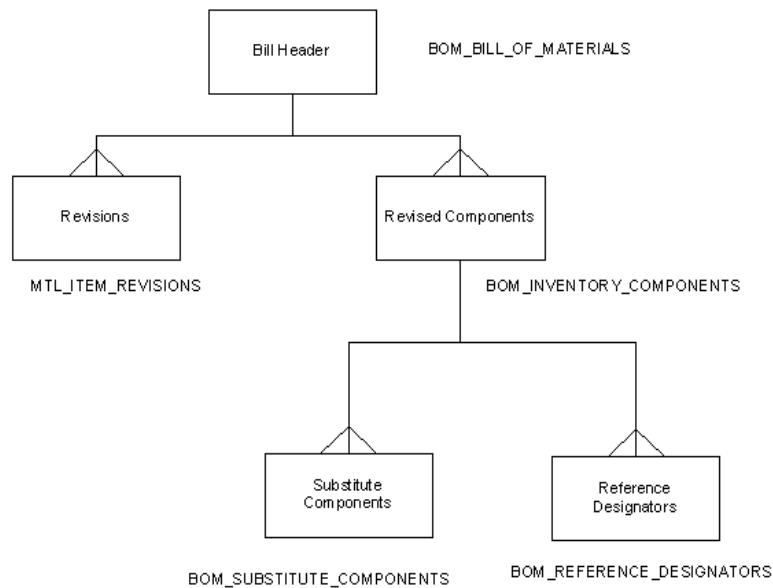
- Detailed and Translatable Error Messages

If your import fails, the Bills of Material Business API reports detailed and translatable error messages. The error message identifies the severity of the error and how it affects other records.

## Bills of Material Entity Diagram

The following diagram shows the table structure for the ECO business object along with all its entities:

**Figure 3–1 Entity Diagram**



### Bills of Material Business Object Architecture

The Bills of Material Business Object Architecture is based on the hierarchical definition of BOM of material in Oracle Bills of Material. To use the Bills of Material Business object interface you only need to know structure of your BOM. As in a genealogical tree, the entity at the top is the parent. The entities connected directly below are its children.

### Bills of Material Header

The BOM header entity is the topmost entity in the Bills of Material hierarchy. You can process more than one header record at a time. The header entity will contain

information such as the header item name, organization in which the item exists, alternate designator if bill is an alternate and the revision.

### Revisions

The revisions entity enables you to define any number of revisions for a header item. When you create or update a bill of material you can choose to create a new revision or modify an existing revision. You can also define different versions of a bills of material within the same revision. To identify a revision you must specify the organization in which exists, assembly item number and revision.

### Components

A component cannot exist without a header entity. To identify a component you must specify the header information such as the item number, organization, alternate designator (if you are adding the component to an alternate bill), effective date, item number, and operation sequence number.

### Substitute Component

A substitute component cannot exist without a component. To identify a substitute component, you must identify the following information: organization, assembly item number, effectivity date, alternate if the component belongs on an alternate bill, component item number, operation sequence number, and substitute component number.

### Reference Designator

A reference designator cannot exist without a component. To identify a reference designator, you must identify the following information: organization, assembly item number, effectivity date, alternate if the component belongs on an alternate bill, component item number, operation sequence number, and substitute component number.

### Production Tables

Each of the entities shown in the Bills of Material entity diagram maps to a corresponding table in the database. The following are the existing production tables that exist, and the information they store.

**Table 3–1 Production Tables**

<b>Production Table</b>	<b>Description</b>
BOM_BILLS_OF_MATERIAL	Stores information about the Bills of Material header item or the Assembly Item
MTL_ITEM_REVISIONS	Stores information about Bill of Materials revisions
BOM_INVENTORY_COMPONENTS	Stores information about the un-implemented single-level BOM components
BOM_REFERENCE_DESIGNATORS	Stores information about the un-implemented BOM component reference designators
BOM_SUBSTITUTE_COMPONENTS	Stores information about the un-implemented substitute components associated with a BOM component
BOM_EXPORT_TAB	Stores exploded bill information for the specified assembly for all subordinate organizations in a specified organization hierarchy.

### **Business Logic and Business Object Rules**

Business logic helps model the business. It includes all constraints and considerations that the business needs to maintain and process data successfully. This implies that certain rules must be imposed on incoming data (business objects) to ensure its validity within the context of the business.

## Bill of Material Import Description

**Table 3–2 Import Description**

Step	Purpose	Description	Error
<b>Step 1:</b> Pass Business Object to Public API	The program will try to import it	<p>Caller must pass one business object at a time.</p> <p>There should be only one Header record.</p> <p>There may be more than one record for other entities.</p>	-N/A-
<b>Step 2:</b> Check for Organization uniformity	We must ensure that all records in a business object belong to the same Organization.	<p>Derive Organization_Id from Organization_Code</p> <p>Store Organization_Id value in System_Information record.</p>	Severe Error I
<b>Step 3:</b> Save system information	Saves system-specific information in System_Information record since it is common to the whole business object. This information is stored in the database along with the record	<p>Initialize User_Id, Login_Id, Prog_Appid, Prog_Id in System_Information record.</p> <p>Pull in values of profiles ENG: Standard Item Access, ENG: Model Item Access and ENG: Planning Item Access into STD_Item_Access, MDL_Item_Access and PLN_Item_Access respectively.</p>	Quit import of business object
<b>Step 4:</b> Pick up highest level un-processed record	The import program processes a parent and all its direct and indirect children, before moving onto to a sibling. So, the highest level parent must be chosen.	<p>The highest level record with a {return status = NULL} is picked.</p> <p>When there are no more records, the program exits and transfers control to the caller.</p>	-N/A-
<b>Step 5:</b> Convert user-unique index to unique index	<p>Unique index helps uniquely identify a record in the database, and may consist of more than one column. User-unique index is a user-friendly equivalent of the unique index. It serves the following purposes:</p> <p>The user need not enter cryptic Ids</p> <p>If a user unique index could not be derived for a parent, it's entire lineage is error-ed out since members of the lineage are referencing an invalid parent.</p>	Derive unique index columns from user-unique index columns.	Severe Error III

**Table 3–2 Import Description**

<b>Step</b>	<b>Purpose</b>	<b>Description</b>	<b>Error</b>
<b>Step 6:</b> Existence Verification	The record being updated or deleted in the database must already exist. But a record being created must not. Such an error in a record must cause all children to error out, since they are referencing an invalid parent.	For CREATE, the record must not already exist. For UPDATE and DELETE, the record must exist.  Query up database record into the associated OLD record.	Severe Error III
<b>Step 7:</b> Check Lineage	We must ensure that the linkage of records is correct in the business object. That is, child records must reference valid parents. A valid parent is one that exists, and is truly the current record's parent in the database.	Perform lineage checks for entity records that do not belong to the top-most entity in the hierarchy, based on Transaction_Type and the following factors:  Immediate parent being referenced exists in the database, and, for UPDATE and DELETE, is truly the parent of this record in the database, OR  If there is no immediate parent record in the business object, the indirect parent being referenced exists and is really the parent of the current record's parent in the database.	Severe Error III
<b>Step 8(a):</b> Check operability of parent items and current item (if applicable)	A assembly item and any of it's components cannot be operated upon if the assembly item is implemented or canceled.	Check if System_Information record has this information. If not, find it in the database assembly item record, and set System_Information flags accordingly.	Fatal Error III or Fatal Error II (depending on affected entity)
<b>Step 8(b):</b> Check operability of parent items and current item (if applicable)	A assembly item and any of it's components cannot be operated upon if the user does not have access to the assembly item type.	Compare assembly item BOM_Item_Type against the assembly item access fields in the System_Information record.	Fatal Error III or Fatal Error II (depending on affected entity)
<b>Step 9:</b> Value-Id conversions	There are user-friendly value columns that derive certain Id columns. The value columns free up the user from having to enter cryptic Ids, since the Ids can be derived from them.	Derive Ids from user-friendly values	<u>CREATE:</u> Severe Error IV.  <u>Other:</u> Standard Error

**Table 3–2 Import Description**

Step	Purpose	Description	Error
<b>Step 10:</b> Required Fields checking	Some fields are required for an operation to be performed. Without them, the operation cannot go through. The user must enter values for these fields.	Check that the required field columns are not NULL.	<u>CREATE:</u> Severe Error IV.  <u>Other:</u> Standard Error
<b>Step 11:</b> Attribute validation (CREATEs and UPDATEs)	Each of the attributes/fields must be checked individually for validity. Examples of these checks are: range checks, checks against lookups etc.	Check that user-entered attributes are valid. Check each attribute independently of the others	<u>CREATE:</u> Severe Error IV.  <u>UPDATE:</u> Standard Error
<b>Step 12:</b> Populate NULL columns (UPDATEs and DELETEs)	The user may send in a record with certain values set to NULL. Values for all such columns are copied over from the OLD record. This feature enables the user to enter minimal information for the operation.	For all NULL columns found in business object record, copy over values from OLD record.	-N/A-
<b>Step 13:</b> Default values for NULL attributes (CREATEs)	For CREATEs, there is no OLD record. So the program must default in individual attribute values, independently of each other. This feature enables the user to enter minimal information for the operation to go through.	For all NULL columns found in business object record, try to default in values, either by retrieving them from the database, or by having the program assign values.	Severe Error IV
<b>Step 14:</b> Check conditionally required attributes	Some attributes are required based on certain external factors such as the Transaction_Type value.	Perform checks to confirm all conditionally required attributes are present.	Severe Error IV
<b>Step 15:</b> Entity level defaulting	Certain column values may depend on profile options, other columns in the same table, columns in other tables, etc. Defaulting for these columns happens here.	For all NULL columns in record, try to default in values based on other values.  Set all MISSING column values to NULL.	<u>CREATE:</u> Severe Error IV.  <u>UPDATE:</u> Standard Error

**Table 3–2 Import Description**

<b>Step</b>	<b>Purpose</b>	<b>Description</b>	<b>Error</b>
<b>Step 16:</b> Entity level validation	<p>This is where the whole record is checked. The following are checked:</p> <p>Non-updateable columns (UPDATES): Certain columns must not be changed by the user when updating the record.</p> <p>Cross-attribute checking: The validity of attributes may be checked, based on factors external to it.</p> <p>Business logic: The record must comply with business logic rules.</p>	Perform checks against record in the order specified in the -Purpose-column.	<p><u>CREATE:</u> Severe Error IV.</p> <p><u>UPDATE:</u> Standard Error</p>
<b>Step 17:</b> Database writes	Write record to database table.	<p>Perform database write:</p> <p>Insert record for CREATE</p> <p>Overwrite record for UPDATE and CANCEL</p> <p>Remove record for DELETE</p>	-N/A-
<b>Step 18:</b> Process direct and indirect children	The program will finish processing an entire branch before moving on to a sibling branch. A branch within the business object tree consists of all direct and indirect children.	<p>Pick up the first un-processed child record and Go to Step 5. Continue until all direct children have been processed.</p> <p>Then pick up the first un-processed indirect child record and do the same as above.</p> <p>When no more records are found, Go to Step 20.</p>	-N/A-
<b>Step 19:</b> Process siblings	When an entire branch of a record has been processed, the siblings of the current record are processed. The sibling may also contain a branch. So the processing for the sibling will be exactly the same as the current record.	<p>Pick up the first un-processed sibling record and Go to Step 5.</p> <p>Continue through the loop until all siblings have been processed.</p> <p>When no more records are found, Go to Step 21.</p>	-N/A-

**Table 3–2    *Import Description***

Step	Purpose	Description	Error
<b>Step 20:</b> Process parent record's siblings	Once all the siblings have been processed, the program will move up to the parent (of this entire branch) and process all of its siblings (which will contains branches of their own).	Go up to parent and pick up the first un-processed sibling of the parent. Go to Step 5.  Continue through the loop until all siblings have been processed.  When there are no more records, Go to Step 4.	-N/A-

# Bill of Material Parameter Descriptions

## Bills of Material Exposed Columns

**Table 3–3 Bill of Material Exposed Columns**

BOM Name	Type	Required	Derived	Optional
Assembly_Item_Name	VARCHAR2(81)	-	x	-
Organization_Code	VARCHAR2(3)	-	x	-
Alternate_BOM_Code	VARCHAR2(10)	-	x	-
Common_Assembly_Name	VARCHAR2(81)	-	-	X
Assembly_Type	NUMBER	-	-	x
Transaction_Type	VARCHAR2(30)	x	-	-
Original_System_Reference	VARCHAR2(50)	x	-	-
Return_Status	VARCHAR2(1)	-	x	-
Assembly_Type	NUMBER	-	-	x
Transaction_Type	VARCHAR2(30)	x	-	-
Attribute Category	VARCHAR2(30)	-	-	x
Attribute1	VARCHAR2(150)	-	-	x
Attribute2	VARCHAR2(150)	-	-	x
Attribute3	VARCHAR2(150)	-	-	x
Attribute4	VARCHAR2(150)	-	-	x
Attribute5	VARCHAR2(150)	-	-	x
Attribute6	VARCHAR2(150)	-	-	x
Attribute1	VARCHAR2(150)	-	-	x
Attribute7	VARCHAR2(150)	-	-	x
Attribute8	VARCHAR2(150)	-	-	x
Attribute9	VARCHAR2(150)	-	-	x

**Table 3–3 Bill of Material Exposed Columns**

BOM Name	Type	Required	Derived	Optional
Attribute10	VARCHAR2(150)	-	-	x
Attribute11	VARCHAR2(150)	-	-	x
Attribute12	VARCHAR2(150)	-	-	x
Attribute13	VARCHAR2(150)	-	-	x
Attribute14	VARCHAR2(150)	-	-	x
Attribute15	VARCHAR2(150)	-	-	x

### **Organization\_Code**

Organization Identifier.

Default Value: FND\_API.G\_MISS\_CHAR

### **Assembly\_Item\_Name**

Inventory item identifier of manufactured assembly.

Default Value: FND\_API.G\_MISS\_CHAR

### **Alternate\_Bom\_Designator**

Alternate designator code.

Default Value: FND\_API.G\_MISS\_CHAR

### **Change\_Description**

Change description.

Default Value: FND\_API.G\_MISS\_CHAR

### **Common\_Assembly\_Item\_Name**

Inventory item identifier of common assembly.

Default Value: FND\_API.G\_MISS\_CHAR

### **Common\_Organization\_Code**

Organization identifier of a common bill.

Default Value: FND\_API.G\_MISS\_CHAR

**Assembly\_Type**

Type of assembly.

1. Manufacturing Bill
2. Engineering Bill

Default Value: FND\_API.G\_MISS\_NUM

**Attribute\_Category**

Descriptive flexfield structure defining column.

Default Value: FND\_API.G\_MISS\_CHAR

**Attribute1-15**

Descriptive flexfield segment.

Default Value: FND\_API.G\_MISS\_CHAR

**Return\_Status**

Processing status of the API after it completes its function. Valid Values include:

Success: FND\_API.G\_MISS\_CHAR

Error: FND\_API.G\_RET\_STS\_ERROR

**Transaction\_Type**

Type of action: Create, Update, or delete.

Default Value: FND\_API.G\_MISS\_CHAR

**Original\_System\_Reference**

Legacy system from which the data for the current record has come.

Default Value: FND\_API.G\_MISS\_CHAR

## **Bills of Material Components Exposed Columns**

**Table 3–4 Bills of Material Components Exposed Columns**

<b>BOM Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
Organization_Code	VARCHAR2(3)	-	-	x
Assembly_Item_Name	VARCHAR2(81)	-	-	x
Alternate_Bom_Code	VARCHAR2(10)	-	-	x
Start_Effective_Date	DATE	-	-	x
Operation_Sequence_Number	NUMBER	-	-	x
Component_Item_Name	VARCHAR2(81)	-	-	x
Transaction_Type	VARCHAR2(30)	x	-	-
Organization_Code	VARCHAR2(3)	-	-	x
Assembly_Item_Name	VARCHAR2(81)	-	-	x
Disable_Date	DATE	-	-	x
New_Effectivity_Date	DATE	-	-	x
New_Operation_Sequence_Number	NUMBER	-	-	x
Item_Sequence_Number	NUMBER	-	-	x
Quantity_Per_Assembly	NUMBER	-	-	x
Planning_Percent	NUMBER	-	-	x
Projected_Yield	NUMBER	-	-	x
Include_In_Cost_Rollup	NUMBER	-	-	
WIP_Supply_Type	NUMBER	-	-	x
Supply_Subinventory	VARCHAR2(10)	-	-	x
Locator_Name	VARCHAR2(81)	-	-	x

**Table 3–4 Bills of Material Components Exposed Columns**

<b>BOM Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
SO_Basis	NUMBER	-	-	x
Optional	NUMBER	-	-	x
Mutally_Exclusive	NUMBER	-	-	x
Check_ATP	NUMBER	-	-	x
Minimum_Allowed_Quantity	NUMBER	-	-	x
Maximum_Allowed_Quantity	NUMBER	-	-	x
Attribute_Category	VARCHAR2(30)	-	-	x
Attribute1	VARCHAR2(150)	-	-	x
Attribute2	VARCHAR2(150)	-	-	x
Attribute3	VARCHAR2(150)	-	-	x
Attribute4	VARCHAR2(150)	-	-	x
Attribute5	VARCHAR2(150)	-	-	x
Attribute6	VARCHAR2(150)	-	-	x
Attribute7	VARCHAR2(150)	-	-	x
Attribute8	VARCHAR2(150)	-	-	x
Attribute9	VARCHAR2(150)	-	-	x
Attribute10	VARCHAR2(150)	-	-	x
Attribute12	VARCHAR2(150)	-	-	x
Attribute13	VARCHAR2(150)	-	-	x
Attribute14	VARCHAR2(150)	-	-	x
Attribute15	VARCHAR2(150)	-	-	x
From_End_Item_Unit_Number	VARCHAR2(30)	-	-	x
To_End_Item_Unit_Number	VARCHAR2(30)	-	-	x

**Organization\_Code**

Organization Identifier.

Default Value: FND\_API.G\_MISS\_CHAR

**Assembly\_Item\_Name**

Inventory item identifier of manufactured assembly.

Default Value: FND\_API.G\_MISS\_CHAR

**Start\_Effective\_Date**

Effective Date.

Default Value: FND\_API.G\_MISS\_DATE

**Disable\_Date**

Disable date.

Default Value: FND\_API.G\_MISS\_DATE

**Operation\_Sequence\_Number**

Routing Operation unique identifier.

Default Value: FND\_API.G\_MISS\_NUM

**Component\_Item\_Name**

Component Item identifier.

Default Value: FND\_API.G\_MISS\_CHAR

**Alternate\_BOM\_Code**

Alternate BOM designator code.

Default Value: FND\_API.G\_MISS\_CHAR

**New\_Effectivity\_Date**

New effective date.

Default Value: FND\_API.G\_MISS\_DATE

**New\_Operation\_Sequence\_Number**

New operation sequence number.

Default Value: FND\_API.G\_MISS\_NUM

**Item\_Sequence\_Number**

Item unique identifier.

Default Values: FND\_API.G\_MISS\_NUM

**Quantity\_Per\_Assembly**

Quantity per assembly.

FND\_API.G\_MISS\_NUM

**Planning\_Percent**

Planning percentage.

Default Value: FND\_API.G\_MISS\_NUM

**Projected\_Yield**

Projected yield for an operation.

Default Value: FND\_API.G\_MISS\_NUM

**Include\_In\_Cost\_Rollup**

Flag that indicates to include the material cost of a component in the standard cost of the assembly.

1. Yes
2. No

Default Value: FND\_API.G\_MISS\_NUM

**Wip\_Supply\_Type**

WIP supply type code.

Default Value: FND\_API.G\_MISS\_NUM

### **So\_Basis**

Quantity basis Oracle Order Management uses to determine how many units of a component to put on an order.

1. Yes
2. No

Default Value: FND\_API.G\_MISS\_NUM

### **Optional**

Flag indicating if a flag is optional in a bill.

1. Yes
2. No

Default Value: FND\_API.G\_MISS\_NUM

### **Mutually\_Exclusive**

Flag indicating if one or more children of a component can be picked when taking an order.

1. Yes
2. No

Default Value: FND\_API.G\_MISS\_NUM

### **Check\_Atp**

Flag indicating if ATP check is required.

1. Yes
2. No

Default Value: FND\_API.G\_MISS\_NUM

### **Shipping\_Allowed**

Flag indicating if a component may be shipped.

Default Value: FND\_API.G\_MISS\_NUM

**Required\_To\_Ship**

Flag indicating that you must include this component of a pick-to-order item in the first shipment of the pick to order item.

FND\_API.G\_MISS\_NUM

**Required\_For\_Revenue**

Flag that prevents invoicing for the pick-to-order item until you ship the component.

Default Value: FND\_API.G\_MISS\_NUM

**Include\_On\_Ship\_Docs**

Flag indicating if the component of the configure-to-order item should appear on Order Entry documents.

Default Value: FND\_API.G\_MISS\_NUM

**Quantity\_Related**

Identifier to indicate if this component has quantity related reference designators.

Default Value: FND\_API.G\_MISS\_NUM

**Supply\_Subinventory**

Supply subinventory.

Default Value: FND\_API.G\_MISS\_CHAR

**Location\_Name**

Supply Location Name.

Default Value: FND\_API.G\_MISS\_CHAR

**Minimum\_Allowed\_Quantity**

Minimum quantity allowed on an order.

Default Value:FND\_API.G\_MISS\_NUM

**Maximum\_Allowed\_Quantity**

Maximum quantity allowed for an order.

Default Value: FND\_API.G\_MISS\_NUM

### **Component\_Remarks**

Component Remarks.

Default Value: FND\_API.G\_MISS\_CHAR

### **Attribute\_Category**

Descriptive flexfield structure defining category

Default Value: FND\_API.G\_MISS\_CHAR

### **Attributes 1-15**

Descriptive Flexfield segments.

Default Value: FND\_API.G\_MISS\_CHAR

### **Return\_Status**

Processing status of the API after it completes its function. Valid values include:

Success: FND\_API.G\_MISS\_CHAR

Error: FND\_API.G\_RET\_STS\_ERROR

### **Transaction\_Type**

Type of action including create, update or delete.

Default Value: FND\_API.G\_MISS\_CHAR

### **Original\_System\_Reference**

Legacy system from which the data for the current record has come.

Default Value: FND\_API.G\_MISS\_CHAR

### **From\_End\_Item\_Unit\_Number**

From end item unit number.

Default Value: FND\_API.G\_MISS\_CHAR

### **To\_End\_Item\_Unit\_Number**

To end item unit number.

FND\_API.G\_MISS\_CHAR

## Item Revision Exposed Columns

**Table 3–5 Item Revision Exposed Columns**

Item Revision	Type	Required	Derived	Optional
Organization_Code	VARCHAR2(3)	-	-	x
Assembly_Item_Name	VARCHAR2(81)	-	-	x
Start_Effective_Date	VARCHAR2(3)	-	-	x
Revision	VARCHAR2(15)	-	-	x
Transaction_Type	VARCHAR2(30)	x	-	-
Revision_Comment	VARCHAR2(240)	-	-	x
Return_Status	VARCHAR2(1)	-	-	x
Attribute Category	VARCHAR2(30)	-	-	x
Attribute1	VARCHAR2(150)	-	-	x
Attribute2	VARCHAR2(150)	-	-	x
Attribute3	VARCHAR2(150)	-	-	x
Attribute4	VARCHAR2(150)	-	-	x
Attribute5	VARCHAR2(150)	-	-	x
Attribute6	VARCHAR2(150)	-	-	x
Attribute7	VARCHAR2(150)	-	-	x
Attribute8	VARCHAR2(150)	-	-	x
Attribute9	VARCHAR2(150)	-	-	x
Attribute10	VARCHAR2(150)	-	-	x
Attribute11	VARCHAR2(150)	-	-	x
Attribute12	VARCHAR2(150)	-	-	x
Attribute13	VARCHAR2(150)	-	-	x
Attribute14	VARCHAR2(150)	-	-	x
Attribute15	VARCHAR2(150)	-	-	x

**Organization\_Code**

Organization Identifier.

Default Value: FND\_API.G\_MISS\_CHAR

**Assembly\_Item\_Name**

Inventory item identifier for manufactured assembly.

Default Value: FND\_API.G\_MISS\_CHAR

**Start\_Effective\_Date**

Effective date.

Default Value: FND\_API.G\_MISS\_DATE

**Operation\_Sequence\_Number**

Routing operation unique identifier.

Default Value: FND\_API.G\_MISS\_NUM

**Component\_Item\_Name**

Component Item identifier.

Default Value: FND\_API.G\_MISS\_CHAR

**Alternate\_Bom\_Code**

Alternate designator code.

Default Value: FND\_API.G\_MISS\_CHAR

**Reference\_Designator\_Name**

Component reference designator.

Default Value: FND\_API.G\_MISS\_CHAR

**Ref\_Designator\_Comment**

Reference designator comment.

**Attribute\_Category**

Descriptive flexfield structure defining category.

Default Value: FND\_API.G\_MISS\_CHAR

**Attributes 1-15**

Descriptive Flexfield segments.

Default Value: FND\_API.G\_MISS\_CHAR

**New\_Reference\_Designator**

Updated value for the old reference designator.

Default Value: FND\_API.G\_MISS\_CHAR

**Return\_Status**

Processing status of the API after it completes its function. Valid Values include:

Success: FND\_API.G\_MISS\_CHAR

Error: FND\_API.G\_RET\_STS\_ERROR

**Transaction\_Type**

Type of action including create, update or delete.

Default Value: FND\_API.G\_MISS\_CHAR

**Original\_System\_Reference**

Legacy system from which the data for the current record has come.

Default Value: FND\_API.G\_MISS\_CHAR

**Substitute Component Exposed Columns**

*Table 3–6 Substitute Component Exposed Columns*

ISubstitute Component	Type	Required	Derived	Optional
Organization_Code	VARCHAR2(3)	-	-	x
Assembly_Item_ Name	VARCHAR2(81)	-	-	x
Start_Effective_Date	VARCHAR2(3)	-	-	x

**Table 3–6 Substitute Component Exposed Columns**

<b>ISubstitute Component</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
Operation_Sequence_Number	NUMBER	-	-	x
Alternate_BOM_Code	VARCHAR2(10)	-	-	x
Component_Item_Name	VARCHAR2(81)	-	-	x
Substitute_Component_Name	VARCHAR2(81)	-	-	x
Transaction_Type	VARCHAR2(30)	x	-	-
Substitute_Item_Quantity	Number	-	-	x
Return_Status	VARCHAR2(1)	-	-	x
Attribute Category	VARCHAR2(30)	-	-	x
Attribute1	VARCHAR2(150)	-	-	x
Attribute2	VARCHAR2(150)	-	-	x
Attribute3	Attribute3	-	-	x
Attribute4	VARCHAR2(150)	-	-	x
Attribute5	VARCHAR2(150)	-	-	x
Attribute6	VARCHAR2(150)	-	-	x
Attribute7	VARCHAR2(150)	-	-	x
Attribute8	VARCHAR2(150)	-	-	x
Attribute9	VARCHAR2(150)	-	-	x
Attribute10	VARCHAR2(150)	-	-	x
Attribute11	VARCHAR2(150)	-	-	x
Attribute12	VARCHAR2(150)	-	-	x
Attribute13	VARCHAR2(150)	-	-	x
Attribute14	VARCHAR2(150)	-	-	x
Attribute15	VARCHAR2(150)	-	-	x

**Organization\_Code**

Organization Identifier.

Default Value: FND\_API.G\_MISS\_CHAR

**Assembly\_Item\_Name**

Inventory item identifier for manufactured assembly.

Default Value: FND\_API.G\_MISS\_CHAR

**Start\_Effective\_Date**

Component Effective Date.

FND\_API.G\_MISS\_DATE

**Operation\_Sequence\_Number**

The Routing step in which you use the component.

FND\_API.G\_MISS\_NUM

**Component\_Item\_Name**

The Component Item Name.

FND\_API.G\_MISS\_CHAR

**Alternate\_BOM\_Code**

Alternate BOM identifier.

FND\_API.G\_MISS\_CHAR

**Substitute\_Component\_Name**

The name of the substitute component.

FND\_API.G\_MISS\_CHAR

**Substitute\_Item\_Quantity**

The usage quantity of the substitute component.

FND\_API.G\_MISS\_NUM

**Attribute\_Category**

Descriptive flexfield structure defining category.

Default Value: FND\_API.G\_MISS\_CHAR

**Attributes 1-15**

Descriptive flexfield segments.

Default Value: FND\_API.G\_MISS\_CHAR

**New\_Reference\_Designator**

Updated value for the old reference designator.

Default Value: FND\_API.G\_MISS\_CHAR

**Return\_Status**

Processing status of the API after it completes its function. Valid Values include:

Success: FND\_API.G\_MISS\_CHAR

Error: FND\_API.G\_RET\_STS\_ERROR

**Transaction\_Type**

Type of action including create, update or delete.

Default Value: FND\_API.G\_MISS\_CHAR

**Original\_System\_Reference**

Legacy system from which the data for the current item.

## Launching the Import

**The Three Step Rule:**

In order to use the business object APIs effectively, the user must follow the three step rule:

1. Initialize the system information.
2. Call the Public API.
3. Review all relevant information after the Public API has completed.

**Step1: Initialize the system information**

Each database table requires you to enter system information, such as who is trying to update the current record. You initialize certain variables to provide the information to the import. The program retrieves system information from these variables during operation. To initialize the variables, the you must call the following procedure:

```
FND_GLOBAL.apps_initialize
user_idIN NUMBER
resp_idIN NUMBER
resp_appl_idIN NUMBER
security_group_idIN NUMBER DEFAULT 0
```

**Pointers:**

1. This procedure initializes the global security context for each database session.
2. This initialization should be done when the session is established outside of a normal forms or concurrent program connection.
3. User\_id is the FND User Id of the person launching this program.
4. Resp id is the FND Responsibility Id the person is using.
5. Resp\_appl\_id is the Application Responsibility Id.
6. Security\_group\_id is the FND Security Group Id.

**Step2: Call the Public API**

You must call the public API programmatically, while sending in one record at a time. The Public API returns the processed record, the record status, and a count of all associated error and warning messages.

The procedure to call is Process\_Eco, and the following is its specification:

```
PROCEDURE Process_BOM
(p_api_version_number  IN NUMBER
, p_init_msg_list      IN VARCHAR2:= FND_API.G_FALSE
, x_return_status      OUT VARCHAR2
, x_msg_count          OUT NUMBER)
```

```

, x_msg_data          OUT VARCHAR2
, p_ECO_rec           IN Eco_Rec_Type:= G_MISS_ECO_REC
, p_assembly_item_tbl IN Revised_Item_Tbl_Type:=
G_MISS_REVISED_ITEM_TBL
, p_rev_component_tbl IN Rev_Component_Tbl_Type:=
G_MISS_REV_COMPONENT_TBL
, p_ref_designator_tbl IN Ref_Designator_Tbl_Type:=
G_MISS_REF_DESIGNATOR_TBL
, p_sub_component_tbl IN Sub_Component_Tbl_Type:=
G_MISS_SUB_COMPONENT_TBL
, x_assembly_item_tbl OUT Revised_Item_Tbl_Type
, x_rev_component_tbl OUT Rev_Component_Tbl_Type
, x_ref_designator_tbl OUT Ref_Designator_Tbl_Type
, x_sub_component_tbl OUT Sub_Component_Tbl_Type)

```

As is obvious from the above specification, all IN parameters begin with *p\_*. All OUT parameters begin with *x\_*. The following is a description of these parameters:

- **p\_api\_version\_number**: This parameter is required. It is used by the API to compare the version numbers of incoming calls to its current version number, and return an unexpected error if they are incompatible. See section 4.1 of the Business Object Coding Standards document for a detailed description of this parameter.
- **p\_init\_msg\_list**: This parameter, if set to TRUE, allows callers to request that the API do the initialization of the message list on their behalf. On the other hand, the caller may set this to FALSE (or accept the default value) in order to do the initialization itself by calling `Error_Handler.Initialize`.
- **p\_assembly\_item\_tbl, p\_rev\_component\_tbl, p\_ref\_designator\_tbl, p\_sub\_component\_tbl**: This is the set of data structures that represents the incoming business object. **p\_assembly\_item** is a record that holds the Bill of Materials header for a BOM. All the other data structures are PL/SQL tables of records that hold records for each of the other entities. All these data structures directly correspond to the entities shown in the BOM entity diagram.

Please note that any of these data structures may be sent in empty (set to NULL) to indicate that there are no instances of that entity in the business object being sent in.

- `x_assembly_item_tbl`, `x_rev_component_tbl`, `x_ref_designator_tbl`, `x_sub_component_tbl`: This is the set of data structures that represents the outgoing business object. These records essentially constitute the whole business object as it was sent in, except now it has all the changes that the import program made to it through all the steps in the Process Flow. These records can be committed, rolled back, or subjected to further processing by the caller. All these data structures directly correspond to the entities shown in the BOM entity diagram.
- `x_return_status`: This is a flag that indicates the state of the whole business object after the import. If there has been an error in a record, this status will indicate the fact that there has been an error in the business object. Similarly, if the business object import has been successful, this flag will carry a status to indicate that. The caller may look up this flag to choose an appropriate course of action (commit, rollback, or further processing by the caller). The following is a list of all the possible business object states:

**Table 3–7 Business Object States**

CODE	MEANING
'S'	Success
'E'	Error
'F'	Fatal Error
'U'	Unexpected Error

- `x_msg_count`: This holds the number of messages in the API message stack after the import. This parameter returns a 0 when there are no messages to return.
- `x_msg_data`: This returns a single message when the message count is 1. The purpose of this parameter is to save the caller the extra effort of retrieving a lone message from the message list. This parameter returns NULL when there is more than one message.

As mentioned above, the Public API must be called programmatically. The caller here may be a form, a shell, or some other API which serves to extend the functionality of the import program.

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---

**Note:** A record must have an error status of NULL for it to be processed. If it has any other value, it will not be picked up for processing. The user must remember to NULL out this field when sending in a record.

---

---

### **Step 3: Review all relevant information after the Public API has completed**

You must look up:

- All error status that the Public API returns, including, the overall business object error status, as well as the individual record statuses.
- All record attributes to see what change occurred after applying business logic to these records.
- All error and warning messages in the API message list.

You can access the API message list using the following procedures and functions in the Error\_Handler package:

1. Initializing the message list: The following procedure clears the message list and initializes all associated variables
2. PROCEDURE Initialize;
3. Go to the start of the list: The following procedure reset the message index to the start of the list so the user can start reading from the start of the list

PROCEDURE Reset;

4. Retrieving the entire message list: The following procedure will return the entire message list to the user

PROCEDURE Get\_Message\_List

(x\_message\_list OUT Eng\_Eco\_Pub.Error\_Tbl\_Type);

5. Retrieving messages by entity: One implementation of procedure Get\_Entity\_Message will return all messages pertaining to a particular entity (p\_entity\_id), denoted by the symbols ECO (ECO Header), RI (Revised Item), RC (Revised Component), SC (Substitute Component), RD (Reference Designator).

PROCEDURE Get\_Entity\_Message

(p\_entity\_id IN VARCHAR2

, x\_message\_list OUT Eng\_Eco\_Pub.Error\_Tbl\_Type

);

6. Retrieving a specific message: Another implementation of procedure `Get_Entity_Message` will return the message pertaining to a particular entity (`p_entity_id`), at a specific array index in that entity table. The entity is denoted by the symbols BH (BOM Header), RC (Revised Component), SC (Substitute Component), RD (Reference Designator). The entity index (`p_entity_index`) is the index in the entity array.

```
PROCEDURE Get_Entity_Message
(p_entity_id      IN VARCHAR2
, p_entity_index  IN NUMBER
, x_message_text  OUT VARCHAR2
);
```

7. Retrieving the current message: Procedure `Get_Message` will returns the message at the current message index and will advance the pointer to the next index. If the user tries to retrieve beyond the size of the message list, then the message index will be reset to the beginning of the list.

```
PROCEDURE Get_Message
(x_message_text  OUT VARCHAR2
, x_entity_index OUT NUMBER
, x_entity_id    OUT VARCHAR2
);
```

8. Deleting a specific message: Procedure `Delete_Message` enables the user to delete a specific message at a specified entity index (`p_entity_index`) within the PL/SQL table of a specified entity (`p_entity_id`). The entity is denoted by the symbols BH (Bills Header), RC (Revised Component), SC (Substitute Component), RD (Reference Designator). The entity index (`p_entity_index`) is the index in the entity array.

```
PROCEDURE Delete_Message
(p_entity_id      IN VARCHAR2
, p_entity_index  IN NUMBER);
```

9. Deleting all messages for a certain entity: Another implementation of procedure `Delete_Message` lets the user delete all messages for a particular entity (`p_entity_id`). The entity is denoted by the symbols BH (Bill Header), RC (Revised Component), SC (Substitute Component), RD (Reference Designator).

PROCEDURE Delete\_Message

(p\_entity\_id IN VARCHAR2);

10. Get a count of all messages: The following function returns the total number of messages currently in the message list

FUNCTION Get\_Message\_Count RETURN NUMBER;

11. Dumping the message list: The following message generates a dump of the message list using dbms\_output

PROCEDURE Dump\_Message\_List;

# Bill of Material Package Interaction

## The Public Package - BOM\_BO\_PUB

This packages allows only one business object through at a time. All records in a specific business object must belong to the business object. For example, the records associated with an engineering change order would make up an instance of the ECO business object. In this example all of the records in the ECO business object instance must reference the same engineering change order.

### Main Procedure: Process\_BOM

1. Set business object status to S.
2. Check that all records in the business object belong to the same Bill, i.e., all records must have the same Assembly Item Name and Organization\_Code combination.

Table 3–8 Failure, Errors, and Messages

Description	Cause of Failure	Error	Message
<p>If there is an Bill Header in the business object, check that all records have the same Assembly_item_name and Organization_Code values as the Header.</p> <p>If the business object does not have an Bill Header record, check that all records have the same Assembly_Item_Name and Organization_Code combination as the first highest level entity record picked up.</p>	Any records have mismatched Assembly_Item_Name and Organization_Code values	Severe Error I	<p>BOM_MUST_BE_IN_SAME_BOM:</p> <p>All records in a business object must belong to the same Bill of Material. That is, they must all have the same Assembly Name and organization. Please check your records for this.</p>

3. Derive Organization\_Id from Organization\_Code and copy this value into all business object records.

**Table 3–9    Errors and Messages**

Column	Description	Error	Message
Organization_Id	Derive using Organization_Code from table MTL_PARAMETERS	Severe Error I	BOM_ORG_INVALID: The Organization <org_id> you entered is invalid.

**Unexpected Error Other Message:**

BOM\_UNEXP\_ORG\_INVALID: This record was not processed since an unexpected error while performing a value to id conversion for organization code.

- 4. Pass business object into Private API if the business object status is still set to S. Also pass the Assembly Item Name and Organization\_Id to Private API, to identify this business object instance.
- 5. Accept processed business object and return status from Private API after the import, and pass it back to the calling program.

# Bill of Material Import Error Handling and Messaging

## Error Handling Concepts

Error handling depends on the severity of the error, the scope of the error, and how the error affects the lineage (child record error states). When an error occurs, records are marked so that erroneous records are not processed again.

### Error Severity Levels

Severity levels help distinguish between different types of errors since the import program behaves differently for each of these errors. The following is a list of the error severity levels recognized by the import program

**Table 3–10 Error Severity**

CODE	MEANING
'W'	Warning / Debug
'E'	Standard Error
'E'	Severe Error
'F'	Fatal Error
'U'	Unexpected error

### Error States

Error states serve two purposes:

- They convey to the user the exact type of error in the record.
- They help the import program identify the records that do not need to be processed

**Table 3–11 Code Meanings**

CODE	MEANING
'S'	Success
'E'	Error
'F'	Fatal Error
'U'	Unexpected Error

**Table 3–11 Code Meanings**

CODE	MEANING
'N'	Not Processed

## Error Scope

This indicates what the depth of the error is in the business object, that is, how many other records in the business object hierarchy the current error affects.

**Table 3–12 Error Scope**

CODE	MEANING
'R'	Error affects current 'R'ecord
'S'	Error affects all 'S'ibling and child records
'C'	Error affects 'C'hild records
'A'	Error affects 'A'll records in business object

## Child Error States

If an error in a record affects child records, the status of the child may vary based on the type of error. There are two error states that indicate how the child is affected:

**Table 3–13 Child Error States**

CODE	MEANING
'E'	Error
'N'	Not Processed

## Error Classes

There are three major classes that determine the severity of the problem.

Expected errors: These are errors the program specifically looks for in the business object, before committing it to the production tables.

1. Standard Error: This error causes only the current record to be error-ed out, but is not serious enough to affect any other records in the object. The current record status is set to E. For example: Bill of Material entry already exists.

2. Severe Error I: This error affects all records. All record statuses are set to E. This error is usually a organization uniformity error. All records must have the same organization code.
3. Severe Error II: This error affects all records that are children of this record's parent, when the parent is not in the business object. A characteristic of this record's parent caused the error, so all it's siblings and their children also get a record status of E. This error usually occurs when a lineage check fails.
4. Severe Error III: This error not only affects the current record but also its child records in the business object. The child record statuses are set to E. Please check your child records for errors as well as the current record. This error is usually a user-unique to unique index conversion error.
5. Severe Error IV: This error affects the current record and its child records since the program cannot properly process the child records. The child record statuses are set to N. This type of errors occur when there are errors on CREATEs.
6. Fatal Error I: These errors occur when it is not possible to perform any operation on the ECO. Such errors affect the entire business object. All record statuses are set to F. The following are situations that cause this error:
7. You do not have access to this Item Type.
8. Fatal Error II: This error affects all records that are children of this record's parent, when the parent is not in the business object. A characteristic of this record's parent caused the error, so all it's siblings and their children also get a record status of F. This usually occurs when the user tries to create, update, or delete a component of a assembly item that the user does not have access to.
9. Fatal Error III: These errors affects the current record and its children, since it is not possible to perform any operation on these records. The current record and all its child record statuses are set to F. The following situations cause this error:
  - You do not have access to the component item's BOM item type

## Unexpected errors

All errors that are not expected errors are unexpected errors. These are errors that the program is not specifically looking for, for example, the user somehow loses the database connection.

Warnings: These are messages for information only. The purpose of warnings is:

- 1. to warn the user of problems that may occur when the bill is used by other manufacturing applications. For example: WIP Supply Type must be Phantom.
- 2. to inform the user of any side-effects caused by user-entered data.

**Child record:**

All records carry the unique keys for all parents above them. A child record (of a particular parent) is one that holds the same values for the unique key columns as the parent record.

**Sibling record**

A sibling record (of the current record) is one that holds the same parent unique key column values as the current record. For example, a component record that holds the same parent assembly item unique key column values as the current component record, is a sibling of the current component record. Likewise, a reference designator record that holds the same parent component unique key column values as a substitute component is a sibling of the substitute component.

**Business Object Error Status**

This indicates the state of the whole business object after the import. As soon as the import program encounters an erroneous record, it sets the business object error status (also called return status) appropriately to convey this to the user. It is then up to the user to locate the offending record(s) using the individual record error statuses as indicated below. The caller may also use the business object return status to choose an appropriate course of action (commit, rollback, or further processing by the caller).

The following is a list of all the possible business object states:

**Table 3–14    *Business Object States***

CODE	MEANING
'S'	Success
'E'	Error
'F'	Fatal Error
'U'	Unexpected Error

## Record Error Status

This is the state of the record after the import (success or error). The error status is also referred to as return status or error state in this document. The error status helps locate erroneous records in a business object that has error-ed out. The following are important pointers about the record error status.

- Every record is assigned an error status by the import program. Hence, if a record has a NULL return status, it means that the import program has not gotten to it yet.
- The user must send in records with {return status = NULL}. The import program will not look at records that already have an error status value, since it assumes that a record with an error status value has already been looked at by the program.

The following shows how the error status, error scope, and child statuses relate together to constitute the different error classes for records:

**Table 3–15 Error Status, Scope, and Child Statuses**

Error	Status	Scope	Child Statuses
Warning	S: Success	R: Record Only	-N/A-
Standard Error	E: Error	R: Record Only	-N/A-
Severe Error I	E: Error	A: All Records	E: Error
Severe Error II	E: Error	S: Current, Sibling and Child Records	E: Error
Severe Error III	E: Error	C: Current and Child Record	E: Error
Severe Error IV	E: Error	C: Current and Child Records	N: Not Processed
Fatal Error I	F: Fatal Error	A: All Records	-N/A
Fatal Error II	F: Fatal Error	S: Current, Sibling and Child Records	-N/A
Fatal Error III	F: Fatal Error	C: Current and Child Record	-N/A
Unexpected Error	U: Unexpected Error	-N/A-	N: Not Processed

## API Messaging

**Error Message Table** All messages are logged in the Error Message Table. This is a PL/SQL table (array) of messages. Please see Accessing Messages in the Launching the Import section of this document on how to access these messages.

The following is a description of the API Message Table:

**Table 3–16 API Message Table**

Field	Type	Description
Business_Object_ID	VARCHAR2(3);	Error Handling API will be shared by ECO, BOM and RTG business objects. The default ID is ECO.
Message_Text	VARCHAR2(2000)	The actual message that the user sees. Please see below for format information.
Entity_Id	VARCHAR2(3)	The entity that this message belongs to. This may hold BO, ECO, REV, RI, RC, RD, or SC. BO - Business Object ECO Header REV - ECO Revisions RI - Revised Items RC - Revised Components RD - Reference Designators SC - Substitute Components BH- Bills of Material Header BC - Bills of Material Comments
Entity_Index	NUMBER	The index of the entity array this record belongs to.

## Message formats

Expected errors and warnings: The message text contains the translated and token substituted message text. Please note that the message text may contain tokens, some of which will identify the entity instances that this message is for. The following tokens identify the several entities:

Assembly Item: Assembly\_Item\_Name

Revised Component: Revised\_Component\_Number

Substitute Component: Substitute\_Component\_Number

Reference Designator: Reference\_Designator\_Name

Assembly Comment: Standard\_Remark\_Designator

Unexpected errors:

<Package Name> <Procedure/Function Name> <SQL Error Number>

<SQL Error Message Text>

## Other message

An Other Message is a message that is logged for all records that are affected by an error in a particular record. So if an error in a assembly item record will cause all it's children to error out, then the following will be logged:

For the Assembly item itself, the error message describing the problem.

For all records affected by the type of error that occurred in the assembly item, the other message. This message essentially mentions the following:

1. How the error has affected this record, that is, it has been errored out too, with a severe or fatal error status, or that it has not been processed.
2. Which record caused this record to be affected.
3. What process flow step in the offending record caused this record to be affected.
4. What transaction type in the offending record caused this record to be affected.

## Error Handler

The program performs all it's error handling and messaging through the Error Handler. It makes calls to the Error Handler when an error or warning needs to be issued. The following are the functions of the Error Handler:

- Log the error/warning messages sent to it.
- Set the return status of the record in error.
- Set the return status of other records affected by this error.

The following is the input that the Error Handler expects from the calling program:

**Table 3–17 Error Handling Input**

Input	Description
Business Object Identifier	Because the Error Handler will be shared by many business objects, the Business Object identifier will help identify the errors, especially when the same user executes the business object for BOM and ECO which share some of the entities.
Business Object Entity Records	Calling program must pass the whole business object as-is.
Message and Token List	List of messages generated for error in the current record. See below for description of this list.
Error Status	Status the record in error should be set to.
Error Level	Business Object hierarchy level that current record is an instance of. That is, the entity that the record in error belongs to.
Entity Array Index	Index of record in error in its encompassing entity array. Does not apply to ECO Header.
Error Scope	Indicates depth of error, that is, how many other records are affected by it.
Other Message and Token List	Message generated for the other affected records. See below for description.
Other Status	Status the other affected records should be set to.

The Message and Token List, and the Other Message and Token List are temporary arrays that the calling program maintains. They hold message-and-token records. The Error Handler must log these messages into the API Message List.

For expected errors and warnings, the translated message text is retrieved using the message name. Then, after any requested token translation is performed, the tokens are substituted into the translated message text, and the message is logged. For unexpected errors, the calling program itself sends a message text, so no message retrieval is needed. The message is logged after token translation and substitution is performed.

**Table 3–18 Messages**

Field	Description
Message Name	Name of the message used to retrieve the translated message text. NULL for unexpected errors.
Message Text	Message text for unexpected errors.
Token Name	Name of the token in the message.
Token Value	Value of the token in the message.
Translate	Should this token value be translated ?

Since each message may have more than one token, the Message and Token List has as many occurrences of the same message as there are tokens in it. The same applies to the Other Message and Token List, except that this list needs to carry only one message which is assigned to all other affected records. Since this lone message may have more than one token, there may be more than one occurrence of the message in the list.

Please note that the API Message List is not public and must be accessed through the Messaging API's provided to access the message list.

These are the message list API's that can be used to perform various operations on the Message List:

**Table 3–19 Message API**

Message API Name	Description
Initialize	This API will clear the message list.
Reset	This API will reset the message counter to the start of the message list.
Get_Message_List	This message list API will return a copy of the message list. It will be users responsibility to extract message from this copy.
Get_Entity_Message (IN p_entity_id, IN p_bo_identifier DEFAULT 'ECO' OUT x_message_list)	This API will return a list of messages for a requested entity and business object identifier.

**Table 3–19 Message API**

Message API Name	Description
Get_Entity_Message (IN p_entity_id, IN p_entity_index IN p_bo_identifier OUT x_message_text)	This API will return message from the index <sup>th</sup> position for an entity within a business object
Delete_Message (IN p_entity_id, IN p_bo_ identifier)	This API will delete all messages for a particular entity within a business object
Delete_Message (IN p_entity_ic, IN p_bo_ identifier, IN p_entity_index)	This API will delete message from the index the position for an entity within a business object
Get_Message (OUT x_entity_id, OUT x_entity_index OUT x_message_text OUT x_bo_identifier)	This API can be used within a loop to get one message at a time from the Message List. Every time the user does a get_message, a message counter will be incremented to the next message index.

## Bill of Material Export API

The Bill of Material Export API provides the ability to export bill of material data for a particular assembly, in all subordinate organizations in a specified organization hierarchy. The number of levels to which a BOM is exploded for a particular organization depends on the Max Bill Levels field setting in the Organization Parameters form. If this value is greater than or equal to the levels of the bill being exported, then that bill will be exploded to the lowest level.

You can insert bill of material information returned by the API in the custom table or some other storage mechanism. This API supports companies having large organization structures.

### Launching the Export

You need to call the API in the following way:

1. BOMPXINQ.EXPORT\_BOM

### INPUT Parameters

Profile\_id

Security Profile Id.

Org\_hierarchy\_name

The name of the organization hierarchy to which all subordinate organizations will receive the exported bill of material data.

Assembly\_item\_id

Must be the inventory\_item\_id of the bill, and must exist in the mtl\_system\_items table for that organization. This item must exist in all subordinate organizations under the hierarchy origin.

Organization\_id

Uniquely identifies a bill which will be exploded with the bill details in the bom\_export\_tab, PL/SQL table.

Alternate\_bom\_designator

The alternate bill defined for this primary bill. This can be passed as NULL or if there are no alternatives defined. It uniquely identifies a bill which will be exploded with the bill details in the bom\_export\_tab, PL/SQL table.

Costs

Pass parameter as 1, if cost details need to be exported. Pass the appropriate cost\_type\_id for that item and organization combination. If the parameter is passed as 2, then pass cost\_type\_id as having zero value. If this parameter is passed as NULL or, then it will take the default value of 2.

Cost\_type\_id

Pass the appropriate cost\_type\_id for that item and organization combination. This works in conjunction with the Costs parameter.

**OUTPUT Parameters**

bom\_export\_tab

PL/SQL table containing the exploded bill of material information. This information can be inserted into a custom table, written to a text file, or passed to host arrays (Oracle Call Interface.) Error\_Code should have a value of zero and Err\_Msg should be NULL, before inserting the data into a custom table.

Err\_Msg

Error Messages.

Error\_Code

Error Codes.

**Export Error Handling and Messaging**

The Bill of Material Export API may return the following values for error code:

**Table 3–20 Error Codes**

Error Code	Description
0	Successful.
9998	Bill exceeds the maximum number of levels defined for that organization. You need to reduce the number of levels of the bill, or increase the maximum number of levels allowed for a bill in that organization.
SQLCODE	Oracle database related errors.

If the error code equals a value other than zero, the contents of the output PL/SQL table (bom\_export\_tab) are deleted. Because the output is inserted into a PL/SQL

table instead of a database table, this API can be rerun multiple times without concerns regarding the committed data. After accessing this API, you should check the value of Error Code and Error Message before inserting the data from the PL/SQL table to custom tables.

PL/SQL Output Table (BOM\_EXPORT\_TAB) Columns

TOP\_BILL\_SEQUENCE\_ID  
BILL\_SEQUENCE\_ID  
COMMON\_BILL\_SEQUENCE\_ID  
ORGANIZATION\_ID  
COMPONENT\_SEQUENCE\_ID  
COMPONENT\_ITEM\_ID  
COMPONENT\_QUANTITY  
PLAN\_LEVEL  
EXTENDED\_QUANTITY  
SORT\_ORDER  
GROUP\_ID  
TOP\_ALTERNATE\_DESIGNATOR  
COMPONENT\_YIELD\_FACTOR  
TOP\_ITEM\_ID  
COMPONENT\_CODE  
INCLUDE\_IN\_ROLLUP\_FLAG  
LOOP\_FLAG  
PLANNING\_FACTOR  
OPERATION\_SEQ\_NUM  
BOM\_ITEM\_TYPE  
PARENT\_BOM\_ITEM\_TYPE  
ASSEMBLY\_ITEM\_ID  
WIP\_SUPPLY\_TYPE  
ITEM\_NUM  
EFFECTIVITY\_DATE

DISABLE\_DATE  
IMPLEMENTATION\_DATE  
OPTIONAL  
SUPPLY\_SUBINVENTORY  
SUPPLY\_LOCATOR\_ID  
COMPONENT\_REMARKS  
CHANGE\_NOTICE  
OPERATION\_LEAD\_TIME\_PERCENT  
MUTUALLY\_EXCLUSIVE\_OPTIONS  
CHECK\_ATP  
REQUIRED\_TO\_SHIP  
REQUIRED\_FOR\_REVENUE  
INCLUDE\_ON\_SHIP\_DOCS  
LOW\_QUANTITY  
HIGH\_QUANTITY  
SO\_BASIS  
OPERATION\_OFFSET  
CURRENT\_REVISION  
LOCATOR  
ATTRIBUTE1  
ATTRIBUTE2  
ATTRIBUTE3  
ATTRIBUTE4  
ATTRIBUTE5  
ATTRIBUTE6  
ATTRIBUTE7  
ATTRIBUTE8  
ATTRIBUTE9  
ATTRIBUTE10

ATTRIBUTE11

ATTRIBUTE12

ATTRIBUTE13

ATTRIBUTE14

ATTRIBUTE15

## Routing API Overview

The Routing API enables you to import routing information from a legacy system. You can create, update and delete routing information. You can automatically process routing data without inserting cryptic IDs or system specific information. It processes the information within a routing synchronously and stills you to process more than one routing simultaneously.

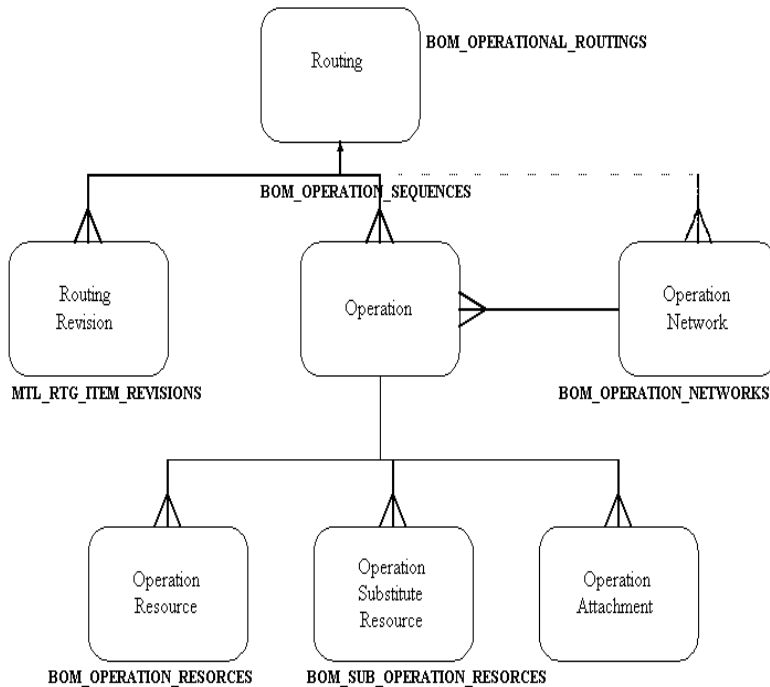
This section describes the basic business needs, major features, business object architecture and components for the routing API.

### Routing API Features

- **Creating, Updating, and Deleting Routing Information**  
Use the Routing API to create, update and delete a routing from a form and the external system. You can use the Routing API located in the Open Interface program to update or delete routing in the external system.
- **Routing Data Encapsulation.**  
When processing data, you do not have to provide system specific data. The Routing API requires only the business data needed to define the routing.
- **Synchronous Processing of Information within a Routing.**  
The Routing API processes the information within a routing synchronously. Following the business hierarchy, it processes operation sequences before operation resources.
- **Asynchronous Processing of Routing.s**  
You can process different Routing business objects simultaneously. You do not have to wait for one process to finish before starting the next.
- **Detailed and Translatable Error Messages.**  
Upon failure, the Routing API reports detailed and translatable error messages. The error messages identifies the severity and scope of the error as well as how other associated records are effected.

### Routing Entity Diagram

The following diagram shows the table structure to the Routing API along with the corresponding entities:

**Figure 3–2 Routing Entity Diagram**

## Routing Architecture

The Routing Business Object Architecture is based on the hierarchical definition of Routings and related sub-entities in Oracle Bill of Material. To use the Routing Business object interface, you only need to know the structure of your routing. As in a genealogical tree, the entity at the top is the parent. The entities connected directly below are its children.

## Routing Header

The routing header entity defines the basic routing scheme. There can only be one routing header per routing scheme. The routing header contains information about the time, unit of measure, alternate designator, and the revision. To identify a routing, specify the item, the alternate designator, and the organization.

### **Routing Revisions**

The revisions entity stores the routing revision information. To identify a routing revision specify the item and the organization.

### **Operation Sequence**

The operation sequence entity enables you to specify an operation sequence. To identify an operation sequence, you must specify the item, alternate designator, organization, operation type, operation effectivity date, and operation sequence number.

### **Operation Resource**

The operation resource entity enables you to add resources to an operation sequence. To identify an operation resource, specify the item, alternate designator, organization, operation type, operation sequence number, operation effectivity date, and resource sequence number.

### **Substitute Operation Resource**

The substitute operation resource entity cannot exist without an operation sequence and related operation resources. Use this entity to add a substitute resource to the operation sequence and operation resources that contain a substitute group number and scheduling sequence number. To identify a substitute operation resource, specify the item, alternate designator, organization operation sequence number, operation effectivity date, operation type, schedule sequence number, and substitute group number.

### **Operation Network**

The operation network entity cannot exist without an operation sequence.

### **The Routing API as it exists in the database**

Each of the entities shown in the Routing entity diagram maps to a corresponding table in the database. The following are the existing production tables.

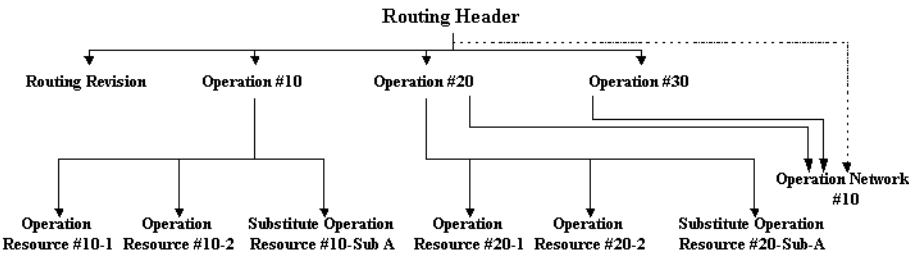
Table 3–21 Production Tables

Production Table	Description
BOM_OPERATIONAL_ROUTINGS	Stores information about manufacturing and engineering routing headers
MTL_RTG_ITEM_REVISIONS	Stores information revisions levels for routings.
BOM_OEPRATION_RESOURCES	Stores information about resources that you require to complete operations on routings.
BOM_OPERATION_SEQUENCES	Stores information about operation sequences.
BOM_SUB_OPERATION_RESOURCES	Stores information about substitute resources used in an operation
BOM_OPERATION_NETWORKS	Stores information about routing operation network.

API Traversal Strategy

The routing API articular is a hierarchy of entities. You can also view it as a tree with branches, where the routing header entity is the parent, and each of the branches are child nodes or entities. Each node in a branch is the parent of the child nodes under it. Here is an example:

Figure 3–3 API Traversal Strategy



The Routing API is a closely tied object. If you do not have access to an assembly item, then you do not have access to any entity records associated with that item. Certain assembly item characteristics and errors affect the children and possibly other assembly items and other API records. To avoid these problems, the program must traverse the tree in an efficient manner to achieve the following:

- Cut down the amount of required processing. Use specific facts established during process of other records. This saves the program from retrieving information again.

- Provide intelligent error handling. Sometimes an error in a parent record implies an error in all children attached to a parent. For example, if you are unable to create a routing header, you will not be able to create a revised operation for the routing.

# Routing Import Description

**Table 3–22 Routing Import Description**

Step	Purpose	Description	Error
<b>Step 1:</b> Pass Business Object to Public API	The program will try to import it	<p>Caller must pass one business object at a time.</p> <p>There should be only one Header record.</p> <p>There may be more than one record for other entities.</p>	-N/A-
<b>Step 2:</b> Check for Organization uniformity	We must ensure that all records in a business object belong to the same Organization.	<p>Set Business Object Identifier to 'RTG' in the system information.</p> <p>All records must have the same.</p> <p>Derive organization_id from Organization_Code</p> <p>Store organization_id value in System_Information record.</p>	Severe Error
<b>Step 3:</b> Save system information	Saves system-specific information in System_Information record since it is common to the whole business object. This information is stored in the database along with the record	<p>Initialize User_Id, Login_Id, Prog_Appid, Prog_Id in System_Information record.</p> <p>Pull in values of profiles profile BOM: Standard Item Access, BOM: Model Item Access into STD_Item_Access, MDL_Item_Access and OC_Item_Access respectively.</p> <p>Pull in values of Cfm_routing_flag into Flow_Routing_Flag and Lot_Based_Routing_Flag.</p>	Quit import of business object
<b>Step 4:</b> Pick up highest level un-processed record	The import program processes a parent and all its direct and indirect children, before moving onto to a sibling. So, the highest level parent must be chosen.	<p>The highest level record with a {return status = NULL} is picked.</p> <p>When there are no more records, the program exits and transfers control to the caller.</p>	-N/A-

**Table 3–22 Routing Import Description**

Step	Purpose	Description	Error
<b>Step 5:</b> Convert user-unique index to unique index	Unique index helps uniquely identify a record in the database, and may consist of more than one column. User-unique index is a user-friendly equivalent of the unique index. It serves the following purposes:	The user need not enter cryptic Ids  If a user unique index could not be derived for a parent, it's entire lineage is error-ed out since members of the lineage are referencing an invalid parent.  Derive unique index columns from user-unique index columns.	Severe Error III
<b>Step 6:</b> Existence Verification	The record being updated or deleted in the database must already exist. But a record being created must not. Such an error in a record must cause all children to error out, since they are referencing an invalid parent	For CREATE, the record must not already exist. For UPDATE and DELETE, the record must exist.  Query up database record into the associated OLD record.	Severe Error III
<b>Step 7:</b> Check Lineage	We must ensure that the linkage of records is correct in the business object. That is, child records must reference valid parents. A valid parent is one that exists, and is truly the current record's parent in the database.	Perform lineage checks for entity records that do not belong to the top-most entity in the hierarchy, based on Transaction_Type and the following factors:  Immediate parent being referenced exists in the database, and, for UPDATE and DELETE, is truly the parent of this record in the database, OR  If there is no immediate parent record in the business object, the indirect parent being referenced exists and is really the parent of the current record's parent in the database.	Severe Error III
<b>Step 8(a):</b> Check operability of parent items and current item (if applicable)	Routing and any of it's children (operation, resources etc.) cannot be operated upon if the assembly item is implemented or canceled.	Check if System_Information record has this information. If not, find it in the database assembly item record, and set System_Information flags accordingly.	Fatal Error III or Fatal Error II (depending on affected entity)

**Table 3–22 Routing Import Description**

Step	Purpose	Description	Error
<b>Step 8(b):</b> Check assembly item operability for Routing	Routing and any of it's children (operation, resources etc.) cannot be operated upon if the user does not have access to assembly item for routing.	Check item attribute if the user can create routing for the assembly item.  Check if System_Information record has this information. If not, find it in the database assembly item record, and set System_Information flags accordingly.  Check if System_Information record has this information. If not, find it in the database assembly item record, and set System_Information flags accordingly.	Fatal Error II
<b>Step 9:</b> Check flow routing and Lot based routing operability	If the routing is flow routing (Cfm_routing_flag = 1). Check Flow Manufacturing have been installed  If the routing is lot based routing (Cfm_routing_flag = 3). Check if the Organization is WSM Enabled	Check if System_Information record has this information. If not, find it in the database and set System_Information flag accordingly.	Fatal Error II
<b>Step 10:</b> Value-Id conversions	There are user-friendly value columns that derive certain Id columns. The value columns free up the user from having to enter cryptic Ids, since the Ids can be derived from them.	Derive Ids from user-friendly values.	CREATE: Severe Error IV.  Other: Standard Error
<b>Step 11:</b> Required Fields checking	Some fields are required for an operation to be performed. Without them, the operation cannot go through. The user must enter values for these fields.	Check that the required field columns are not NULL.	CREATE: Severe Error IV.  Other: Standard Error
<b>Step 12:</b> Attribute validation (CREATEs and UPDATEs)	Each of the attributes/fields must be checked individually for validity. Examples of these checks are: range checks and checks against lookups. .	Check that user-entered attributes are valid. Check each attribute independently of the others	CREATE: Severe Error IV.  UPDATE: Standard Error

**Table 3–22 Routing Import Description**

Step	Purpose	Description	Error
<b>Step 13:</b> Populate NULL column (UPDATES and Deletes)	The user may send in a record with certain values set to NULL. Values for all such columns are copied over from the OLD record. This feature enables the user to enter minimal information for the operation.	For all NULL columns found in business object record, copy over values from OLD record	-N/A-
<b>Step 14:</b> Default values for NULL attributes (CREATEs)	For CREATEs, there is no OLD record. So the program must default in individual attribute values, independently of each other. This feature enables you to enter minimal information for the operation to proceed.	For all NULL columns found in business object record, try to default in values, either by retrieving them from the database, or by having the program assign values.	Severe Error IV
<b>Step 15:</b> Check conditionally required attributes	Some attributes are required based on certain external factors such as the Transaction_Type value.	Perform checks to confirm all conditionally required attributes are present.	Severe Error IV
<b>Step 16:</b> Entity level defaulting	Certain column values may depend on profile options, other columns in the same table, columns in other tables, etc. Defaulting for these columns happens here.	For all NULL columns in record, try to default in values based on other values.  Set all MISSING column values to NULL.	CREATE: Severe Error IV.  UPDATE: Standard Error
<b>Step 17:</b> Entity level validation	This is where the whole record is checked. The following are checked:  Non-updateable columns (UPDATES): Certain columns must not be changed by the user when updating the record.  Cross-attribute checking: The validity of attributes may be checked, based on factors external to it  Business logic: The record must comply with business logic rules	Perform checks against record in the order specified in the -Purpose-column.	CREATE: Severe Error IV. UPDATE: Standard Error

**Table 3–22 Routing Import Description**

<b>Step</b>	<b>Purpose</b>	<b>Description</b>	<b>Error</b>
<b>Step 18:</b> Database writes	Write record to database table.	Perform database write:  Insert record for CREATE Overwrite record for UPDATE and CANCEL.	-N/A-
<b>Step 19:</b> Process direct and indirect children	The program will finish processing an entire branch before moving on to a sibling branch. A branch within the business object tree consists of all direct and indirect children.	Pick up the first un-processed child record and Go to Step 5. Continue until all direct children have been processed.  Then pick up the first un-processed indirect child record and do the same as above.  When no more records are found, Go to Step 20.	-N/A-
<b>Step 20:</b> Process siblings	When an entire branch of a record has been processed, the siblings of the current record are processed. The sibling may also contain a branch. So the processing for the sibling will be exactly the same as the current record.	Pick up the first un-processed sibling record and Go to Step 5.  When no more records are found, Go to Step 21.	-N/A-
<b>Step 21:</b> Process parent record's siblings	Once all the siblings have been processed, the program moves up to the parent (of this entire branch) and processes all of its siblings (which contain branches of their own).	Go up to parents and pick up the first un-processed sibling of the parent. Go to Step 5.  Continue through the loop until all siblings have been processed. When there are no more records, Go to Step 4.	

## Routing Parameter Descriptions

### Routing Headers Exposed Columns

The following table describes all parameters the BOM\_OPERATIONAL\_ROUTINGS table uses. Additional information on these parameters follows.

**Table 3–23 Reference Designator Exposed Columns**

IRouting Header Name	Type	Required	Derived	Optional
Assembly_Item_Name	VARCHAR2(81)	x	-	-
Organization_Code	VARCHAR2(3)	x	-	-
Alternate_Routing_Code	VARCHAR2(10)	-	-	x
Eng_Routing_Flag	NUMBER	x	-	-
Common_Assembly_Item_Name	VARCHAR2(81)	-	X	-
Routing_Comment	VARCHAR2(240)	-	-	x
Completion_Subinventory	VARCHAR2(10)	-	-	x
Completion_Location_Name	VARCHAR2(81)	-	-	x
Line_Code	VARCHAR2(10)	-	-	x
CFM_Routing_Flag	NUMBER	-	-	x
Mixed_Model_Map_Flag	NUMBER	-	-	x
Total_Cycle_Time	NUMBER	-	-	x
Priority	NUMBER	-	-	x
CTP_Flag	NUMBER	-	-	x
Attribute_Category	VARCHAR2(30)	-	-	x
Attribute1	VARCHAR2(150)	-	-	x
Attribute2	VARCHAR2(150)	-	-	x
Attribute3	VARCHAR2(150)	-	-	x

**Table 3–23 Reference Designator Exposed Columns**

<b>IRouting Header Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
Attribute4	VARCHAR2(150)	-	-	x
Attribute5	VARCHAR2(150)	-	-	x
Attribute6	VARCHAR2(150)	-	-	x
Attribute7	VARCHAR2(150)	-	-	x
Attribute8	VARCHAR2(150)	-	-	x
Attribute9	VARCHAR2(150)	-	-	x
Attribute10	VARCHAR2(150)	-	-	x
Attribute11	VARCHAR2(150)	-	-	x
Attribute12	VARCHAR2(150)	-	-	x
Attribute13	VARCHAR2(150)	-	-	x
Attribute14	VARCHAR2(150)	-	-	x
Attribute15	VARCHAR2(150)	-	-	x
Transaction_Type	VARCHAR2(30)	x	-	-
Return_Status	VARCHAR2(1)	-	-	x
Original_System_Reference	VARCHAR2(50)	-	-	x
Delete_Group_Name	VARCHAR2(10)	-	-	x
DG_Description	VARCHAR2(240)	-	-	x

**Assembly\_Item\_Name**

Inventory item name of a manufactured assembly.

Default Value: FND\_API.G\_MISS\_CHAR

**Organization\_Code**

Identifies the organization

Default Value: FND\_API.G\_MISS\_CHAR

### **Alternate\_Routing\_Code**

Alternate routing designator code

Default Value: FND\_API.G\_MISS\_CHAR

### **Eng\_Routing\_Flag**

The rule that sets the routing as a manufacturing item or an engineering item. Valid values are as follows:

1. MFG Routing
2. Eng Routing)

Default= FND\_API.G\_MISS\_NUM

### **Common\_Assembly\_Item\_Name**

Inventory item identifier of a common assembly. The default is derived from the common\_assembly\_item\_name.

Default= FND\_API.G\_MISS\_CHAR

### **Routing\_Comment**

Common about Routing.

Default Value: FND\_API.G\_MISS\_CHAR

### **Completion\_Subinventory**

Destination subinventory for assembly

Default Value: FND\_API.G\_MISS\_CHAR

### **Completion\_Location\_Name**

Destination location for an assembly

Default Value: FND\_API.G\_MISS\_CHAR

### **Line\_Code**

Name of the WIP line

Default Value: FND\_API.G\_MISS\_CHAR

**CFM\_Routing\_Flag**

Continuous flow, or traditional routing

Default Value: FND\_API.G\_MISS\_NUM

**Mixed\_Model\_Map\_Flag**

You use this routing in mixed model map calculation. Valid values are as follows:

1. Yes
2. No)

Default Value: FND\_API.G\_MISS\_NUM

**Priority**

This parameter is for informational use.

Default Value: FND\_API.G\_MISS\_NUM

**Total\_Cycle\_Time**

Total time an assembly takes along the primary path in the operation network calculated by Flow Manufacturing.

Default Value= FND\_API.G\_MISS\_NUM

**CTP\_Flag**

Flag that indicates capacity must be checked when item is ordered

Default Value: FND\_API.G\_MISS\_NUM

**Attribute\_category**

The category of the flexfield described in the attribute column

Default Value: FND\_API.G\_MISS\_CHAR

**Attribute 1-15**

Descriptive text for flexfields.

Default Value: FND\_API.G\_MISS\_CHAR

**Original\_System\_Reference**

Legacy system from which the data for the current record has come.

Default Value: FND\_API.G\_MISS\_CHAR

**Transaction\_Type**

Type of action including create, update or delete.

Default Value: FND\_API.G\_MISS\_CHAR

**Return\_Status**

Processing status of the API after it completes its function. Valid Values include:

Success: FND\_API.G\_MISS\_CHAR

Error: FND\_API.G\_RET\_STS\_ERROR

**Delete\_Group\_Name**

Delete group name of the entity type you are deleting

Default Value: FND\_API.G\_MISS\_CHAR

**DG\_Description**

Description of the group you are deleting.

Default Value: FND\_API.G\_MISS\_CHAR

**Routing Revision Exposed Columns**

The following table describes all the parameters the MTL\_RTG\_ITEM\_REVISIONS table.

**Table 3–24    Routing Revision Exposed Columns**

IRouting Revision Name	Type	Required	Derived	Optional
Assembly_Item_Name	VARCHAR2(81)	x	-	-
Organization_Code	VARCHAR2(3)	x	-	-
Revision	VARCHAR2(3)	x	-	-
Start_Effective_Date	DATE	-	-	x
Attribute_Category	ARCHAR2(30)	-	-	x
Attribute1	VARCHAR2(150)	-	-	x

**Table 3–24 Routing Revision Exposed Columns**

<b>IRouting Revision Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
Attribute2	VARCHAR2(150)	-	-	x
Attribute3	VARCHAR2(150)	-	-	x
Attribute4	VARCHAR2(150)	-	-	x
Attribute5	VARCHAR2(150)	-	-	x
Attribute6	VARCHAR2(150)	-	-	x
Attribute7	VARCHAR2(150)	-	-	x
Attribute8	VARCHAR2(150)	-	-	x
Attribute9	VARCHAR2(150)	-	-	x
Attribute10	VARCHAR2(150)	-	-	x
Attribute11	VARCHAR2(150)	-	-	x
Attribute12	VARCHAR2(150)	-	-	x
Attribute13	VARCHAR2(150)	-	-	x
Attribute14	ARCHAR2(150)	-	-	x
Attribute15	VARCHAR2(150)	-	-	x
Transaction_Type-	VARCHAR2(30)	x	-	-
Return_Status-	VARCHAR2(1)	-	-	x
Original_System_Reference	VARCHAR2(50)	-	-	x

**Assembly\_Item\_Name**

Inventory item name of a manufactured assembly.

Default Value: FND\_API.G\_MISS\_CHAR

**Organization\_Code**

Identifies the organization

Default Value: FND\_API.G\_MISS\_CHAR

**Alternate\_Routing\_Code**

Alternate routing designator code

Default Value: FND\_API.G\_MISS\_CHAR

**Revision**

Routing Revision

Default Value: FND\_API.G\_MISS\_CHAR

**Start\_Effective\_Date**

Effective Date.

Default Value: FND\_API.G\_MISS\_DATE

**Attribute\_category**

The category of the flexfield described in the attribute column

Default Value: FND\_API.G\_MISS\_CHAR

**Attribute 1-15**

Descriptive text for flexfields.

Default Value: FND\_API.G\_MISS\_CHAR

**Original\_System\_Reference**

Legacy system from which the data for the current record has come.

Default Value: FND\_API.G\_MISS\_CHAR

**Transaction\_Type**

Type of action including create, update or delete.

Default Value: FND\_API.G\_MISS\_CHAR

**Return\_Status**

Processing status of the API after it completes its function. Valid Values include:

Success: FND\_API.G\_MISS\_CHAR

Error: FND\_API.G\_RET\_STS\_ERROR

## Operation Sequence Exposed Columns

The following table describes all the parameters the BOM\_OPERATION\_SEQUENCES table.

**Table 3–25 Operation Sequence Exposed Columns**

Operation Sequence Name	Type	Required	Derived	Optional
Assembly_Item_Name	VARCHAR2(81)	x	-	-
Organization_Code	VARCHAR2(3)	x	-	-
Alternate_Routing_Code	VARCHAR2(10)	-	-	x
Operation_Sequence_Number	NUMBER	x	-	-
Operation_Type	NUMBER	x	-	-
Start_Effective_Date	DATE	-	-	x
New_Operation_Sequence_Number	NUMBER	-	-	x
New_Start_Effective_Date	DATE	-	-	x
Standard_Operation_Code	NUMBER	x	-	-
Department_Code	NUMBER	-	x	-
Op_Lead_Time_Percent	NUMBER	-	-	x
Minimum_Transfer_Quantity	NUMBER	-	-	x
Count_Point_Type	NUMBER	-	-	x
Operation_Description	VARCHAR2(240)	-	-	x
Disable_Date	DATE	-	-	x
Backflush_Flag	NUMBER	-	-	x
Option_Dependent_Flag	NUMBER	-	-	x

**Table 3–25 Operation Sequence Exposed Columns**

<b>IOperation Sequence Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
Reference_Flag	NUMBER	-	-	x
Process_Seq_Number	NUMBER	-	-	x
Process_Code	VARCHAR2(4)	-	-	x
Line_Op_Code	VARCHAR2(4)	-	-	x
Yield	NUMBER	-	-	x
Cumulative_Yield	NUMBER	-	-	x
Reverse_CUM_Yield	NUMBER	-	-	x
User_Labor_Time	NUMBER	-	-	x
User_Machine_Time	NUMBER	-	-	x
Net_Planning_Percent	NUMBER	-	x	-
Include_In_Rollup	NUMBER	-	-	x
Op_Yield_Enabled_Flag	NUMBER	-	-	x
Attribute_Category	VARCHAR2(30)	-	-	x
Attribute1	VARCHAR2(150)	-	-	x
Attribute2	VARCHAR2(150)	-	-	x
Attribute3	VARCHAR2(150)	-	-	x
Attribute4	VARCHAR2(150)	-	-	x
Attribute5	VARCHAR2(150)	-	-	x
Attribute6	VARCHAR2(150)	-	-	x
Attribute7	VARCHAR2(150)	-	-	x
Attribute8	VARCHAR2(150)	-	-	x
Attribute9	VARCHAR2(150)	-	-	x
Attribute10	VARCHAR2(150)	-	-	x
Attribute11	VARCHAR2(150)	-	-	x
Attribute12	VARCHAR2(150)	-	-	x

**Table 3–25 Operation Sequence Exposed Columns**

<b>Operation Sequence Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
Attribute13	VARCHAR2(150)	-	-	x
Attribute14	VARCHAR2(150)	-	-	x
Attribute15	VARCHAR2(150)	-	-	x
Transaction_Type	VARCHAR2(30))	x	-	-
Return_Status	VARCHAR2(1)	-	-	x

**Assembly\_Item\_Name**

Inventory item name of a manufactured assembly.

Default Value: FND\_API.G\_MISS\_CHAR

**Organization\_Code**

Identifies the organization.

Default Value: FND\_API.G\_MISS\_CHAR

**Alternate\_Routing\_Code**

Alternate routing designator code.

Default Value: FND\_API.G\_MISS\_CHAR

**Operation\_Sequence\_Number**

Routing operation unique identifier

Default Value: FND\_API.G\_MISS\_NUM

**Operation\_Type**

A process, a line operation, or an event.

Default Value: FND\_API.G\_MISS\_NUM

**Start\_Effective\_Date**

Default Value: FND\_API.G\_MISS\_DATE

**New\_Operation\_Sequence\_Number**

Added to facilitate updates because it is part of the primary key.

Default Value: FND\_API.G\_MISS\_NUM

**New\_Start\_Effective\_Date**

Added to facilitate updates because it is part of the primary key.

FND\_API.G\_MISS\_DATE

**Standard\_Operation\_Code**

Standard operation unique identifier

Default Value: FND\_API.G\_MISS\_CHAR

**Department\_Code**

Department Code.

Default Value: FND\_API.G\_MISS\_CHAR

**Op\_Lead\_Time\_Percent**

Indicates the amount of overlapping lead time the child operation with the parent operation.

Default Value: FND\_API.G\_MISS\_NUM

**Minimum\_Transfer\_Quantity**

Minimum operation transfer quantity.

Default Value: FND\_API.G\_MISS\_NUM

**Count\_Point\_Type**

Operation Move Type

FND\_API.G\_MISS\_NUM

**Operation\_Description**

Description of the operation

FND\_API.G\_MISS\_CHAR

**Disable\_Date**

Date the operation is no longer effective. Effectivity lasts until the end of the disable date.

Default Value: FND\_API.G\_MISS\_DATE

**Backflush\_Flag**

Indicates if an operations requires Backflush\_Flag.

Default Value: FND\_API.G\_MISS\_NUM

**Option\_Dependent\_Flag**

Indicates if to sue this operation in all configuration routings, even if no components of the configuration are used in this operation.

Default Value: FND\_API.G\_MISS\_NUM

**Reference\_Flag**

If the Standard operation is references or copied then the operation cannot be updated.

Default Value: FND\_API.G\_MISS\_NUM

**Process\_Seq\_Number**

Operation sequence identifier of parent process. This applies only to events.

Default Value: FND\_API.G\_MISS\_NUM

**Process\_Code**

Process code.

Default Value: FND\_API.G\_MISS\_CHAR

**Line\_Op\_Seq\_Number**

Operation sequence identifier of the parent line operation. This applies only to events.

Default Value: FND\_API.G\_MISS\_NUM

**Line\_Op\_Code**

Line Operation code.

FND\_API.G\_MISS\_CHAR

**Yield**

Process yield at this operation.

Default Value: FND\_API.G\_MISS\_NUM

**Cumulative\_Yield**

Cumulative process yield from beginning of routing to this operation.

Default Value: FND\_API.G\_MISS\_NUM

**Reverse\_CUM\_Yield**

Cumulative process yield from end of routing to comparable operation.

Default Value: FND\_API.G\_MISS\_NUM

**User\_Labor\_Time**

User calculated run time attributable to labor.

Default Value: FND\_API.G\_MISS\_NUM

**User\_Machine\_Time**

User calculated run time attributable to machines.

Default Value: FND\_API.G\_MISS\_NUM

**Net\_Planning\_Percent**

Cumulative planning percent derived from the operation network.

Default Value: FND\_API.G\_MISS\_NUM

**Include\_In\_Rollup**

Indicates if the operation yield is considered in cost rollup.

Default Value: FND\_API.G\_MISS\_NUM

**Op\_Yield\_Enabled\_Flag**

Indicates if operation yield is considered during costing.

Default Value: FND\_API.G\_MISS\_NUM

**Attribute\_category**

The category of the flexfield described in the attribute column.  
Default Value: FND\_API.G\_MISS\_CHAR

**Attribute 1-15**

Descriptive text for flexfields.  
Default Value: FND\_API.G\_MISS\_CHAR

**Original\_System\_Reference**

Legacy system from which the data for the current record has come.  
Default Value: FND\_API.G\_MISS\_CHAR

**Transaction\_Type**

Type of action including create, update or delete.  
Default Value: FND\_API.G\_MISS\_CHAR

**Return\_Status**

Processing status of the API after it completes its function. Valid values include:  
Success: FND\_API.G\_MISS\_CHAR  
Error: FND\_API.G\_RET\_STS\_ERROR

**Delete\_Group\_Name**

Delete group name of the entity type you are deleting.  
Default Value: FND\_API.G\_MISS\_CHAR

**DG\_Description**

Description of the group you are deleting.  
Default Value: FND\_API.G\_MISS\_CHA

**Operation Resources Exposed Columns**

The following table describes all the parameters the BOM\_OPERATION\_RESOURCES table.

**Table 3–26 Operation Resource Exposed Columns**

Operation Resource Name	Type	Required	Derived	Optional
Assembly_Item_Name	VARCHAR2(81)	x	-	-
Organization_Code	VARCHAR2(3)	x	-	-
Alternate_Routing_Code	VARCHAR2(10)	-	-	-
Operation_Sequence_Number	NUMBER	-	-	x
Operation_Type	NUMBER	x	-	-
Op_Start_Effective_Date	DATE	x	-	-
Resource_Sequence_Number	NUMBER	x	-	-
Resource_Code	VARCHAR2(10)	-	-	x
Activity	VARCHAR2(10)	-	x	-
Standard_Rate_Flag	NUMBER	-	x	-
Assigned_Units	NUMBER	-	x	-
Usage_Rate_Or_amount	NUMBER	-	-	x
Usage_Rate_Or_Amount_Inverse	NUMBER	-	-	x
Basis_Type	NUMBER	-	x	-
Schedule_Flag	NUMBER	-	x	-
Resource_Offset_Percent	NUMBER	-	-	x
Autocharge_Type	NUMBER	-	x	-
Schedule_Sequence_Number	NUMBER	-	-	x
Principle_Flag	NUMBER	-	-	x
Setup_Type	VARCHAR2(30)	-	-	x

**Table 3–26 Operation Resource Exposed Columns**

<b>Operation Resource Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
Attribute_Category	VARCHAR2(30)	-	-	x
Attribute1	VARCHAR2(150)	-	-	x
Attribute2	VARCHAR2(150)	-	-	x
Attribute3	VARCHAR2(150)	-	-	x
Attribute4	VARCHAR2(150)	-	-	x
Attribute5	VARCHAR2(150)	-	-	x
Attribute6	VARCHAR2(150)	-	-	x
Attribute7	VARCHAR2(150)	-	-	x
Attribute8	VARCHAR2(150)	-	-	x
Attribute9	VARCHAR2(150)	-	-	x
Attribute10	VARCHAR2(150)	-	-	x
Attribute11	VARCHAR2(150)	-	-	x
Attribute12	VARCHAR2(150)	-	-	x
Attribute13	VARCHAR2(150)	-	-	x
Attribute14	VARCHAR2(150)	-	-	x
Attribute15	VARCHAR2(150)	-	-	x
Transaction_Type	VARCHAR2(30)	x	-	-
Return_Status	VARCHAR2(1)	-	-	x
Original_System_Reference	VARCHAR2(50)	-	-	x

**Assembly\_Item\_Name**

Inventory item name of a manufactured assembly.

Default Value: FND\_API.G\_MISS\_CHAR

**Organization\_Code**

Identifies the organization.

Default Value: FND\_API.G\_MISS\_CHAR

**Alternate\_Routing\_Code**

Itinerant routing designator code.

Default Value: FND\_API.G\_MISS\_CHAR

**Operation\_Sequence\_Number**

Routing operation unique identifier

Default Value: FND\_API.G\_MISS\_NUM

**Operation\_Type**

A process, a line operation, or an event.

Default Value: FND\_API.G\_MISS\_NUM

**Start\_Effective\_Date**

Default Value: FND\_API.G\_MISS\_DATE

**New\_Operation\_Sequence\_Number**

Added to facilitate updates because it is part of the primary key.

Default Value: FND\_API.G\_MISS\_NUM

**New\_Start\_Effective\_Date**

Added to facilitate updates because it is part of the primary key.

FND\_API.G\_MISS\_DATE

**Standard\_Operation\_Code**

Standard operation unique identifier.

Default Value: FND\_API.G\_MISS\_CHAR

**Department\_Code**

Department Code.

Default Value: FND\_API.G\_MISS\_CHAR

**Op\_Lead\_Time\_Percent**

Indicates the amount of overlapping lead time the child operation with the parent operation.

Default Value: FND\_API.G\_MISS\_NUM

### **Minimum\_Transfer\_Quantity**

Minimum operation transfer quantity.

Default Value: FND\_API.G\_MISS\_NUM

### **Count\_Point\_Type**

Operation Move Type.

FND\_API.G\_MISS\_NUM

### **Operation\_Description**

Description of the operation.

FND\_API.G\_MISS\_CHAR

### **Disable\_Date**

Date the operation is no longer effective. Effectivity lasts until the end of the disable date.

Default Value: FND\_API.G\_MISS\_DATE

### **Backflush\_Flag**

Indicates if an operations requires Backflush\_Flag.

Default Value: FND\_API.G\_MISS\_NUM

### **Option\_Dependent\_Flag**

Indicates if to sue this operation in all configuration routings, even if no components of the configuration are used in this operation.

Default Value: FND\_API.G\_MISS\_NUM

### **Reference\_Flag**

If the Standard operation is references or copied then the operation cannot be updated.

Default Value: FND\_API.G\_MISS\_NUM

### **Process\_Seq\_Number**

Operation sequence identifier of parent process. This applies only to events.

Default Value: FND\_API.G\_MISS\_NUM

### **Process\_Code**

Process Code.

Default Value: FND\_API.G\_MISS\_CHAR

### **Line\_Op\_Seq\_Number**

Operation sequence identifier of the parent line operation. This applies only to events.

Default Value: FND\_API.G\_MISS\_NUM

### **Line\_Op\_Code**

Line operation code.

FND\_API.G\_MISS\_CHAR

### **Yield**

Process yield at this operation.

Default Value: FND\_API.G\_MISS\_NUM

### **Cumulative\_Yield**

Cumulative process yield from beginning of routing to this operation.

Default Value: FND\_API.G\_MISS\_NUM

### **Reverse\_CUM\_Yield**

Cumulative processes yield from end of routing to comparable operation.

Default Value: FND\_API.G\_MISS\_NUM

### **User\_Labor\_Time**

User calculated run time attributable to labor.

Default Value: FND\_API.G\_MISS\_NUM

**User\_Machine\_Time**

User calculated run time attributable to machines.

Default Value: FND\_API.G\_MISS\_NUM

**Net\_Planning\_Percent**

Cumulative planning percent derived from the operation network.

Default Value: FND\_API.G\_MISS\_NUM

**Include\_In\_Rollup**

Indicates if the operation yield is considered in cost rollup.

Default Value: FND\_API.G\_MISS\_NUM

**Op\_Yield\_Enabled\_Flag**

Indicates if operation yield is considered during costing.

Default Value: FND\_API.G\_MISS\_NUM

**Attribute\_category**

The category of the flexfield described in the attribute column.

Default Value: FND\_API.G\_MISS\_CHAR

**Attribute 1-15**

Descriptive text for flexfields.

Default Value: FND\_API.G\_MISS\_CHAR

**Original\_System\_Reference**

Legacy system from which the data for the current record has come.

Default Value: FND\_API.G\_MISS\_CHAR

**Transaction\_Type**

Type of action including create, update or delete.

Default Value: FND\_API.G\_MISS\_CHAR

**Return\_Status**

Processing status of the API after it completes its function. Valid values include:

Success: FND\_API.G\_MISS\_CHAR

Error: FND\_API.G\_RET\_STS\_ERROR

**Delete\_Group\_Name**

Delete group name of the entity type you are deleting.

Default Value: FND\_API.G\_MISS\_CHAR

**DG\_Description**

Description of the group you are deleting.

Default Value: FND\_API.G\_MISS\_CHA INDEX BY BINARY\_INTEGER

**Substitute Operation Resources Exposed Columns**

The following table describes all the parameters the BOM\_SUB\_OPERATION\_RESOURCES table.

*Table 3–27 Substitute Operation Resources Exposed Columns*

Substitute Operation Resource Name	Type	Required	Derived	Optional
Assembly_Item_ Name	VARCHAR2(81)	x	-	-
Organization_Code	VARCHAR2(3)	x	-	-
Alternate_Routing_ Code	VARCHAR2(10)	-	-	x
Operation_ Sequence_Number	NUMBER	x	-	-
Operation_Type	NUMBER	x	-	-
Op_Start_Effective_ Date	DATE	x	-	-
Sub_Resource_Code	VARCHAR2(10)	x	-	-
New_Sub_Resource_ Code	VARCHAR2(10)	-	-	x

**Table 3–27 Substitute Operation Resources Exposed Columns**

<b>Substitute Operation Resource</b>				
<b>Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
Schedule_Sequence_Number	NUMBER	x	-	-
Replacement_Group_Number	NUMBER	x	-	-
Activity	VARCHAR2(10)	-	x	-
Standard_Rate_Flag	NUMBER	-	x	-
Assigned_Units	NUMBER	-	x	-
Usage_Rate_Or_amount	NUMBER	-	-	x
Usage_Rate_Or_Amount_Inverse	NUMBER	-	-	x
Basis_Type	NUMBER	-	x	-
Schedule_Flag	NUMBER	-	x	-
Resource_Offset_Percent	NUMBER	-	-	x
Autocharge_Type	NUMBER	-	x	-
Principle_Flag	NUMBER	-	-	x
Setup_Type	VARCHAR2(30)	-	-	x
Attribute_Category	VARCHAR2(30)	-	-	x
Attribute1	VARCHAR2(150)	-	-	x
Attribute2	VARCHAR2(150)	-	-	x
Attribute3	VARCHAR2(150)	-	-	x
Attribute4	VARCHAR2(150)	-	-	x
Attribute5	VARCHAR2(150)	-	-	x
Attribute6	VARCHAR2(150)	-	-	x
Attribute7	VARCHAR2(150)	-	-	x
Attribute8	VARCHAR2(150)	-	-	x
Attribute9	VARCHAR2(150)	-	-	x
Attribute10	VARCHAR2(150)	-	-	x

**Table 3–27   Substitute Operation Resources Exposed Columns**

Substitute Operation Resource Name	Type	Required	Derived	Optional
Attribute11	VARCHAR2(150)	-	-	x
Attribute12	VARCHAR2(150)	-	-	x
Attribute13	VARCHAR2(150)	-	-	x
Attribute14	VARCHAR2(150)	-	-	x
Attribute15	VARCHAR2(150)	-	-	x
Transaction_Type	VARCHAR2(30)	-	-	x
Return_Status	VARCHAR2(1)	-	-	x

**Assembly\_Item\_Name**

Inventory item name of a manufactured assembly.

Default Value: FND\_API.G\_MISS\_CHAR

**Organization\_Code**

Identifies the organization.

Default Value: FND\_API.G\_MISS\_CHAR

**Alternate\_Routing\_Code**

Itinerant routing designator code.

Default Value: FND\_API.G\_MISS\_CHAR

**Operation\_Sequence\_Number**

Routing operation unique identifier

Default Value: FND\_API.G\_MISS\_NUM

**Operation\_Type**

A process, a line operation, or an event.

Default Value: FND\_API.G\_MISS\_NUM

**Op\_Start\_Effective\_Date**

Default Value:FND\_API.G\_MISS\_DATE

### **Sub\_Resource\_Code**

Substitute resource identifier.

Default Value: FND\_API.G\_MISS\_CHAR

### **New\_Sub\_Resource\_Code**

Default Value: FND\_API.G\_MISS\_CHAR

### **Schedule\_Sequence\_Number**

Scheduling Sequence Number

Default Value: FND\_API.G\_MISS\_NUM

### **Replacement\_Group\_Number**

Substitute Group Number

Default Value: FND\_API.G\_MISS\_NUM

### **Activity**

Activity identifier

Default Value FND\_API.G\_MISS\_CHAR

### **Standard\_Rate\_Flag**

Use standard rate for shopfloor transactions

Default Value FND\_API.G\_MISS\_NUM

### **Assigned\_Units**

Resource units assigned

Default Value: FND\_API.G\_MISS\_NUM

### **Usage\_Rate\_Or\_Amount**

Resource usage rate.

Default Value: FND\_API.G\_MISS\_NUM

**Usage\_Rate\_Or\_Amount\_Inverse**

Resource usage rate inverse.

Default Value: FND\_API.G\_MISS\_NUM

**Basis\_Type**

Basis type identifier.

Default Value: FND\_API.G\_MISS\_NUM

**Schedule\_Flag**

Default Value: FND\_API.G\_MISS\_NUM

**Resource\_Offset\_Percent**

Resource offset percent from the start of the routing.

Default Value: FND\_API.G\_MISS\_NUM

**Autocharge\_Type**

Default Value: FND\_API.G\_MISS\_NUM

**Principle\_Flag**

Principle Flag

Default Value: FND\_API.G\_MISS\_NUM

**Attribute\_Category**

The category of the flexfield described in the attribute column

Default Value: FND\_API.G\_MISS\_CHAR

**Attribute 1-15**

Descriptive text for flexfields.

Default Value: FND\_API.G\_MISS\_CHAR

**Setup\_Type**

Setup ID.

Default Value:

**Original\_System\_Reference**

Legacy system from which the data from the current record has come.

**Transaction\_Type**

Type of action including create, update or delete.

Default Value: FND\_API.G\_MISS\_CHAR

**Return\_Status**

Processing status of the API after it completes its function. Valid Values include:

Success: FND\_API.G\_MISS\_CHAR

Error: FND\_API.G\_RET\_STS\_ERROR

**Operation Networks Exposed Columns**

The following table describes all the parameters the BOM\_OPERATION\_NETWORKS table.

**Table 3–28** *Operation Networks Exposed Columns*

Operation Networks Name	Type	Required	Derived	Optional
Assembly_Item_Name	VARCHAR2(81)	x	-	-
Organization_Code	VARCHAR2(3)	x	-	-
Alternate_Routing_Code	VARCHAR2(10)	-	-	x
Operation_Type	NUMBER	-	-	x
From_Op_Seq_Number	NUMBER	x	-	-
From_Start_Effective_Date	DATE	-	-	x
To_Op_Seq_Number	NUMBER	x	-	-
To_Start_Effective_Date	DATE	-	-	x
Connection_Type	NUMBER	-	-	x

**Table 3–28    OPeration Networks Exposed Columns**

<b>Operation Networks Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
Planning_Percent	NUMBER	-	-	x
Attribute_Category	VARCHAR2(30)	-	-	x
Attribute1	VARCHAR2(150)	-	-	x
Attribute2	VARCHAR2(150)	-	-	x
Attribute3	VARCHAR2(150)	-	-	x
Attribute4	VARCHAR2(150)	-	-	x
Attribute5	VARCHAR2(150)	-	-	x
Attribute6	VARCHAR2(150)	-	-	x
Attribute8	VARCHAR2(150)	-	-	x
Attribute9	VARCHAR2(150)	-	-	x
Attribute10	VARCHAR2(150)	-	-	x
Attribute11	VARCHAR2(150)	-	-	x
Attribute12	VARCHAR2(150)	-	-	x
Attribute13	VARCHAR2(150)	-	-	x
Attribute14	VARCHAR2(150)	-	-	x
Attribute15	VARCHAR2(150)	-	-	x
Transaction_Type	VARCHAR2(30)	x	-	-
Return_Status	VARCHAR2(1)	-	-	x
Original_System_Reference	VARCHAR2(50)	-	-	x

**Assembly\_Item\_Name**

Inventory item name of a manufactured assembly.

Default Value: FND\_API.G\_MISS\_CHAR

**Organization\_Code**

Identifies the organization.

Default Value: FND\_API.G\_MISS\_CHAR

**Alternate\_Routing\_Code**

Alternate routing designator code.

Default Value: FND\_API.G\_MISS\_CHAR

**Operation\_Type**

A process, a line operation, or an event

Default Value: FND\_API.G\_MISS\_NUM

**From\_Op\_Seq\_Number**

From routing operation identifier

FND\_API.G\_MISS\_NUM

**From\_Start\_Effective\_Date**

TBD

Default Value: FND\_API.G\_MISS\_DATE

**To\_Op\_Seq\_Number**

To routing operation identifier

Default Value: FND\_API.G\_MISS\_NUM

**To\_Start\_Effective\_Date**

TBD

Default Value: FND\_API.G\_MISS\_DATE

**Connection\_Type**

Primary, Alternate or Rework connection

Default Value: FND\_API.G\_MISS\_NUM

**Planning\_Percent**

Planning Percentage

Default Value: FND\_API.G\_MISS\_NUM

**Attribute\_Category**

The category of the flexfield described in the attribute column

Default Value: FND\_API.G\_MISS\_CHAR

**Attribute 1-15**

Descriptive text for flexfields.

Default Value: FND\_API.G\_MISS\_CHAR

**Return Status**

processing status of the API after it complete its function. Valid Values include:

Success: FND\_API.G\_MISS\_CHAR

Error: FND\_API.G\_RET\_STS\_ERROR

**Original\_System\_Reference**

Legacy system from which the data from the current record has come.

**Transaction\_Type**

Type of action including create, update or delete.

# Launching the Routing Import

## Three Step Rule

You must follow the three step rule to use the Routing API effectively. The following section describes the steps in detail.

1. Initialize the system information.
2. Call the Public API.
3. Review all relevant information after the Public API completes.

## Step 1: Initialize the System Information

Each database table the programs writes to requires system information. You initialize specific variables to provide this information to the import program. The program retrieves system information from these variables during operation. Use the following procedure to initialize the variables:

```
FND_BLGOAL.apps_initialize
(user_IDIN NUMBER
,resp_idIN NUMBER
,resp_appl_idIN NUMBER]
,security_group_idINNUMBER)
```

Pointers

1. This procedure initializes the global security context for each database session.
2. This initialization should be done when the session is established outside of a noraml forms or concurrent program connection.
3. User\_id is the FND User ID of the person launching the program.
4. Resp\_id is the FND Responsibility Id.
5. Resp\_appl\_id is the application Responsibility ID.
6. Security\_group is the FND Security Group ID.

## Step 2: Call the Public API

The Public API is your interface to the Import program. You must call the API programmatically, while sending in one business object at a time. The Public API

returns the process business object, the business object status, and a count of all associated err and warning messages. The procedure to call the API is as follows:

```
PROCEDURE Process_Rtg
(p_bo_identifier      IN VARCHAR2:= 'RTG'
, p_api_version_number  IN NUMBER:= 1.0
, p_init_msg_list      IN BOOLEAN:= FALSE
, p_rtg_header_rec     IN Bom_Rtg_Pub.Rtg_Header_Rec_Type
                      :=Bom_Rtg_Pub.G_MISS_RTG_HEADER_REC
, p_rtg_revision_tbl   IN Bom_Rtg_Pub.Rtg_Revision_Tbl_Type
                      :=Bom_Rtg_Pub.G_MISS_RTG_REVISION_TBL
, p_operation_tbl      IN Bom_Rtg_Pub.Operation_Tbl_Type
                      := Bom_Rtg_Pub.G_MISS_OPERATION_TBL
, p_op_resource_tbl    IN Bom_Rtg_Pub.Op_Resource_Tbl_Type
                      := Bom_Rtg_Pub.G_MISS_OP_RESOURCE_TBL
, p_sub_resource_tbl   IN Bom_Rtg_Pub.Sub_Resource_Tbl_Type
                      := Bom_Rtg_Pub.G_MISS_SUB_RESOURCE_TBL
, p_op_network_tbl     IN Bom_Rtg_Pub.Op_Network_Tbl_Type
                      := Bom_Rtg_Pub.G_MISS_OP_NETWORK_TBL
, x_rtg_header_rec     OUT Bom_Rtg_Pub.Rtg_Header_Rec_Type
, x_rtg_revision_tbl   OUT Bom_Rtg_Pub.Rtg_Revision_Tbl_Type
, x_operation_tbl      OUT Bom_Rtg_Pub.Operation_Tbl_Type
, x_op_resource_tbl    OUT Bom_Rtg_Pub.Op_Resource_Tbl_Type
, x_sub_resource_tbl   OUT Bom_Rtg_Pub.Sub_Resource_Tbl_Type
, x_op_network_tbl     OUT Bom_Rtg_Pub.Op_Network_Tbl_Type
, x_return_status      OUT VARCHAR2
, x_msg_count          OUT NUMBER
, p_debug              IN VARCHAR2:= 'N'
, p_output_dir         IN VARCHAR2:= NULL
, p_debug_filename     IN VARCHAR2:= 'RTG_BO_debug.log'
```

As is obvious from the above specification, all IN parameters begin with *p\_*. All OUT parameters begin with *x\_*. The following is a description of these parameters:

- *p\_api\_version\_number*: It is used by the API to compare the version numbers of incoming calls to its current version number, and return an unexpected error if they are incompatible. See section 4.1 of the Business Object Coding Standards document for a detailed description of this parameter.
- *p\_init\_msg\_list*: This parameter, if set to TRUE, allows callers to request that the API do the initialization of the message list on their behalf. On the other hand, the caller may set this to FALSE (or accept the default value) in order to do the initialization itself by calling `FND_MSG_PUB.Initialize`.
- *p\_rtg\_header\_rec*, *p\_rtg\_revision\_tbl*, *p\_operation\_tbl*, *p\_op\_resource\_tbl*, *p\_sub\_resource\_tbl*, *p\_op\_network\_tbl*: This is the set of data structures that represents the incoming business object. *p\_rtg\_header\_rec* is a record that holds the Routing header for the Routing. All the other data structures are PL/SQL tables of records that hold records for each of the other entities. All these data structures directly correspond to the entities shown in the Routing entity diagram.

Please note that any of these data structures may be sent in empty (set to NULL) to indicate that there are no instances of that entity in the business object being sent in.

- *x\_rtg\_header\_rec*, *x\_rtg\_revision\_tbl*, *x\_operation\_tbl*, *x\_op\_resource\_tbl*, *x\_sub\_resource\_tbl*, *x\_op\_network\_tbl*: This is the set of data structures that represents the outgoing business object. These records essentially constitute the whole business object as it was sent in, except now it has all the changes that the import program made to it through all the steps in the Process Flow. These records can be committed, rolled back, or subjected to further processing by the caller. *x\_rtg\_header\_rec* is a record that holds the Routing header for the Routing. All the other data structures are PL/SQL tables of records that hold records for each of the other entities. All these data structures directly correspond to the entities shown in the Routing entity diagram.
- *x\_return\_status*: This is a flag that indicates the state of the whole business object after the import. If there has been an error in a record, this status will indicate the fact that there has been an error in the business object. Similarly, if the business object import has been successful, this flag will carry a status to indicate that. The caller may look up this flag to choose an appropriate course of action (commit, rollback, or further processing by the caller).

- `x_msg_count`: This holds the number of messages in the API message stack after the import. This parameter returns a 0 when there are no messages to return.
- `x_msg_data`: This returns a single message when the message count is 1. The purpose of this parameter is to save the caller the extra effort of retrieving a lone message from the message list. This parameter returns NULL when there is more than one message.

As mentioned above, the Public API must be called programmatically. The caller here may be a form, a shell, or some other API which serves to extend the functionality of the import program. Please see the Sample Shell section in the Appendix for a complete listing of the shell that was written to test the import program. This shell illustrates the correct usage of the import program.

---

**Note:** A record must have an error status of NULL for it to be processed. If it has any other value, it will not be picked up for processing. The user must remember to NULL out this field when sending in a record.

---

### **Step 3: Review all relevant information after the Public API has completed**

You must look up the following

- all error status that the Public API returns, including, the overall business object error status, as well as the individual record statuses.
- all record attributes to see what changes occurred after applying business logic to these records.
- all error and warning messages in the API message list.

The user can access the API message list using the following procedures and functions in the `Error_Handler` package:

#### **Resetting Messages:**

The following commands allow you to reset messages

- PROCEDURE Initialize
- PROCEDURE Reset;

### Retrieving Messages:

The following commands enable you to retrieve messages

- PROCEDURE Get\_Message\_List  
(x\_message\_list OUT Error\_Handler.Error\_Tbl\_Type);
- PROCEDURE Get\_Entity\_Message  
(p\_entity\_id IN VARCHAR2  
, x\_message\_list OUT Error\_Handler.Error\_Tbl\_Type);
- PROCEDURE Get\_Entity\_Message  
(p\_entity\_id IN VARCHAR2  
p\_entity\_index IN NUMBER  
, x\_message\_text OUT VARCHAR2);
- PROCEDURE Get\_Message  
(x\_message\_text OUT VARCHAR2  
, x\_entity\_index OUT NUMBER  
, x\_entity\_id OUT VARCHAR2);
- FUNCTION Get\_Message\_Count RETURN NUMBER;

### Deleting Messages:

The following commands enable you to delete messages:

- PROCEDURE Delete\_Message  
(p\_entity\_id IN VARCHAR2  
, p\_entity\_index IN NUMBER);
- PROCEDURE Delete\_Message  
(p\_entity\_id IN VARCHAR2);
- PROCEDURE Dump\_Message\_List;

# Routing Package Interaction

## The Public Package - BOM\_Rtg\_PUB

This package is like a gatekeeper, letting only one business object through at a time. This essentially means that all records in the business object must *belong to* the business object. The business object here is the Routing, and incoming records together make up an instance of the business object. So, all records in an Routing Business Object instance must reference the same Routing.

## Main Procedure: Process\_Rtg

- 1. Set business object identifier to RTG in the System Information record.
- 2. Set business object status to S.
- 3. Check that all records in the business object belong to the same Routing, i.e., all records must have the same Assembly Item Name and Organization\_Code combination and Alternate Designator.

Table 3–29 Failure, Errors, and Messages

Description	Cause of Failure	Error	Message
<p>If there is an Routing Header in the business object, check that all records have the same Assembly_Item_Name, Organization_Code and Alternate Designator values as the Header.</p> <p>If the business object does not have an Routing Header record, check that all records have the same Assembly_Item_Name and Organization_Code combination as the first highest level entity record picked up.</p>	Any records have mismatched Assembly_Item_Name, Organization_Code and Alternate_Routing_Code values	Severe Error I	<p>BOM_MUST_BE_IN_SAME_RTG</p> <p>All records in a business object must belong to the same Routing. That is, they must all have the same Assembly Item Name, Organization and Alternate Designator. Please check your records for this.</p>

4. Derive Organization\_Id from Organization\_Code and copy this value into all business object records.

**Table 3–30 Errors and Messages**

Column	Description	Error	Message
Organization_Id	Derive using Organization_Code from table MTL_PARAMETERS	Severe Error I	BOM_ORG_INVALID:  The Organization <rigid> you entered is invalid.

### Unexpected Error Other Messages

#### **BOM\_UNEXP\_ORG\_INVALID:**

Due to an unexpected error, while performing a value to id conversion for the organization code, this record was not processed.

5. Pass business object into Private API if the business object status is still S. Also pass the Assembly Item Name and Organization\_Id to Private API, to identify the business object instance.
6. Accept processed business object and return status from Private API after the import, and pass it back to the calling program.

# Routing Import Error Handling and Messaging

## Error Handling Concepts

Error handling depends on the severity of the error, the entities the error extends itself over (*scope* of the error), and how the error affects the lineage (child record error states). When an error occurs, records are marked so that erroneous records are not processed again.

**Error Severity Levels** Severity levels help distinguish between different types of errors since the import program behaves differently for each of these errors. The following is a list of the error severity levels recognized by the import program:

**Table 3–31   Error Severity**

CODE	MEANING
'W'	Warning / Debug
'E'	Standard Error
'E'	Severe Error
'F'	Fatal Error
'U'	Unexpected error

**Error States** serve two purposes:

- They convey to the user the exact type of error in the record.
- They help the import program identify the records that do not need to be processed.

**Table 3–32 Error States**

CODE	MEANING
'S'	Success
'E'	Error
'F'	Fatal Error
'U'	Unexpected Error
'N'	Not Processed

**Error Scope:** This indicates what the depth of the error is in the business object, that is, how many other records in the business object hierarchy the current error affects.

**Table 3–33 Error Scope**

CODE	MEANING
'R'	Error affects current 'Record
'S'	Error affects all 'Sibling and child records
'C'	Error affects 'Child records
'A'	Error affects 'All records in business object

**Child Error States** If an error in a record affects child records, the status of the child may vary based on the type of error. There are two error states that indicate how the child is affected:

**Table 3–34 Child Error States**

CODE	MEANING
'E'	Error
'N'	Not Processed

## Error Classes

There are three major classes that determine the severity of the problem.

**Expected errors:** These are errors the program specifically looks for in the business object, before committing it to the production tables.

1. **Standard Error:** This error causes only the current record to be error-ed out, but is not serious enough to affect any other records in the object. The current record status is set to E.
2. **Severe Error I:** This error affects all records. All record statuses are set to E. This error is usually a change notice/organization uniformity error. All records must have the same change notice/organization combination.
3. **Severe Error II:** This error affects all records that are children of this record's parent, when the parent is not in the business object. A characteristic of this record's parent caused the error, so all its siblings and their children also get a record status of E. This error usually occurs when a lineage check fails.
4. **Severe Error III:** This error not only affects the current record but also its child records in the business object. The child record statuses are set to E. Please check your child records for errors as well as the current record. This error is usually a user-unique to unique index conversion error.
5. **Severe Error IV:** This error affects the current record and its child records since the program cannot properly process the child records. The child record statuses are set to N. This type of errors occur when there are errors on `CREATEs`
6. **Fatal Error I:** These errors occur when it is not possible to perform any operation on the Routing. Such errors affect the entire business object. All record statuses are set to F. The following are situations that cause this error:
  - You do not have access to this Item Type: (BOM is not allowed, PTO Item)
  - You do not have access to Flow Routing or Lot Based Routing.
7. **Fatal Error II:** This error affects all records that are children of this record's parent, when the parent is not in the business object. A characteristic of this record's parent caused the error, so all its siblings and their children also get a record status of F.
8. **Fatal Error III:** These errors affects the current record and its children, since it is not possible to perform any operation on these records. The current record and all its child record statuses are set to F. The following situations cause this error:
  - You do not have access to this assembly item BOM item type.

**Unexpected errors:** All errors that are not expected errors are unexpected errors. These are errors that the program is not specifically looking for, for example, the user somehow loses the database connection.

**Warnings:** These are messages for information only. The purpose of warnings is: to warn the user of problems that may occur when the routing is implemented. For example: the user entered value in the column only for Flow Routing is ignored in a standard routing.

to inform the user of any side-effects caused by user-entered data. For example: New Delete Group is created.

In order to bring together all the concepts above into a workable algorithm, we must introduce some terms that used extensively in this section, and the rest of the document.

**Child record:** All records carry the unique keys for all parents above them. A child record (of a particular parent) is one that holds the same values for the unique key columns as the parent record.

**Sibling record:** A sibling record (of the current record) is one that holds the same parent unique key column values as the current record. For example, a operation record that holds the same parent routing unique key column values as the current operation record, is a sibling of the current operation record. Likewise, an operation resource record that holds the same parent operation sequence unique key column values is a sibling of the operation resource

**Business Object Error Status:** This indicates the state of the whole business object after the import. As soon as the import program encounters an erroneous record, it sets the business object error status (also called return status) appropriately to convey this to the user. It is then up to the user to locate the offending record(s) using the individual record error statuses as indicated below. The caller may also use the business object return status to choose an appropriate course of action (commit, rollback, or further processing by the caller).

The following is a list of all the possible business object states:

**Table 3–35 Error Status****Table 1:**

CODE	MEANING
'S'	Success
'E'	Error
'F'	Fatal Error
'U'	Unexpected Error

**Record Error Status:** This is the state of the record after the import (success or error). The error status is also referred to as *return status* or *error state* in this document. Please see the Error States section above for a list of statuses a record can receive. The error status helps locate erroneous records in a business object that has error-ed out. The following are important pointers about the record error status.

- Every record is assigned an error status by the import program. Hence, if a record has a NULL return status, it means that the import program has not gotten to it yet.
- The user must send in records with {return status = NULL}. The import program will not look at records that already have an error status value, since it assumes that a record with an error status value has already been looked at by the program.

The following shows how the error status, error scope, and child statuses relate together to constitute the different error classes for records:

**Table 3–36 Error Class Messages**

Error	Status	Scope	Child Statuses
Warning	S: Success	R: Record Only	-N/A-
Standard Error	E: Error	R: Record Only	-N/A-
Severe Error I	E: Error	A: All Records	E: Error
Severe Error II	E: Error	S: Current, Sibling and Child Records	E: Error
Severe Error III	E: Error	C: Current and Child Record	E: Error
Severe Error IV	E: Error	C: Current and Child Records	N: Not Processed

**Table 3–36 Error Class Messages**

Error	Status	Scope	Child Statuses
Fatal Error I	F: Fatal Error	A: All Records	
Fatal Error II	F: Fatal Error	S: Current, Sibling and Child Records	
Fatal Error III	F: Fatal Error	C: Current and Child Record	
Unexpected Error	U: Unexpected Error	-N/A-	N: Not Processed

## API Messaging

### API Message Table

All messages are logged in the API Error Message Table. This is a PL/SQL table (array) of messages. Please see *Accessing Messages* in the *Launching the Import* section of this document on how to access these messages.

The following is a description of the API Message Table:

**Table 3–37 API Message Table**

Field	Type	Description
Business_Object_ID	VARCHAR2(3);	Error Handling API will be shared by ECO, BOM and RTG business objects. The default ID is ECO.
Message_Text	VARCHAR2(2000)	The actual message that the user sees. Please see below for format information.

**Table 3–37    API Message Table**

Field	Type	Description
Entity_Id	VARCHAR2(3)	The entity that this message belongs to. This may hold BO, ECO, REV, RI, RC, RD, or SC.  BO - Business Object ECO - ECO Header REV - Revisions(BOM, ECO, Routing) RI - Revised Items RC - Revised Components RD - Reference Designators SC - Substitute Components BH- Bills of Material Header BC - Bills of Material Comments RTG - Routing Header OP - Routing Operations Sequence RES - Operation Resources SR - Substitute Operation Resources NWK - Operation Networks
Entity_Index	NUMBER	The index of the entity array this record belongs to.

**Message formats**

- Expected errors and warnings: The message text contains the translated and token substituted message text. Please note that the message text may contain tokens, some of which will identify the entity instances that this message is for. The following tokens identify the several entities:
  - Assembly Item Name: Assembly\_Item\_Name
  - Alternate Routing Code: Alternate\_Routing\_Code
  - Organization Code: Orchid
  - Operation Sequence Number: Op\_Seq\_Number
  - Operation Resource Sequence Number: Res\_Seq\_Number
  - Schedule Sequence Number: Schedule\_Seq\_Number

- Substitute Resource Code: Sub\_Resource\_Code

**Unexpected errors:**

- <Package Name> <Procedure/Function Name> <SQL Error Number> <SQL Error Message Text>

**Other message:**

An **Other Message** is a message that is logged for all records that are affected by an error in a particular record. So if an error in a routing record will cause all it's children to error out, then the following will be logged:

- For the routing itself, the error message describing the problem.
- For all records affected by the type of error that occurred in the routing, the **other message**. This message essentially mentions the following:
  1. How the error has affected this record, that is, it has been error-ed out too, with a severe or fatal error status, or that it has not been processed.
  2. Which record caused this record to be affected.
  3. What process flow step in the offending record caused this record to be affected.

## Error Handler

The program performs all error handling and messaging through the Error Handler. It makes calls to the Error Handler when an error or warning needs to be issued. The following are the functions of the Error Handler:

- Log the error/warning messages sent to it.
- Set the return status of the record in error.
- Set the return status of other records affected by this error.

The following is the input that the Error Handler expects from the calling program:

**Table 3–38 Error Handler Input**

Input	Description
Business Object	Calling program must pass the whole business object as-is.
Message and Token List	List of messages generated for error in the current record. See below for description of this list.
Error Status	Status the record in error should be set to.
Error Level	Business Object hierarchy level that current record is an instance of. That is, the entity that the record in error belongs to.
Entity Array Index	Index of record in error in its encompassing entity array. Does not apply to Routing Header.
Error Scope	Indicates depth of error, that is, how many other records are affected by it.
Other Message and Token List	Message generated for the other affected records. See below for description.
Other Status	Status the other affected records should be set to.

The calling program must trap the error and send the above details to the Error Handler. The Error Handler handles the error and returns the altered object to the calling program.

### Message and Token List Records

The Message and Token List, and the Other Message and Token List are temporary arrays that the calling program maintains. They hold message-and-token records. The Error Handler must log these messages into the API Message List. The calling program may want some of these message record tokens to be translated (such tokens are typically messages themselves).

For expected errors and warnings, the translated message text is retrieved using the message name. Then, after any requested token translation is performed, the tokens are substituted into the translated message text, and the message is logged. For unexpected errors, the calling program itself sends a message text, so no message retrieval is needed. The message is logged after token translation and substitution is performed.

**Table 3–39 Message and Token List Records**

Field	Description
Message Name	Name of the message used to retrieve the translated message text. NULL for unexpected errors.
Message Text	Message text for unexpected errors.
Token Name	Name of the token in the message.
Token Value	Value of the token in the message.
Translate	Should this token value be translated?

Since each message may have more than one token, the Message and Token List has as many occurrences of the same message as there are tokens in it. The same applies to the Other Message and Token List, except that this list needs to carry only one message which is assigned to all other affected records. Since this lone message may have more than one token, there may be more than one occurrence of the message in the list.

Please note that the API Message List is not public and must be accessed through the Messaging API's provided to access the message list.

These are the message list API's that can be used to perform various operations on the Message List.



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# Oracle Cost Management Open Interfaces

This chapter contains information about the following Oracle Cost Management open interfaces and application program interfaces:

- [Periodic Cost Open Interface](#) on page 4-2
- [Cost Import Interface](#) on page 4-14

## Periodic Cost Open Interface

The Oracle Periodic Cost Open Interface provides an open interface for you to easily load periodic item costs from external applications or legacy systems and migrate them into the Oracle Cost Management Application. This interface should only be used to bring in periodic costs for the first opened periodic period. It cannot be used for subsequent periods. Costs in subsequent periods are calculated by the system.

### See Also

*Oracle Cost Management User's Guide*

*Oracle Bill of Materials Technical Reference Manual*

## Functional Overview

The Periodic Cost Open Interface lets you import Periodic Costing data into the Oracle Cost Management Application. You can specify just the few required attributes and let the system do validation of imported data.

Initially, Periodic Costs need to be loaded into the following interface tables with a value of `PROCESS_FLAG = 1`:

- `CST_PC_ITEM_COST_INTERFACE` is used for the Periodic Cost data and all Periodic Cost related attributes. This is the header table storing cost information in the interface.
- `CST_PC_COST_DET_INTERFACE` is used for capturing the Periodic Cost details and related cost detail attributes.

If the Periodic Costs and/or the periodic cost detail rows fail any validation, the master/detail rows are flagged with errors. The columns `ERROR_FLAG`, `ERROR_EXPLANATION`, and `PROCESS_FLAG` are populated and the import is failed.

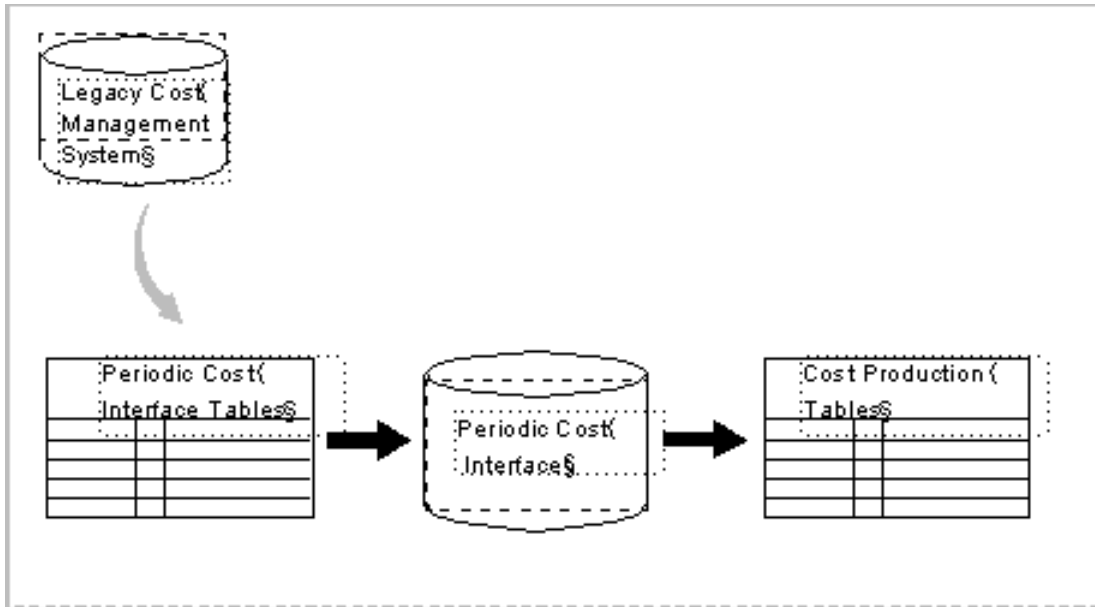
If the import succeeds validation, the destination tables for periodic costs are:

- `CST_PAC_ITEM_COSTS`
- `CST_PAC_ITEM_COST_DETAILS`
- `CST_PAC_QUANTITY_LAYERS`

### See Also

*Oracle Cost Management User's Guide*

*Oracle Bill of Materials Technical Reference Manual*

**Figure 4–1 Periodic Cost Open Interface.**

## Setting Up the Interface

### Create Indexes for Performance

You should create indexes on the following columns to improve Periodic Cost Open Interface performance.

- Unique index on INTERFACE\_HEADER\_ID on CST\_PC\_ITEM\_COST\_INTERFACE
- Unique index on INTERFACE\_LINE\_ID on CST\_PC\_COST\_DET\_INTERFACE
- Non-unique index on INTERFACE\_GROUP\_ID column in the CST\_PC\_ITEM\_COST\_INTERFACE table
- Non-unique index on INTERFACE\_HEADER\_ID column in the CST\_PC\_COST\_DET\_INTERFACE table

**Set Profile Option Defaults**

None. All defaults are set up as part of the basic Periodic Costing set up.

**Periodic Cost Open Interface Runtime Options**

To run the Periodic Cost Open Interface, select Import Periodic Costs from the Periodic Cost menu.

These are runtime options for the Periodic Cost Open Interface:

**Delete Interface Rows After Successful Import**

- Yes Delete all the rows in the interface table.
- No Do not delete the rows in the interface.

**Inserting into the Periodic Cost Interface Tables**

**Periodic Costs Interface Table Description**

CST\_PC\_ITEM\_COSTS\_INTERFACE is used for the Periodic Cost data and all Periodic Cost related attributes.

*Table 4–1 Periodic Costing Open Costs Interface Table*

CST_PC_ITEM_COSTS_INTERFACE					
Column Name	Type	Required	Derived	Optional	Reserved for Future Use
INTERFACE_HEADER_ID	NUMBER (sequence)	X			
INTERFACE_GROUP_ID	NUMBER		X		
COST_LAYER_ID	NUMBER		X		
PAC_PERIOD_ID	NUMBER		X		
COST_GROUP_ID	NUMBER		X		
COST_GROUP	VARCHAR2(10)	X			
COST_TYPE	VARCHAR2(10)	X			
PERIOD_NAME	VARCHAR2(15)	X			
INVENTORY_ITEM_ID	NUMBER	X			

**Table 4–1 Periodic Costing Open Costs Interface Table**

<b>CST_PC_ITEM_COSTS_INTERFACE</b>					
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
QUANTITY_LAYER_ID	NUMBER		X		
BEGIN_LAYER_QUANTITY	NUMBER	X			
ISSUE_QUANTITY	NUMBER				
BUY_QUANTITY	NUMBER				
MAKE_QUANTITY	NUMBER				
ITEM_COST	NUMBER		X		
MARKET_VALUE	NUMBER			X	
JUSTIFICATION	VARCHAR2(2000)			X	
BEGIN_ITEM_COST	NUMBER		X		
ITEM_BUY_COST	NUMBER		X		
ITEM_MAKE_COST	NUMBER		X		
PL_MATERIAL	NUMBER		X		
PL_MATERIAL_OVERHEAD	NUMBER		X		
PL_RESOURCE	NUMBER		X		
PL_OUTSIDE_PROCESSING	NUMBER		X		
PL_OVERHEAD	NUMBER		X		
TL_MATERIAL	NUMBER		X		
TL_MATERIAL_OVERHEAD	NUMBER		X		
TL_RESOURCE	NUMBER		X		
TL_OUTSIDE_PROCESSING	NUMBER		X		
TL_OVERHEAD	NUMBER		X		
PL_ITEM_COST	NUMBER		X		
TL_ITEM_COST	NUMBER		X		
UNBURDENED_COST	NUMBER		X		
BURDEN_COST	NUMBER		X		

**Table 4–1 Periodic Costing Open Costs Interface Table**

<b>CST_PC_ITEM_COSTS_INTERFACE</b>					
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
MATERIAL_COST	NUMBER		X		
MATERIAL_OVERHEAD_COST	NUMBER		X		
RESOURCE_COST	NUMBER		X		
OVERHEAD_COST	NUMBER		X		
OUTSIDE_PROCESSING_COST	NUMBER		X		
PROCESS_FLAG	NUMBER	X			
REFERENCE	VARCHAR2(240)				
ERROR_FLAG	NUMBER				
ERROR_EXPLANATION	VARCHAR2(2000)				
LAST_UPDATE_DATE	DATE	X			
LAST_UPDATED_BY	NUMBER	X			
CREATION_DATE	DATE	X			
CREATED_BY	NUMBER	X			
LAST_UPDATE_LOGIN	NUMBER				
REQUEST_ID	NUMBER				
PROGRAM_APPLICATION_ID	NUMBER				
PROGRAM_APPLICATION_DATE	DATE				
LOCK_FLAG	NUMBER				X

## Periodic Cost Detail Interface Table Description

CST\_PC\_COST\_DET\_INTERFACE is used for importing the Periodic Cost details and related cost detail attributes.

**Table 4–2 Detail Table Periodic Cost Open Interface**

CST_PC_COST_DET_INTERFACE					
Column Name	Type	Required	Derived	Optional	Reserved for Future Use
INTERFACE_LINE_ID	NUMBER (sequence)	X			
INTERFACE_HEADER_ID	NUMBER (FK)	X			
COST_LAYER_ID	NUMBER				
COST_ELEMENT_ID	NUMBER	X			
LEVEL_TYPE	NUMBER	X			
ITEM_COST	NUMBER	X			
ITEM_BUY_COST	NUMBER			X	
ITEM_MAKE_COST	NUMBER			X	
PROCESS_FLAG	NUMBER	X			
REFERENCE	VARCHAR2(240)			X	
ERROR_FLAG	NUMBER				
ERROR_EXPLANATION	VARCHAR2(2000)				
LAST_UPDATE_DATE	DATE	X			
LAST_UPDATED_BY	NUMBER	X			
CREATION_DATE	DATE	X			
CREATED_BY	NUMBER	X			
LAST_UPDATE_LOGIN	NUMBER				
REQUEST_ID	NUMBER				
PROGRAM_APPLICATION_ID	NUMBER				
PROGRAM_APPLICATION_DATE	DATE				

**Note:** For information about columns not discussed in the Interface Manual, see Table and View Definitions, *Oracle Bills of Material Technical Reference Manual*.

Required Data

The Periodic Cost Interface uses the PROCESS\_FLAG to indicate whether processing of the row succeeded or errored. When the data is loaded, the PROCESS\_FLAG must be set to a value of 1 (Unprocessed). This will allow the import program to process the row for validation and import. The next table shows the required values for each interface table.

Table 4–3 Required Values for Interface Tables

Table	Columns	Required Value
CST_PC_ITEM_COSTS_INTERFACE	INTERFACE_HEADER_ID	not null
	PERIOD_NAME	not null
	COST_GROUP	not null
	COST_TYPE	not null
	INVENTORY_ITEM_ID	not null
	BEGIN_LAYER_QUANTITY	not null
	PROCESS_FLAG	1
	Standard WHO column	
	LAST_UPDATE_DATE	
	LAST_UPDATED_BY	
	CREATION_DATE	
CST_PC_COST_DET_INTERFACE	INTERFACE_LINE_ID	not null
	INTERFACE_HEADER_ID	not null
	COST_ELEMENT_ID	not null
	ITEM_COST	not null
	LEVEL_TYPE	not null

**Table 4–3 Required Values for Interface Tables**

Table	Columns	Required Value
	PROCESS_FLAG	not null
	Standard WHO column	not null
	LAST_UPDATE_DATE	not null
	LAST_UPDATED_BY	not null
	CREATION_DATE	not null
	CREATED_BY	not null

### Derived Data

Issues arising during derivation of values for these columns are flagged as error and the row fails import.

## Validation

The Open Interface program processes rows that have a PROCESS\_FLAG = 1 (Unprocessed). Default values for derived columns are first updated. Then, the value of the PROCESS\_FLAG is updated to 2 (Running) to continue validation of data.

The Periodic Cost Interface then validates each row. If a row in an interface table fails validation, the program sets the PROCESS\_FLAG to 3 (Error) and sets the appropriate ERROR\_FLAG and ERROR\_EXPLANATION.

For all successfully validated rows, the interface inserts the rows into the appropriate Oracle Cost Management Periodic Cost tables.

Once the validated row is successfully inserted into the Oracle Cost Management Periodic Cost table, the PROCESS\_FLAG is set to 7 (Complete). The rows in the interface that were successfully imported will be deleted if the runtime option 'Delete all the rows in the interface table' = Yes is set.

If the rows in the interface are not deleted, users can manually delete them when necessary.

The PROCESS\_FLAG column has one of 4 possible values:

- n 1 - Unprocessed
- n 2 - Running
- n 3 - Error

n 7 - Complete

Validation and Error Handling

This table lists all the required Periodic Costing Open Cost Interface validations and the error conditions that result when these validations fail. When validations fail the PROCESS\_FLAG is set to 3 denoting an error condition.

The Error Flag and Error Explanation detail the nature of the error.

Tables abbreviations are:

- CPCDI - CST\_PC\_COST\_DET\_INTERFACE
- CPICI - CST\_PC\_ITEM\_COST\_INTERFACE

Table 4–4 Periodic Costing Open Cost Interface Validations

Error Flag	Validation Rule	Error Explanation	Table
1	No Corresponding Header	No Corresponding Header	CPCDI
2	COST_ELEMENT_ID must be one of following: 1 - Material, 2 - Material Overhead 3 - Resource 4 - Outside Processing 5 - Overhead	Invalid Cost Element	CPCDI
3	LEVEL_TYPE must be either: 1 - This (current) Level 2 - Previous Level	Invalid Level Type	CPCDI
4	All values in the column COST_GROUP_ID must exist in the CST_COST_GROUP_ASSIGNMENTS table.	Invalid Cost Group or No Organizations in Cost Group	CPICI
5	All values in the COST_TYPE_ID column must exist in the CST_LE_COST_TYPES table.	Invalid Cost Type or Cost Type not in Legal Entity	CPICI

**Table 4–4 Periodic Costing Open Cost Interface Validations**

Error Flag	Validation Rule	Error Explanation	Table
6	<p>All values in the column PAC_PERIOD_ID must exist in the CST_PAC_PERIODS table.</p> <p>The period for which the data is imported (into the CST_PAC_ITEM_COSTS, CST_PAC_ITEM_COST_DETAILS and CST_PAC_QUANTITY_LAYERS tables) should have a status of “OPEN” and the first defined period in the CST_PAC_PERIODS table.</p>	Period Name Invalid or period is not the first opened for the legal entity and cost type	CPICI
7	Line Record Missing	Line Record Missing	CPICI
8	<p>All values in the column INVENTORY_ITEM_ID must exist in the MTL_SYSTEM_ITEMS table.</p> <p>All items should belong to at least one of the organizations in the MTL_SYSTEM_ITEMS, CST_COST_GROUPS and CST_COST_GROUP_ASSIGNMENTS tables.</p>	Invalid Inventory Item or item not in Periodic Costing Organization	CPICI
9	Records brought into the CST_PAC_ITEM_COSTS, CST_PAC_ITEM_COST_DETAILS and CST_PAC_QUANTITY_LAYERS tables must not pre-exist in the relevant tables at the time of import	Item Cost Exists	CPICI
10	Header Failed as Line Failed	Header Failed as Line Failed	CPICI
11	Line Failed as Header failed	Line Failed as Header failed	CPCDI
12	MAKE_QUANTITY, BUY_QUANTITY, ISSUE_QUANTITY must all be 0	QOH Value Error	CPCDI
13	All quantity and cost columns should have a value of $\geq 0$	Cost Value Error	CPICI CPCDI

**Table 4–4 Periodic Costing Open Cost Interface Validations**

Error Flag	Validation Rule	Error Explanation	Table
14	If MARKET_VALUE is supplied, it should be less than the computed ITEM_COST value in CPICI	Market Value Error	CPICI
15	If MARKET_VALUE is supplied, then JUSTIFICATION should be NOT NULL	Justification cannot be NULL	CPICI
99	Other	Other	CPICI CPCDI

## Importing Additional Periodic Cost Details

Imported cost data for derived columns will overwrite any user specified values.

## Reviewing Failed Rows

You can review and report rows in any of the interface tables using SQL\*Plus or any custom reports you develop. Since all rows in the interface tables have a value for PROCESS\_FLAG, you can identify records that have not been successfully imported into Oracle Cost Management. If you want to reprocess any row, put the flag back to 1, and clear all errors (columns ERROR\_FLAG and ERROR\_EXPLANATION).

## Log File Messages

**Table 4–5 Log File Messages**

Message Code	Message Text	Type
CST_PAC_OCI_START_VALIDATION	Starting to validate Periodic Open Cost Interface table information	Action
CST_PAC_OCI_ERR_CGLE	Error: Could not fetch cost group and/or legal entity identifiers	Error
CST_PAC_OCI_SUCC_CGLE	Success: Retrieved cost group and legal entity identifiers	Success
CST_PAC_OCI_ERR_CTCM	Error: Could not fetch cost type and/or cost method identifiers	Error

**Table 4–5 Log File Messages**

<b>Message Code</b>	<b>Message Text</b>	<b>Type</b>
CST_PAC_OCI_SUCC_CTCM	Success: Retrieved cost type and/or cost method identifiers	Success
CST_PAC_OCI_ERR_PID	Error: Could not fetch proper Periodic Costing Period identifier	Error
CST_PAC_OCI_SUCC_PID	Success: Retrieved Periodic Costing Period identifier	Success
CST_PAC_OCI_ERR_ITEMID	Error: Could not validate inventory item identifier	Error
CST_PAC_OCI_SUCC_ITEMID	Success: Validated inventory item identifier	Success
CST_PAC_OCI_ERR_COST	Error: Item cost exists in the System	Error
CST_PAC_OCI_SUCC_COST	Success: Item cost does not exist in the System	Success
CST_PAC_OCI_ERR_LAYER_EXISTS	Error: Layer Validation Error	Error
CST_PAC_OCI_ERR_LAYER_GEN	Error: Layer Creation Error	Error
CST_PAC_OCI_SUCC_LAYER_GEN	Success: Layer Creation Successful	Success
CST_PAC_OCI_UPDATE_NULL	Action: Updating all derived columns to NULL in the Interface Tables	Action
CST_PAC_OCI_CALCULATE	Action: Computing and Updating derived columns in the Interface Tables	Action
CST_PAC_OCI_SUCC_CALCULATE	Success: Computation of all derived columns complete	Success
CST_PAC_OCI_ERR_MARKET	Error: Market Value cannot be more than computed Item Cost Value	Error
CST_PAC_OCI_ERR_JUSTIFICATION	Error: Justification cannot be NULL if Market Value is supplied	Error
CST_PAC_OCI_START_INSERT	Action: Starting to insert rows into Oracle Cost Management tables	Action
CST_PAC_OCI_SUCC_CPIC	Success: Inserted into CST_PAC_ITEM_COSTS table	Success

**Table 4–5 Log File Messages**

Message Code	Message Text	Type
CST_PAC_OCI_SUCC_CPICD	Success: Inserted into CST_PAC_ITEM_COST_DETAILS table	Success
CST_PAC_OCI_SUCC_CPQL	Success: Inserted into CST_PAC_QUANTITY_LAYERS table	Success
CST_PAC_OCI_START_PURGE	Action: Starting to purge processed rows from interface tables	Action
CST_PAC_OCI_SUCC_PURGE	Success: Purge Process Complete	Success
CST_PAC_OCI_CHECK_LOG	NOTE: Please check log for error transactions	Note

## Cost Import Interface

The Oracle Cost Import Interface enables you to import costs for items from legacy systems, as well as import new cost information for existing items. Importing resource costs and resource overhead rates is also supported. You will also be able to replace existing cost information with the new cost information. However, updating of existing costs is not supported. Importing costs into frozen cost type is also not supported. The item costs will have to be imported into another cost type and then the cost update may be run to update to the frozen cost type.

## Parameters and Descriptions

This section includes the details to each of the following parameters:

[Import Cost Option](#)

[Mode to Run This Request](#)

[Group ID Option](#)

[Cost Type to Import To](#)

[Delete Successful Rows](#)

### Import Cost Option

A list of values is provided from which the user can select one of the import options which may be either to import Only item costs, Only resource costs, Only overhead rates, or All cost information. The following list contains the Option and the table from which data is processed:

- Only item cost - cst\_item\_cst\_dtls\_interface
- Only resource costs - cst\_resource\_costs\_interface
- Only overhead rates - cst\_res\_overheas\_interface and cst\_dept\_overheads\_interface
- All Cost Information - From all four interface tables

If default material subelement is specified for an Organization and the material row in cst\_item\_cst\_dtls\_interface has not subelement specified against it then the org level default would be picked up for the material row.

## Mode to Run This Request

A list of values is provided with possible two values:

- Insert new cost - This mode can be used if the user is importing large numbers of items and is unsure if Item/Organization/Cost Type combination exists in the production tables. If it does exist then the row in the interface table would be flagged as an error and not imported. This would prevent any accidental overwrite of existing data.
- Remove and replace costs - All the previous cost information for this item, cost\_type, organization combination will be deleted from the production tables and the new information will overwrite (replace) the existing one.

## Group ID Option

A list of values is provided from which the user can either select All or Specific Group ID. If the user wishes to submit multiple Cost Import process requests they can do so by submitting one request per group id. For doing so the data in the interface tables should be stamped with distinct group id value by using the NEXTVAL from the sequence generator CST\_LISTS\_S. The use of this sequence generator is a must for generating multiple groups or may lead to data corruption as these interface tables are used by other processes as well.

If the user selects All from the list then a group ID generated by a sequence will replace the group ID in the interface tables (if any) and all the unprocessed rows from the four interface tables (cst\_item\_cst\_dtls\_interface, cst\_resource\_costs\_interface, cst\_res\_overheads\_interface, and cst\_dept\_overheads\_interface) will be processed in one run.

## Cost Type to Import To

The user is provided with a list of values from which they need to select the cost type in which they wish to import the cost information. Even if the user has populated a cost type or cost type ID in the interface tables, it would be overwritten with the one that is selected here. The cost types that the user can pick from is restricted to the multi-org, updatable cost types.

**Delete Successful Rows**

This parameter determines whether the successfully processed rows should be deleted from the interface tables at the end of the run. If the user selects Yes then all the successful rows will be deleted (rows that do not have their error flag set to 'E').

**Setting Up the Cost Import Interface**

The Cost Import Interface includes four tables:

- n CST\_RESOURCE\_COSTS\_INTERFACE
- n CST\_RES\_OVERHEADS\_INTERFACE
- n CST\_DEPT\_OVERHEADS\_INTERFACE
- n CST\_ITEM\_CST\_DTLS\_INTERFACE

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**Note:** CICI is not used by the Cost Import process.

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**Note:** The Process\_flag indicates what stage of validation this row is in. This will be populated as the rows are being processed in various phases. This must be set to 1 initially.

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**Obtaining a Trace**

You need to run "exec FND\_STATS.gather\_table\_stats('BOM','<name of the table>',10)" before the Cost Import process is run. This will ensure that the plan that is obtained, after running the process, gives a good picture of the execution plan. This statement gives the cost optimizer an idea of the number of rows that will be present in the table. If this statement is not executed before the process is run then the plan that is obtained will be based on an old estimate of the number of rows and it may not provide an accurate picture of the actual execution plan. For example, if the user is planning to run the trace for importing item costs, then they will need to run the above statement for the 3 tables CICDI,CIC,CICD before running the import process and the plan that is obtained will give a good picture of the actual execution plan.

## CST\_RESOURCE\_COSTS\_INTERFACE

**Table 4–6 Resource Cost Interface**

CST_RESOURCE_COST_INTERFACE					
Column Name	Type	Required	Derived	Optional	Reserved for Future Use
Resource_ID	Number	X			
Cost_type_ID	Number				X
Organization_ID	Number	X			
Last_update_date	Date			X	
Last_updated_by	Number			X	
Creation_date	Date			X	
Created_by	Number			X	
Last_update_login	Number			X	
Resource_rate	Number	X			
Request_ID	Number			X	
Program_application_ID	Number			X	
Program_ID	Number			X	
Program_update_date	Date			X	
Attribute_category	Varchar2(30)			X	
Error_flag	Varchar2(1)			X	
Error_code	Varchar2(240)			X	
Error_explanation	Varchar2(240)			X	
Resource_code	Varchar2(20)			X	
Cost_type	Varchar2(10)				X
Organization_code	Varchar2(3)			X	
Transaction_ID	Number			X	
Group_ID	Number			X	
Group_description	Varchar2(80)			X	
Process_flag	Number	X			

## Column Descriptions

**Resource\_ID** - The Resource (subelement) identifier. This must be in BOM\_RESOURCES. Either resource\_ID or resource\_code has to be filled up.

**Cost\_type\_ID** - The cost type identifier. All of the costs will be imported against the cost type specified in the request parameters. If a cost type is provided in this column, it will be overwritten.

**Organization\_ID** - Organization identifier. This must be in mtl\_parameters. Either Organization\_code or organization\_id must be populated.

**Last\_update\_date** - Standard Who column.

**Last\_updated\_by** - Standard Who column.

**Creation\_date** - Standard Who column.

**Created\_by** - Standard Who column.

**Last\_update\_logon** - Standard Who column.

**Resource\_rate** - Resource unit cost.

**Request\_ID** - Concurrent Who column.

**Program\_applicatin\_ID** - Concurrent Who column.

**Program\_ID** - Concurrent Who column.

**Program\_update\_date** - Concurrent Who column.

**Attribute\_category** - Descriptive flexfield structure defining the column.

**Error\_flag** - This is set to "E" if there is an error.

**Error\_code** - This identifies the error code.

**Error\_explanation** - The error explanation. This displays the cause of the error which can be reviewed using the [list of common cost import error explanations](#) further in this guide.

**Resource\_code** - The resource (subelement) identifier. This must be in BOM\_RESOURCES.

**Cost\_type** - The cost type identifier. This will be overwritten with the cost type mentioned while specified in the request parameters.

**Organization\_code** - Organization identifier. This must be in MTL\_PARAMETERS.

**Transaction\_ID** - Unique row identifier. This is auto generated.

Group\_ID - Batch identifier. You can populate this column if the process is to be run by group ID.

Group\_description - Description of the Group\_ID.

Process\_flag - Flag that indicates what stage of validation this row is in. This will be populated as the rows are being processed in various phases. This must be set to 1 initially.

## CST\_RESOURCE\_COSTS\_INTERFACE Table Validations

- <sup>n</sup> The Resource\_ID (or Resource\_code) and Organization\_ID combination must have been defined. In other words no new resources will be created. If the Resource\_ID, Organization\_ID is not found in the BOM\_RESOURCES, the rows for that particular item, organization combination will be errored out and no item costs will be imported.
- <sup>n</sup> If the Resource\_ID mentioned in the CST\_RESOURCE\_COSTS\_INTERFACE table has the Functional\_currency flag (in the BOM\_RESOURCES table) set to yes, then no resource rates can be entered for this Resource\_ID organization combination. In other words the functional currency flag must not be equal to 1 for the resource to have a rate.
- <sup>n</sup> The resource rate cannot be null. It must have some value.
- <sup>n</sup> No two rows can be defined for the same resource, organization, and cost type combination.

## CST\_RES\_OVERHEADS\_INTERFACE

**Table 4–7 Resource Cost Overheads Interface**

CST_RES_OVERHEADS_INTERFACE					
Column Name	Type	Required	Derived	Optional	Reserved for Future Use
Resource_ID	Number	X			
Cost_type_ID	Number				X
Organization_ID	Number	X			
Overhead_ID	Number	X			
Last_update_date	Date			X	
Last_updated_by	Number			X	
Creation_date	Date			X	
Created_by	Number			X	

CST_RES_OVERHEADS_INTERFACE					
Column Name	Type	Required	Derived	Optional	Reserved for Future Use
Last_update_login	Number			X	
Request_ID	Number			X	
Program_application_ID	Number			X	
Program_ID	Number			X	
Program_update_date	Date			X	
Attirbute_category	Varchar2(30)			X	
Error_code	Varchar2(240)			X	
Error_explanation	Varchar2(240)			X	
Resource_code	Varchar2(20)			X	
Cost_type	Varchar2(10)				X
Organization_code	Varchar2(3)			X	
Overhead	Varchar2(30)			X	
Transaction_ID	Number			X	
Group_ID	Number			X	
Group_description	Varchar2(80)			X	
Error_flag	Varchar2(1)			X	
Process_flag	Number	X			

Column Descriptions

Resource\_ID - The Resource (subelement) identifier. This must be in BOM\_RESOURCES. Either Resource\_ID or Resource\_code has to be filled up.

Cost\_type\_ID - The cost type identifier. All of the costs will be imported against the cost type specified in the request parameters. If a cost type is provided in this column, it will be overwritten.

Organization\_ID - Organization identifier. This must be in MTL\_PARAMETERS. Either Organization\_code or Organization\_id must be populated.

Overhead\_ID - Overhead subelement identifier. This must be in BOM\_RESOURCES. Either Overhead\_ID or Overhead must be populated.

Last\_update\_date - Standard Who column.

Last\_updated\_by - Standard Who column.

Creation\_date - Standard Who column.

Created\_by - Standard Who column.

Last\_update\_logon - Standard Who column.

Request\_ID - Concurrent Who column.

Program\_applicatin\_ID - Concurrent Who column.

Program\_ID - Concurrent Who column.

Program\_update\_date - Concurrent Who column.

Attribute\_category - Descriptive flexfield structure defining the column.

Error\_flag - This is set to "E" if there is an error.

Error\_code - This identifies the error code.

Error\_explanation - The error explanation. This displays the cause of the error which can be reviewed using the [list of common cost import error explanations](#) further in this guide.

Resource\_code - The resource (subelement) identifier. This must be in BOM\_RESOURCES.

Cost\_type - The cost type identifier. This will be overwritten with the cost type specified in the request parameters.

Organization\_code - Organization identifier. This must be in MTL\_PARAMETERS.

Overhead - Overhead subelement identifier.

Transaction\_ID - Unique row identifier. This is auto generated.

Group\_ID - Batch identifier. You can populate this column if the process is to be run by group ID.

Group\_description - Description of the Group\_ID.

Process\_flag - Flag that indicates what stage of validation this row is in. This will be populated as the rows are being processed in various phases. This must be set to 1 initially.

## CST\_RES\_OVERHEADS\_INTERFACE Table Validations

- The Organization\_ID, Resource\_ID combination must exist in the BOM\_RESOURCES. No new resources will be created.

- <sup>n</sup> The resource\_ID or the Resource\_code must be provided and must be valid for that Organization\_ID. If both are provided then they must match.
- <sup>n</sup> The Organization\_ID and Overhead\_ID combination must exist in the BOM\_RESOURCES table. The Overhead\_ID or the Overhead has to be provided.

## CST\_DEPT\_OVERHEADS\_INTERFACE

**Table 4–8 Department Cost Overheads Interface**

CST_DEPT_OVERHEADS_INTERFACE					
Column Name	Type	Required	Derived	Optional	Reserved for Future Use
Department_ID	Number	X			
Cost_type_ID	Number				X
Organization_ID	Number	X			
Overhead_ID	Number	X			
Last_update_date	Date			X	
Last_updated_by	Number			X	
Creation_date	Date			X	
Created_by	Number			X	
Last_update_login	Number			X	
Basis_type	Number			X	
Rate_or_amount	Number	X			
Activity_ID	Number			X	
Request_ID	Number			X	
Program_application_ID	Number			X	
Program_ID	Number			X	
Program_update_date	Date			X	
Attribute_category	Varchar2(30)			X	
Error_code	Varchar2(240)			X	
Error_explanation	Varchar2(240)			X	
Department_code	Number			X	

**CST\_DEPT\_OVERHEADS\_INTERFACE**

Column Name	Type	Required	Derived	Optional	Reserved for Future Use
Cost_type	Varchar2(10)				X
Organization_code	Varchar2(3)			X	
Overhead	Varchar2(30)			X	
Transaction_ID	Number			X	
Group_ID	Number			X	
Group_description	Varchar2(80)			X	
Process_flag	Number	X			
Activity	Varchar2(20)			X	
Error_flag	Varchar2(1)			X	

**Column Descriptions**

Department\_ID - Department identifier. This must be in BOM\_DEPARTMENTS. Either Department\_ID or Department must be populated.

Cost\_type\_ID - The cost type identifier. All of the costs will be imported against the cost type specified in the request parameters. If a cost type is provided in this column, it will be overwritten.

Organization\_ID - Organization identifier. This must be in MTL\_PARAMETERS. Either Organization\_code or Organization\_id must be populated.

Overhead\_ID - Overhead subelement identifier. This must be in BOM\_RESOURCES. Either Overhead\_ID or Overhead must be populated.

Last\_update\_date - Standard Who column.

Last\_updated\_by - Standard Who column.

Creation\_date - Standard Who column.

Created\_by - Standard Who column.

Last\_update\_logon - Standard Who column.

Basis\_type - The basis type identifier. This must be between 1 and 6.

Rate\_or\_amount - Rate or amount for the overhead subelement. You must populate this column.

Activity\_ID - Activity identifier. This must be in CST\_ACTIVITIES.

Request\_ID - Concurrent Who column.

Program\_applicatin\_ID - Concurrent Who column.

Program\_ID - Concurrent Who column.

Program\_update\_date - Concurrent Who column.

Attribute\_category - Descriptive flexfield structure defining the column.

Error\_flag - This is set to "E" if there is an error.

Error\_code - This identifies the error code.

Error\_explanation - The error explanation. This displays the cause of the error which can be reviewed using the [list of common cost import error explanations](#) further in this guide.

Department - Department identifier.

Cost\_type - Cost type identifier. This must be in CST\_COST\_TYPES. This will be overwritten with the cost type specified in the request parameters.

Organization\_code - Organization identifier. This must be in MTL\_PARAMETERS.

Overhead - Overhead subelement identifier.

Transaction\_ID - Unique row identifier. This is auto generated.

Group\_ID - Batch identifier. You can also populate this column if the process is to be run by group ID.

Group\_description - Description of the Group\_ID.

Process\_flag - Flag that indicates what stage of validation this row is in. This will be populated as the rows are being processed in various phases. This must be set to 1 initially.

Activity - Activity identifier. This must be in CST\_ACTIVITIES.

## CST\_DEPT\_OVERHEADS\_INTERFACE Table Validations

- Either Department\_ID or Department will have to be provided. If both of them are provided and the Department\_ID does not match Department, the row will error out. If only the Department is provided, the Department\_ID column will be populated from the BOM\_DEPARTMENTS table.
- Either Overhead\_ID or Overhead will have to be provided wherever necessary. If both of them are provided and the Overhead\_ID does not match Overhead, the row will error

out. If only the Overhead is provided, the Overhead\_ID column will be populated from the BOM\_RESOURCES table.

- <sup>n</sup> The Overhead\_ID, Organization\_ID combination that is provided in the CST\_DEPT\_OVERHEADS\_INTERFACE table must be defined in the BOM\_RESOURCES table for the Cost\_element\_ID=5 (cost element overhead).
- <sup>n</sup> The Basis\_type must be a valid number between 1 and 6.

## CST\_ITEM\_CST\_DTLS\_INTERFACE

**Table 4–9 Item Cost Details Interface**

CST_ITEM_CST_DTLS_INTERFACE					
Column Name	Type	Required	Derived	Optional	Reserved for Future Use
Cost_type_ID	Number				X
Cost_type	Varchar2(10)				X
Last_update_date	Date			X	
Last_updated_by	Number			X	
Creation_date	Date			X	
Created_by	Number			X	
Last_update_login	Number			X	
Organization_ID	Number	X			
Organization_code	Varchar2(3)			X	
Operation_sequence_ID	Number			X	
Operation_seq_num	Number			X	
Department_ID	Number			X	
Department	Varchar2(10)			X	
Level_type	Number			X	
Activity_ID	Number			X	
Activity	Varchar2(10)			X	
Resource_seq_num	Number			X	
Resource_ID	Number	X			

<b>CST_ITEM_CST_DTLS_INTERFACE</b>					
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
Resource_code	Varchar2(10)			X	
Rollup_source_type	Number			X	
Activity_context	Varchar2(30)			X	
Request_ID	Number			X	
Item_units	Number			X	
Activity_units	Number			X	
Basis_type	Number			X	
Basis_resource_ID	Number			X	
Basis_resource_code	Varchar2(10)			X	
Usage_rate_or_amount	Number	X			
Basis_factor	Number			X	
Resource_rate	Number			X	
Net_yield_or_shrinkage_factor	Number			X	
Item_cost	Number			X	
Program_application_ID	Number			X	
Program_ID	Number			X	
Program_update_date	Date			X	
Attribute_category	Varchar2(30)			X	
Lot_size	Number			X	
Based_on_rollup_flag	Number			X	
Shrinkage_rate	Number			X	
Inventory_asset_flag	Number			X	
Cost_element_ID	Number	X			
Cost_element	Varchar2(50)			X	
Item_number	Varchar2(81)			X	
Group_ID	Number			X	

**CST\_ITEM\_CST\_DTLS\_INTERFACE**

Column Name	Type	Required	Derived	Optional	Reserved for Future Use
Group_description	Varchar2(80)			X	
Transaction_ID	Number			X	
Error_flag	Varchar2(1)			X	
Error_code	Varchar2(240)			X	
Error_explanation	Varchar2(240)			X	
Process_flag	Number	X			

**Column Descriptions**

Inventory\_item\_ID - Item identifier. This must be in MTL\_SYSTEM\_ITEMS.

Cost\_type\_ID - Cost type identifier. This will be overwritten with the cost type provided while submitting the request.

Cost\_type - Cost type identifier. This will be overwritten with the cost type provided while submitting the request.

Last\_update\_date - Standard Who column.

Last\_updated\_by - Standard Who column.

Creation\_date - Standard Who column.

Created\_by - Standard Who column.

Last\_update\_login - Standard Who column.

Organization\_ID - Organization identifier. This must be in MTL\_PARAMETERS. Either Organization\_ID or Organization\_code must be specified.

Organization\_code - Organization identifier. Must be in MTL\_PARAMETERS.

Operation\_sequence\_ID - Operation sequence identifier. This is not used.

Operation\_seq\_num - Operation sequence number in a routing. This is not used.

Department\_ID - Not used.

Department - Not used.

Level\_type - Level at which costs are incurred. Only 1 is supported.

Activity\_ID - Activity identifier. This must be in CST\_ACTIVITIES.

Activity - Activity identifier. This must be in CST\_ACTIVITIES. If Activity is mentioned, then Activity\_ID is populated from CST\_ACTIVITIES. Otherwise the default is null.

Resource\_seq\_num - Not used.

Resource\_ID - Resource (subelement) identifier. This must be in BOM\_RESOURCES. Either of Resource\_ID or Resource\_code must be entered for any cost elements other than material. This is either defined by the user or populated from BOM\_RESOURCES based on the Resource\_code.

Resource\_code - Resource (subelement) identifier. This must be in BOM\_RESOURCES.

Rollup\_source\_type - Cost source. This must be 1, which is user defined.

Activity\_context - Column for defining activity unit information.

Request\_ID - Concurrent Who column.

Item\_units - Number of units the activity cost is applied to. This must be greater than 0.

Activity\_units - Number of activity units applied to the item costs. This must be greater than, or equal to, 0.

Basis\_type - Basis type identifier. This must be between 1 and 6.

Basis\_resource\_ID - Not used.

Basis\_resource\_code - Not used.

Usage\_rate\_or\_amount - Number of resource units, overhead rate, or activity unit cost per basis. This must be greater than 0.

Basis\_factor - Basis factor. This is calculated from the Basis\_type and lot size.

Resource\_rate - Resource unit cost. This must be null.

Net\_yield\_or\_shrinkage\_factor - Item shrinkage factor. This is computed from the item shrinkage factor.

Item\_cost - Computed cost of the item. This is the product of Basis\_factor, Resource\_rate, Usage\_rate\_or\_amount, Net\_yield\_or\_shrinkage\_rate.

Program\_application\_ID - Concurrent Who column.

Program\_ID - Concurrent Who column.

Program\_update\_date - Concurrent Who column.

Attribute\_category - Descriptive flexfield structure defining column.

Lot\_size - Lot size. This must be greater than 0 if specified.

Based\_on\_rollup\_flag - Flag that indicates whether the cost has to be rolled up. This must be 1 or 2.

Shrinkage\_rate - Manufacturing shrinkage rate (for make items only). This must be between 0 and 0.99 (must be less than 1).

Inventory\_asset\_flag - Flag that indicates whether the item is asset or expense item. This must be 1 for it to be able to have any costs.

Cost\_element\_ID - Cost element identifier. This must be in CST\_COST\_ELEMENTS. Either of the Cost\_element\_ID or Cost\_element has to be populated.

Cost\_element - Cost element identifier. This must be in CST\_COST\_ELEMENTS.

Item\_number - Not used.

Group\_ID - Batch identifier. You can also populate this column if the process is to be run by group ID.

Group\_description - Description of the Group\_ID.

Transaction\_ID - Unique row identifier. This is populated by a sequence.

Error\_flag - This is set to "E" if there is an error.

Error\_code - The error code that identifies the error.

Error\_explanation - The error explanation. This displays the cause of the error which can be reviewed using the [list of common cost import error explanations](#) further in this guide.

Process\_flag - Flag that indicates what stage of validation this row is in. This will be populated as the rows are being processed in various phases. This must be set to 1 initially.

## CST\_ITEM\_CST\_DTLS\_INTERFACE Table Validations

- <sup>n</sup> The Organization\_ID, Cost\_element\_ID, Resource\_ID combination in the CICDI must be defined in BOM\_RESOURCES. No new resources will be supported. Also, subelements with Functional\_currency\_code set to 1 only will be supported for resource and outside processing Cost\_elements.
- <sup>n</sup> The Resource\_ID or Resource\_code has to be provided for cost elements other than material. For material cost element, if the Resource and Resource\_ID is not provided, it will be defaulted from MTL\_PARAMETERS for this organization.
- <sup>n</sup> Only subelements with functional currency flag set to 1 will be allowed to be imported for cost elements resource and outside processing.

- If Activity is provided, the Activity\_ID will be populated from CST\_ACTIVITIES. If Activity\_ID is provided, the Organization\_ID, Activity\_ID combination must exist in the CST\_ACTIVITIES table. If both Activity\_ID and Activity is provided, then the Activity\_ID should match the Activity.
- If any of the activity related information like the activity units, activity context, etc. is provided, it will be inserted into CST\_ITEM\_COSTS/CST\_ITEM\_COST\_DETAILS without any validation.
- The Cost\_element or Cost\_element\_id must be provided. If both are provided then they should match.
- The flags Based\_on\_rollup\_flag, Inventory\_asset\_flag, and the columns Lot\_size, Shrinkage\_rate should be the same for all rows that correspond to a particular Inventory\_item, Organization, Cost\_type combination. If they do not match (are not the same for the same Inventory\_item, Organization, Cost\_type combination) then all the rows for that item will be errored out and no costs for that item, organization, cost type combination will be imported. If they are left empty, they will be defaulted from the item/organization/default cost type combination where the default cost type is derived from the CST\_COST\_TYPES table for the provided cost type.
- The Level\_type is always 1 referring to "This" level cost information. If any level type is mentioned, all the rows for that item, organization, cost type combination will error out.
- The Usage\_rate\_or\_amount cannot be null.
- The Rollup\_source\_type must always be 1 (user defined costs only).
- The Resource\_rate must always be null.
- If the item is not an inventory asset item (i.e. the inventory asset flag is set to 2 in the CICDI or if the inventory\_asset\_flag is set to "N" in MTL\_SYSTEM\_ITEM for this item, organization combination) then no costs will be imported.
- Basis types of only 1 and 2 are allowed for any cost element other than material overhead. For material overhead all basis types are allowed. If the basis type of Activity is provided, then there have to be both activity units and item units defined. Moreover, Item\_units\_ cannot be zero if the basis type is Activity.
- Shrinkage\_rate can never exceed 1.
- Lot\_size can never be 0.
- If Based\_on\_rollup\_flag is 2, then the item cannot have shrinkage rate (i.e. shrinkage rate must be 0).

## Common Validations

Because of dependencies, tables CST\_RESOURCE\_COSTS\_INTERFACE, CST\_RES\_OVERHEADS\_INTERFACE, CST\_DEPT\_OVERHEADS\_INTERFACE, and CST\_ITEM\_CST\_DTLS\_INTERFACE must be populated in the same order that they are listed here.

- You will have to provide either Organization\_ID or Organization\_code wherever required. If both are provided and if the Organization\_ID does not match the Organization code, then the row will be marked error. If only the Organization\_code is provided, Organization\_ID will be populated from the MTL\_PARAMETERS table.
- You will have to provide the Inventory\_item\_ID. The Inventory\_item\_ID and the Organization\_ID must exist in the MTL\_SYSTEM\_ITEMS table. Only the item ID is allowed. No item names are allowed. The Item\_name field is not considered even if it is populated. Only item ID is considered.
- The Group\_ID specifies the batch that the row will be processed in. This is automatically populated by a sequence. All rows with that particular batch ID will then be processed in that particular run. If you decide to specify this Group\_ID, then this column must be populated with the next value from the sequence CST\_LISTS\_S. This is necessary to avoid these rows from getting picked up by the cost copy process.
- If the organization for which the cost/rates are being imported is not an organization that can control costs (i.e. it could be an organization whose costs are controlled by another master organization), then all the rows with this Organization\_ID will error out.

## Error Handling and Resubmission

The following list should be verified if any of the rows contain errors during validation:

- Error\_flag - This will be set to 'E' to indicate that an error has occurred.
- Error\_code - A code that will indicate the error.
- Error\_explanation - The actual short message that will enable the user to understand what exactly caused the error.
- Process\_flag - This will indicate in what phase of the validation the validation failed.

If any row contains an error, the user can find out the reason for the error and fix the row(s) in the corresponding interface table(s). To fix a particular row, the user can use Transaction\_ID to identify a particular row. To resubmit an error row for re-processing after correcting the error the user would have to set the following:

- Error\_flag = null
- Process\_flag = 1

The user will have to do this for all the rows for an item, organization, cost\_type combination that has an error. This is because no partial cost information for an item will be imported. If there is an error with any one row for a particular item, organization, cost type combination, then all the rows for this item, organization, cost type combination for the current batch id will be contain errors.

### Common Cost Import Interface Errors

This is a list of common errors that you may encounter when the rows are being validated. The error\_code can be obtained from the Error\_code column in the interface table. There is also a very brief explanation of the error in the Error\_explanation column. A more detailed explanation of the errors is listed here:

**CST\_NULL\_ORGANIZATION** - The row that has been marked with this error is missing values for both the Organization\_ID and the Organization\_code columns. At least one of the two must be provided for the row to be processed.

**CST\_INVALID\_ORGANIZATION** - The row that has been marked with this error could have any of the following listed errors.

- Organization\_ID that does not match any Organization\_ID in the MTL\_PARAMETERS table
- Organization\_code that is provided does not match any Organization\_code in the MTL\_PARAMETERS table
- Both the Organization\_ID and the Organization code that has been provided do not match (i.e the Organization\_ID is not of the Organization\_code that is mentioned)

**CST\_NULL\_ITEMID** - The row that has been marked with this error has missing Inventory\_item\_ID value. The Inventory\_item\_ID must be provided.

**CST\_NULL\_COSTELEMENT** - The row that has been marked with this error has missing Cost\_element\_ID and Cost\_element. At least one of the two must be provided.

**CST\_INVALID\_ROLLUP\_SRC\_TYPE** - A row that has been marked with this error has an invalid value for the Rollup\_source\_type column. The only allowed value is 1 (user defined costs).

**CST\_INVALID\_ITEMID** - A row that has been marked with this error has an Inventory\_item\_ID, Organization\_ID combination that does not exist (not defined in the MTL\_SYSTEM\_ITEMS table).

**CST\_INVALID\_COSTELEMENT** - The row that has been marked with this error has any of the following errors:

- The Cost\_element\_ID mentioned is not defined in the CST\_COST\_ELEMENTS table

- The Cost\_element\_ID, Cost\_element combination that is mentioned does not exist in the CST\_COST\_ELEMENTS table

CST\_INVALID\_SUBELEMENT - A row that has been marked with this error has any of the following errors:

- An invalid Organization\_ID, Cost\_element\_ID, Resource\_ID combination which is not defined in the BOM\_RESOURCES table
- An invalid Organization\_ID, Cost\_element\_ID, Resource\_code combination which is not defined in the BOM\_RESOURCES table
- An invalid Organization\_ID, Cost\_element\_ID, Resource\_ID, Resource\_code combination which is not defined in the BOM\_RESOURCES table

CST\_NULL\_SUBELEMENT - A row that has been marked with this error indicates that the row is missing values for Resource\_ID and Resource\_code columns. At least one of them will have to be provided.

CST\_NULL\_DEFSUBELEMENT - A row that has been marked with this error suggests that it has missing values for both the Resource\_ID and Resource\_code columns. This error arises when either of the following conditions is true:

- You have not provided either the Resource\_ID or Resource\_code for a cost element other than material or material overhead
- The default subelements from MTL\_PARAMETERS are null for cost element material

CST\_INVALID\_FUNCCODE - A row that has been marked with this error indicates that the Resource\_ID mentioned does not have the Functional\_currency\_flag set to 1 in the BOM\_RESOURCES table. Subelements with Functional\_currency\_code set to 1, will only be supported for resource and outside processing Cost\_elements. You can check the Functional\_currency\_flag in the BOM\_RESOURCES table for the subelement that is defined in this row.

CST\_INVALID\_LEVELTYPE - A row that has been marked with this error indicates that an invalid value has been entered for the Level\_type column. Only Level\_type value of 1 (this level costs) is supported.

CST\_INVALID\_CIC\_FLAGS - The 4 columns Based\_on\_rollup\_flag, Inventory\_asset\_flag, Shrinkage\_rate, and Lot\_size must have the same values for all the rows for a particular Inventory\_item\_ID, Organization, Cost\_type combination. The rows that have been marked with this error indicate that the 4 columns do not match for these rows. You have to check up the valid combination and then fix all the other rows with this value.

CST\_INVALID\_ROWS - If there is an error with any one row, all the rows with the same Item, Organization and Cost\_type combination as this errored out row will be marked error.

This is necessary to avoid importing partial costs for an item. You must fix the errored out row and then resubmit all the rows for processing.

**CST\_NO\_ITORACUNITS** - A row errored out with this error has a basis type of 6 (Activity) but either or both of Item\_units and Activity\_units is null. To fix this, you can mention the Item\_units and the Activity\_units, then resubmit for processing.

**CST\_ZERO\_LOTSIZE** - A row errored out with this error has 0 lot size. You will have to enter a non zero lot size to fix this row.

**CST\_NOT\_COSTINGORG** - A row is errored out with this error when the Organization\_ID mentioned in this row is not an organization that can control costs (i.e this organization receives costing information from another master org).

**CST\_NULL\_DEPARTMENT** - A row marked with this error has a null Department and Department\_ID. To fix this, either a Department\_ID or Department or both will have to be provided.

**CST\_CANT\_INSERT** - Rows are errored out with this error when the cost import process is being run in the “insert new cost information only” mode and there are rows that already exist for the same item/organization/cost type combination as the rows in the interface table. Since the cost information already exists, rows in the interface table will be errored out. To fix this problem, the rows will have to resubmitted with a “remove and replace cost information option”.

**CST\_DUPL\_ROWS** - Rows in the interface table are marked with this error when there are multiple rows in the interface table for the same Organization, Resource\_ID, and Cost type combination. This error is applicable to only CST\_RESOURCE\_COSTS\_INTERFACE, CST\_RES\_OVERHEADS\_INTERFACE, and CST\_DEPT\_OVERHEADS\_INTERFACE tables. To fix this error, you delete the duplicate rows.

**CST\_INVALID\_ACTIVITY** - Rows marked with this error suggest one of the following:

- The Activity\_ID or Activity mentioned is invalid (does not exist in CST\_ACTIVITIES table)
- The Activity\_ID and Activity combination is invalid
- The Activity\_ID, Organization\_ID combination is invalid

To fix the problem, you insert a valid Activity\_ID or Activity name from CST\_ACTIVITIES.

**CST\_INVALID\_BASEDONRLP** - Rows marked with this error suggest that the rows have an invalid Based\_on\_rollup\_flag value. The only valid values are 1(yes) and 2(no).

**CST\_INVALID\_BASISTYPE** - Rows errored out with this error could have been errored out because of either of the following reasons:

- The Basis\_type value is not between 1 and 6
- If this error is for a row in CST\_DEPT\_OVERHEADS\_INTERFACE table, the Basis\_type is not between 1 and 4 for cost element overhead
- The Cost\_element\_ID is not 2 (Material Overhead) and the Basis\_type exceeds 2. For all other cost elements, other than material overhead, the only valid values are 1 and 2. For material overhead, all values (between 1 and 6) are allowed

**CST\_INVALID\_BUYITEM** - The rows marked with this error suggest that the item is not a buy item (Based\_on\_rollup is not 1) but a Shrinkage\_rate (greater than 0) is being defined for this item. To fix this error, you can either input a value of 1 for the Based\_on\_rollup\_flag or make the Shrinkage\_rate equal to 0.

**CST\_INVALID\_OVERHEAD** - Rows are marked with this error when either of the following hold true:

- The Overhead\_ID or Overhead is invalid (does not exist in BOM\_RESOURCES)
- The Overhead and Organization combination does not exist in BOM\_RESOURCES
- The Overhead\_ID and Overhead combination is invalid

**CST\_INVALID\_RESRATE** - This error is applicable to the rows only in CST\_ITEM\_COST\_DTLS\_INTERFACE table. The rows marked with this error suggest that the Resource\_rate column does not have null as the value. Only null values are allowed.

**CST\_INVALID\_ROLLUP\_SRC\_TYPE** - The rows marked with this error have an invalid value of Rollup\_source\_type flag. It must be 1 (user defined). Only a value of 1 is supported.

**CST\_INVALID\_SHRRATE** - Rows marked with this error do not have a value of Shrinkage\_rate between 0 and 1. The Shrinkage\_rate can never be 1 or exceed 1.

**CST\_NOT\_INVASSITEM** - Rows are marked with this error when either of the following is true:

- The Inventory\_asset\_flag is not 1 for this row in the interface table
- The Inventory\_asset\_item is set to “N” in the MTL\_SYSTEM\_ITEMS table for this item/organization combination

**CST\_INVALID\_DEFCSTTYPE** - Rows are marked with this error when either of Based\_on\_rollup\_flag or Shrinkage\_rate or Lot\_size or Inventory\_asset\_flag has null values and there are no rows that exist in CST\_ITEM\_COSTS for this Item, Organization, Default\_cost\_type combination. The Default\_cost\_type is derived from CST\_COST\_TYPES for the cost type provided during the request submission. You have two options to correct this:

- Supply all the required defaults (i.e. Based\_on\_rollup\_flag, Inventory\_asset\_item\_flag, Shrinkage\_rate, and Lot\_size values)
- Rerun the request with a cost type that has a default cost type such that a row for the Item/Organization/Cost\_type exists in CST\_ITEM\_COSTS from which defaults can be derived

CST\_EXP\_SUBELEMENT - Rows are marked with this error when either of the following is true:

- The subelement has expired
- The Allow\_costS\_flag for this subelement is set to 2 (No)

CST\_REQ\_ERROR - This error occurs when two requests have the same Group\_ID parameter.

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## eAM Open Interfaces and APIs

This appendix details the integration tools used to integrate eAM with your existing non-Oracle systems. The following topics are covered:

- [eAM Interfaces and APIs](#) on page 5-1
- [eAM Item Open Interface](#) on page 5-2
- [eAM Asset Number Open Interface](#) on page 5-9
- [eAM Asset Genealogy Open Interface](#) on page 5-12
- [eAM Meter Reading Open Interface](#) on page 5-15
- [Meter Reading API](#) on page 5-18
- [Preventive Maintenance Definition API](#) on page 5-21
- [Activity Creation API](#) on page 5-27
- [Maintenance Object Instantiation API](#) on page 5-40
- [Work Order Business API](#) on page 5-41

### eAM Interfaces and APIs

Oracle Enterprise Asset Management provides a number of open interfaces and APIs, enabling you to link with non-Oracle applications, applications you build, and applications on other computers.

This section includes the following topics:

- [eAM Item Open Interface](#) on page 5-2
- [eAM Asset Number Open Interface](#) on page 5-9
- [eAM Asset Genealogy Open Interface](#) on page 5-12
- [eAM Meter Reading Open Interface](#) on page 5-15

## eAM Item Open Interface

The eAM Item Open Interface enables you to import asset groups, asset activities, and rebuildable items into the eAM application in a batch process. You can create them as new items or update existing items (asset groups, asset activities, or rebuildable items). The Item Open Interface validates your data, insuring that your imported items contain the same item detail as items you enter manually in the Master Item window.

You can also import item category assignments. This can be done simultaneously with a process of importing items, or as a separate task of importing item category assignments only.

When importing items through the Item Open Interface, you create new items in your item master organization, update existing items, or assign existing items to additional organizations. You can specify values for all the item attributes, or you can specify just a few attributes and let the remainder default or remain null. The Item Open Interface also enables import revision details, including past and future revisions and effectivity dates. Validation of imported items is done using the same rules as the item definition windows, so you are insured of valid items. See: [Overview of Engineering Prototype Environment](#), *Oracle Engineering User's Guide* and [Defining Items](#), *Oracle Inventory User's Guide*.

The Item Open Interface reads data from three tables for importing items and item details. Use the MTL\_SYSTEM\_ITEMS\_INTERFACE table for new item numbers and all item attributes. This is the main item interface table, and may be the only table you choose to use. When importing revision details for new items, use the MTL\_ITEM\_REVISIONS\_INTERFACE table. This table is used for revision information, and is not required. When importing item category assignments, use the MTL\_ITEM\_CATEGORIES\_INTERFACE table to store data about item assignments to category sets, and categories to be imported into the Oracle Inventory MTL\_ITEM\_CATEGORIES table. A fourth table, MTL\_INTERFACE\_ERRORS, is used for error tracking of all items that the Item Interface fails.

Before using the Item Open Interface, you must write and run a custom program that extracts item information from your source system and inserts the records into the MTL\_SYSTEM\_ITEMS\_INTERFACE table, and (if revision detail is included) the MTL\_ITEMS\_REVISIONS\_INTERFACE table, as well as the MTL\_ITEM\_CATEGORIES\_INTERFACE table. After you load item, revision, and item category assignment records into these interface tables, you run the Item Open Interface to import the data. The Item Open Interface assigns defaults, validates included data, and then imports the new items.

---

**Note:** You must import items into a master organization before you import items into additional organizations. You can accomplish this by specifying only your master organization on a first pass run of the Item Open Interface. Once this has completed, you can run the Item Open Interface again, this time specifying an additional or all organizations.

---

## Setting Up the Item Open Interface

1. Create Indexes for Performance. Create the following indexes to improve the Item Open Interface performance.

First, determine which segments are enabled for the System Items flexfield.

Then, for example, if you have a two-segment flexfield, with SEGMENT8 and SEGMENT12 enabled, you would do the following:

```
SQL> create unique index MTL_SYSTEM_ITEMS_B_UC1 on MTL_SYSTEM_ITEMS_B (ORGANIZATION_ID,
SEGMENT8, SEGMENT12);
SQL> create unique index MTL_SYSTEM_ITEMS_INTERFACE_UC1 on mtl_system_items_interface
(organization_id, segment8, segment12);
```

If you plan to populate the ITEM\_NUMBER column in mtl\_system\_items\_interface instead of the item segment columns, do not create the MTL\_SYSTEM\_ITEMS\_INTERFACE\_UC1 unique index. Instead, create MTL\_SYSTEM\_ITEMS\_INTERFACE\_NC1 non-unique index on the same columns.

Create the following indexes for optimum performance:

### MTL\_SYSTEM\_ITEMS\_B

- Non-Unique Index on organization\_id, segment#
- You need at least one indexed, mandatory segment.

**MTL\_SYSTEM\_ITEMS\_INTERFACE**

- Non Unique Index on inventory\_item\_id, organization\_id
- Non Unique Index on Item\_number
- Unique Index on Transaction\_id

---

---

**Note:** This Index will have to be recreated as Non Unique if you are populating organization\_code, instead of organization\_id. It should include the segment (s) having been enabled for the System Item Key Flexfield. You are enabled to use the created default index if you are using segment1.

---

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**MTL\_ITEM\_REVISIONS\_INTERFACE**

- Non Unique Index on set\_process\_id
- Non Unique Index on Transaction\_id
- Non Unique Index on Organization\_id, Inventory\_item\_id, Revision

**MTL\_ITEM\_CATEGORIES\_INTERFACE**

- Non Unique Index on inventory\_item\_id, category\_id
- Non Unique Index on set\_process\_id

---

---

**Suggestion:** Populate \_id fields whenever possible. Populating inventory\_item\_id instead of segment (n) for Update Mode will significantly improve performance. Populating organization\_id instead of organization\_code for both Create and Update modes, will also reduce processing time.

---

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2. Start the Concurrent Manager.

Because the Item Open Interface process is launched and managed via the concurrent manager, you must ensure that the concurrent manager is running before you can import any items.

3. Set Profile Option Defaults.

Some columns use profile options as default values. You must set these profiles if you want them to default. See: [Inventory Profile Options](#), *Oracle Inventory User's Guide* and [Overview of Inventory Setup](#), *Oracle Inventory User's Guide*.

## Execution Steps

### 1. Populate the interface tables.

The item interface table MTL\_SYSTEM\_ITEMS\_INTERFACE contains *every* column in the Oracle Inventory item master table, MTL\_SYSTEM\_ITEMS. The columns in the item interface correspond directly to those in the item master table. Except for ITEM\_NUMBER or SEGMENT $n$  columns, ORGANIZATION\_CODE or ORGANIZATION\_ID, DESCRIPTION, PROCESS\_FLAG, and TRANSACTION\_TYPE, all of these columns are optional, either because they have defaults that can be derived, or because the corresponding attributes are optional and may be left null.

You may put in details about other interface tables not used by the Item Open Interface.

Currently, the interface does not support the MTL\_CROSS\_REFERENCE\_INTERFACE or MTL\_SECONDARY\_LOCS\_INTERFACE.

The MTL\_ITEM\_CATEGORIES\_INTERFACE is used by the Item Open Interface for both internal processing of default category assignments, *and* to retrieve data populated by the user to be imported into the Oracle Inventory MTL\_ITEM\_CATEGORIES table.

**Table 5–1 MTL\_SYSTEM\_ITEMS\_INTERFACE**

Column Names (partial list of columns)	Instruction
PROCESS_FLAG	Enter 1 for pending data to be imported.  After running the import process, the PROCESS_FLAG of the corresponding rows will be set to different values, indicating the results of the import (1 = Pending, 2 = Assign complete, 3 = Assign/validation failed, 4 = Validation succeeded; import failed, 5 = Import in process, 6 = Import succeeded)
TRANSACTION_TYPE	Enter CREATE to create a new item, or UPDATE to update existing items.
SET_PROCESS_ID	Enter an arbitrary number. Rows designated with the same value for SET_PROCESS_ID will process together.
ORGANIZATION_CODE	Enter the organization that the new item will import into.

**Table 5–1 MTL\_SYSTEM\_ITEMS\_INTERFACE**

Column Names (partial list of columns)	Instruction
SEGMENT1~20	Corresponds to the item name (for example, the name of the Asset Group, Asset Activity, or Rebuildable Item)
DESCRIPTION	Enter the description of the item.
EAM_ITEM_TYPE	Enter 1 for Asset Group, 2 for Asset Activity, or 3 for Rebuildable Item.
INVENTORY_ITEM_FLAG	Enter Y for eAM items.
MTL_TRANSACTIONS_ENABLED_FLAG	Enter N for Asset Group and Asset Activity. Enter Y for Rebuildable Item.
EFFECTIVITY_CONTROL	Enter 2 for Unit Effectivity Control for eAM Asset Groups.
SERIAL_NUMBER_CONTROL_CODE	Enter 2 (Predefined) for Asset Groups; This should be NULL for Asset Activities. Enter 1 (No Control) for Non-Serialized Rebuildable Items. Enter 2 (Predefined) or 5 (Dynamic entry at inventory receipt) or 6 (Dynamic entry at sales order issue) for Serialized Rebuildable items.
AUTO_SERIAL_ALPHA_PREFIX	Serial Number Prefix
START_AUTO_SERIAL_NUMBER	Start Serial Number

**Note:** For information about columns not discussed, see Table and View Definitions, *Oracle Inventory Technical Reference Manual*.

- 2. Launch the Item Import process.
  - a. Navigate to the [Import Items](#) window.

Choose an organization if you have not specified one already. You must import items into the master organization before importing them to additional children organization.
  - b. Enter parameters:

**Table 5-1 Parameters**

<b>Parameter Name</b>	<b>Instruction</b>
All Organizations	<p>Select Yes to run the interface for all organization codes within the item interface table.</p> <p>Select No to run the interface for only interface rows within the current organization.</p>
Validate Items	<p>Select Yes to validate all items, and their information residing in the interface table, that have not yet been validated. If items are not validated, they will not be imported into eAM.</p> <p>Select No to not validate items within the interface table. Use this option if you have previously run the Item Open interface and responded Yes in the Validate Items parameter, and No in the Process Items parameter, and now need to process your items.</p>
Process Items	<p>Select Yes to import all qualifying items in the interface table into eAM.</p> <p>Select No to not import items into eAM. Use this option, along with Yes in the Delete Processed Rows parameter, to remove successfully processed rows from the interface table, without performing any other processing. You can also use this option, with Yes in the Validate Items parameter, to validate items without any processing.</p>
Delete Processed Rows	<p>Select Yes to delete successfully processed rows from the item interface tables.</p> <p>Select No to leave all rows in the item interface tables.</p>
Process Set	<p>Enter a set id number for the set of rows in the interface table to process. The interface process will process rows having that id in the SET_PROCESS_ID column. If you leave this parameter blank, all rows are picked up for processing, regardless of the SET_PROCESS_ID column value.</p>
Create or Update Items	<p>Select 1 to create new items.</p> <p>Select 2 to update existing items. You can create or update items via separate executions of the Import Items process.</p>

- c. Choose OK.
- d. Choose Submit to launch the Asset Number Import process. You can view its progress by choosing View from the tool bar, and then selecting Requests.

**See Also:**

Oracle Manufacturing APIs and Open Interfaces Manual, Release 11i

[Defining Asset Groups](#), *Oracle Enterprise Asset Management User's Guide*

[Defining Asset Activities](#), *Oracle Enterprise Asset Management User's Guide*

[Defining Rebuildable Items](#), *Oracle Enterprise Asset Management User's Guide*

## eAM Asset Number Open Interface

The eAM Asset Number Open Interface enables you to import asset numbers into eAM, using a batch process. You can optionally import asset number attributes. You can create new asset numbers and attributes, or update existing asset numbers and attributes.

### Execution Steps

1. Populate the interface tables with the import information.

The two item interface tables to be populated are MTL\_EAM\_ASSET\_NUM\_INTERFACE (MEANI), and the MTL\_EAM\_ATTR\_VAL\_INTERFACE (MEAVI). The MTL\_EAM\_ASSET\_NUM\_INTERFACE table stores relevant asset number information. If the asset's attributes are also imported; that information is stored in the MTL\_EAM\_ATTR\_VAL\_INTERFACE.

**Table 5–2 MTL\_EAM\_ASSET\_NUM\_INTERFACE (MEANI)**

Column Name (partial list of columns)	Instruction
BATCH_ID	Enter an arbitrary number. Rows designated with the same BATCH_ID will process together.
PROCESS_FLAG	Enter a P for pending. This value will change to S if the import is successful, or E if the row contains an error.
IMPORT_MODE	Enter 0 to create new rows (asset numbers), or 1 to update existing rows.
IMPORT_SCOPE	Enter 0 to import both Asset Numbers and Attributes, 1 to import Asset Numbers only.
INVENTORY_ITEM_ID	Enter the inventory item id for Asset Group to associate with the imported Asset Number(s).
SERIAL_NUMBER	Enter the name of the Asset Number.
ORGANIZATION_CODE	Enter the current organization.
OWNING_DEPARTMENT_CODE	Enter the Owning Department of the asset number(s).
ERROR_CODE	This column will update by the Import process if an error occurs.
ERROR_MESSAGE	This column will update by the Import process if an error occurs.

**Table 5–2 MTL\_EAM\_ASSET\_NUM\_INTERFACE (MEANI)**

Column Name (partial list of columns)	Instruction
INTERFACE_HEADER_ID	This is used with the identically named column in the MEAVI table, to relate the Attributes associated with an Asset Number.

**Table 5–3 MTL\_EAM\_ATTR\_VAL\_INTERFACE (MEAVI)**

Column Name (partial list of columns)	Instruction
PROCESS_STATUS	Enter P (Pending). This value will change to S if the import is successful, or E if the row contains an error.
INTERFACE_HEADER_ID	Foreign key of the identically named column in the MEANI table to relate to the Asset Number an Attribute is associated with.
INTERFACE_LINE_ID	A unique key
END_USER_COLUMN_NAME	Corresponds with the Attribute Name
ATTRIBUTE_CATEGORY	Corresponds with the Attribute Group
LINE_TYPE	Enter 1 if the Attribute is of type VARCHAR2, 2 if it is of type NUMBER, or 3 if it is of type DATE.
ATTRIBUTE_VARCHAR2_VALUE	Value of the Attribute; used with LINE_TYPE = 1
ATTRIBUTE_NUMBER_VALUE	Value of the Attribute; used with LINE_TYPE = 2
ATTRIBUTE_DATE_VALUE	Value of the Attribute; used with LINE_TYPE = 3
ERROR_NUMBER	This column will update by the Import process if an error occurs.
ERROR_MESSAGE	This column will update by the Import process if an error occurs.

---

---

**Note:** For information about columns not discussed, see Table and View Definitions, *Oracle Enterprise Asset Management Technical Reference Manual*.

---

---

2. Launch the Asset Number Import process to import interface information into the MTL\_SERIAL\_NUMBERS production table.
  - a. Navigate to the [Asset Number Import](#) window.  
Choose an organization if you have not specified one already.
  - b. Enter parameters:

**Table 5-2 Parameters**

Column Name	Instruction
Batch ID	This is the same value that is populated in the BATCH_ID column within the MEANI table.
Purge Option	Select Yes to delete rows in the interface tables after they have successfully imported into the production tables.  Select No to keep all rows in the interface tables after they have successfully imported into the production tables. Any failed rows with error messages will not delete.

- c. Choose OK.
- d. Choose Submit to launch the Asset Number Import process. You can view its progress by choosing View from the tool bar, and then selecting Requests.

### Create and Update Asset Genealogy and Hierarchy API

The INV\_GENEALOGY\_PUB public API is used to create and update asset genealogy and hierarchy information in the MTL\_OBJECT\_GENEALOGY table, and is called from the Asset Number Open Interface process.

**Table 5-4 INV\_GENEALOGY\_PUB**

Column Name	Type	Required	Default
P_API_VERSION	Number	Yes	-
P_INIT_MSG_LIST	Varchar2	-	FND_API.G_FALSE
P_COMMIT	Varchar2	-	FND_API.G_FALSE
P_VALIDATION_LEVEL	Number	-	FND_API.G_VALID_LEVEL_FULL

**Table 5–4** *INV\_GENEALOGY\_PUB*

Column Name	Type	Required	Default
P_OBJECT_TYPE	Number	Yes	-
P_PARENT_OBJECT_TYPE	Number	-	-
P_OBJECT_ID	Number	-	-
P_OBJECT_NUMBER	Varchar2	-	-
P_INVENTORY_ITEM_ID	Number	-	-
P_ORG_ID	Number	-	-
P_PARENT_OBJECT_ID	Number	-	-
P_PARENT_OBJECT_NUMBER	Varchar2	-	-
P_PARENT_INVENTORY_ITEM_ID	Number	-	-
P_PARENT_ORG_ID	Number	-	-
P_GENEALOGY_ORIGIN	Number	-	-
P_GENEALOGY_TYPE	Number	-	-
P_START_DATE_ACTIVE	Date	-	-
P_END_DATE_ACTIVE	Date	-	-
P_ORIGIN_TXN_ID	Number	-	-
P_UPDATE_TXN_ID	Number	-	-

**See Also:**

[Defining Asset Numbers](#), *Oracle Enterprise Asset Management User's Guide*

**eAM Asset Genealogy Open Interface**

The eAM Asset Genealogy Open Interface enables you to import asset genealogy (configuration history) into eAM, using a batch process. You can create new parent/child relationships, or update existing relationships.

**Execution Steps**

1. Populate the interface tables with the import information.

The Asset Genealogy Import process reads information within the MTL\_OBJECT\_GENEALOGY\_INTERFACE (MOGI) table, then imports that information into the production tables.

**Table 5–5 MTL\_OBJECT\_GENEALOGY\_INTERFACE (MOGI)**

Column Name (partial list of columns)	Instruction
BATCH_ID	Enter an arbitrary number. Rows designated with the same BATCH_ID will process together.
PROCESS_STATUS	Enter P (Pending). This value will change to S if the import is successful, or E if the row contains an error.
INTERFACE_HEADER_ID	Unique key
IMPORT_MODE	Enter 0 to create new rows (configuration histories), or 1 to update existing rows.
OBJECT_TYPE	Enter 2 for eAM.
PARENT_OBJECT_TYPE	Enter 2 for eAM.
GENEALOGY_ORIGIN	Enter 3 (Manual) for eAM.
GENEALOGY_TYPE	Enter 5 for eAM.
INVENTORY_ITEM_ID	Corresponds to Asset Group
SERIAL_NUMBER	Corresponds to Asset Number
PARENT_INVENTORY_ITEM_ID	Corresponds to Parent Asset Group
PARENT_SERIAL_NUMBER	Corresponds to Parent Asset Number
START_DATE_ACTIVE	Enter the Parent/Child relationship start date.
END_DATE_ACTIVE	Enter the Parent/Child relationship end date.
ERROR_CODE	This column will update by the Import process if an error occurs.
ERROR_MESSAGE	This column will update by the Import process if an error occurs.

---

**Note:** For information about columns not discussed, see Table and View Definitions, *Oracle Enterprise Asset Management Technical Reference Manual*.

---

- 2. Launch the Asset Genealogy Import process.
  - a. Navigate to the [Asset Genealogy Import](#) window.

Choose an organization if you have not specified one already. You have to import asset genealogies into the master organization before importing them into additional children organizations.
  - b. Enter parameters:

**Table 5-3 Parameters**

Parameter	Instruction
Batch ID	This is the same value that is populated in the BATCH_ID column within the MOGI table.
Purge Option	Select Yes to delete rows in the interface tables after they have successfully imported into the production tables.  Select No to keep all rows in the interface tables after they have successfully imported into the production tables. Any failed rows with error messages will not delete.

- c. Choose OK.
    - d. Choose Submit to launch the Asset Genealogy Import process. You can view its progress by choosing View from the tool bar, and then selecting Requests.

**See Also:**

[Viewing and Updating the Configuration History](#), *Oracle Enterprise Asset Management User's Guide*

[Displaying the Asset Hierarchy](#), *Oracle Enterprise Asset Management User's Guide*

## eAM Meter Reading Open Interface

Import Meter Reading is an interface process used to import meter readings into eAM.

### Execution Steps

1. Populate the interface table with the import information.

The Meter Reading Import process reads information within the EAM\_METER\_READING\_INTERFACE table, then imports that information into the eAM production table.

**Table 5–6 EAM\_METER\_READING\_INTERFACE**

Column Name (partial list of columns)	Instruction
GROUP_ID	Enter an arbitrary number. Rows designated with the same GROUP_ID will process together.
PROCESS_STATUS	Enter P (Pending). This value will change to S if the import is successful, or E if the row contains an error.
PROCESS_PHASE	Enter 2 for rows to be processed.
METER_ID	Unique key
METER_NAME	Enter the name of the meter to process. This is not mandatory if you entered a METER_ID.
RESET_FLAG	Enter Yes to reset the meter reading. If there is an already existing meter reading for the given meter that occurs after this reset reading, the processor will error. Enter No to not reset the meter reading.
LIFE_TO_DATE	Enter a value for LIFE_TO_DATE or a value in the READING_VALUE column. If both columns are populated, then the READING_VALUE value is used to enter a reading, and the LIFE_TO_DATE_READING value is calculated from this current reading.
ORGANIZATION_ID	If you enter an organization ID, the organization provided must be enabled for eAM.
ORGANIZATION_CODE	If you enter an organization code, the organization provided must be enabled for eAM.
READING_DATE	Date the reading is entered
READING_VALUE	Reading value at the reading date

**Table 5–6 EAM\_METER\_READING\_INTERFACE**

Column Name (partial list of columns)	Instruction
WIP_ENTITY_ID	Enter the work order id that the reading is associated with. If the column is populated, then the ORGANIZATION_ID or ORGANIZATION_CODE columns are mandatory.
WORK_ORDER_NAME	Enter the work order name that the reading is associated with. If this column is populated, then the ORGANIZATION_ID or ORGANIZATION_CODE columns are mandatory.
DESCRIPTION	Description of meter reading
ERROR_CODE	This column will update by the Import process if an error occurs.
ERROR_MESSAGE	This column will update by the Import process if an error occurs.

**Note:** For information about columns not discussed, see Table and View Definitions, *Oracle Enterprise Asset Management Technical Reference Manual*.

- 2. Launch the Meter Reading Import process.
  - a. Navigate to the [Import Jobs and Schedules](#) window.

Choose an organization if you have not specified one already. You must import work orders into the master organization before importing them into additional children organizations.

Enter parameters:

Group ID

Corresponds to the GROUP\_ID in the EAM\_METER\_READING\_INTERFACE table. The import process will only process those meter readings that have a GROUP\_ID in the interface table matching the value entered in this parameter.
  - b. Choose OK.
  - c. Choose Submit to launch the Meter Reading Import process. You can view its progress by choosing View from the tool bar, and then selecting Requests.

### To view pending meter readings:

You can display the rows within the interface table that failed to import into eAM.

1. Navigate to the [Find Meter Readings](#) window. This window enables you to query rows using search criteria, such as Group ID, Reading Date, or Organization code, to narrow your search.
2. Choose Find. The rows that display failed to import into eAM.

**Figure 5–1 Pending Meter Reading Window**

The screenshot shows a window titled "Pending Meter Reading" with three tabs: "Process", "Readings", and "More". The "Readings" tab is selected, displaying a table of meter readings. The table has the following columns: Group ID, Phase, Status, Request ID, Source Code, and Source Line ID. The data is as follows:

Group ID	Phase	Status	Request ID	Source Code	Source Line ID
1	Validation	Error			
3003601	Validation	Pending			
3003602	Validation	Pending			
3003603	Validation	Pending			
3003604	Validation	Error			

At the bottom of the window, there are two buttons: "Submit 1" and "Errors".

3. Optionally, select the Process tab to display general information about the errored meter readings.
4. Optionally, select the Readings tab to display meter reading information, such as meter name, reading date, and reading value.
5. Optionally, select the More tab to display information about the meter reading, such as Organization, Work order, Description, and Created By.

- 6. Optionally, select Errors to view additional detailed information regarding the type and cause of the failure.
- 7. Optionally, choose Submit1 to import work orders, again, after correcting errors.

**See Also:**

[Entering Meter Readings](#), *Oracle Enterprise Asset Management User's Guide*

## Meter Reading API

**Package Name:** EAM\_METERREADING\_PUB

**Procedure Name:** CREATE\_METER\_READING

The CREATE\_METER\_READING API creates meter readings and reset existing meter readings. The table below provides the specifications for this API:

**Table 5–7 CREATE\_METER\_READING**

Parameter	Type	Required	Default	Description
p_api_version	NUMBER	x		Standard Oracle API parameter
p_init_msg_list	VARCHAR2		FND_API.G_FALSE	Standard Oracle API parameter
p_commit	VARCHAR2		FND_API.G_FALSE	Standard Oracle API Output parameter
x_msg_count	NUMBER			Standard Oracle API Output parameter
x_msg_data	VARCHAR2			Standard Oracle API output parameter
x_return_status	VARCHAR2			Standard Oracle API output parameter

**Table 5–7 CREATE\_METER\_READING**

Parameter	Type	Required	Default	Description
p_meter_reading_rec	Eam_MeterReading_PUB.meter_reading_Rec_Type	x		The record includes details of the meter reading
p_value_before_reset	NUMBER		NULL	Value of the meter reading before reset. Required when the reading is a reset
x_meter_reading_id	NUMBER			The meter_reading_id of the newly created record

**Table 5–8 meter\_reading\_rec\_type**

Column name	Type	Default
meter_id	NUMBER	NULL
meter_reading_id	NUMBER	NULL
current_reading	NUMBER	NULL
current_reading_date	DATE	NULL
reset_flag	VARCHAR2(1)	NULL
description	VARCHAR2(100)	NULL
wip_entity_id	NUMBER	NULL
attribute_category	VARCHAR2(30)	NULL
attribute1	VARCHAR2(150)	NULL
attribute2	VARCHAR2(150)	NULL
attribute3	VARCHAR2(150)	NULL
attribute4	VARCHAR2(150)	NULL

**Table 5–8 meter\_reading\_rec\_type**

Column name	Type	Default
attribute5	VARCHAR2(150)	NULL
attribute6	VARCHAR2(150)	NULL
attribute7	VARCHAR2(150)	NULL
attribute8	VARCHAR2(150)	NULL
attribute9	VARCHAR2(150)	NULL
attribute10	VARCHAR2(150)	NULL
attribute11	VARCHAR2(150)	NULL
attribute11	VARCHAR2(150)	NULL
attribute13	VARCHAR2(150)	NULL
attribute14	VARCHAR2(150)	NULL
attribute15	VARCHAR2(150)	NULL
source_line_id	NUMBER	NULL
source_code	VARCHAR2(30)	NULL
wo_entry_fake_flag	VARCHAR2(1)	NULL

**Package Name:** EAM\_METERREADING\_PUB

**Procedure Name:** DISABLE\_METER\_READING

The DISABLE\_METER\_READING public API disables existing meter readings. The user needs to supply either a meter reading id or a meter reading date, to identify the specific reading. The user also needs to supply either a meter name or a meter id to identify the meter. The table below provides the specifications for this API:

**Table 5–9 DISABLE\_METER\_READING**

Parameter	Type	Required	Default	Description
p_api_version	NUMBER	x		Standard Oracle API parameter
p_init_msg_list	VARCHAR2		FND_API.G_FALSE	Standard Oracle API parameter

**Table 5–9 DISABLE\_METER\_READING**

Parameter	Type	Required	Default	Description
p_commit	VARCHAR2		FND_API.G_FALSE	Standard Oracle API parameter
x_return_status	VARCHAR2			Standard Oracle API output parameter
x_msg_count	NUMBER			Standard Oracle API output parameter
x_msg_data	VARCHAR2	x		Standard Oracle API output parameter
p_meter_reading_id	NUMBER		NULL	The meter_reading_id of the meter reading to be disabled
p_meter_id	NUMBER		NULL	The meter_id of the meter
p_meter_reading_date	DATE		NULL	Meter reading date
p_meter_name	VARCHAR2		NULL	Meter name

## Preventive Maintenance Definition API

The Preventive Maintenance Definition API creates a new Preventive Maintenance Schedules or Preventive Maintenance Schedule Templates. Preventive Maintenance schedule header and rules are specified, and new Preventive Maintenance schedules or templates are validated and then generated.

**Package Name:** EAM\_PMDEF\_PUB

**Procedure Name:** CREATE\_PM\_DEF

The CREATE\_PM\_DEF public API creates a new Preventive Maintenance definition. The table below provides the specifications for this API:

**Table 5–10 CREATE\_PM\_DEF**

Parameter	Type	Required	Default	Description
p_api_version	NUMBER	x		Standard Oracle API parameter
p_init_msg_list	VARCHAR2		FND_API.G_FALSE	Standard Oracle API parameter
p_commit	VARCHAR2		FND_API.G_FALSE	Standard Oracle API parameter
x_msg_count	NUMBER			Standard Oracle API output parameter
x_msg_data	VARCHAR2			Standard Oracle API output parameter
x_return_status	VARCHAR2			Standard Oracle API output parameter
p_pm_schedule_rec	pm_scheduling_rec_type	x		This record contains all the information of the PM header
p_pm_day_interval_rules_tbl	pm_rule_tbl_type	x		A table of day interval rule records. If no day interval rules are defined for this PM definition, pass in an empty table of type pm_rule_tbl_type
p_pm_runtime_rules_tbl	pm_rule_tbl_type	x		A table of run time rule records. If no run time rules are defined for this PM definition, pass in an empty table of type pm_rule_tbl_type

**Table 5–10 CREATE\_PM\_DEF**

Parameter	Type	Required	Default	Description
p_pm_list_date_rules_tbl	pm_rule_tbl_type	x		A table of list date records. If no list date rules are defined for this PM definition, pass in an empty table of type pm_rule_tbl_type
x_new_pm_schedule_id	NUMBER	x		The pm_schedule_id for the newly created PM

**Package Name:** EAM\_PMDEF\_PUB

**Procedure Name:** UPDATE\_PM\_DEF

The UPDATE\_PM\_DEF API updates an existing Preventive Maintenance definition. The table below provides the specifications for this API:

**Table 5–11 UPDATE\_PM\_DEF**

Parameter	Type	Required	Default	Description
p_api_version	NUMBER	x		Standard Oracle API parameter
p_init_msg_list	VARCHAR2		FND_API.G_FALSE	Standard Oracle API parameter
p_commit	VARCHAR2		FND_API.G_FALSE	Standard Oracle API parameter
x_msg_count	NUMBER			Standard Oracle API Output parameter
x_msg_data	VARCHAR2			Standard Oracle API output parameter
x_return_status	VARCHAR2			Standard Oracle API output parameter

**Table 5–11 UPDATE\_PM\_DEF**

Parameter	Type	Required	Default	Description
p_pm_schedule_ id	NUMBER			The pm_schedule_ id of the PM definition to be updated
p_pm_schedule_ rec	pm_ scheduling_ rec_type		NULL	This record contains all of the information for the PM header
p_pm_day_ interval_rules_tbl	pm_rule_tbl_ type	x		A table of day interval rule records
p_pm_runtime_ rules_tbl	pm_rule_tbl_ type	x		A table of run time rule record
p_pm_list_date_ rules_tbl	pm_rule_tbl_ type	x		A table of list date record

**Table 5–12 PM\_SCHEDULING\_REC\_TYPE**

Column name	Type	Default
pm_schedule_id	NUMBER	NULL
non_schedule_ flag	VARCHAR2(1)	NULL
from_effective_ date	DATE	NULL
to_effective_date	DATE	NULL
rescheduling_ point	NUMBER	NULL
lead_time	NUMBER	NULL
attribute_category	VARCHAR2(30)	NULL
attribute1	VARCHAR2(150)	NULL
attribute2	VARCHAR2(150)	NULL
attribute3	VARCHAR2(150)	NULL
attribute4	VARCHAR2(150)	NULL

**Table 5–12 PM\_SCHEDULING\_REC\_TYPE**

Column name	Type	Default
attribute5	VARCHAR2(150)	NULL
attribute6	VARCHAR2(150)	NULL
attribute7	VARCHAR2(150)	NULL
attribute8	VARCHAR2(150)	NULL
attribute9	VARCHAR2(150)	NULL
attribute10	VARCHAR2(150)	NULL
attribute11	VARCHAR2(150)	NULL
attribute11	VARCHAR2(150)	NULL
attribute13	VARCHAR2(150)	NULL
attribute14	VARCHAR2(150)	NULL
attribute15	VARCHAR2(150)	NULL
day_tolerance	NUMBER	NULL
source_code	VARCHAR2(30)	NULL
source_line	VARCHAR2(30)	NULL
default_implementation	VARCHAR2(1)	NULL
whichever_first	VARCHAR2(1)	NULL
include_manual	VARCHAR2(1)	NULL
set_name_id	NUMBER	NULL
scheduling_method_code	NUMBER	NULL
type_code	NUMBER	NULL
next_service_start_date	DATE	NULL
next_service_end_date	DATE	NULL
source_tmpl_id	NUMBER	NULL
auto_instantiation_flag	VARCHAR2(1)	NULL

**Table 5–12 PM\_SCHEDULING\_REC\_TYPE**

Column name	Type	Default
name	VARCHAR2(50)	NULL
tmpl_flag	VARCHAR2(1)	NULL

**Table 5–13 PM\_RULE\_REC\_TYPE**

Column name	Type	Default
rule_id	NUMBER	NULL
rule_type	NUMBER	NULL
day_interval	NUMBER	NULL
meter_id	NUMBER	NULL
runtime_interval	NUMBER	NULL
last_service_ reading	NUMBER	NULL
effective_reading_ from	NUMBER	NULL
effective_reading_ to	NUMBER	NULL
effective_date_ from	DATE	NULL
effective_date_to	DATE	NULL
list_date	DATE	NULL
list_date_desc	VARCHAR2(50)	NULL

TYPE pm\_rule\_tbl\_type IS TABLE OF pm\_rule\_rec\_type  
INDEX BY BINARY\_INTEGER

**Table 5–14 PM\_NUM\_REC\_TYPE**

Column name	Type	Default
index1	NUMBER	NULL
num1	NUMBER	NULL
other	NUMBER	NULL

TYPE pm\_num\_tbl\_type IS TABLE OF pm\_num\_rec\_type  
INDEX BY BINARY\_INTEGER

## Activity Creation API

**Package Name:** EAM\_ACTIVITY\_PUB

**Procedure Name:** CREATE\_ACTIVITY

The CREATE\_ACTIVITY API creates eAM activities. The user can specify the source of the Work Order that the API uses as a model for the new Activities. Optionally, the user needs to specify an item template in Create\_Activity procedure (either by specifying parameter p\_template\_id or p\_template\_name) to define the attributes of the Activity. The user can specify various Activity properties, such as Activity Type, Cause, Shutdown Notification, and Source. The Activity Creation API includes various copy options that control the copy of Operations, Material, Resources, and Activity Association are supported. The table below provides the specifications of this API:

**Table 5–15 CREATE\_ACTIVITY**

Parameter	Type	Required	Default	Description
p_api_version	NUMBER	x		Standard Oracle API parameter
p_init_msg_list	VARCHAR2		FND_API.G_FALSE	Standard Oracle API parameter
p_commit	VARCHAR2		FND_API.G_FALSE	Standard Oracle API parameter
validation_level	NUMBER		FND_API.G_VALID_LEVEL_FULL	Standard Oracle API parameter

**Table 5–15 CREATE\_ACTIVITY**

Parameter	Type	Required	Default	Description
x_return_status	VARCHAR2			Standard Oracle API output parameter
x_msg_count	NUMBER			Standard Oracle API output parameter
x_msg_data	VARCHAR2			Standard Oracle API output parameter
p_asset_activity	inv_item_ x grp.item_rec_ type			Item record to define the attributes of the activity
p_template_id	NUMBER		NULL	Template id(if template name is also specified. Template id will override template name)
p_template_name	VARCHAR2		NULL	Template name
p_activity_type_code	VARCHAR2		NULL	Activity type
p_activity_cause_code	VARCHAR2		NULL	Activity cause
p_shutdown_type_code	VARCHAR2		NULL	Shutdown type
p_notification_req_flag	VARCHAR2		NULL	Notification Required Flag ('Y' for enabled, 'N' for disabled)
p_activity_source_code	VARCHAR2		NULL	Activity source
p_work_order_rec	EAM_ ACTIVITY_ PUB.WORK_ ORDER_ REC_TYPE			Specifies the source Work Order the new activity is to be created from

**Table 5–15 CREATE\_ACTIVITY**

Parameter	Type	Required	Default	Description
p_operation_copy_option	NUMBER		2	Operation Copy Option: 1 (NONE), 2 (ALL)
p_material_copy_option	NUMBER		2	Material Copy Option: 1 (NONE), 2 (ISSUED), 3 (ALL)
p_resource_copy_option	NUMBER		2	Resource Copy Option: 1 (NONE), 2 (ISSUED), 3 (ALL)
p_association_copy_option	NUMBER		2	Association Copy Option: 1 (NONE), 2 (CURRENT), 3 (ALL)
x_work_order_rec	EAM_ACTIVITY_PUB.WORK_ORDER_REC_TYPE			Output. Validated Work Order record
x_curr_item_rec	INV_ITEM_GRP.ITEM_REC_TYPE			Output. Validated current item record
x_curr_item_return_status	VARCHAR2			Output. Current item creation return status
x_curr_item_error_tbl	INV_ITEM_GRP.ERROR_TBL_TYPE			Output. Current item creation error table
x_master_item_rec	INV_ITEM_GRP.ITEM_REC_TYPE			Output. Validated master item record
x_master_item_return_status	VARCHAR2			Output. Master item creation return status
x_master_item_error_tbl	INV_ITEM_GRP.ITEM_REC_TYPE			Output. Master item creation error table

**Table 5–15 CREATE\_ACTIVITY**

Parameter	Type	Required	Default	Description
x_rtg_header_rec	BOM_Rtg_Pub.Rtg_Header_Rec_Type			Routing Business Object API output
x_rtg_revision_tbl	BOM_Rtg_Pub.Rtg_Revision_Tbl_Type			Routing Business Object API output
x_operation_tbl	BOM_Rtg_Pub.Operation_Tbl_Type			Routing Business Object API output
x_op_resource_tbl	BOM_Rtg_Pub.Op_Resource_Tbl_Type			Routing Business Object API output
x_sub_resource_tbl	BOM_Rtg_Pub.Sub_Resource_Tbl_Type			Routing Business Object API output
x_op_network_tbl	BOM_Rtg_Pub.Op_Network_Tbl_Type			Routing Business Object API output
x_rtg_return_status	VARCHAR2			Routing Business Object API output
x_rtg_msg_count	NUMBER			Routing Business Object API output
x_rtg_msg_list	Error_Handler.Error_Tbl_Type			Routing Business Object API output
x_bom_header_rec	BOM_BO_PUB.BOM_Head_Rec_Type			BOM Business Object API output
x_bom_revision_tbl	BOM_BO_PUB.BOM_Revision_tbl_Type			BOM Business Object API output

**Table 5–15 CREATE\_ACTIVITY**

Parameter	Type	Required	Default	Description
x_bom_component_tbl	BOM_BO_PUB.BOM_Comps_Tbl_Type			BOM Business Object API output
x_bom_return_status	VARCHAR2			BOM Business Object API output
x_bom_msg_count	NUMBER			BOM Business Object API output
x_bom_msg_list	Error_Handler.Error_Tbl_Type			BOM Business Object API output
x_assoc_return_status	VARCHAR2			Copy Association API output
x_assoc_msg_count	NUMBER			Copy Association API output
x_assoc_msg_data	VARCHAR2			Copy Association API output
x_act_num_association_tbl	EAM_Activity_PUB.Activity_Association_Tbl_Type			Copy Association API output
x_activity_association_tbl	EAM_Activity_PUB.Activity_Association_Tbl_Type			Copy Association API output

**Package Name:** EAM\_ACTIVITY\_PUB

**Procedure Name:** COPY\_ACTIVITY

The COPY\_ACTIVITY API creates a new activity from an existing activity. When copying from the source activity, the user can copy the source activity's BOM, Routing and Associations. The table below provides the specifications of this API:

**Table 5–16 COPY\_ACTIVITY**

Parameter	Type	Required	Default	Description
p_api_version	NUMBER	x		Standard Oracle API parameter
p_init_msg_list	VARCHAR2		FND_API.G_FALSE	Standard Oracle API parameter
p_commit	VARCHAR2		FND_API.G_FALSE	Standard Oracle API parameter
p_validation_level	NUMBER		FND_API.G_VALID_LEVEL_FULL	Standard Oracle API parameter
x_return_status	VARCHAR2			Standard Oracle API output parameter
x_msg_count	NUMBER			Standard Oracle API output parameter
x_msg_data	VARCHAR2			Standard Oracle API output parameter
p_asset_activity	inv_item_ grp.item_rec_ type	x		Item record to define the attributes of the activity
p_template_id	NUMBER		NULL	Template id(if template name is also specified. Template id will override template name)
p_template_name	VARCHAR2		NULL	Template name
p_activity_type_code	VARCHAR2		NULL	Activity type

**Table 5–16 COPY\_ACTIVITY**

Parameter	Type	Required	Default	Description
p_activity_cause_code	VARCHAR2		NULL	Activity cause
p_shutdown_type_code	VARCHAR2		NULL	Shutdown type
p_notification_req_flag	VARCHAR2		NULL	Notification Required Flag ('Y' for enabled, 'N' for disabled)
p_activity_source_code	VARCHAR2		NULL	Activity source
p_source_org_id	NUMBER			Organization id source
p_source_activity_id	NUMBER			Activity source
p_source_alt_bom_designator	VARCHAR2			BOM source designator
p_source_bom_rev_date	DATE			BOM revision date
p_source_alt_rtg_designator	VARCHAR2			Routing designator
p_source_rtg_rev_date	DATE			Routing source date
p_bom_copy_option	NUMBER			BOM Copy Option: 1 (NONE), 2 (ISSUED), 3 (ALL)
p_routing_copy_option	NUMBER			Routing Copy Option: 1 (NONE), 2 (ISSUED), 3 (ALL)
p_association_copy_option	NUMBER			Association Copy Option: 1 (NONE), 2 (ISSUED), 3 (ALL)
x_curr_item_rec	INV_ITEM_GRP.ITEM_REC_TYPE			Output. Validated current item record

**Table 5–16 COPY\_ACTIVITY**

Parameter	Type	Required	Default	Description
x_curr_item_return_status	VARCHAR2			Output. Current item creation return status
x_curr_item_error_tbl	INV_ITEM_GRP.ERROR_TBL_TYPE			Output. Current item creation error table
x_master_item_rec	INV_ITEM_GRP.ITEM_REC_TYPE			Output. Validated master item record
x_master_item_return_status	VARCHAR2			Output. Master item creation return status
x_master_item_error_tbl	INV_ITEM_GRP.ITEM_REC_TYPE			Output. Master item creation error table
x_assoc_return_status	VARCHAR2			Routing Business Object API output
x_assoc_msg_count	NUMBER			Routing Business Object API output
x_assoc_msg_data	VARCHAR2			Routing Business Object API output
x_act_num_association_tbl	EAM_Activity_Pub.Activity_Association_Tbl_Type			Routing Business Object API output
x_activity_association_tbl	EAM_Activity_Pub.Activity_Association_Tbl_Type			Routing Business Object API output

**Package Name:** EAM\_ACTIVITY\_PUB

**Procedure Name:** CREATE\_ACTIVITY\_WITH\_TEMPLATE

The CREATE\_ACTIVITY\_WITH\_TEMPLATE API creates an activity from a pre-defined template. The table below provides the specifications of this API:

**Table 5–17 COPY\_ACTIVITY**

Parameter	Type	Required	Default	Description
p_api_version	NUMBER	x		Standard Oracle API parameter
p_init_msg_list	VARCHAR2		FND_API.G_FALSE	Standard Oracle API parameter
p_commit	VARCHAR2		FND_API.G_FALSE	Standard Oracle API parameter
p_validation_level	NUMBER		FND_API.G_VALID_LEVEL_FULL	Standard Oracle API parameter
x_return_status	VARCHAR2			Standard Oracle API output parameter
x_msg_count	NUMBER			Standard Oracle API output parameter
x_msg_data	VARCHAR2			Standard Oracle API output parameter
p_organization_id	NUMBER			Organization id
p_organization_code	NUMBER			Organization code
p_asset_activity	VARCHAR2		NULL	Asset activity
p_segment1	VARCHAR2		NULL	Segment 1
p_segment2	VARCHAR2		NULL	Segment 2
p_segment3	VARCHAR2		NULL	Segment 3
p_segment4	VARCHAR2		NULL	Segment 4
p_segment5	VARCHAR2		NULL	Segment 5
p_segment6	VARCHAR2		NULL	Segment 6

**Table 5–17 COPY\_ACTIVITY**

Parameter	Type	Required	Default	Description
p_segment7	VARCHAR2		NULL	Segment 7
p_segment8	VARCHAR2		NULL	Segment 8
p_segment9	VARCHAR2		NULL	Segment 9
p_segment10	VARCHAR2		NULL	Segment 10
p_segment11	VARCHAR2		NULL	Segment 11
p_segment12	VARCHAR2		NULL	Segment 12
p_segment13	VARCHAR2		NULL	Segment 13
p_segment14	VARCHAR2		NULL	Segment 14
p_segment15	VARCHAR2		NULL	Segment 15
p_segment16	VARCHAR2		NULL	Segment 16
p_segment17	VARCHAR2		NULL	Segment 17
p_segment18	VARCHAR2		NULL	Segment 18
p_segment19	VARCHAR2		NULL	Segment 19
p_segment20	VARCHAR2		NULL	Segment 20
p_description	VARCHAR2			Description
p_template_id	NUMBER		NULL	Template id
p_template_name	VARCHAR2		NULL	Name of template
p_activity_type_code	VARCHAR2		NULL	Activity code
p_activity_cause_code	VARCHAR2		NULL	Activity cause
p_shutdown_type_code	VARCHAR2		NULL	Shutdown type
p_notification_req_flag	VARCHAR2		NULL	Notification Required Flag ('Y' for enabled, 'N' for disabled)
p_activity_source_code	VARCHAR2		NULL	Activity source

**Table 5–17 COPY\_ACTIVITY**

Parameter	Type	Required	Default	Description
x_curr_item_rec	INV_ITEM_ GRP.ITEM_ REC_TYPE			Output. Validated current item record
x_curr_item_return_status	VARCHAR2			Output. Current item creation return status
x_curr_item_error_tbl	INV_ITEM_ GRP.ERROR_ TBL_TYPE			Output. Current item creation error table
x_master_item_rec	INV_ITEM_ GRP.ITEM_ REC_TYPE			Output. Validated master item record
x_master_item_return_status	VARCHAR2			Output. Master item creation return status
x_master_item_error_tbl	INV_ITEM_ GRP.ITEM_ REC_TYPE			Output. Master item creation error table

**Table 5–18 WORK\_ORDER\_REC\_TYPE**

Column name	Type	Default
organization_id	NUMBER	NULL
organization_code	VARCHAR2(3)	NULL
wip_entity_id	NUMBER	NULL
wip_entity_name	VARCHAR2(240)	NULL

**Table 5–19 ACTIVITY\_ASSOCIATION\_REC\_TYPE**

Column name	Type	Default
organization_id	NUMBER	NULL
asset_activity_id	NUMBER	NULL
start_date_active	DATE	NULL
end_date_active	DATE	NULL
priority_code	VARCHAR2(30)	NULL
attribute_category	VARCHAR2(30)	NULL
attribute1	VARCHAR2(150)	NULL
attribute2	VARCHAR2(150)	NULL
attribute3	VARCHAR2(150)	NULL
attribute4	VARCHAR2(150)	NULL
attribute5	VARCHAR2(150)	NULL
attribute6	VARCHAR2(150)	NULL
attribute7	VARCHAR2(150)	NULL
attribute8	VARCHAR2(150)	NULL
attribute9	VARCHAR2(150)	NULL
attribute10	VARCHAR2(150)	NULL
attribute11	VARCHAR2(150)	NULL
attribute11	VARCHAR2(150)	NULL
attribute13	VARCHAR2(150)	NULL
attribute14	VARCHAR2(150)	NULL
attribute15	VARCHAR2(150)	NULL
owning_ department_id	NUMBER	NULL
activity_cause_ code	VARCHAR2(30)	NULL
activity_type_ code	VARCHAR2(30)	NULL
activity_source_ code	VARCHAR2(30)	NULL

**Table 5–19 ACTIVITY\_ASSOCIATION\_REC\_TYPE**

Column name	Type	Default
class_code	VARCHAR2(10)	NULL
maintenance_ object_id	NUMBER	NULL
maintenance_ object_type	NUMBER	NULL
genealogy_id	NUMBER	NULL
inventory_item_ id	NUMBER	NULL
serial_number	VARCHAR2(30)	NULL
activity_ association_id	NUMBER	NULL
tagging_ required_flag	VARCHAR2(1)	NULL
shutdown_type_ code	VARCHAR2(30)	NULL
tmpl_flag	VARCHAR2(1)	NULL
creation_ organization_id	NUMBER	NULL
return_status	VARCHAR2(1)	NULL
error_mesg	VARCHAR2(240)	NULL

TYPE activity\_association\_tbl\_type IS TABLE OF activity\_association\_rec\_type  
INDEX BY BINARY\_INTEGER

# Maintenance Object Instantiation API

**Package Name:** EAM\_OBJECTINSTANTIATION\_PUB

**Procedure Name:** INSTITUTE\_OBJECT

The INSTITUTE\_OBJECT API is first triggered after the creation of a Maintenance Object. It will then call the private packages for the Activity Instantiation (from the Maintenance Item, or Activity Templates), and Preventive Maintenance and Meter Instantiations (from their templates). The table below provides the specifications for this API:

**Table 5–20** INSTITUTE\_OBJECT

Parameter	Type	Required	Default	Description
p_api_version	NUMBER	x		Standard Oracle API parameter
p_init_msg_list	VARCHAR2		FND_API.G_FALSE	Standard Oracle API parameter
p_validation_level	NUMBER		FND_API.G_VALID_LEVEL_FULL	Standard Oracle API parameter
x_return_status	VARCHAR2			Standard Oracle API output parameter
x_msg_count	NUMBER			Standard Oracle API parameter
x_msg_data	VARCHAR2			Standard Oracle API output parameter
p_maintenance_object_id	NUMBER	x		Standard Oracle API output parameter
p_maintenance_object_type	NUMBER	x		Only support type 1 (serial numbers)
p_commit	VARCHAR2		FND_API.G_FALSE	Standard Oracle API parameter

TYPE association\_id\_tbl\_type IS TABLE OF number  
INDEX BY BINARY\_INTEGER;

## Work Order Business API

**Package Name:** EAM\_PROCESS\_WO\_PUB

**Procedure Name:** PROCESS\_WO

The PROCESS\_WO API creates, updates, and deletes the eAM Work Orders and their sub-entities, such as Operations, Materials, Resources, Resources Instances, and Operation Dependency. The user can use this API to create these entities in the database. The user can set and update all relevant attributes of the Work Order and its sub-entities. The table below provides the specifications of this API:

**Table 5–21** PROCESS\_WO

Parameter	Type	Required	Default	Description
p_bo_identifier	VARCHAR2	x	EAM	Standard Oracle API parameter
p_api_version_number	NUMBER		1.0	Standard Oracle API parameter
p_init_msg_list	BOOLEAN		FALSE	Standard Oracle API parameter
p_eam_wo_rec	EAM_PROCESS_WO_PUB.eam_wo_rec_type			Input Work Order record
p_eam_op_tbl	EAM_PROCESS_WO_PUB.eam_op_tbl_type			Input PL/SQL table of operation records
p_eam_op_network_tbl	EAM_PROCESS_WO_PUB.eam_op_network_tbl_type			Input PL/SQL table of operation network records
p_eam_res_tbl	EAM_PROCESS_WO_PUB.eam_res_tbl_type	x		Input PL/SQL table of resource records

**Table 5–21    *PROCESS\_WO***

Parameter	Type	Required	Default	Description
p_eam_res_inst_tbl	EAM_ PROCESS_ WO_ PUB.eam_ res_inst_tbl_ type	x		Input PL/SQL table of resource instance records
p_eam_res_usage_tbl	EAM_ PROCESS_ WO_ PUB.eam_ res_usage_ tbl_type			Input PL/SQL table of resource usage records
p_eam_mat_req_tbl	EAM_ PROCESS_ WO_ PUB.eam_ mat_req_tbl_ type			Input PL/SQL table of material requirements records
x_eam_wo_rec	EAM_ PROCESS_ WO_ PUB.eam_ wo_rec_type			Output Work Order record
x_eam_op_tbl	EAM_ PROCESS_ WO_ PUB.eam_ op_tbl_type			Output PL/SQL table of operation records
x_eam_op_network_tbl	EAM_ PROCESS_ WO_ PUB.eam_ op_network_ tbl_type			Output PL/SQL table of operation network records
x_eam_res_tbl	EAM_ PROCESS_ WO_ PUB.eam_ res_tbl_type			Output PL/SQL table of resource records

**Table 5–21 PROCESS\_WO**

Parameter	Type	Required	Default	Description
x_eam_res_inst_tbl	EAM_PROCESS_WO_PUB.eam_res_inst_tbl_type			Output PL/SQL table of resource instance records
x_eam_res_usage_tbl	EAM_PROCESS_WO_PUB.eam_res_usage_tbl_type			Output PL/SQL table of resource usage records
x_eam_mat_req_tbl	EAM_PROCESS_WO_PUB.eam_mat_req_tbl_type			Output PL/SQL table of material requirements records
x_return_status	VARCHAR2			Standard Oracle API output parameter
x_msg_count	NUMBER			Standard Oracle API output parameter
p_debug	VARCHAR2		N	Standard Oracle API output parameter
p_output_dir	VARCHAR2		NULL	Input parameter for specifying the location of the debug file
p_debug_filename	VARCHAR2		EAM_WO_DEBUG.log	Input parameter for debug file name

**Table 5–22 EAM\_WO\_REC\_TYPE**

Column name	Type	Default
wip_entity_name	VARCHAR2(240)	NULL
wip_entity_id	NUMBER	NULL
organization_id	NUMBER	NULL
description	VARCHAR2(240)	NULL
asset_number	VARCHAR2(30)	NULL
asset_group_id	NUMBER	NULL
rebuild_item_id	NUMBER	NULL
rebuild_serial_number	VARCHAR2(30)	NULL
maintenance_object_id	NUMBER	NULL
Maintenance_object_type	NUMBER	NULL
maintenance_object_source	NUMBER	NULL
class_code	VARCHAR2(10)	NULL
asset_activity_id	NUMBER	NULL
activity_type	VARCHAR2(30)	NULL
activity_cause	VARCHAR2(30)	NULL
activity_source	VARCHAR2(30)	NULL
work_order_type	VARCHAR2(30)	NULL
status_type	NUMBER	NULL
job_quantity	NUMBER	NULL
date_released	DATE	NULL
owning_department	NUMBER	NULL
priority	NUMBER	NULL
requested_start_date	DATE	NULL

**Table 5–22 EAM\_WO\_REC\_TYPE**

Column name	Type	Default
due_date	DATE	NULL
shutdown_type	VARCHAR2(30)	NULL
firm_planned_ flag	NUMBER	NULL
notification_ require	VARCHAR2(1)	NULL
tagout_required	VARCHAR2(1)	NULL
plan_maintenance	VARCHAR2(1)	NULL
project_id	NUMBER	NULL
task_id	NUMBER	NULL
end_item_unit_ number	VARCHAR2(30)	NULL
schedule_group_ id	NUMBER	NULL
bom_revision_ date	DATE	NULL
routing_revision_ date	DATE	NULL
alternate_ routing_ designator	VARCHAR2(10)	NULL
alternate_bom_ designator	VARCHAR2(10)	NULL
routing_revision	VARCHAR2(3)	NULL
bom_revision	VARCHAR2(3)	NULL
parent_wip_ entity_id	NUMBER	NULL
manual_rebuild_ flag	VARCHAR2(1)	NULL
pm_schedule_id	NUMBER	NULL
wip_supply_type	NUMBER	NULL
material_account	NUMBER	NULL

**Table 5–22 EAM\_WO\_REC\_TYPE**

<b>Column name</b>	<b>Type</b>	<b>Default</b>
material_ overhead_account	NUMBER	NULL
resource_account	NUMBER	NULL
outside_ processing_ account	NUMBER	NULL
material_ variance_account	NUMBER	NULL
resource_ variance_account	NUMBER	NULL
outside_proc_ variance_account	NUMBER	NULL
std_cost_ adjustment_ account	NUMBER	NULL
overhead_account	NUMBER	NULL
overhead_ variance_account	NUMBER	NULL
schedule_start_ date	DATE	NULL
schedule_ completion_date	DATE	NULL
common_bom_ sequence_id	NUMBER	NULL
common_ routing_ sequence_id	NUMBER	NULL
po_creation_time	NUMBER	NULL
gen_object_id	NUMBER	NULL
attribute_category	VARCHAR2(30)	NULL
attribute1	VARCHAR2(150)	NULL
attribute2	VARCHAR2(150)	NULL
attribute3	VARCHAR2(150)	NULL

**Table 5–22 EAM\_WO\_REC\_TYPE**

Column name	Type	Default
attribute4	VARCHAR2(150)	NULL
attribute5	VARCHAR2(150)	NULL
attribute6	VARCHAR2(150)	NULL
attribute7	VARCHAR2(150)	NULL
attribute8	VARCHAR2(150)	NULL
attribute9	VARCHAR2(150)	NULL
attribute10	VARCHAR2(150)	NULL
attribute11	VARCHAR2(150)	NULL
attribute11	VARCHAR2(150)	NULL
attribute13	VARCHAR2(150)	NULL
attribute14	VARCHAR2(150)	NULL
attribute15	VARCHAR2(150)	NULL
material_issue_ by_mo	VARCHAR2(1)	NULL
user_id	NUMBER	NULL
reponsibility_id	NUMBER	NULL
request_id	NUMBER	NULL
program_id	NUMBER	NULL
program_ application_id	NUMBER	NULL
source_line_id	NUMBER	NULL
source_code	VARCHAR2(30)	NULL
return_status	VARCHAR2(1)	NULL
transaction_type	NUMBER	NULL

**Table 5–23 EAM\_OP\_REC\_TYPE**

Column name	Type	Default
wip_entity_id	NUMBER	NULL
organization_id	NUMBER	NULL
operation_seq_num	NUMBER	NULL
standard_operation_id	NUMBER	NULL
department_id	NUMBER	NULL
operation_sequence_id	NUMBER	NULL
description	VARCHAR2(240)	NULL
minimum_transfer_quantity	NUMBER	NULL
count_point_type	NUMBER	NULL
backflush_flag	NUMBER	NULL
shutdown_type	VARCHAR2(30)	NULL
start_date	DATE	NULL
completion_date	DATE	NULL
attribute_category	VARCHAR2(30)	NULL
attribute1	VARCHAR2(150)	NULL
attribute2	VARCHAR2(150)	NULL
attribute3	VARCHAR2(150)	NULL
attribute4	VARCHAR2(150)	NULL
attribute5	VARCHAR2(150)	NULL
attribute6	VARCHAR2(150)	NULL
attribute7	VARCHAR2(150)	NULL
attribute8	VARCHAR2(150)	NULL
attribute9	VARCHAR2(150)	NULL
attribute10	VARCHAR2(150)	NULL
attribute11	VARCHAR2(150)	NULL

**Table 5–23 EAM\_OP\_REC\_TYPE**

Column name	Type	Default
attribute11	VARCHAR2(150)	NULL
attribute13	VARCHAR2(150)	NULL
attribute14	VARCHAR2(150)	NULL
attribute15	VARCHAR2(150)	NULL
long_description	VARCHAR2(4000)	NULL
request_id	NUMBER	NULL
program_id	NUMBER	NULL
program_application_id	NUMBER	NULL
return_status	VARCHAR2(1)	NULL
transaction_type	NUMBER	NULL

**Table 5–24 EAM\_RES\_REC\_TYPE**

Column name	Type	Default
wip_entity_id	NUMBER	NULL
organization_id	NUMBER	NULL
operation_seq_num	NUMBER	NULL
resource_seq_num	NUMBER	NULL
resource_id	NUMBER	NULL
uom_code	VARCHAR2(3)	NULL
basis_type	NUMBER	NULL
usage_rate_or_amount	NUMBER	NULL
activity_id	NUMBER	NULL
schedule_flag	NUMBER	NULL

**Table 5–24 EAM\_RES\_REC\_TYPE**

Column name	Type	Default
assigned_units	NUMBER	NULL
autocharge_type	NUMBER	NULL
standard_rate_ flag	NUMBER	NULL
applied_resource_ units	NUMBER	NULL
applied_resource_ value	NUMBER	NULL
start_date	DATE	NULL
comletion_date	DATE	NULL
schedule_seq_ num	NUMBER	NULL
substitute_group_ num	NUMBER	NULL
replacement_ group_num	NUMBER	NULL
attribute_category	VARCHAR2(30)	NULL
attribute1	VARCHAR2(150)	NULL
attribute2	VARCHAR2(150)	NULL
attribute3	VARCHAR2(150)	NULL
attribute4	VARCHAR2(150)	NULL
attribute5	VARCHAR2(150)	NULL
attribute6	VARCHAR2(150)	NULL
attribute7	VARCHAR2(150)	NULL
attribute8	VARCHAR2(150)	NULL
attribute9	VARCHAR2(150)	NULL
attribute10	VARCHAR2(150)	NULL
attribute11	VARCHAR2(150)	NULL
attribute11	VARCHAR2(150)	NULL
attribute13	VARCHAR2(150)	NULL

**Table 5–24 EAM\_RES\_REC\_TYPE**

Column name	Type	Default
attribute14	VARCHAR2(150)	NULL
attribute15	VARCHAR2(150)	NULL
department_id	NUMBER	NULL
request_id	NUMBER	NULL
program_application_id	NUMBER	NULL
program_id	NUMBER	NULL
program_update_date	DATE	NULL
return_status	VARCHAR2(1)	NULL
transaction_type	NUMBER	NULL

**Table 5–25 EAM\_RES\_INST\_REC\_TYPE**

Column name	Type	Default
wip_entity_id	NUMBER	NULL
organization_id	NUMBER	NULL
operation_seq_num	NUMBER	NULL
instance_id	NUMBER	NULL
serial_number	NUMBER	NULL
start_date	DATE	NULL
completion_date	DATE	NULL
batch_id	NUMBER	NULL
return_status	VARCHAR2(1)	NULL
transaction_type	NUMBER	NULL

**Table 5–26 EAM\_SUB\_RES\_REC\_TYPE**

Column name	Type	Default
wip_entity_id	NUMBER	NULL
organization_id	NUMBER	NULL
operation_seq_ num	NUMBER	NULL
resource_seq_ num	NUMBER	NULL
resource_id	NUMBER	NULL
uom_code	VARCHAR2(3)	NULL
basis_type	NUMBER	NULL
usage_rate_or_ amount	NUMBER	NULL
activity_id	NUMBER	NULL
schedule_flag	NUMBER	NULL
assigned_units	NUMBER	NULL
autocharge_type	NUMBER	NULL
standard_rate_ flag	NUMBER	NULL
applied_resource_ units	NUMBER	NULL
applied_resource_ value	NUMBER	NULL
start_date	DATE	NULL
comletion_date	DATE	NULL
schedule_seq_ num	NUMBER	NULL
substitute_group_ num	NUMBER	NULL
replacement_ group_num	NUMBER	NULL

**Table 5–26 EAM\_SUB\_RES\_REC\_TYPE**

Column name	Type	Default
attribute_category	VARCHAR2(30)	NULL
attribute1	VARCHAR2(150)	NULL
attribute2	VARCHAR2(150)	NULL
attribute3	VARCHAR2(150)	NULL
attribute4	VARCHAR2(150)	NULL
attribute5	VARCHAR2(150)	NULL
attribute6	VARCHAR2(150)	NULL
attribute7	VARCHAR2(150)	NULL
attribute8	VARCHAR2(150)	NULL
attribute9	VARCHAR2(150)	NULL
attribute10	VARCHAR2(150)	NULL
attribute11	VARCHAR2(150)	NULL
attribute11	VARCHAR2(150)	NULL
attribute13	VARCHAR2(150)	NULL
attribute14	VARCHAR2(150)	NULL
attribute15	VARCHAR2(150)	NULL
department_id	NUMBER	NULL
request_id	NUMBER	NULL
program_application_id	NUMBER	NULL
program_id	NUMBER	NULL
program_update_date	DATE	NULL
return_status	VARCHAR2(1)	NULL
transaction_type	NUMBER	NULL

**Table 5–27 EAM\_RES\_USAGE\_REC\_TYPE**

Column name	Type	Default
wip_entity_id	NUMBER	NULL
operation_seq_ num	NUMBER	NULL
resource_seq_ num	NUMBER	NULL
organization_id	NUMBER	NULL
start_date	DATE	NULL
completion_date	DATE	NULL
assigned_units	NUMBER	NULL
request_id	NUMBER	NULL
program_ application_id	NUMBER	NULL
program_id	NUMBER	NULL
program_update_ date	DATE	NULL
instance_id	NUMBER	NULL
serial_number	NUMBER	NULL
return_status	VARCHAR2(1)	NULL
transaction_type	NUMBER	NULL

**Table 5–28 EAM\_MAT\_REQ\_REC\_TYPE**

Column name	Type	Default
wip_entity_id	NUMBER	NULL
organization_id	NUMBER	NULL
operation_seq_num	NUMBER	NULL
inventory_item_id	NUMBER	NULL
quantity_per assembly	NUMBER	NULL
department_id	NUMBER	NULL
wip_supply_type	NUMBER	NULL
date_required	DATE	NULL
required_quantity	NUMBER	NULL
quantity_issued	NUMBER	NULL
supply_subinventory	VARCHAR2(10)	NULL
supply_locator_id	NUMBER	NULL
mrp_net_flag	NUMBER	NULL
mps_required_quantity	NUMBER	NULL
mps_date_required	DATE	NULL
component_sequence_id	NUMBER	NULL
comments	VARCHAR2(240)	NULL
attribute_category	VARCHAR2(30)	NULL
attribute1	VARCHAR2(150)	NULL
attribute2	VARCHAR2(150)	NULL
attribute3	VARCHAR2(150)	NULL
attribute4	VARCHAR2(150)	NULL
attribute5	VARCHAR2(150)	NULL

**Table 5–28 EAM\_MAT\_REQ\_REC\_TYPE**

Column name	Type	Default
attribute6	VARCHAR2(150)	NULL
attribute7	VARCHAR2(150)	NULL
attribute8	VARCHAR2(150)	NULL
attribute9	VARCHAR2(150)	NULL
attribute10	VARCHAR2(150)	NULL
attribute11	VARCHAR2(150)	NULL
attribute11	VARCHAR2(150)	NULL
attribute13	VARCHAR2(150)	NULL
attribute14	VARCHAR2(150)	NULL
attribute15	VARCHAR2(150)	NULL
auto_request_ material	VARCHAR2(1)	NULL
request_id	NUMBER	NULL
program_ application_id	NUMBER	NULL
program_id	NUMBER	NULL
program_update_ date	DATE	NULL
return_status	VARCHAR2(1)	NULL
transaction_type	NUMBER	NULL

Type eam\_op\_tbl\_type is table of eam\_op\_rec\_type  
INDEX BY BINARY\_INTEGER;

Type eam\_op\_network\_tbl\_type is table of eam\_op\_network\_rec\_type  
INDEX BY BINARY\_INTEGER;

Type eam\_res\_tbl\_type is table of eam\_res\_rec\_type  
INDEX BY BINARY\_INTEGER;

Type eam\_res\_inst\_tbl\_type is table of eam\_res\_inst\_rec\_type  
INDEX BY BINARY\_INTEGER;

Type eam\_sub\_res\_tbl\_type is table of eam\_sub\_res\_rec\_type  
INDEX BY BINARY\_INTEGER;

Type eam\_res\_usage\_tbl\_type is table of eam\_res\_usage\_rec\_type  
INDEX BY BINARY\_INTEGER;

Type eam\_mat\_req\_tbl\_type is table of eam\_mat\_req\_rec\_type  
INDEX BY BINARY\_INTEGER;



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# Engineering Change Order Business Object Interface

The Engineering Change Order (ECO) Business Object Interface enables you to import your change order information from a legacy or product data management (PDM) system into Oracle Engineering. You can create, update and delete ECO information. With the ECO Business Object Interface, you can automatically import data from your PDM or Legacy system without inserting cryptic Ids or system specific information. The ECO Business Object Interface will import the information within an ECO synchronously while still enabling you to import more than one ECO simultaneously.

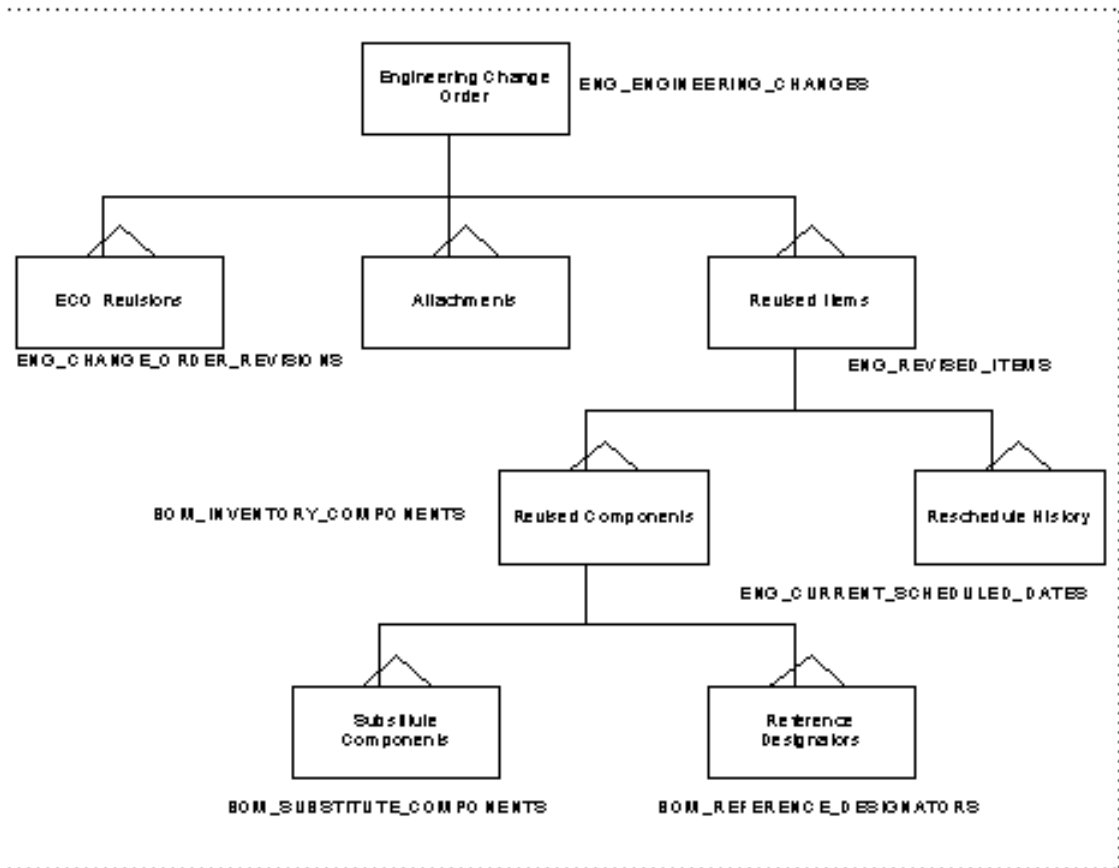
This document describes the basic business needs, major features, business object architecture and components for the Insert, Update and Delete features for the ECO Business Object Interface. Topics included are:

- [Features](#) on page 6-2
- [Business Object APIs](#) on page 6-7
- [Entity Process Flows](#) on page 6-13

## Features

- The ECO Business Object Interface allows users to create new ECOs in the Oracle Engineering tables. The Open Interface program validates all data before importing it into the production tables. It allows users to update and delete existing ECO data.
- You can easily import create, update, and delete data. Instead of forcing you to enter cryptic ID and system specific values, the ECO Business Object Interface allows you to enter only the necessary business information that defines your ECO. The Open Interface program figures out all the remaining information.
- You should be able to create, update, and delete ECO information synchronously. The ECO Business Object Interface should process parent information before its processes child information.

Figure 6–1 ECO Information



- You should be able to process ECOs asynchronously. The ECO Business Object Interface should allow you to import different ECOs simultaneously.

## ECO Business Object

The ECO business object encompasses several entities to fully model the flow of information through it. Each new ECO that is setup and processed by the user can be thought of as a business object instance.

### ECO Entity Diagram

The following diagram is a representation of the ECO business object. It shows all the entities that make up the business object.

Following from the above definition of a business object, and the ECO entity diagram, each ECO business object instance contains the following specific information about its entities :

- ECO header : This entity represents general ECO attributes, such as, the ECO name, the change order type, its requestor, the organization responsible for it, etc.
- ECO Revisions : This provides additional information about the ECO. In particular, it holds revision information for an ECO. The user may wish to keep this entity up-to-date if he/she is particular about implementing a revision control system.
- Other entities : The other entities represent detailed information about the ECO.

These entities are governed by business rules that dictate the relationships between the entities, and consequently, the processing algorithms used.

### The Business Object in the Database

Each of the entities shown in the ECO entity diagram maps to a corresponding table in the database. The following are the existing production tables that exist, and the information they store.

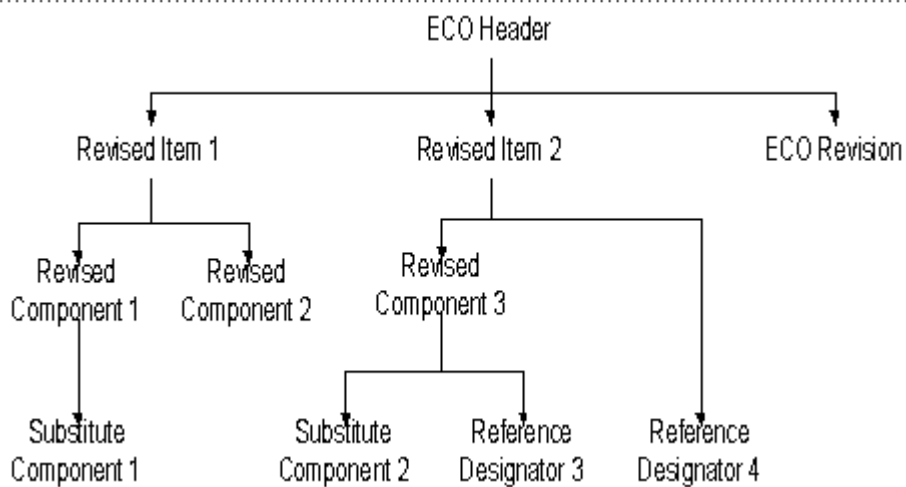
**Table 6–1    Production Table and Stored Information**

Production Table	Description
ENG_ENGINEERING_CHANGES	Stores information about ECO headers
ENG_CHANGE_ORDER_REVISIONS	Stores information about revisions of an ECO
ENG_REVISIED_ITEMS	Stores information about revised items on an ECO
BOM_INVENTORY_COMPONENTS	Stores information about the un-implemented single-level BOM components
BOM_REFERENCE_DESIGNATORS	Stores information about the un-implemented BOM component reference designators
BOM_SUBSTITUTE_COMPONENTS	Stores information about the un-implemented substitute components associated with a BOM component

## Business Object Interface Design

The Business object architecture is a hierarchy of entities. It can also be viewed as a tree with branches, where the ECO Header entity is the parent, and each of its branches consists of child nodes (entities). Each node in the branch in turn is a parent of the child nodes under it, hence each node has a branch of its own. Here is an example:

**Figure 6–2 Business Object Interface Design**



## ECO Business Object Architecture

The ECO Business Object Architecture is based on the business definition of an engineering change order. To import ECO information into Oracle Engineering, you only need to know the basic ECO hierarchical tree. As in a genealogical tree, the entity at the top is the parent. The entities connected directly below are its children.

Engineering Change Order: The ECO header entity is the parent and defines the basic business object. There can only be one ECO header record per business object. This entity contains information about the status, approval status, reason, priority and if it is linked to a workflow. To identify an engineering change order, you need only to specify the change notice (ECO name) and the organization in which it exists.

**ECO Revisions:** The revisions entity is a direct child of the ECO header. It cannot exist without an ECO. This entity stores the eco revision information. To identify an ECO Revision, you must specify the change notice, the organization in which it exists, and the name of the revision.

**Revised Items:** The revised items entity is also a direct child of the ECO header. It cannot exist without an ECO. You can enter information into this entity if you wish to revised an item or its bill. To identify a revised item, you must specify the change notice, the organization in which it exists, the revised item number, its effectivity date, and if there is a new item revision.

**Revised Components:** The revised components entity is a direct child of the revised items entity. It cannot exist without a revised item. You can enter information into this entity if you wish to add, change, or disable a component on your revised item's bill. To identify a revised component, you must specify the change notice, the organization which it exists, the revised item number, its effectivity date, if there is a new revised item revision, if you wish to revised the main bill or an alternate, the component item number, and its operation sequence number.

**Substitute Component:** The substitute components entity is a direct child of the revised components entity. It cannot exists without a revised component. You can enter information into this entity if you wish to add or disable a substitute component on your revised component. To identify a substitute component, you must specify the change notice, the organization in which it exists, the revised item number, its effectivity date, if there is a new revised item revision, if you wish to revised the main bill or an alternate, the component item number, its operation sequence number, the substitute component number, and whether you wish to add or disable your substitute component.

**Reference Designator:** The reference designator entity is a direct child of the revised components entity. It cannot exist without a revised component. You can enter information into this entity if you wish to add or disable a reference designator on your revised component. To identify a reference designator, you must specify the change notice, the organization in which it exists, your revised item number, its effectivity date, if there is a new revised item revision, if you wish to revise the main bill or an alternate, the component item number, its operation sequence number, your reference designator, and whether you wish to add or disable your reference designator.

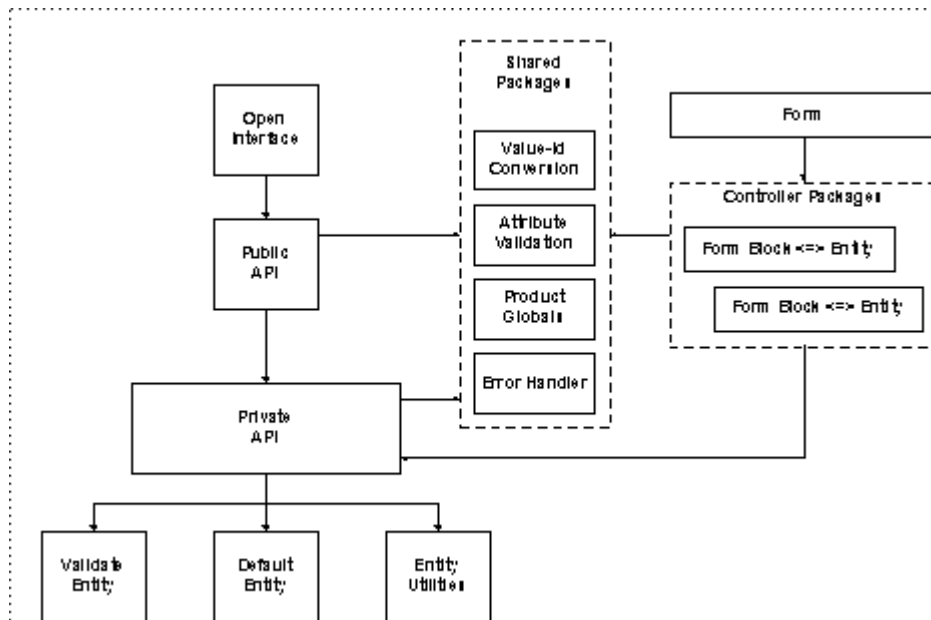
To import data into the ECO Business Object Interface, you simply need to categorize your data into ECO Business Object and identify which records you wish to import. No elaborate Ids or system specific information is required. The information you need to pass to the ECO Business Object Interface is the same information you would need to convey to any other person about your ECO.

## Business Object APIs

The Business Object API framework is designed to provide flexible usage, but with a unified programming style. Business Object APIs can be called from Oracle Forms, Business object interfaces, Web-based applications, PL/SQL programs, and almost all calls that support PL/SQL calls to Oracle RDBMS. They perform a complete transaction on a business object, and always leave the database in a consistent state, regardless of the outcome of the transaction.

The APIs encompass all the business rules required to process incoming data. In a nutshell, they are the interface between the user and the database.

**Figure 6–3 Business Object APIs**



### Business Object API Framework

The below framework demonstrates how forms and business object interfaces can use the business object API framework simultaneously.

## Process Flow

**Table 6–2 Process Flow for Forms and Business Object Interfaces using the API Framework Simultaneously**

Step	Purpose	Description	Error
<b>Step 1:</b> Pass Business Object to Public API	The program will try to import it.	<p>Caller must pass one business object at a time.</p> <p>There should be only one Header record.</p> <p>There may be more than one record for other entities.</p>	-N/A-
<b>Step 2:</b> Check for Organization / Change Notice uniformity	Each instance of the business object represents a particular ECO. We must ensure that all records in a business object belong to the same ECO.	<p>All records must have the same Change Notice and Organization values.</p> <p>Derive Organization_Id from Organization_Code</p> <p>Store ECO_Name and Organization_Id value in System_Information record.</p>	Severe Error I
<b>Step 3:</b> Save system information	Saves system-specific information in System_Information record since it is common to the whole business object. This information is stored in the database along with the record	<p>Initialize User_Id, Login_Id, Prog_Appid, Prog_Id in System_Information record.</p> <p>Pull in values of profiles ENG: Standard Item Access, ENG: Model Item Access and ENG: Planning Item Access into STD_Item_Access, MDL_Item_Access and PLN_Item_Access respectively.</p>	Quit import of business object
<b>Step 4:</b> Pick up highest level un-processed record	The import program processes a parent and all its direct and indirect children, before moving onto to a sibling. So, the highest level parent must be chosen.	The highest level record with a {return status = NULL} is picked. When there are no more records, the program exits and transfers control to the caller.	-N/A-

**Table 6–2 Process Flow for Forms and Business Object Interfaces using the API Framework Simultaneously**

Step	Purpose	Description	Error
<b>Step 5:</b> Convert user-unique index to unique index	<p>Unique index helps uniquely identify a record in the database, and may consist of more than one column. User-unique index is a user-friendly equivalent of the unique index. It serves the following purposes:</p> <p>The user need not enter cryptic Ids</p> <p>If a user unique index could not be derived for a parent, its entire lineage is error-ed out since members of the lineage are referencing an invalid parent.</p>	Derive unique index columns from user-unique index columns.	Severe Error III
<b>Step 6:</b> Existence Verification	The record being updated or deleted in the database must already exist. But a record being created must not. Such an error in a record must cause all children to error out, since they are referencing an invalid parent.	<p>For CREATE, the record must not already exist. For UPDATE and DELETE, the record must exist.</p> <p>Query up database record into the associated OLD record.</p>	Severe Error III
<b>Step 7:</b> Check Lineage	We must ensure that the linkage of records is correct in the business object. That is, child records must reference valid parents. A valid parent is one that exists, and is truly the current record's parent in the database.	<p>Perform lineage checks for entity records that do not belong to the top-most entity in the hierarchy, based on Transaction_Type and the following factors:</p> <p>Immediate parent being referenced exists in the database, and, for UPDATE and DELETE, is truly the parent of this record in the database, OR</p> <p>If there is no immediate parent record in the business object, the indirect parent being referenced exists and is really the parent of the current record's parent in the database.</p>	Severe Error III

**Table 6–2 Process Flow for Forms and Business Object Interfaces using the API Framework Simultaneously**

Step	Purpose	Description	Error
<b>Step 8(a):</b> Check ECO operability	An ECO and its constituents cannot be operated upon if the ECO has already been implemented/canceled, or if the ECO is in a workflow process (with Approval_Status = Approval Requested).	First check if System_Information record has this information. If not, find it in ECO Header record in database, and set System_Information flags accordingly.	Fatal Error I
<b>Step 8(b):</b> Check ECO operability	An ECO and any of its constituents cannot be operated upon if the user does not have access to the Change Order type of that ECO.	Check if System_Information record has this information. If not, compare Assembly_Type of Change Order Type against value of profile ENG: Engineering Item Change Order Access. If profile value is No, then Assembly_Type must not be Engineering. Set System_Information flag accordingly.	Fatal Error I
<b>Step 8(c):</b> Check operability of parent items and current item (if applicable)	A revised item and any of its components cannot be operated upon if the revised item is implemented or canceled.	Check if System_Information record has this information. If not, find it in the database revised item record, and set System_Information flags accordingly.	Fatal Error III or Fatal Error II (depending on affected entity)
<b>Step 8(d):</b> Check operability of parent items and current item (if applicable)	A revised item and any of its components cannot be operated upon if the user does not have access to the revised item type.	Compare revised item BOM_Item_Type against the revised item access fields in the System_Information record.	Fatal Error III or Fatal Error II (depending on affected entity)
<b>Step 9:</b> Value-Id conversions	There are user-friendly value columns that derive certain Id columns. The value columns free up the user from having to enter cryptic Ids, since the Ids can be derived from them.	Derive Ids from user-friendly values	CREATE: Severe Error IV. Other: Standard Error
<b>Step 10:</b> Required Fields checking	Some fields are required for an operation to be performed. Without them, the operation cannot go through. The user must enter values for these fields.	Check that the required field columns are not NULL.	CREATE: Severe Error IV. Other: Standard Error

**Table 6–2 Process Flow for Forms and Business Object Interfaces using the API Framework Simultaneously**

Step	Purpose	Description	Error
<b>Step 11:</b> Attribute validation (CREATEs and UPDATEs)	Each of the attributes/fields must be checked individually for validity. Examples of these checks are: range checks, checks against lookups etc.	Check that user-entered attributes are valid. Check each attribute independently of the others	CREATE: Severe Error IV. UPDATE: Standard Error
<b>Step 12:</b> Populate NULL columns(UPDATEs and DELETEs)	The user may send in a record with certain values set to NULL. Values for all such columns are copied over from the OLD record. This feature enables the user to enter minimal information for the operation.	For all NULL columns found in business object record, copy over values from OLD record.	-N/A-
<b>Step 13:</b> Default values for NULL attributes (CREATEs)	For CREATEs, there is no OLD record. So the program must default in individual attribute values, independently of each other. This feature enables the user to enter minimal information for the operation to go through.	For all NULL columns found in business object record, try to default in values, either by retrieving them from the database, or by having the program assign values.	Severe Error IV
<b>Step 14:</b> Check conditionally required attributes	Some attributes are required based on certain external factors such as the Transaction_Type value.	Perform checks to confirm all conditionally required attributes are present.	Severe Error IV
<b>Step 15:</b> Entity level defaulting	Certain column values may depend on profile options, other columns in the same table, columns in other tables, etc. Defaulting for these columns happens here.	For all NULL columns in record, try to default in values based on other values. Set all MISSING column values to NULL.	CREATE: Severe Error IV. UPDATE: Standard Error

**Table 6–2    Process Flow for Forms and Business Object Interfaces using the API Framework Simultaneously**

Step	Purpose	Description	Error
<b>Step 16:</b> Entity level validation	<p>This is where the whole record is checked. The following are checked:</p> <p>Non-updateable columns (UPDATES): Certain columns must not be changed by the user when updating the record.</p> <p>Cross-attribute checking: The validity of attributes may be checked, based on factors external to it.</p> <p>Business logic: The record must comply with business logic rules.</p>	<p>Perform checks against record in the order specified in the -Purpose- column.</p>	<p>CREATE: Severe Error IV.</p> <p>UPDATE: Standard Error</p>
<b>Step 17:</b> Database writes	Write record to database table.	<p>Perform database write:</p> <p>Insert record for CREATE</p> <p>Overwrite record for UPDATE and CANCEL</p> <p>Remove record for DELETE</p>	-N/A-

**Table 6–2 Process Flow for Forms and Business Object Interfaces using the API Framework Simultaneously**

Step	Purpose	Description	Error
<b>Step 18(a):</b> Process direct and indirect children	The program will finish processing an entire branch before moving on to a sibling branch. A branch within the business object tree consists of all direct and indirect children.	Pick up the first un-processed child record and Go to Step 5. Continue until all direct children have been processed.  Then pick up the first un-processed indirect child record and do the same as above.  When no more records are found, Go to Step 20.	-N/A-
<b>Step 18(b):</b> Process siblings	When an entire branch of a record has been processed, the siblings of the current record are processed. The sibling may also contain a branch. So the processing for the sibling will be exactly the same as the current record.	Pick up the first un-processed sibling record and Go to Step 5.  Continue through the loop until all siblings have been processed.  When no more records are found, Go to Step 21.	-N/A-
<b>Step 18 (c):</b> Process parent record's siblings	Once all the siblings have been processed, the program will move up to the parent (of this entire branch) and process all of its siblings (which will contains branches of their own).	Go up to parent and pick up the first un-processed sibling of the parent. Go to Step 5.  Continue through the loop until all siblings have been processed.  When there are no more records, Go to Step 4.	-N/A-

## Entity Process Flows

### Exposed Columns and Un-exposed columns

Each business object record that the user includes in the business object needs user-input for certain columns (required fields, conditionally required fields, user-unique index columns). There are also some other columns that are user-enterable for the import program. These columns are called exposed columns, and are included in the data structures that the user passes the business object records in.

All columns that exist in the Production table, but are not exposed to the user are called un-exposed columns. These columns are not exposed either because they are not user-enterable, or because no user-input is required. In the latter case, the

import program saves on processing, since user-input will require validation that the program can avoid by defaulting values into these columns by itself.

**Data Entry Rules**

- Certain fields are REQUIRED fields. They cannot be derived or defaulted. So the user must enter values for these fields.
- Transaction\_Type is always required. It specifies what operation is to be performed on a record. When left empty (NULL), this will cause the record to error out. Also, this field must have values (CREATE, UPDATE, or DELETE). In addition, it can also have the value CANCEL for the Revised Component entity only.
- Each column can take in missing or null values. Defaulting only happens for columns with NULL values, unless the business logic explicitly requires specific defaulting. On the other hand, a column with a missing value is NULL-ed out. The following are the missing values for the different data types:
  - Varchar2 : chr(12)
  - Int : 9.99E125
  - Date : TO\_DATE('1','j')

**ECO Headers**

**Columns Exposed to the User**

**Table 6–3 Visible Columns**

Exposed Name	Actual Column Name	Type	Comments
ECO_Name	Change_Notice	VARCHAR2(10)	User-Unique Index
Organization_Code	Organization_Id	VARCHAR2(3)	User-Unique Index
Transaction_Type	-N/A-	VARCHAR2(30)	Required
Change_Type_Code	Change_Order_Type	VARCHAR2(10)	Required for Create
Status_Type	Status_Type	NUMBER	
ECO_Department_Name	Responsible_Organization_Id	VARCHAR2(3)	

**Table 6–3 Visible Columns**

<b>Exposed Name</b>	<b>Actual Column Name</b>	<b>Type</b>	<b>Comments</b>
Priority_Code	Priority_Code	VARCHAR2(10)	
Approval_List_Name	Approval_List_Name	VARCHAR2(10)	
Approval_Status_Type	Approval_Status_ Type	NUMBER	
Reason_Code	Reason_Code	VARCHAR2(10)	
ENG_Implementation_Cost	Estimated_ENG_Cost	NUMBER	
MFG_Implementation_Cost	Estimated_MFG_Cost	NUMBER	
Cancellation_Comments	Cancellation_ Comments	VARCHAR2(240)	
Requestor	Requestor_Id	NUMBER	Requestor = Employee Number
Description	Description	VARCHAR2(2000 )	
Return_Status	-N/A-	VARCHAR2(1)	
Attribute Category	Attribute Category	VARCHAR2(30)	
Attribute1	Attribute1	VARCHAR2(150)	
Attribute2	Attribute2	VARCHAR2(150)	
Attribute3	Attribute3	VARCHAR2(150)	
Attribute4	Attribute4	VARCHAR2(150)	
Attribute5	Attribute5	VARCHAR2(150)	
Attribute6	Attribute6	VARCHAR2(150)	
Attribute7	Attribute7	VARCHAR2(150)	
Attribute8	Attribute8	VARCHAR2(150)	
Attribute9	Attribute9	VARCHAR2(150)	
Attribute10	Attribute10	VARCHAR2(150)	
Attribute11	Attribute11	VARCHAR2(150)	
Attribute12	Attribute12	VARCHAR2(150)	
Attribute13	Attribute13	VARCHAR2(150)	

**Table 6–3 Visible Columns**

Exposed Name	Actual Column Name	Type	Comments
Attribute14	Attribute14	VARCHAR2(150)	
Attribute15	Attribute15	VARCHAR2(150)	

ECO Revisions

Columns Exposed to the User

**Table 6–4 Visible Columns**

Name	Actual Name	Type	Comments
ECO_Name	Change_Notice	VARCHAR2(10)	User-Unique Index
Organization_Code	Organization_Id	VARCHAR2(3)	User-Unique Index
Revision	Revision	VARCHAR2(10)	User-Unique Index
New_Revision	Revision	VARCHAR2(10)	Allows updates to Revision
Transaction_Type	-N/A-	VARCHAR2(30)	Required
Comments	Comments	VARCHAR2(240)	
Return_Status	-N/A-	VARCHAR2(30)	
Attribute_Category	Attribute_Category	VARCHAR2(30)	
Attribute1	Attribute1	VARCHAR2(150)	
Attribute2	Attribute2	VARCHAR2(150)	
Attribute3	Attribute3	VARCHAR2(150)	
Attribute4	Attribute4	VARCHAR2(150)	
Attribute5	Attribute5	VARCHAR2(150)	
Attribute6	Attribute6	VARCHAR2(150)	
Attribute7	Attribute7	VARCHAR2(150)	
Attribute8	Attribute8	VARCHAR2(150)	
Attribute9	Attribute9	VARCHAR2(150)	
Attribute10	Attribute10	VARCHAR2(150)	

**Table 6–4 Visible Columns**

<b>Name</b>	<b>Actual Name</b>	<b>Type</b>	<b>Comments</b>
Attribute11	Attribute11	VARCHAR2(150)	
Attribute12	Attribute12	VARCHAR2(150)	
Attribute13	Attribute13	VARCHAR2(150)	
Attribute14	Attribute14	VARCHAR2(150)	
Attribute15	Attribute15	VARCHAR2(150)	

## Revised Items

Columns Exposed to the User

**Table 6–5 Visible Columns**

<b>Name</b>	<b>Assoc. Column Name</b>	<b>Type</b>	<b>Comments</b>
ECO_Name	Change_Notice	VARCHAR2(10)	User-Unique Index
Organization_Code	Organization_Code	VARCHAR2(3)	User-Unique Index
Revised_Item_Name	Revised_Item_Id	VARCHAR2(81)	User-Unique Index
New_Revised_Item_Revision	New_Item_Revision	VARCHAR2(3)	User-Unique Index
Updated_Revised_Item_Revision	New_Item_Revision	VARCHAR2(3)	Allows updates to New_Revised_Item_Revision
Start_Effective_Date	Scheduled_Date	DATE	User-Unique Index
New_Effective_Date	Scheduled_Date	DATE	Allows updates to Effectivity_Date
Transaction_Type	-N/A-	VARCHAR2(30)	Required
Alternate_BOM_Code	Alternate_BOM_Designator	VARCHAR2(10)	
Status_Type	Status_Type	NUMBER	
MRP_Active	MRP_Active	NUMBER	1/yes 2/no

**Table 6–5 Visible Columns**

<b>Name</b>	<b>Assoc. Column Name</b>	<b>Type</b>	<b>Comments</b>
Earliest_Effective_Date	Early_Schedule_Date	DATE	
Use_Up_Item_Name	Use_Up_Item_Id	VARCHAR2(81)	
Use_Up_Plan_Name	Use_Up_Plan_Name	VARCHAR2(10)	
Disposition_Type	Disposition_Type	NUMBER	
Update_WIP	Update_WIP	NUMBER	1/yes 2/no
Cancel_Comments	Cancel_Comments	VARCHAR2(240)	
Descriptive_Text	Change_Description	VARCHAR2(240)	
Attribute Category	Attribute Category	VARCHAR2(30)	
Attribute1	Attribute1	VARCHAR2(150)	
Attribute2	Attribute2	VARCHAR2(150)	
Attribute3	Attribute3	VARCHAR2(150)	
Attribute4	Attribute4	VARCHAR2(150)	
Attribute5	Attribute5	VARCHAR2(150)	
Attribute6	Attribute6	VARCHAR2(150)	
Attribute7	Attribute7	VARCHAR2(150)	
Attribute8	Attribute8	VARCHAR2(150)	
Attribute9	Attribute9	VARCHAR2(150)	
Attribute10	Attribute10	VARCHAR2(150)	
Attribute11	Attribute11	VARCHAR2(150)	
Attribute12	Attribute12	VARCHAR2(150)	
Attribute13	Attribute13	VARCHAR2(150)	
Attribute14	Attribute14	VARCHAR2(150)	
Attribute15	Attribute15	VARCHAR2(150)	

---

**Notes:** The New\_Revised\_Item\_Revision is not updateable for revised items since it is part of the unique key which uniquely identifies a record. So, updates to it have to be made by entering the new revision into Updated\_Revised\_Item\_Revision. After the record is retrieved using the unique key, its revision is overwritten by the new value.

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- Just like New\_Revised\_Item\_Revision, Start\_Effective\_Date is a unique index column. So changes to it have to be made by entering the new value into New\_Effective\_Date.
- The user can reschedule a revised item by entering the new Effective Date in New\_Effective\_Date. All Effective Date changes will be recorded in the history table ENG\_Current\_Start\_Effective\_Dates, along with requestor\_id and comments.
- Revised item revisions go into MTL\_ITEM\_REVISIONS. When an item is first defined through the Define Item form, a starting revision record is written out to this table. Any subsequent revisions are added to or updated in MTL\_ITEM\_REVISIONS.

## Revised Components

Columns Exposed to the User

**Table 6–6 Visible Columns**

Name	Associated Column Name	Type	Comments
ECO_Name	ECO_Name	VARCHAR2(10)	User-Unique Index
Organization_Code	Organization_Id	VARCHAR2(3)	User-Unique Index
Revised_Item_Name	Revised_Item_Id	VARCHAR2(81)	User-Unique Index
New_Revised_Item_Revision	New_Item_Revision	VARCHAR2(3)	User-Unique Index
Start_Effective_Date	Effectivity_Date	DATE	User-Unique Index

**Table 6–6 Visible Columns**

<b>Name</b>	<b>Associated Column Name</b>	<b>Type</b>	<b>Comments</b>
Operation_Sequence_Number	Operation_Seq_Num	NUMBER	User-Unique Index
Component_Item_Name	Component_Item_Id	VARCHAR2(81)	User-Unique Index
Alternate_BOM_Code	Alternate_BOM_Designator	VARCHAR2(10)	User-Unique Index
Transaction_Type	-N/A-	VARCHAR2(30)	Required
ACD_Type	ACD_Type	NUMBER	Required. 1/add 2/change 3/disable
Old_Effectivity_Date	Effectivity_Date	DATE	
Old_Operation_Sequence_Number	Operation_Seq_Num	NUMBER	
New_Operation_Sequence_Number	Operation_Seq_Num	NUMBER	Allows updates to Operation_Seq_Num
Item_Sequence_Number	Item_Num	NUMBER	
Quantity_Per_Assembly	Component_Quantity	NUMBER	
Planning_Percent	Planning_Factor	NUMBER	
Projected_Yield	Component_Yield_Factor	NUMBER	
Include_In_Cost_Rollup	Include_In_Cost_Rollup	NUMBER	1/yes 2/no
WIP_Supply_Type	WIP_Supply_Type	NUMBER	
Supply_Subinventory	Supply_Subinventory	VARCHAR2(10)	
Locator_Name	Locator_Id	VARCHAR2(81)	
SO_Basis	SO_Basis	NUMBER	1/yes 2/no
Optional	Optional	NUMBER	1/yes 2/no
Mutually_Exclusive	Mutually_Exclusive_Options	NUMBER	1/yes 2/no
Check_ATP	Check_ATP	NUMBER	1/yes 2/no
Minimum_Allowed_Quantity	Low_Quantity	NUMBER	

**Table 6–6 Visible Columns**

<b>Name</b>	<b>Associated Column Name</b>	<b>Type</b>	<b>Comments</b>
Maximum_Allowed_Quantity	High_Quantity	NUMBER	
Shipping_Allowed	Shipping_Allowed	NUMBER	1/yes 2/no
Required_To_Ship	Required_To_Ship	NUMBER	1/yes 2/no
Required_For_Revenue	Required_For_Revenue	NUMBER	1/yes 2/no
Include_On_Ship_Docs	Include_On_Ship_Docs	NUMBER	1/yes 2/no
Comments	Component_Remarks	VARCHAR2(240)	
Quantity_Related	Quantity_Related	NUMBER	1/yes 2/no
Return_Status	-N/A-	VARCHAR2(1)	
Attribute Category	Attribute Category	VARCHAR2(30)	
Attribute1	Attribute1	VARCHAR2(150)	
Attribute2	Attribute2	VARCHAR2(150)	
Attribute3	Attribute3	VARCHAR2(150)	
Attribute4	Attribute4	VARCHAR2(150)	
Attribute5	Attribute5	VARCHAR2(150)	
Attribute6	Attribute6	VARCHAR2(150)	
Attribute7	Attribute7	VARCHAR2(150)	
Attribute8	Attribute8	VARCHAR2(150)	
Attribute9	Attribute9	VARCHAR2(150)	
Attribute10	Attribute10	VARCHAR2(150)	
Attribute11	Attribute11	VARCHAR2(150)	
Attribute12	Attribute12	VARCHAR2(150)	
Attribute13	Attribute13	VARCHAR2(150)	
Attribute14	Attribute14	VARCHAR2(150)	
Attribute15	Attribute15	VARCHAR2(150)	

---

**Notes:** The ECO Header unique key is part of the revised item unique key. So confirming the revised item confirms the revised item-ECO Header link, and, consequently, the Header’s link to all other entity records.

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Start\_Effectivity\_Date is not updateable. So Effectivity Date changes have to made using the parent revised item’s New\_Effective\_Date column. Please note however, that revised item Effectivity Date changes will be propagated to all un-implemented child revised components.

Users can cancel Revised Components by entering a Transaction\_Type value of CANCEL.

Item locators cannot be created dynamically. There are no APIs to validate flexfields.

Adding a component to a bill-less revised item causes a new primary bill to be created.

For ACD\_Type = (‘Change’ or ‘Disable’), Old\_Operation\_Sequence\_Number identifies the implemented record being changed or disabled. Operation\_Sequence\_Number identifies the current un-implemented record. New\_Operation\_Sequence\_Number allows user-updates to Operation\_Sequence\_Number. For acd\_type = ‘Add’, Old\_Operation\_Sequence\_Number will equal Operation\_Sequence\_Number, and New\_Operation\_Sequence\_Number will be null.

Reference Designators

Columns Exposed to the User

Table 6–7 Visible Columns

Name	Associated Column Name	Type	Comments
ECO_Name	ECO_Name	VARCHAR2(10)	User-Unique Index
Organization_Code	Organization_Code	VARCHAR2(3)	User-Unique Index

**Table 6–7 Visible Columns**

<b>Name</b>	<b>Associated Column Name</b>	<b>Type</b>	<b>Comments</b>
Revised_Item_Name	Revised_Item_Id	VARCHAR2(81)	User-Unique Index
Start_Effective_Date	Effectivity_Date	VARCHAR2(3)	User-Unique Index
New_Revised_Item_Revision	New_Item_Revision	DATE	User-Unique Index
Operation_Sequence_Number	Operation_Seq_Num	NUMBER	User-Unique Index
Alternate_BOM_Code	Alternate_BOM_Designator	VARCHAR2(10)	User-Unique Index
Component_Item_Name	Component_Item_Id	VARCHAR2(81)	User-Unique Index
Reference_Designator_Name	Component_Reference_Designator	VARCHAR2(15)	User-Unique Index
ACD_Type	ACD_Type	NUMBER	User-Unique Index
Transaction_Type	-N/A-	VARCHAR2(30)	Required
Ref_Designator_Comment	Ref_Designator_Comment	VARCHAR2(240)	
Return_Status	-N/A-	VARCHAR2(1)	
Attribute Category	Attribute Category	VARCHAR2(30)	
Attribute1	Attribute1	VARCHAR2(150)	
Attribute2	Attribute2	VARCHAR2(150)	
Attribute3	Attribute3	VARCHAR2(150)	
Attribute4	Attribute4	VARCHAR2(150)	
Attribute5	Attribute5	VARCHAR2(150)	
Attribute6	Attribute6	VARCHAR2(150)	
Attribute7	Attribute7	VARCHAR2(150)	
Attribute8	Attribute8	VARCHAR2(150)	
Attribute9	Attribute9	VARCHAR2(150)	

**Table 6–7 Visible Columns**

Name	Associated Column Name	Type	Comments
Attribute10	Attribute10	VARCHAR2(150)	
Attribute11	Attribute11	VARCHAR2(150)	
Attribute12	Attribute12	VARCHAR2(150)	
Attribute13	Attribute13	VARCHAR2(150)	
Attribute14	Attribute14	VARCHAR2(150)	
Attribute15	Attribute15	VARCHAR2(150)	

Substitute Components

Columns Exposed to the User

**Table 6–8 Visible Columns**

Name	Name	Type	Comments
ECO_Name	Change_Notice	VARCHAR2(10)	User-Unique Index
Organization_Code	Organization_Id	VARCHAR2(3)	User-Unique Index
Revised_Item_Name	Revised_Item_Id	VARCHAR2(81)	User-Unique Index
Start_Effective_Date	Effectivity_Date	VARCHAR2(3)	User-Unique Index
New_Revised_Item_Revision	New_Item_Revision	DATE	User-Unique Index
Operation_Sequence_Number	Operation_Seq_Num	NUMBER	User-Unique Index
Alternate_BOM_Code	Alternate_BOM_Designator	VARCHAR2(10)	User-Unique Index
Component_Item_Name	Component_Item_Id	VARCHAR2(81)	User-Unique Index
Substitute_Component_Name	Substitute_Component_Id	VARCHAR2(81)	User-Unique Index

**Table 6–8 Visible Columns**

<b>Name</b>	<b>Name</b>	<b>Type</b>	<b>Comments</b>
ACD_Type	ACD_Type	NUMBER	User-Unique Index
Transaction_Type	-N/A	VARCHAR2(30)	Required
Substitute_Item_Quantity	Substitute_Item_Quantity	NUMBER	
Return_Status	-N/A-	VARCHAR2(1)	
Attribute Category	Attribute Category	VARCHAR2(30)	
Attribute1	Attribute1	VARCHAR2(150)	
Attribute2	Attribute2	VARCHAR2(150)	
Attribute3	Attribute3	VARCHAR2(150)	
Attribute4	Attribute4	VARCHAR2(150)	
Attribute5	Attribute5	VARCHAR2(150)	
Attribute6	Attribute6	VARCHAR2(150)	
Attribute7	Attribute7	VARCHAR2(150)	
Attribute8	Attribute8	VARCHAR2(150)	
Attribute9	Attribute9	VARCHAR2(150)	
Attribute10	Attribute10	VARCHAR2(150)	
Attribute11	Attribute11	VARCHAR2(150)	
Attribute12	Attribute12	VARCHAR2(150)	
Attribute13	Attribute13	VARCHAR2(150)	
Attribute14	Attribute14	VARCHAR2(150)	
Attribute15	Attribute15	VARCHAR2(150)	

## New API Packages

The ECO Business object interface program will contain new Business Object API packages. Please see the Business Object Framework section for the flow of control in these packages.

### **Main Packages**

- **ENG\_Eco\_PUB** : This is the public PL/SQL package that is to be programmatically called to launch the import. This package ensures that all records belong to the same business object before it lets the business object through to the Private package.
- **ENG\_Eco\_PVT** : This is the private PL/SQL package. It performs all the business logic by calling the Entity and Shared packages as and when required.

### **Shared Packages**

- **ENG\_Globals** : This Global package contains all global structure and variable definitions, as well as commonly used procedures and functions.
- **ENG\_Validate** : This is a shared validation package. This package contains all attribute-level validation logic.
- **ENG\_Value\_to\_ID** : This is the shared Value-Id conversion package. This package contains all Value-Id conversions.
- **Error\_Handler** : This is the shared error handling package. This package is responsible for logging error messages and erroring out records.

### **Entity Packages**

- **ENG\_Validate\_Eco**: This package contains Attribute and Entity level validation for the ECO Header.
- **ENG\_Default\_Eco**: This package contains default attribute procedures for the ECO Header.
- **ENG\_Eco\_Util**: This package contains entity utility functions and procedures for the ECO Header.
- **ENG\_Validate\_EcoRevision**: This package contains Attribute and Entity level validation for the ECO Revision.
- **ENG\_Default\_EcoRevision**: This package contains default attribute procedures for the ECO Revision.
- **ENG\_EcoRevision\_UTIL**: This package contains entity utility functions and procedures for the ECO Revision.
- **ENG\_Validate\_RevisedItem**: This package contains Attribute and Entity level validation for the Revised Item.

- ENG\_Default\_RevisedItem: This package contains default attribute procedures for the Revised Item.
- ENG\_RevisedItem\_UTIL: This package contains entity utility functions and procedures for the Revised Item.
- BOM\_Validate\_RevisedComp: This package contains Attribute and Entity level validation for the Revised Component.
- BOM\_Default\_RevisedComp: This package contains default attribute procedures for the Revised Component.
- BOM\_RevisedComp\_UTIL: This package contains entity utility functions and procedures for the RevisedComponent.
- BOM\_Validate\_ReferenceDesig: This package contains Attribute and Entity level validation for the Reference Designator.
- BOM\_Default\_ReferenceDesig: This package contains default attribute procedures for the Reference Designator.
- BOM\_ReferenceDesig\_UTIL: This package contains entity utility functions and procedures for the Reference Designator.
- BOM\_Validate\_SubstituteComp: This package contains Attribute and Entity level validation for the Substitute Component.
- BOM\_Default\_SubstituteComp: This package contains default attribute procedures for the Substitute Component.
- BOM\_SubstituteComp\_UTIL: This package contains entity utility functions and procedures for the Substitute Component.

### **Commits and Rollbacks**

None of the ECO business object APIs issue commits or rollbacks. It is the responsibility of the calling code to issue them. This ensures that parts of the transaction are not left in the database. If an error occurs, the whole transaction is rolled back. Therefore, API work is either all completed or none of the work is done.

The APIs pass back to the caller, the state of the business object, whether there has been an error, or it has been successfully processed. The caller could use this to perform further activities by building on top of the APIs. This gives callers the flexibility to issue commits and rollbacks where they decide.

## Launching the Import

The Three Step Rule:

To use the business object APIs effectively, the user must follow the three step rule:

1. Initialize the system information.
2. Call the Public API.
3. Review all relevant information after the Public API has completed.

### Step1: Initialize the system information

Each database table that the program writes to requires system information, such as who is trying to update the current record. The user must provide this information to the import program by initializing certain variables. The program will retrieve system information from these variables, during operation. To initialize the variables, the user must call the following procedure:

```
FND_GLOBAL.apps_initialize  
( user_id IN NUMBER  
, resp_id IN NUMBER  
, resp_appl_id IN NUMBER  
, security_group_id IN NUMBER DEFAULT 0  
)
```

#### Pointers:

1. This procedure initializes the global security context for each database session.
2. This initialization should be done when the session is established outside of a normal forms or concurrent program connection.
3. user\_id is the FND User Id of the person launching this program.
4. resp id is the FND Responsibility Id the person is using.
5. resp\_appl\_id is the Application Responsibility Id.
6. security\_group\_id is the FND Security Group Id.

### Step2: Call the Public API

The Public API is the user's interface to the Import program. The user must call it programmatically, while sending in one business object at a time. The Public API

returns the processed business object, the business object status, and a count of all associated error and warning messages.

The procedure to call is Process\_Eco, and the following is its specification :

PROCEDURE Process\_Eco

```
( p_api_version_number  IN  NUMBER
, p_init_msg_list        IN  VARCHAR2 := FND_API.G_FALSE
, x_return_status        OUT VARCHAR2
, x_msg_count            OUT NUMBER
, x_msg_data             OUT VARCHAR2
, p_ECO_rec              IN   Eco_Rec_Type := G_MISS_ECO_REC

, p_eco_revision_tbl     IN   Eco_Revision_Tbl_Type := G_MISS_ECO_
REVISION_TBL
, p_revised_item_tbl     IN   Revised_Item_Tbl_Type := G_MISS_REVISIED_
ITEM_TBL
, p_rev_component_tbl    IN   Rev_Component_Tbl_Type := G_MISS_REV_
COMPONENT_TBL
, p_ref_designator_tbl   IN   Ref_Designator_Tbl_Type := G_MISS_REF_
DESIGNATOR_TBL
, p_sub_component_tbl    IN   Sub_Component_Tbl_Type := G_MISS_SUB_
COMPONENT_TBL
, x_ECO_rec              OUT Eco_Rec_Type
, x_eco_revision_tbl     OUT Eco_Revision_Tbl_Type
, x_revised_item_tbl     OUT Revised_Item_Tbl_Type
, x_rev_component_tbl    OUT Rev_Component_Tbl_Type
, x_ref_designator_tbl   OUT Ref_Designator_Tbl_Type
, x_sub_component_tbl    OUT Sub_Component_Tbl_Type
)
```

As is obvious from the above specification, all IN parameters begin with p\_. All OUT parameters begin with x\_. The following is a description of these parameters :

- `p_api_version_number` : This parameter is required. It is used by the API to compare the version numbers of incoming calls to its current version number, and return an unexpected error if they are incompatible. See section 4.1 of the Business Object Coding Standards document for a detailed description of this parameter.
- `p_init_msg_list` : This parameter, if set to TRUE, allows callers to request that the API do the initialization of the message list on their behalf. On the other hand, the caller may set this to FALSE (or accept the default value) in order to do the initialization itself by calling `FND_MSG_PUB.Initialize`.
- `p_eco_rec`, `p_eco_revision_tbl`, `p_revised_item_tbl`, `p_rev_component_tbl`, `p_ref_designator_tbl`, `p_sub_component_tbl` : This is the set of data structures that represents the incoming business object. `p_eco_rec` is a record that holds the ECO header for the ECO. All the other data structures are PL/SQL tables of records that hold records for each of the other entities. All these data structures directly correspond to the entities shown in the ECO entity diagram.

Please note that any of these data structures may be sent in empty (set to NULL) to indicate that there are no instances of that entity in the business object being sent in.

- `x_eco_rec`, `x_eco_revision_tbl`, `x_revised_item_tbl`, `x_rev_component_tbl`, `x_ref_designator_tbl`, `x_sub_component_tbl` : This is the set of data structures that represents the outgoing business object. These records essentially constitute the whole business object as it was sent in, except now it has all the changes that the import program made to it through all the steps in the Process Flow. These records can be committed, rolled back, or subjected to further processing by the caller. `x_eco_rec` is a record that holds the ECO header for the ECO. All the other data structures are PL/SQL tables of records that hold records for each of the other entities. All these data structures directly correspond to the entities shown in the ECO entity diagram.
- `x_return_status` : This is a flag that indicates the state of the whole business object after the import. If there has been an error in a record, this status will indicate the fact that there has been an error in the business object. Similarly, if the business object import has been successful, this flag will carry a status to indicate that. The caller may look up this flag to choose an appropriate course of action (commit, rollback, or further processing by the caller). The following is a list of all the possible business object states:
- `x_msg_count` : This holds the number of messages in the API message stack after the import. This parameter returns a 0 when there are no messages to return.

- `x_msg_data` : This returns a single message when the message count is 1. The purpose of this parameter is to save the caller the extra effort of retrieving a lone message from the message list. This parameter returns NULL when there is more than one message.

As mentioned above, the Public API must be called programmatically. The caller here may be a form, a shell, or some other API which serves to extend the functionality of the import program. Please see the Sample Shell section in the Appendix for a complete listing of the shell that was written to test the import program. This shell illustrates the correct usage of the import program.

---

**Note :** A record must have an error status of NULL for it to be processed. If it has any other value, it will not be picked up for processing. The user must remember to NULL out this field when sending in a record.

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### Step 3: Review all relevant information after the Public API has completed

The user must look up:

- all error status that the Public API returns, including, the overall business object error status, as well as the individual record statuses.
- all record attributes to see what changes occurred after applying business logic to these records.
- all error and warning messages in the API message list.

The user can access the API message list using the following procedures and functions in the `Error_Handler` package:

1. Initializing the message list: The following procedure clears the message list and initializes all associated variables

PROCEDURE Initialize;

2. Go to the start of the list: The following procedure reset the message index to the start of the list so the user can start reading from the start of the list

PROCEDURE Reset;

3. Retrieving the entire message list: The following procedure will return the entire message list to the user

PROCEDURE Get\_Message\_List

( `x_message_list`      OUT Eng\_Eco\_Pub.Error\_Tbl\_Type);

4. Retrieving messages by entity: One implementation of procedure `Get_Entity_Message` will return all messages pertaining to a particular entity (`p_entity_id`), denoted by the symbols ECO (ECO Header), RI (Revised Item), RC (Revised Component), SC (Substitute Component), RD (Reference Designator).

PROCEDURE `Get_Entity_Message`

```
( p_entity_id      IN VARCHAR2
, x_message_list   OUT Eng_Eco_Pub.Error_Tbl_Type
);
```

5. Retrieving a specific message: Another implementation of procedure `Get_Entity_Message` will return the message pertaining to a particular entity (`p_entity_id`), at a specific array index in that entity table. The entity is denoted by the symbols ECO (ECO Header), RI (Revised Item), RC (Revised Component), SC (Substitute Component), RD (Reference Designator). The entity index (`p_entity_index`) is the index in the entity array.

PROCEDURE `Get_Entity_Message`

```
( p_entity_id      IN VARCHAR2
, p_entity_index   IN NUMBER
, x_message_text   OUT VARCHAR2
);
```

6. Retrieving the current message: Procedure `Get_Message` will return the message at the current message index and will advance the pointer to the next index. If the user tries to retrieve beyond the size of the message list, then the message index will be reset to the beginning of the list.

PROCEDURE `Get_Message`

```
( x_message_text   OUT VARCHAR2
, x_entity_index   OUT NUMBER
, x_entity_id      OUT VARCHAR2
);
```

7. Deleting a specific message: Procedure `Delete_Message` enables the user to delete a specific message at a specified entity index (`p_entity_index`) within the PL/SQL table of a specified entity (`p_entity_id`). The entity is denoted by the symbols ECO (ECO Header), RI (Revised Item), RC (Revised Component), SC

(Substitute Component), RD (Reference Designator). The entity index (p\_entity\_index) is the index in the entity array.

```
PROCEDURE Delete_Message
( p_entity_id      IN VARCHAR2
, p_entity_index   IN NUMBER
);
```

8. Deleting all messages for a certain entity: Another implementation of procedure Delete\_Message lets the user delete all messages for a particular entity (p\_entity\_id). The entity is denoted by the symbols ECO (ECO Header), RI (Revised Item), RC (Revised Component), SC (Substitute Component), RD (Reference Designator).

```
PROCEDURE Delete_Message
( p_entity_id      IN VARCHAR2 );
```

9. Get a count of all messages: The following function returns the total number of messages currently in the message list

```
FUNCTION Get_Message_Count RETURN NUMBER;
```

10. Dumping the message list: The following message generates a dump of the message list using dbms\_output

```
PROCEDURE Dump_Message_List;
```

## Package Interaction

### The Public Package - ENG\_ECO\_PUB

This package is like a gatekeeper, letting only one business object through at a time. This essentially means that all records in the business object must belong to the business object. The business object here is the ECO, and incoming records together make up an instance of the business object. So, all records in an ECO business object instance must reference the same ECO.

Main Procedure: Process\_ECO

1. Set business object status to 'S'.
2. Check that all records in the business object belong to the same Bill, i.e., all records must have the same Assembly Item Name and Organization\_Code combination

**Table 6–9    Errors**

Description	Cause of Failure	Error	Message
If there is an ECO Header in the business object, check that all records have the same ECO_name and Organization_Code values as the Header.  If the business object does not have an ECO Header record, check that all records have the same ECO_Name and Organization_Code combination as the first highest level entity record picked up.	Any records have mismatched ECO_Name and Organization_Code values	Severe Error I	ENG_MUST_BE_IN_SAME_ECO:All records in a business object must belong to the same ECO. That is, they must all have the same ECO Name and organization. Please check your records for this.

3. Derive Organization\_Id from Organization\_Code and copy this value into all business object records.

**Table 6–10    Errors**

Column	Description	Error	Message
Organization_Id	Derive using Organization_Code from table MTL_PARAMETERS	Severe Error I	ENG_ORG_INVALID:The Organization <org_id> you entered is invalid.

Unexpected Error Other Message: ENG\_UNEXP\_ORG\_INVALID: This record was not processed since an unexpected error while performing a value to id conversion for organization code.

4. Pass business object into Private API if the business object status is still 'S'. Also pass the Assembly Item Name and Organization\_Id to Private API, to identify this business object instance.
5. Accept processed business object and return status from Private API after the import, and pass it back to the calling program.

## The Private Package - ENG\_BO\_PVT

This package is called by the Public package. It carries out all the business object checks listed in the Process Flow, while making any necessary changes to it, and also performs production tables inserts, updates and deletes. It then passes the business object and the business object import status back to the Public API.

Main Procedure: Process\_ECO

1. Initialize User\_Id, Login\_Id, Prog\_AppId, Prog\_Id in System\_Information record.

**Table 6–11 Column Descriptions**

Column	Description
User_Id	From environment
Login_Id	From environment
Prog_AppId	From environment
Prog_Id	From environment

2. Initialize Assembly\_Item\_Name and Org\_Id in System\_Information record from values passed by Public API.
3. If an BOM Header was passed in, call ECO\_Header
4. If BOM Revisions records exist, call ECO\_Rev
5. Call Rev\_Comps to process immediate-parentless components
6. Call Ref\_Desgs to process immediate-parentless reference designators
7. Call Sub\_Comps to process immediate-parentless substitute components
8. Return import status and processed business object to Public API

The sections below list the steps performed within each of the entity procedures: ECO\_Header, ECO\_Rev, Rev\_Comps, Ref\_Desgs, Sub\_Comps. Each of these entity procedures performs all the entity process flow steps listed by entity under the Entity Process Details section. They also call other entity procedures to process child records.

The entity procedure descriptions below also point out how the Private API reacts to errors in entity process flow steps.

## Sample Launch Package

The following is the PL/SQL program that was coded to test the APIs. its purpose here is to illustrate how the user might call the Public API.

```
/*****  
*****/
```

This package calls the Public API. It uses interface table ENG\_ENG\_CHANGES\_INTERFACE, ENG\_ECO\_REVISIONS\_INTERFACE, ENG\_REVISED\_ITEMS\_INTERFACE, BOM\_INVENTORY\_COMPS\_INTERFACE, BM\_REF\_DESGS\_INTERFACE and BOM\_SUB\_COMPS\_INTERFACE. The way it works is that it assumes that user has loaded these tables with business object records, and then runs this program. Each record will have a TEST TAG which identifies the whole business object uniquely to the user.

When the user runs this program, he/she specifies a TEST TAG (p\_test\_tag). This program picks up all records that carry this test tag value as one business object, and then tries to import it into the production tables.

```
*****/
```

CREATE OR REPLACE

PROCEDURE Public\_API\_UT

( p\_test\_tag IN VARCHAR2 )

IS

```
l_eco_rec          Eng_Eco_Pub.Eco_Rec_Type;  
l_eco_revision_tbl Eng_Eco_Pub.Eco_Revision_Tbl_Type;  
l_revised_item_tbl Eng_Eco_Pub.Revised_Item_Tbl_Type;  
l_rev_component_tbl Eng_Eco_Pub.Rev_Component_Tbl_Type;  
l_sub_component_tbl Eng_Eco_Pub.Sub_Component_Tbl_Type;  
l_ref_designator_tbl Eng_Eco_Pub.Ref_Designator_Tbl_Type;  
l_return_status    VARCHAR2(1);  
l_msg_count        NUMBER;  
l_msg_data         VARCHAR2(2000);  
l_Error_Table      Eng_Eco_Pub.Error_Tbl_Type;
```

```
l_Message_text      VARCHAR2(2000);
CURSOR c_eco_rec IS
SELECT *
  FROM eng_eng_changes_interface
 WHERE eng_changes_ifce_key like p_test_tag;
CURSOR c_eco_rev IS
SELECT *
  FROM eng_eco_revisions_interface
 WHERE eng_eco_revisions_ifce_key like p_test_tag;
CURSOR c_rev_items IS
SELECT *
  FROM eng_revised_items_interface
 WHERE eng_revised_items_ifce_key like p_test_tag;
CURSOR c_rev_comps IS
SELECT *
  FROM bom_inventory_comps_interface
 WHERE bom_inventory_comps_ifce_key like p_test_tag;
CURSOR c_sub_comps IS
SELECT *
  FROM bom_sub_comps_interface
 WHERE bom_sub_comps_ifce_key like p_test_tag;
CURSOR c_ref_desgs IS
SELECT *
  FROM bom_ref_desgs_interface
 WHERE bom_ref_desgs_ifce_key like p_test_tag;
i      number;
BEGIN
  -- Query all the records and call the Private API.
```

```
FOR eco_rec IN c_eco_rec
LOOP
    l_eco_rec.eco_name := eco_rec.change_notice;
    l_eco_rec.organization_code := eco_rec.organization_code;
    l_eco_rec.change_type_code := eco_rec.change_order_type;
    l_eco_rec.status_type := eco_rec.status_type;
    l_eco_rec.eco_department_name := eco_rec.responsible_org_code;
    l_eco_rec.priority_code := eco_rec.priority_code;
    l_eco_rec.approval_list_name := eco_rec.approval_list_name;
    l_eco_rec.approval_status_type := eco_rec.approval_status_type;
    l_eco_rec.reason_code := eco_rec.reason_code;
    l_eco_rec.eng_implementation_cost := eco_rec.estimated_eng_cost;
    l_eco_rec.mfg_implementation_cost := eco_rec.estimated_mfg_cost;
    l_eco_rec.cancellation_comments:=eco_rec.cancellation_comments;
    l_eco_rec.requestor := eco_rec.requestor;
    l_eco_rec.description := eco_rec.description;
    l_eco_rec.transaction_type := eco_rec.transaction_type;
END LOOP;

-- Fetch ECO Revisions
i := 1;
FOR rev IN c_eco_rev
LOOP
    l_eco_revision_tbl(i).eco_name := rev.change_notice;
    l_eco_revision_tbl(i).organization_code:= rev.organization_code;
    l_eco_revision_tbl(i).revision := rev.revision;
    l_eco_revision_tbl(i).new_revision := rev.new_revision;
    l_eco_revision_tbl(i).comments := rev.comments;
    l_eco_revision_tbl(i).transaction_type := rev.transaction_type;
```

```
        i := i + 1;
    END LOOP;
    -- Fetch revised items
    i := 1;
    FOR ri IN c_rev_items
    LOOP
        l_revised_item_tbl(i).eco_name := ri.change_notice;
        l_revised_item_tbl(i).organization_code := ri.organization_code;
        l_revised_item_tbl(i).revised_item_name :=
            ri.revised_item_number;
        IF ri.new_item_revision = FND_API.G_MISS_CHAR
        THEN
            l_revised_item_tbl(i).new_revised_item_revision := NULL;
        ELSE
            l_revised_item_tbl(i).new_revised_item_revision :=
                ri.new_item_revision;
        END IF;
        l_revised_item_tbl(i).start_effective_date :=
            ri.scheduled_date;
        l_revised_item_tbl(i).alternate_bom_code :=
            ri.alternate_bom_designator;
        l_revised_item_tbl(i).status_type := ri.status_type;
        l_revised_item_tbl(i).mrp_active := ri.mrp_active;
        l_revised_item_tbl(i).earliest_effective_date :=
            ri.early_schedule_date;
        l_revised_item_tbl(i).use_up_item_name := ri.use_up_item_number;
        l_revised_item_tbl(i).use_up_plan_name := ri.use_up_plan_name;
        l_revised_item_tbl(i).disposition_type := ri.disposition_type;
```

```
l_revised_item_tbl(i).update_wip := ri.update_wip;
l_revised_item_tbl(i).cancel_comments := ri.cancel_comments;
l_revised_item_tbl(i).change_description := ri.descriptive_text;
l_revised_item_tbl(i).transaction_type := ri.transaction_type;
i := i + 1;
END LOOP;
-- Fetch revised components
i := 1;
FOR rc IN c_rev_comps
LOOP
    l_rev_component_tbl(i).eco_name := rc.change_notice;
    l_rev_component_tbl(i).organization_code:= rc.organization_code;
    l_rev_component_tbl(i).revised_item_name :=
        rc.assembly_item_number;
    l_rev_component_tbl(i).new_revised_item_revision := NULL;
    l_rev_component_tbl(i).start_effective_date :=
        rc.effectivity_date;
    l_rev_component_tbl(i).disable_date := rc.disable_date;
    l_rev_component_tbl(i).operation_sequence_number :=
        rc.operation_seq_num;
    l_rev_component_tbl(i).component_item_name :=
        rc.component_item_number;
    l_rev_component_tbl(i).alternate_bom_code :=
        rc.alternate_bom_designator;
    l_rev_component_tbl(i).acd_type := rc.acd_type;
    l_rev_component_tbl(i).old_effectivity_date :=
        rc.old_effectivity_date;
    l_rev_component_tbl(i).old_operation_sequence_number :=
```

```
rc.old_operation_seq_num;
l_rev_component_tbl(i).item_sequence_number := rc.item_num;
l_rev_component_tbl(i).quantity_per_assembly :=
rc.component_quantity;
l_rev_component_tbl(i).planning_percent := rc.planning_factor;
l_rev_component_tbl(i).projected_yield :=
rc.component_yield_factor;
l_rev_component_tbl(i).include_in_cost_rollup :=
rc.include_in_cost_rollup;
l_rev_component_tbl(i).wip_supply_type := rc.wip_supply_type;
l_rev_component_tbl(i).so_basis := rc.so_basis;
l_rev_component_tbl(i).optional := rc.optional;
l_rev_component_tbl(i).mutually_exclusive :=
rc.mutually_exclusive_options;
l_rev_component_tbl(i).check_atp := rc.check_atp;
l_rev_component_tbl(i).shipping_allowed :=
rc.shipping_allowed;
l_rev_component_tbl(i).required_to_ship := rc.required_to_ship;
l_rev_component_tbl(i).required_for_revenue :=
rc.required_for_revenue;
l_rev_component_tbl(i).include_on_ship_docs :=
rc.include_on_ship_docs;
l_rev_component_tbl(i).quantity_related := rc.quantity_related;
l_rev_component_tbl(i).supply_subinventory :=
rc.supply_subinventory;
l_rev_component_tbl(i).location_name := rc.location_name;
l_rev_component_tbl(i).minimum_allowed_quantity :=
rc.low_quantity;
```

```
        l_rev_component_tbl(i).maximum_allowed_quantity :=
            rc.high_quantity;
        l_rev_component_tbl(i).component_remarks :=
            rc.component_remarks;
        l_rev_component_tbl(i).transaction_type :=
            rc.transaction_type;

        i := i + 1;
    END LOOP;
    -- Fetch substitute component records
    i := 1;
    FOR sc IN c_sub_comps
    LOOP
        l_sub_component_tbl(i).eco_name := sc.change_notice;
        l_sub_component_tbl(i).organization_code:= sc.organization_code;
        l_sub_component_tbl(i).revised_item_name :=
            sc.assembly_item_number;
        l_sub_component_tbl(i).start_effective_date :=
            sc.effectivity_date;
        l_sub_component_tbl(i).new_revised_item_revision := NULL;
        l_sub_component_tbl(i).component_item_name :=
            sc.component_item_number;
        l_sub_component_tbl(i).alternate_bom_code :=
            sc.alternate_bom_designator;
        l_sub_component_tbl(i).substitute_component_name :=
            sc.substitute_comp_number;
        l_sub_component_tbl(i).acd_type := sc.acd_type;
        l_sub_component_tbl(i).operation_sequence_number :=
            sc.operation_seq_num;
```

```
l_sub_component_tbl(i).substitute_item_quantity :=
    sc.substitute_item_quantity;
l_sub_component_tbl(i).transaction_type := sc.transaction_type;
i := i + 1;
END LOOP;
-- Fetch reference designators
i := 1;
FOR rd IN c_ref_desgs
LOOP
    l_ref_designator_tbl(i).eco_name := rd.change_notice;
    l_ref_designator_tbl(i).organization_code :=
        rd.organization_code;
    l_ref_designator_tbl(i).revised_item_name :=
        rd.assembly_item_number;
    l_ref_designator_tbl(i).start_effective_date :=
        rd.effectivity_date;
    l_ref_designator_tbl(i).new_revised_item_revision := null;
    l_ref_designator_tbl(i).operation_sequence_number :=
        rd.operation_seq_num;
    l_ref_designator_tbl(i).component_item_name :=
        rd.component_item_number;
    l_ref_designator_tbl(i).alternate_bom_code :=
        rd.alternate_bom_designator;
    l_ref_designator_tbl(i).reference_designator_name :=
        rd.component_reference_designator;
    l_ref_designator_tbl(i).acd_type := rd.acd_type;
    l_ref_designator_tbl(i).ref_designator_comment :=
        rd.ref_designator_comment;
```

```
        l_ref_designator_tbl(i).new_reference_designator :=
            rd.new_designator;
        l_ref_designator_tbl(i).transaction_type :=
            rd.transaction_type;
    END LOOP;
    Eng_Globals.G_WHO_REC.org_id := 207;
    Eng_Globals.G_WHO_REC.user_id := 2462;
    Eng_Globals.G_WHO_REC.login_id := 2462;
    Eng_Globals.G_WHO_REC.prog_appid := 703;
    Eng_Globals.G_WHO_REC.prog_id:= NULL;
    Eng_Globals.G_WHO_REC.req_id := NULL;
    ENG_GLOBALS.system_information.org_id := 207;
    fnd_global.apps_initialize
    ( user_id    => Eng_Globals.G_WHO_REC.user_id
    , resp_id    => 20567
    , resp_appl_id => Eng_Globals.G_WHO_REC.prog_appid
    );
    -- Call the private API
    Eng_Eco_PUB.Process_Eco
    ( p_api_version_number    => 1.0
    , x_return_status          => l_return_status
    , x_msg_count              => l_msg_count
    , p_eco_rec                => l_eco_rec
    , p_eco_revision_tbl       => l_eco_revision_tbl
    , p_revised_item_tbl       => l_revised_item_tbl
    , p_rev_component_tbl      => l_rev_component_tbl
    , p_sub_component_tbl      => l_sub_component_tbl
    , p_ref_designator_tbl     => l_ref_designator_tbl
```

```

, x_eco_rec          => l_eco_rec
, x_eco_revision_tbl => l_eco_revision_tbl
, x_revised_item_tbl => l_revised_item_tbl
, x_rev_component_tbl => l_rev_component_tbl
, x_sub_component_tbl => l_sub_component_tbl
, x_ref_designator_tbl => l_ref_designator_tbl
);
--
-- On return from the PUB API
-- Perform all the error handler operations to verify that the
-- error or warning are displayed and all the error table interface
-- function provided to the user work correctly;
--
Error_Handler.Get_Message_List( x_message_list => l_error_table);
FOR i IN 1..l_error_table.COUNT
LOOP
    dbms_output.put_line('Entity Id: ' || l_error_table(i).entity_id);
    dbms_output.put_line('Index: ' || l_error_table(i).entity_index);
    dbms_output.put_line('Mesg: ' || l_error_table(i).message_text);
    dbms_output.put_line('-----');
END LOOP;
dbms_output.put_line('Total Messages: ' || to_char(i));
l_msg_count := Error_Handler.Get_Message_Count;
dbms_output.put_line('Message Count Function: ' || to_char(l_msg_count));
Error_Handler.Dump_Message_List;
Error_Handler.Get_Entity_Message
( p_entity_id      => 'ECO'
, x_message_list   => l_error_table

```

```
);  
Error_Handler.Get_Entity_Message  
( p_entity_id      => 'REV'  
  , x_message_list  => l_error_table  
);  
Error_Handler.Get_Entity_Message  
( p_entity_id      => 'RI'  
  , x_message_list  => l_error_table  
);  
Error_Handler.Get_Entity_Message  
( p_entity_id      => 'RC'  
  , x_message_list  => l_error_table  
);  
Error_Handler.Get_Entity_Message  
( p_entity_id      => 'SC'  
  , x_message_list  => l_error_table  
);  
Error_Handler.Get_Entity_Message  
( p_entity_id      => 'RD'  
  , x_message_list  => l_error_table  
);  
  
END Public_API_UT;
```

## Import Error Handling and Messaging

### Error Handler Flow Diagram

This flow diagram charts the possible paths an error might take once it has exited the general main ECO Business Object Interface process flow.

## Error Handling Concepts

Error handling depends on the severity of the error, the entities the error extends itself over (scope of the error) , and how the error affects the lineage (child record error states). When an error occurs, records are marked so that erroneous records are not processed again.

### Error Severity Levels

Severity levels help distinguish between different types of errors since the import program behaves differently for each of these errors. The following is a list of the error severity levels recognized by the import program:

**Table 6–12 Code Meanings**

CODE	MEANING
'W'	Warning / Debug
'E'	Standard Error
'E'	Severe Error
'F'	Fatal Error
'U'	Unexpected error

### Error States

Error states serve two purposes :

- They convey to the user the exact type of error in the record.
- They help the import program identify the records that do not need to be processed.

**Table 6–13 Code Meanings**

CODE	MEANING
'S'	Success
'E'	Error
'F'	Fatal Error
'U'	Unexpected Error
'N'	Not Processed

Error Scope

This indicates what the depth of the error is in the business object, that is, how many other records in the business object hierarchy the current error affects.

Table 6–14 Code Meanings

CODE	MEANING
'R'	Error affects current 'R'ecord
'S'	Error affects all 'S'ibling and child records
'C'	Error affects 'C'hild records
'A'	Error affects 'A'll records in business object

Child Error States

If an error in a record affects child records, the status of the child may vary based on the type of error. There are two error states that indicate how the child is affected:

Table 6–15 Code Meanings

CODE	MEANING
'E'	Error
'N'	Not Processed

Error Classes

There are three major classes that determine the severity of the problem.

Expected errors: These are errors the program specifically looks for in the business object, before committing it to the production tables.

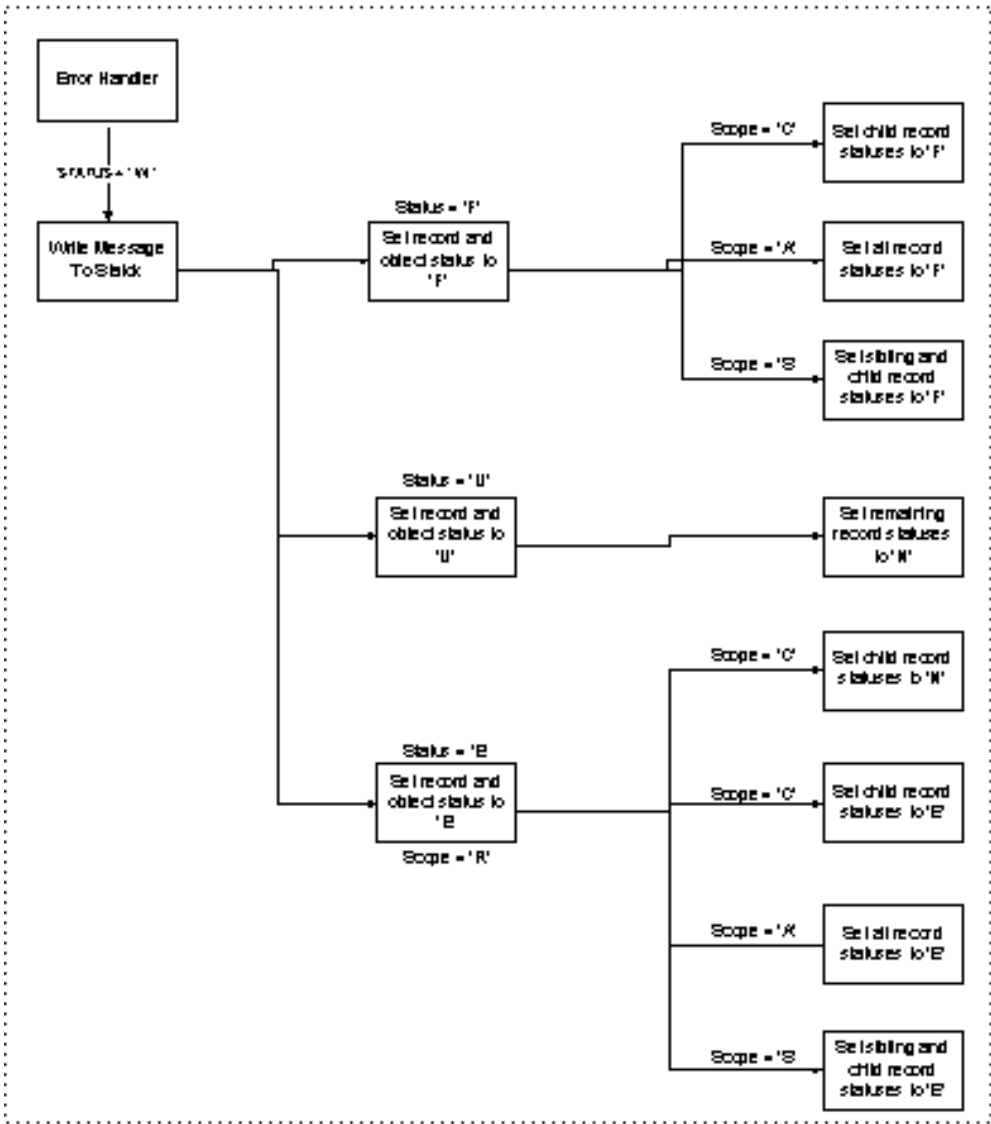
1. Standard Error: This error causes only the current record to be error-ed out, but is not serious enough to affect any other records in the object. The current record status is set to 'E'. For example: Revised item cannot be updated to status=10.
2. Severe Error I: This error affects all records. All record statuses are set to 'E'. This error is usually a change notice/organization uniformity error. All records must have the same change notice/organization combination.
3. Severe Error II: This error affects all records that are children of this record's parent, when the parent is not in the business object. A characteristic of this

record's parent caused the error, so all its siblings and their children also get a record status of 'E'. This error usually occurs when a lineage check fails.

4. Severe Error III: This error not only affects the current record but also its child records in the business object. The child record statuses are set to 'E'. Please check your child records for errors as well as the current record. This error is usually a user-unique to unique index conversion error.
5. Severe Error IV: This error affects the current record and its child records since the program cannot properly process the child records. The child record statuses are set to 'N'. This type of errors occur when there are errors on CREATEs.
6. Fatal Error I: These errors occur when it is not possible to perform any operation on the ECO. Such errors affect the entire business object. All record statuses are set to 'F'. The following are situations that cause this error:
  - ECO is implemented in the production tables
  - ECO is canceled in the production tables
  - Workflow activity is in progress for the ECO
  - You do not have access to this ECO (change order type)
7. Fatal Error II: This error affects all records that are children of this record's parent, when the parent is not in the business object. A characteristic of this record's parent caused the error, so all its siblings and their children also get a record status of 'F'. This usually occurs when the user tries to create, update, or delete a component of a revised item that was already implemented or cancelled.
8. Fatal Error III: These errors affects the current record and its children, since it is not possible to perform any operation on these records. The current record and all its child record statuses are set to 'F'. The following situations cause this error:
  - Revised item is implemented in the production tables
  - Revised item is canceled in the production tables
  - You do not have access to this revised item (BOM item type)

Unexpected errors: All errors that are not expected errors are unexpected errors. These are errors that the program is not specifically looking for, for example, the user somehow loses the database connection.

Figure 6–4 Unexpected Errors



Warnings: These are messages for information only. The purpose of warnings is:

1. to warn the user of problems that may occur when the ECO is implemented.  
For example: Revised item is being referenced on another pending ECO.
2. to inform the user of any side-effects caused by user-entered data. For example:  
All Approval History records associated with ECO have been deleted.

### How it all works

To bring together all the concepts above into a workable algorithm, we must introduce some terms that used extensively in this section, and the rest of the document.

**Child record :** All records carry the unique keys for all parents above them. A child record (of a particular parent) is one that holds the same values for the unique key columns as the parent record.

**Sibling record :** A sibling record (of the current record) is one that holds the same parent unique key column values as the current record. For example, a component record that holds the same parent revised item unique key column values as the current component record, is a sibling of the current component record. Likewise, a reference designator record that holds the same parent component unique key column values as a substitute component is a sibling of the substitute component.

**Business Object Error Status :** This indicates the state of the whole business object after the import. As soon as the import program encounters an erroneous record, it sets the business object error status (also called return status) appropriately to convey this to the user. It is then up to the user to locate the offending record(s) using the individual record error statuses as indicated below. The caller may also use the business object return status to choose an appropriate course of action (commit, rollback, or further processing by the caller).

The following is a list of all the possible business object states.

**Table 6–16 Code Meanings**

CODE	MEANING
'S'	Success
'E'	Error
'F'	Fatal Error
'U'	Unexpected Error

**Record Error Status :** This is the state of the record after the import (success or error). The error status is also referred to as return status or error state in this

document. Please see the Error States section above for a list of statuses a record can receive. The error status helps locate erroneous records in a business object that has error-ed out. The following are important pointers about the record error status.

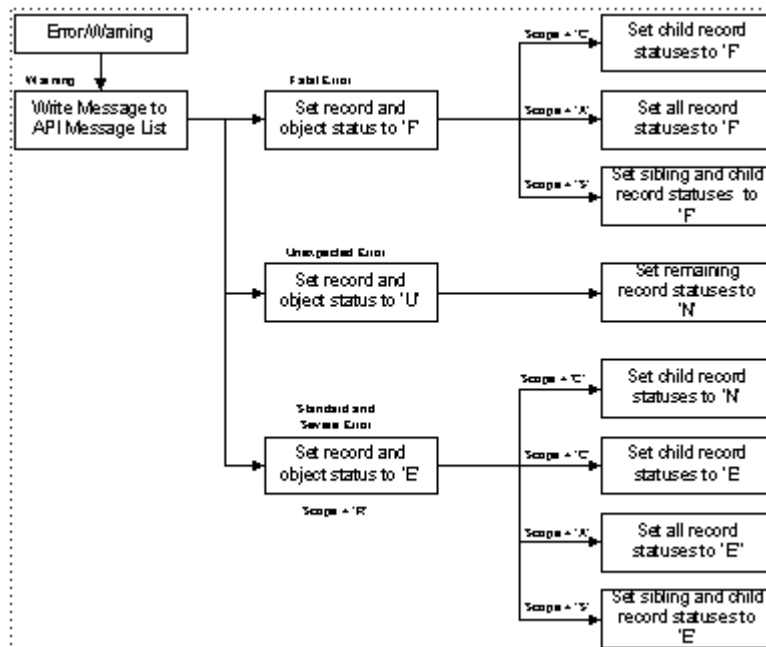
- Every record is assigned an error status by the import program. Hence, if a record has a NULL return status, it means that the import program has not gotten to it yet.
- The user must send in records with {return status = NULL}. The import program will not look at records that already have an error status value, since it assumes that a record with an error status value has already been looked at by the program.

The following shows how the error status, error scope, and child statuses relate together to constitute the different error classes for records

**Table 6–17    Error Status, Scope and Child Status**

Error	Status	Scope	Child Statuses
Warning	S: Success	R: Record Only	-N/A-
Standard Error	E: Error	R: Record Only	-N/A-
Severe Error I	E: Error	A: All Records	E: Error
Severe Error II	E: Error	S: Current, Sibling and Child Records	E: Error
Severe Error III	E: Error	C: Current and Child Record	E: Error
Severe Error IV	E: Error	C: Current and Child Records	N: Not Processed
Fatal Error I	F: Fatal Error	A: All Records	
Fatal Error II	F: Fatal Error	S: Current, Sibling and Child Records	
Fatal Error III	F: Fatal Error	C: Current and Child Record	
Unexpected Error	U: Unexpected Error	-N/A-	N: Not Processed

This flow diagram charts the possible paths an error might take:

**Figure 6–5 Possible Error Paths**

The list below shows the sequence of steps that need to be performed when warnings or errors are encountered:

#### **p\_severity\_level = Standard Error**

- Log error messages
- Set record status to 'E'
- Set business object status to 'E'

#### **p\_severity\_level = Severe Error I**

- Log error messages
- Set record status to 'E'
- Set all business object record statuses to 'E'
- Set business object status to 'E'

**p\_severity\_level = Severe Error II**

- Log error messages
- Set record status to 'E'
- Set direct and indirect children statuses to 'E'. Also set statuses of sibling records and all their children to 'E'.
- Set business object status to 'E'

**p\_severity\_level = Severe Error III**

- Log error messages
- Set record status to 'E'
- Set direct and indirect children statuses to 'E'.
- Set business object status to 'E'

**p\_severity\_level = Severe Error IV**

- Log error messages
- Set record status to 'E'
- Set direct and indirect children statuses to 'N'.
- Set business object status to 'E'

**p\_severity\_level = Fatal Error I**

- Log error messages
- Set record status to 'F'
- Set all business object records to 'F'.
- Set business object statuses to 'F'

**p\_severity\_level = Fatal Error II**

- Log error messages
- Set record status to 'F'
- Set direct and indirect children statuses to 'F'. Also set statuses of sibling records and all their children to 'F'.
- Set business object statuses to 'F'

**p\_severity\_level = Fatal Error III**

- Log error messages
- Set record status to 'F'
- Set direct and indirect children statuses to 'F'
- Set business object statuses to 'F'

**p\_severity\_level = Unexpected Error**

- Log error messages
- Set record status to 'U'
- Set all remaining un-processes business object record statuses to 'N'.
- Set business object statuses to 'U'

**p\_severity\_level = Warning**

- Log error messages

## API Messaging

**API Message Table**

All messages are logged in the API Error Message Table. This is a PL/SQL table (array) of messages. Please see Accessing Messages in the Launching the Import section of this document on how to access these messages.

The following is a description of the API Message Table:

**Table 6–18 API Message Table**

Field	Type	Description
Message_Text	VARCHAR2(2000)	The actual message that the user sees. Please see below for format information.
Entity_Id	VARCHAR2(3)	The entity that this message belongs to. This may hold BO, ECO, REV, RI, RC, RD, or SC. BO - Business ObjectECO - ECO HeaderREV - ECO RevisionsRI - Revised ItemsRC - Revised ComponentsRD - Reference DesignatorsSC - Substitute Components

**Table 6–18    API Message Table**

Field	Type	Description
Entity_Index	NUMBER	The index of the entity array this record belongs to.
Message_Type	VARCHAR2(1)	Indicates whether message is an error or warning.

**Message Formats**

Expected errors and warnings: The message text contains the translated and token substituted message text. Please note that the message text may contain tokens, some of which will identify the entity instances that this message is for. The following tokens identify the several entities:

- Revised Item : Revised\_Item\_Name
- Revised Component : Revised\_Component\_Number
- Substitute Component : Substitute\_Component\_Number
- Reference Designator : Reference\_Designator\_Name
- ECO Revisions : Revision
- ECO Header : ECO\_Name

**Unexpected errors:**

<Package Name> <Procedure/Function Name> <SQL Error Number>  
<SQL Error Message Text>

**Other message:**

An Other Message is a message that is logged for all records that are affected by an error in a particular record. So if an error in a revised item record will cause all its children to error out, then the following will be logged:

- For the revised item itself, the error message describing the problem.
- For all records affected by the type of error that occurred in the revised item, the other message. This message essentially mentions the following:
  1. how the error has affected this record, that is, it has been error-ed out too, with a severe or fatal error status, or that it has not been processed.
  2. which record caused this record to be affected.

3. what process flow step in the offending record caused this record to be affected.
4. what transaction type in the offending record caused this record to be affected.

Essentially the purpose of the other message is to give the user as much information as possible about the error that got propagated to this record.

## Error Handler

The program performs all its error handling and messaging through the Error Handler. It makes calls to the Error Handler when an error or warning needs to be issued. The following are the functions of the Error Handler:

- Log the error/warning messages sent to it.
- Set the return status of the record in error.
- Set the return status of other records affected by this error.

The following is the input that the Error Handler expects from the calling program.

**Table 6–19** *Input*

Input	Description
Business Object	Calling program must pass the whole business object as-is.
Message and Token List	List of messages generated for error in the current record. See below for description of this list.
Error Status	Status the record in error should be set to.
Error Level	Business Object hierarchy level that current record is an instance of. That is, the entity that the record in error belongs to.
Entity Array Index	Index of record in error in its encompassing entity array. Does not apply to ECO Header.
Error Scope	Indicates depth of error, that is, how many other records are affected by it.
Other Message and Token List	Message generated for the other affected records. See below for description.
Other Status	Status the other affected records should be set to.

The calling program must trap the error and send the above details to the Error Handler. The Error Handler handles the error and returns the altered object to the calling program.

**Message and Token List Records**

The Message and Token List, and the Other Message and Token List are temporary arrays that the calling program maintains. They hold message-and-token records. The Error Handler must log these messages into the API Message List. The calling program may want some of these message record tokens to be translated (such tokens are typically messages themselves).

For expected errors and warnings, the translated message text is retrieved using the message name. Then, after any requested token translation is performed, the tokens are substituted into the translated message text, and the message is logged. For unexpected errors, the calling program itself sends a message text, so no message retrieval is needed. The message is logged after token translation and substitution is performed.

**Table 6–20    *Field Descriptions***

Field	Description
Message Name	Name of the message used to retrieve the translated message text. NULL for unexpected errors.
Message Text	Message text for unexpected errors.
Token Name	Name of the token in the message.
Token Value	Value of the token in the message.
Translate	Should this token value be translated ?

Since each message may have more than one token, the Message and Token List has as many occurrences of the same message as there are tokens in it. The same applies to the Other Message and Token List, except that this list needs to carry only one message which is assigned to all other affected records. Since this lone message may have more than one token, there may be more than one occurrence of the message in the list.

Please note that the API Message List is public, but the Message and Token Lists are not.

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# Oracle Inventory Open Interfaces and APIs

This chapter contains information about the following Oracle Inventory open interfaces and application program interfaces:

- [Open Transaction Interface](#) on page 7-2
- [Open Replenishment Interface](#) on page 7-28
- [Open Item Interface](#) on page 7-38
- [Customer Item and Customer Item Cross-Reference Open Interfaces](#) on page 7-68
- [Cycle Count Entries Interface](#) on page 7-83
- [Cycle Count Application Program Interface](#) on page 7-89
- [Kanban Application Program Interface](#) on page 7-92
- [Lot Application Program Interface](#) on page 7-95
- [Material Reservation Application Program Interface](#) on page 7-97
- [Reservations Manager Application Program Interface](#) on page 7-110
- [Sales Order Application Program Interface](#) on page 7-113
- [Move Order Application Program Interface](#) on page 7-118
- [Pick Release Application Program Interface](#) on page 7-134
- [Pick Confirm Application Program Interface](#) on page 7-138
- [Quantity Tree Program Interface](#) on page 142
- [Transaction Processing Program Interface](#) on page 7-154

## Open Transaction Interface

Oracle Inventory provides an open interface for you to load transactions from external applications and feeder systems. These transactions could include sales order shipment transactions from an order entry system other than Oracle Order Entry, or they could be simple material issues, receipts, or transfers loaded from data collection devices. The following transaction types are supported by this interface:

- Inventory issues and receipts (including user-defined transaction types)
- Subinventory transfers
- Direct inter-organization transfers
- Intransit shipments
- WIP component issues and returns
- WIP assembly completions and returns
- Sales order shipments
- Inventory average cost updates

This interface is also used as an integration point with Oracle Order Entry for shipment transactions. Oracle Order Management's Inventory Interface program populates the interface tables with transactions submitted through the Confirm Shipments window.

You must write the load program that inserts a single row for each transaction into the `MTL_TRANSACTIONS_INTERFACE` table. For material movement of items that are under lot or serial control, you must also insert rows into `MTL_TRANSACTION_LOTS_INTERFACE` and `MTL_SERIAL_NUMBERS_INTERFACE` respectively. If you insert WIP assembly/completion transactions that complete or return job assemblies, you must also insert rows into the `CST_COMP_SNAP_INTERFACE` table if the organization referenced uses average costing. The system uses this information to calculate completion cost.

There are two modes you can use to process your transactions through the interface. In the first processing mode, you populate the interface table only. Then the Transaction Manager polls the interface table asynchronously looking for transactions to process, groups the transaction rows, and launches a Transaction Worker to process each group. In the second processing mode, you insert the rows in the interface table and call a Transaction Worker directly, passing the group identifier of the interfaced transactions as a parameter so that the worker can recognize which subset of transactions to process.

The Transaction Worker calls the Transaction Validator which validates the row, updates the error code and explanation if a validation or processing error occurs, and derives or defaults any additional columns.

Next, the Transaction Processor records the transaction details in the transaction history table along with relevant current cost information. All material movement transactions update inventory perpetual balances for the issue, receipt, or transfer locations.

Once the transaction has been successfully processed, the corresponding row is deleted from the interface table. Finally, the transaction is costed by the transaction cost processor which runs periodically, picking up all transactions from the history table that have not yet been marked as costed.

### **Additional Transaction Processing Flow Steps**

The following transactions require additional processing by the transaction processor or other modules.

**Inventory Issue Transactions** Inventory Issue transactions consume any existing reservations where the Transaction Source Type and Source match. For example, if you reserved 10 boxes of paper for the Finance department, and then you issue 4 boxes to that department, the reservation will automatically be partially consumed, with a remaining balance of 6 reserved boxes.

**Average Cost Transactions** In average cost organizations, receipts and average cost update transactions modify the item's average cost using the current average cost, on-hand quantity, and the transaction value and quantity (if appropriate) to calculate the new average.

**WIP Issue Transactions** WIP issue transactions also update quantity issued for all material requirements on the job or repetitive schedule and charge the costs of issued components to the job/schedule.

**WIP Completion Transactions** WIP completion transactions update the job or repetitive schedule completed quantities, launch appropriate backflush transactions, and relieve costs of completed assembly from the job/schedule. If you are completing an ATO assembly, you must specify the sales order demand details so that Oracle Inventory can reserve the completed units to the appropriate sales order line/shipment.

If the WIP completion/return transaction completes or return job assemblies in an average costing organization, the rows in the CST\_COMP\_SNAP\_INTERFACE

table are transferred to the CST\_COMP\_SNAPSHOT table so that completion costs can be calculated.

**Sales Order Shipment Transactions** For sales order shipment transactions, the Transaction Processor attempts to consume any reservations that may have been created for an order by matching the Order, Line, Delivery, and Picking Line identifiers. If MRP is installed, the processor also creates an interface row in MRP\_RELIEF\_INTERFACE that the MRP Planning Manager uses to relieve the Master Demand Schedule.

### **Lot and Serial Transaction Detail Relationships**

If you are transacting items under lot and/or serial control, you need to link the lot/serial transaction detail rows to their parent row. You accomplish this by populating MTL\_TRANSACTIONS\_INTERFACE.

TRANSACTION\_INTERFACE\_ID with a unique value to be used as the primary key to link the child lot/serial rows. If the item is under lot control, you populate the foreign key MTL\_TRANSACTION\_LOTS\_INTERFACE.TRANSACTION\_INTERFACE\_ID with the same value for all child lot rows of the transaction and ensure that the total of all the lot quantities adds up to the transaction quantity on the parent row. Similarly, if the item is under serial control, you populate the foreign key MTL\_SERIAL\_NUMBERS\_INTERFACE.

TRANSACTION\_INTERFACE\_ID with the value in the parent row and ensure that the total number of serial numbers adds up to the transaction quantity of the parent row.

If the item is under both lot and serial control, the serial interface rows must belong to lot parent rows. This means that the relationship between MTL\_TRANSACTIONS\_INTERFACE and MTL\_TRANSACTION\_LOT\_NUMBERS remains the same as in the case where the item

is under only lot control, but you also need to populate each lot row with a unique value in MTL\_TRANSACTION\_LOT\_NUMBERS.SERIAL\_TRANSACTION\_TEMP\_ID. You then need to populate the foreign key MTL\_SERIAL\_NUMBERS\_INTERFACE.

TRANSACTION\_INTERFACE\_ID with the value in the parent lot row and ensure that the total number of serial numbers adds up to the lot quantity in the parent row.

### **Completion Cost Detail Relationships**

If you are completing or returning WIP assembly items for a job in an average costing organization, you need to link the completion cost detail rows to their

parent rows. You accomplish this by populating MTL\_TRANSACTIONS\_INTERFACE. TRANSACTION\_INTERFACE\_ID with a unique value to be used as the primary key to link the child completion cost rows. You must also populate the foreign key CST\_COMP\_SNAP\_INTERFACE.TRANSACTION\_INTERFACE\_ID with the same value for all child completion cost calculation rows.

## Setting Up the Transaction Interface

### Setting Up the Inventory Concurrent Manager

For optimal processing in the Inventory Transaction Interface, you need to set up your concurrent manager to best handle your transaction volumes while balancing your performance requirements and your system load restrictions. Oracle Inventory ships the Transaction Manager to be run in Inventory's own concurrent manager named Inventory Manager. It is defaulted to run in the Standard work shift with Target Processes = 1 and Sleep Time of 60 seconds. See: Transaction Managers, *Oracle Inventory User's Guide*.

With this configuration, the Material Transaction Manager and all Transaction Workers that are spawned must share the same processing queue. If you have the available resources, you can substantially reduce the time to process your interfaced transactions by increasing the target processes and reducing the concurrent manager sleep time using the Concurrent Managers window. This will allow Transaction Workers to run in parallel with the Transaction Manager and with each other. See: Defining Managers and their Work Shifts, *Oracle Applications System Administrator's Guide*.

### Starting the Inventory Transaction Manager

Once you have set up the Inventory concurrent manager, you can launch the Inventory Transaction Manager in the Interface Managers window. This launches the Material Transaction manager and lets you specify the polling interval and the number of transactions to be processed by each worker. After polling the MTL\_TRANSACTIONS\_INTERFACE table for eligible rows, the Transaction Manager creates the necessary number of Transaction Workers to process the load. See: Launching Transaction Managers, *Oracle Inventory User's Guide*.

### Submitting a Transaction Worker Directly as a Concurrent Process

The transaction worker can be directly called either from an Oracle Form or a c program. You can also launch a worker from the operating system using the

Application Object library CONCSUB utility. You need to specify the following parameters in the given order.

### **HEADER\_ID**

This is the `transaction_header_id` that you want the worker to process. If no header id is passed the worker will assign itself.

### **TABLE**

Pass 1 for the Interface table and 2 for the temp table.

### **SOURCE\_HEADER\_ID**

This column will be used to select rows to process if `HEADER_ID` is not specified.

### **SOURCE\_CODE**

This column is used to select rows to process if header id is not specified.

## **Setting Up Your Sales Order Flexfield**

Oracle Inventory uses a flexfield to hold the unique Sales Order name so that it does not need to join back to the feeder Order Entry system. This means that you must set up Inventory's Sales Order flexfield (MKTS) using the Key Flexfield Segments window with enough segments so that the combination is unique across all orders. See: Key Flexfield Segments, *Oracle Flexfields User's Guide*.

For example, Oracle Order Entry guarantees uniqueness within an installation, order type, and order number. Consequently, standard installation steps require that you set up three segments. If you can guarantee that one segment is sufficient (for example, Order Number), then that is all you need to enable in your flexfield definition.

When you enter shipment transactions into the interface, you should use the Sales Order segment values to identify the order. The Material Transaction Manager will validate against `MTL_SALES_ORDERS`, and if the code combination does not already exist will create a new one. All references to the order number internal to Inventory in reports and inquiries will be based on this relationship.

## **Inserting into the Transaction Interface Tables**

This section provides a chart for each interface table that lists all columns, followed by a section giving a brief description of a subset of columns requiring further

explanation. The chart identifies each column's datatype and whether it is Required, Derived, or Optional. Many of the columns are conditionally required. Reference numbers corresponding to notes immediately following the table help identify the mandatory conditions.

Several of the attributes in the interface tables can be populated using either the user-friendly values or the internal identifiers. This is particularly true of flexfields, such as Item, Locator, and Distribution Account. In these cases, you have the option to specify either the flexfield segment representation or the internal identifier (for example, INVENTORY\_ITEM\_ID) for the required value.

If you populate the user-friendly values, the Transaction Validator will automatically validate them and derive the internal identifiers. If the translation is already available to the external system, it may be advantageous to use the internal identifiers to improve performance (see discussion below on validation).

## MTL\_TRANSACTIONS\_INTERFACE

The following graphic describes the MTL\_TRANSACTIONS\_INTERFACE table:

**Table 7–1 MTL\_TRANSACTIONS\_INTERFACE Table**

Column Name	Type	Required	Derived	Optional
SOURCE_CODE	Varchar2(30)	x		
SOURCE_LINE_ID	Number	x		
SOURCE_HEADER_ID	Number	x		
PROCESS_FLAG	Number(1)	x		
TRANSACTION_MODE	Number	x		
LOCK_FLAG	Number(1)			x
TRANSACTION_HEADER_ID	Number		x	
ERROR_CODE	Varchar2(240)		x	
ERROR_EXPLANATION	Varchar2(240)		x	
VALIDATION_REQUIRED	Number			x
TRANSACTION_INTERFACE_ID	Number	x		
INVENTORY_ITEM_ID	Number	x		
ITEM_SEGMENT1 to ITEM_SEGMENT20	Varchar2(40)	x		

**Table 7–1 MTL\_TRANSACTIONS\_INTERFACE Table**

Column Name	Type	Required	Derived	Optional
REVISION	Varchar2(3)	1		
ORGANIZATION_ID	Number	x		
SUBINVENTORY_CODE	Varchar2(10)	2		
LOCATOR_ID	Number	3		
LOC_SEGMENT1toLOC_SEGMENT20	Varchar2(40)	3		
TRANSACTION_QUANTITY	Number	x		
TRANSACTION_UOM	Varchar2(3)	x		
PRIMARY_QUANTITY	Number		x	
TRANSACTION_DATE	Date	x		
ACCT_PERIOD_ID	Number		x	
TRANSACTION_SOURCE_ID	Number	x		
DSP_SEGMENT1toDSP_SEGMENT30	Varchar2(40)	x		
TRANSACTION_SOURCE_NAME	Varchar2(30)	x		
TRANSACTION_SOURCE_TYPE_ID	Number		x	
TRANSACTION_ACTION_ID	Number		x	
TRANSACTION_TYPE_ID	Number	x		
REASON_ID	Number			x
TRANSACTION_REFERENCE	Varchar2(240)			x
TRANSACTION_COST	Number	4		
DISTRIBUTION_ACCOUNT_ID	Number	5		
DST_SEGMENT1toDST_SEGMENT30	Varchar2(25)	5		
CURRENCY_CODE	Varchar(30)			x
CURRENCY_CONVERSION_TYPE	Varchar(30)			x
CURRENCY_CONVERSION_RATE	Number			x

**Table 7–1 MTL\_TRANSACTIONS\_INTERFACE Table**

Column Name	Type	Required	Derived	Optional
CURRENCY_CONVERSION_DATE	Date			x
USSGL_TRANSACTION_CODE	Varchar(30)			x
ENCUMBRANCE_ACCOUNT	Number			x
ENCUMBRANCE_AMOUNT	Number			x
VENDOR_LOT_NUMBER	Varchar2(30)			x
TRANSFER_SUBINVENTORY	Varchar2(10)	6		
TRANSFER_ORGANIZATION	Number	6		
TRANSFER_LOCATOR	Number	3,6		
XFER_LOC_SEGMENT1toXFER_LOC_SE	Varchar2(40)	3,6		
SHIPMENT_NUMBER	Varchar2(30)	7		
TRANSPORTATION_COST	Number			x
TRANSPORTATION_ACCOUNT	Number			x
TRANSFER_COST	Number			x
FREIGHT_CODE	Varchar2(25)			x
CONTAINERS	Number			x
WAYBILL_AIRBILL	Varchar2(20)			x
EXPECTED_ARRIVAL_DATE	Date			x
NEW_AVERAGE_COST	Number	8		
VALUE_CHANGE	Number	8		
PERCENTAGE_CHANGE	Number	8		
DEMAND_ID	Number			9
PICKING_LINE_ID	Number			
DEMAND_SOURCE_HEADER_ID	Number			10
DEMAND_SOURCE_LINE	Varchar2(30)			10
DEMAND_SOURCE_DELIVERY	Varchar(30)			10
WIP_ENTITY_TYPE	Number	11,12		

**Table 7–1 MTL\_TRANSACTIONS\_INTERFACE Table**

Column Name	Type	Required	Derived	Optional
SCHEDULE_ID	Number		11,12	
OPERATION_SEQ_NUM	Number	11	12	
REPETITIVE_LINE_ID	Number	13		
NEGATIVE_REQ_FLAG	Number			x
TRX_SOURCE_LINE_ID	Number			9
TRX_SOURCE_DELIVERY_ID	Number			9
CUSTOMER_SHIP_ID	Number			x
SHIPPABLE_FLAG	Varchar2(1)		x	
LAST_UPDATE_DATE	Date	x		
LAST_UPDATED_BY	Number	x		
CREATION_DATE	Date	x		
CREATED_BY	Number	x		
LAST_UPDATE_LOGIN	Number			x
REQUEST_ID	Number			x
PROGRAM_APPLICATION_ID	Number			x
PROGRAM_ID	Number			x
COST_GROUP_ID	Number	8		
PROGRAM_UPDATE_DATE	Date			x
ATTRIBUTE_CATEGORY	Varchar2(30)			x
ATTRIBUTE1 to ATTRIBUTE15	Varchar2(150)			x
BOM_REVISION	Varchar2(1)			15
BOM_REVISION_DATE	Date			15
ROUTING_REVISION	Varchar2(1)			15
ROUTING_REVISION_DATE	Date			15
ALTERNATE_BOM_DESIGNATOR	Varchar2(1)			14
ALTERNATE_ROUTING_DESIGNATOR	Varchar2(1)			14

**Table 7–1 MTL\_TRANSACTIONS\_INTERFACE Table**

Column Name	Type	Required	Derived	Optional
ACCOUNTING_CLASS	Varchar2(1)			15
DEMAND_CLASS	Varchar2(1)			14
PARENT_ID	Number			14
SUBSTITUTION_ID	Number			14
SUBSTITUTION_ITEM_ID	Number			14
SCHEDULE_GROUP	Number			14
BUILD_SCHEDULE	Number			14
REFERENCE_CODE	Number			14
FLOW_SCHEDULE	Varchar2(1)	16		
SCHEDULED_FLAG		17		

## Notes:

- 1 If under revision control
- 2 All transaction types except average cost update
- 3 If under locator control
- 4 Inventory Issues and Receipts in an average cost organization
- 5 Inventory Issues/Receipts of an asset item to/from an asset subinventory and sales order shipment transactions
- 6 Inventory direct transfers (inter- or intra-organization)
- 7 Intransit shipments
- 8 Average cost update transactions only
- 9 Sales order shipment transactions
- 10 To reserve/unreserve ATO items to a sales order upon completion/return from a WIP job
- 11 WIP component issues/returns
- 12 WIP assembly completions/returns
- 13 Repetitive schedules

14 For work order-less completions

15 For work order-less completions, derived if null

16 Must be set to Y

17 Must be set to 2

### **SOURCE\_CODE**

This column is required for Sales Order transactions to identify the source Order Entry system. For other transaction types, you can enter any useful value for tracking purposes. The values entered are transferred directly to the transaction history table.

### **SOURCE\_HEADER\_ID**

You can use this column as an external system reference. The values entered are transferred directly to the transaction history table.

### **SOURCE\_LINE\_ID**

You can use this column as an external system reference. The values entered are transferred directly to the transaction history table.

### **PROCESS\_FLAG**

This column controls whether rows in the interface table are processed. You should insert a row that you intend to be processed with a value of 1 (Yes). The valid values are:

1 - Yes

2 - No

3 - Error

### **TRANSACTION\_MODE**

This column determines how the interfaced transactions will be processed. The valid options are:

2 - Concurrent

3 - Background

Interface transactions marked for Background processing will be picked up by the transaction manager polling process and assigned to a transaction worker. These transactions will not be processed unless the transaction manager is running.

You use Concurrent transaction mode if you want to launch a dedicated transaction worker to explicitly process a set of transactions. The Transaction Manager does not process transactions marked for concurrent processing.

### **LOCK\_FLAG**

The Transaction Manager uses this column to manage the worker assignment process. You should need to update this column only if a transaction has failed due to an exceptional failure such as the system going down in the middle of transaction worker processing. In this case, you will need to reset the LOCK\_FLAG to 2 so your failed transactions can be reprocessed.

### **TRANSACTION\_HEADER\_ID**

This column groups transactions for assignment to specific transaction workers. Depending on the value of TRANSACTION\_MODE, this column is either required (concurrent mode) or derived by the transaction manager (background mode). This column maps to MTL\_MATERIAL\_TRANSACTIONS.TRANSACTION\_SET\_ID in the transaction history tables.

### **ERROR\_CODE DERIVED**

If a transaction error occurs, the Transaction Validator populates this column with short descriptive text indicating the type of error that has occurred.

### **ERROR\_EXPLANATION DERIVED**

If a transaction error occurs, the Transaction Validator populates this column with an explanation of the error. If an explanation is not provided, check the log file for details using the View Requests window.

### **VALIDATION\_REQUIRED**

You can use this flag to control whether the Transaction Validator skips certain validation steps for certain transaction types. The options are:

1 - Full validation

2 - Validate only columns required for derivation

If you leave this field null, Full validation is used.

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**Note:** See: [Validation](#) on page 7-26.

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### **TRANSACTION\_INTERFACE\_ID**

This column is required for transactions of items under lot or serial control. The value in the column in this table is used to identify the child rows in the lot or serial interface tables MTL\_TRANSACTION\_LOTS\_INTERFACE and MTL\_SERIAL\_NUMBERS\_INTERFACE.

If the transacted item is under lot control, this column maps to MTL\_TRANSACTION\_LOTS\_INTERFACE.TRANSACTION\_INTERFACE\_ID. If the transacted item is under serial control and not lot control, this column maps to MTL\_SERIAL\_NUMBERS\_INTERFACE.TRANSACTION\_INTERFACE\_ID.

### **TRANSACTION\_QUANTITY**

Enter the transaction quantity in the transaction unit of measure. The quantity should be positive for receipts into inventory, and negative for both issues out of inventory and transfers. Enter a quantity of 0 for Average Cost Update transactions.

### **TRANSACTION\_UOM**

You can enter the TRANSACTION\_QUANTITY in any unit of measure that has conversion rates defined to the item's primary unit of measure. Use this column to specify the transacted unit of measure even if it is the same as the primary unit of measure.

### **PRIMARY\_QUANTITY**

This column is the transaction quantity in the item's primary unit of measure calculated using TRANSACTION\_QUANTITY and TRANSACTION\_UOM.

### **ACCT\_PERIOD\_ID**

This column is derived using the entered TRANSACTION\_DATE to determine within which period the transaction occurred. The transaction date must be on or before the system date at time of transaction processing, and the transaction date must lie within the boundaries of an open period (in ORG\_ACCT\_PERIODS).

**TRANSACTION\_TYPE\_ID**

Enter the type of transaction you are executing. The transaction types and internal IDs supported by the interface are:

**Table 7–2 Transaction Types and Internal IDs**

Transaction Type	Internal ID
Account Issue	01
Account Alias Issue	31
Miscellaneous Issue	32
Issue Components to WIP	35
Return Assemblies to WIP	17
Account Receipt	40
Account Alias Receipt	41
Miscellaneous Receipt	42
Return Components from WIP	43
WIP Assembly Completion	44
Subinventory Transfer	02
Direct Inter-Organization Transfer	03
Intransit Shipment	21
Average Cost Update	80
Sales Order Shipment	33

You can identify the TRANSACTION\_TYPE\_ID for user-defined transactions by selecting from MTL\_TRANSACTION\_TYPES where TRANSACTION\_TYPE\_NAME is the transaction type you wish to use.

**TRANSACTION\_SOURCE\_TYPE\_ID**

This column is derived from MTL\_TRANSACTION\_TYPES using the value you enter in TRANSACTION\_TYPE\_ID.

**TRANSACTION\_SOURCE\_NAME**

This column is required for user-defined transaction source types. Enter the value of the source name, such as an order number, to be displayed on all transaction reports and inquiries.

**TRANSACTION\_SOURCE\_ID**

TRANSACTION\_SOURCE\_ID or the corresponding flexfield segment columns (DSP\_SEGMENT1 to DSP\_SEGMENT30) are required for all transaction source types other than those that are user-defined. You should enter the foreign key ID that points to the context table identified by the transaction source type.

**Table 7–3    TRANSACTION\_SOURCE\_ID, Foreign Key References**

Source Type	Foreign Key Reference
Account	GL_CODE_COMBINATIONS.CODE_COMBINATION_ID
Account Alias	MTL_GENERIC_DISPOSITIONS.DISPOSITION_ID
Job or Schedule	WIP_ENTITIES.WIP_ENTITY_ID
Sales Order	MTL_SALES_ORDERS.SALES_ORDER_ID

**DSP\_SEGMENT1 TO DSP\_SEGMENT30**

You can use these flexfield segment columns instead of TRANSACTION\_SOURCE\_ID to enter the more user-friendly information. For example, if the interfaced transaction is for an Issue to Account transaction type, you would enter the GL Code Combination segment values in these columns instead of putting the Code GL Code Combination ID in TRANSACTION\_SOURCE\_ID.

**TRANSACTION\_ACTION\_ID**

This column is derived from MTL\_TRANSACTION\_TYPES using the value you enter in TRANSACTION\_TYPE\_ID.

**OPERATION\_SEQ\_NUM**

For assembly completions and returns, this value is derived. For WIP component issues and returns with routings, this value is required. For WIP routings, enter 1.

**WIP\_ENTITY\_TYPE**

For WIP component issues and returns, and WIP assembly completions and returns, enter one of the following values:

1. Standard discrete jobs
2. Repetitive schedules
3. Non-standard discrete jobs
4. Work Order-less Schedule

**REASON\_ID**

Use this column to specify a transaction reason from the predefined list of reasons in MTL\_TRANSACTION\_REASONS.

**TRANSACTION\_REFERENCE**

Use this column to enter any transaction reference information to be displayed in transaction inquiries and reports.

**TRANSACTION\_COST**

You can use this column to specify a transaction unit cost for average cost Inventory issues and receipts. If you leave it blank, the current system unit cost is used.

**DISTRIBUTION\_ACCOUNT\_ID**

Use this column (or the flexfield segment columns) to specify the account to charge for the cost of the Inventory transaction. It is required for user-defined transactions, and derived by the Transaction Worker based on the transaction source type and source for Account Issue/Receipt and Account Alias Issue/Receipt transactions.

**DST\_SEGMENT1 TO DST\_SEGMENT30**

You can use these flexfield segment columns instead of DISTRIBUTION\_ACCOUNT\_ID to enter the more user-friendly information. For example, if the interfaced transaction is for an Issue to Account transaction type, you would enter the GL Code Combination segment values in these columns instead of putting the Code GL Code Combination ID in DISTRIBUTION\_ACCOUNT\_ID.

**CURRENCY\_CODE**

If your transaction cost is in a different currency than the functional currency of your set of books, enter the currency code.

**CURRENCY\_CONVERSION\_TYPE**

If you enter a currency code other than the functional currency for your set of books, enter the conversion type.

**CURRENCY\_CONVERSION\_RATE**

If you enter a currency code other than the functional currency for your set of books, enter the conversion rate

**CURRENCY\_CONVERSION\_DATE**

Enter the currency conversion date for which the conversion rate is valid for the transaction.

**VENDOR\_LOT\_NUMBER**

Use this column as transaction reference information and/or to cross-reference supplier lot numbers against internal lot numbers.

**TRANSFER\_ORGANIZATION**

This column is required for all inter-organization transfers. Enter the destination organization's internal ID.

**TRANSFER\_SUBINVENTORY**

This column is required for subinventory transfers within the same organization and direct transfers from one organization to another. For these scenarios, enter the destination subinventory.

**TRANSFER\_LOCATOR**

This column is required for subinventory transfers within the same organization and direct transfers from one organization to another when the item being transferred is under locator control in the destination subinventory. For these scenarios, enter the destination locator internal ID.

**XFER\_LOC\_SEGMENT1-XFER\_LOC\_SEGMENT20**

When a transfer locator is required, you can optionally use these columns instead of TRANSFER\_LOCATOR when you want to use the user-friendly flexfield representation of the transfer locator instead of the internal ID.

**SHIPMENT\_NUMBER**

This column is required for intransit shipments. It groups shipment lines in RCV\_SHIPMENT\_LINES under a parent shipment number in RCV\_SHIPMENT\_HEADERS.

The Transaction Worker will not process intransit transactions if a shipment header already exists in RCV\_SHIPMENT\_HEADERS that matches SHIPMENT\_NUMBER. If you want to group shipment lines under the same header, you must ensure they are processed by the same worker. You can accomplish this using the concurrent processing mode, using the TRANSACTION\_HEADER\_ID to group your interface transactions, and directly calling a Transaction Worker to process that group.

**NEW\_AVERAGE\_COST**

Average cost update transactions require that either NEW\_AVERAGE\_COST, VALUE\_CHANGE, or PERCENTAGE\_CHANGE be populated, depending on the type of cost update being performed.

**VALUE\_CHANGE**

See NEW\_AVERAGE\_COST.

**PERCENTAGE\_CHANGE**

See NEW\_AVERAGE\_COST.

**DEMAND\_ID**

Use this column for sales order shipment transactions to identify the exact reservation row to be relieved in MTL\_DEMAND. If you do not have the DEMAND\_ID information, leave this column blank, and the Transaction Processor will try to match reservations to relieve by checking MTL\_DEMAND to see if there are any reservations where there is a match on:

**Table 7–4    Table Mapping: MTL\_TRANSACTIONS\_INTERFACE to MTL\_DEMAND**

MTL_TRANSACTIONS_INTERFACE	MTL_DEMAND
ORGANIZATION_ID	ORGANIZATION_ID
INVENTORY_ITEM_ID	INVENTORY_ITEM_ID
TRANSACTION_SOURCE_TYPE_ID	DEMAND_SOURCE_TYPE_ID
TRANSACTION_SOURCE_ID	DEMAND_SOURCE_HEADER_ID
TRX_SOURCE_LINE_ID	DEMAND_SOURCE_LINE
TRANSACTION_SOURCE_NAME	DEMAND_SOURCE_NAME
TRX_DELIVERY_ID	DEMAND_SOURCE_DELIVERY

**TRX\_SOURCE\_LINE\_ID**

Use this column to specify details of reservations to be relieved with an issue transaction. See DEMAND\_ID.

**TRX\_SOURCE\_DELIVERY\_ID**

Use this column to specify details of reservations to be relieved with an issue transaction. See DEMAND\_ID.

**DEMAND\_SOURCE\_HEADER\_ID**

Use this column for completion (and returns) of ATO items from a Final Assembly Order if the quantity you are completing is to be reserved to an existing sales order. Enter values in DEMAND\_SOURCE\_HEADER\_ID, DEMAND\_SOURCE\_LINE\_ID, and DEMAND\_SOURCE\_DELIVERY\_ID that match the appropriate demand rows in MTL\_DEMAND. The transaction processor will automatically create a reservation for the completed quantity to that sales order.

**DEMAND\_SOURCE\_LINE**

See DEMAND\_SOURCE\_HEADER\_ID.

**DEMAND\_SOURCE\_DELIVERY**

See DEMAND\_SOURCE\_HEADER\_ID.

**BOM\_REVISION**

The bill revision and date determine which version of the bill is used to explode work order-less component requirements.

**ROUTING\_REVISION**

The routing revision and date determines which version of the routing is used to create work order-less component requirements.

**ALTERNATE\_BOM\_DESIGNATOR**

An alternate bill of material is optional if alternates have been defined for the assembly you are building.

**ALTERNATE\_ROUTING\_DESIGNATOR**

An alternate routing is optional if alternates have been defined for the assembly you are building.

**PARENT\_ID**

This column identifies the work order-less completion interface ID.

**SUBSTITUTION\_ID**

Use this column to specify the substitution type

3 - *Add*: Add a component at the operation.

2 - *Delete*: Delete a component from the operation.

1 - *Change*: Substitute one component for another at the operation.

4 - *Lot/Serial*: Specify lot/serial number information for items.

**SUBSTITUTION\_ITEM\_ID**

This column identifies the inventory item number of the substitute item.

**SCHEDULE\_GROUP**

This column can specify any active schedule group.

**BUILD\_SEQUENCE**

For future use.

REFERENCE\_CODE

For future use.

MTL\_TRANSACTION\_LOTS\_INTERFACE

The following graphic describes the MTL\_TRANSACTION\_LOTS\_INTERFACE table:

Table 7–5 Transaction Lot Numbers Interface

Column Name	Type	Required	Derived	Optional
TRANSACTION_INTERFACE_ID	Number	3		
SOURCE_CODE	Varchar2(30)			x
SOURCE_LINE_ID	Number			x
LOT_NUMBER	Varchar2(30)	x		
LOT_EXPIRATION_DATE	Date	1		
TRANSACTION_QUANTITY	Number	x		
PRIMARY_QUANTITY	Number		x	
SERIAL_TRANSACTION_TEMP_ID	Number	2		
ERROR_CODE	Varchar2(30)		x	
LAST_UPDATE_DATE	Date	x		
LAST_UPDATED_BY	Number	x		
CREATION_DATE	Date	x		
CREATED_BY	Number	x		
LAST_UPDATE_LOGIN	Number			x
REQUEST_ID	Number			x
PROGRAM_APPLICATION_ID	Number			x
PROGRAM_ID	Number			x
PROGRAM_UPDATE_DATE	Date			x

Notes:

1 If item is under lot expiration control

2 If item is under both lot and serial control

### **LOT\_NUMBER**

Enter the lot number that is being transacted.

### **TRANSACTION\_INTERFACE\_ID**

Use this column to associate lot transaction detail rows with the parent transaction row in MTL\_TRANSACTIONS\_INTERFACE.

### **SERIAL\_TRANSACTION\_TEMP\_ID**

This column is required only for items under both lot and serial control. It is used to identify the child rows in MTL\_SERIAL\_NUMBERS\_INTERFACE.

## **MTL\_SERIAL\_NUMBERS\_INTERFACE**

The following graphic describes the MTL\_SERIAL\_NUMBERS\_INTERFACE Interface table:

**Table 7–6 Transaction Serial Numbers Interface**

Column Name	Type	Required	Derived	Optional
TRANSACTION_INTERFACE_ID	Number	x		
SOURCE_CODE	Varchar2(30)			x
FM_SERIAL_NUMBER	Varchar2(30)	x		
TO_SERIAL_NUMBER	Varchar2(30)			x
SOURCE_LINE_ID	Number			x
VENDOR_SERIAL_NUMBER	Varchar2(30)			x
ERROR_CODE	Varchar2(30)		x	
LAST_UPDATE_DATE	Date	x		
LAST_UPDATED_BY	Number	x		
CREATION_DATE	Date	x		
CREATED_BY	Number	x		
LAST_UPDATE_LOGIN	Number			x
REQUEST_ID	Number			x
PROGRAM_APPLICATION_ID	Number			x
PROGRAM_ID	Number			x
PROGRAM_UPDATE_DATE	Date			x

**FM\_SERIAL\_NUMBER**

Enter the starting serial number in the range. If you enter only the ‘from’ serial number, the Transaction Processor assumes that only one serial number is being transacted.

**TO\_SERIAL\_NUMBER**

You can enter a ‘to’ serial number to specify a range. The transaction processor will attempt to transact all serial numbers within the range of the right-most numeric digits.

**TRANSACTION\_INTERFACE\_ID**

Use this column to associate serial number transaction detail rows with their parent rows. If the item is under both lot and serial control, this should point to MTL\_TRANSACTION\_LOTS\_INTERFACE SERIAL\_TRANSACTION\_TEMP\_ID. Otherwise, it should point to MTL\_TRANSACTIONS\_INTERFACE. TRANSACTION\_INTERFACE\_ID

**VENDOR\_SERIAL\_NUMBER**

You can use this column to enter vendor cross-reference information. The vendor serial number is stored in the serial number table MTL\_SERIAL\_NUMBERS.

**CST\_COMP\_SNAP\_INTERFACE**

The following graphic describes the CST\_COMP\_SNAP\_INTERFACE Interface table:

|

**Table 7–7 Completion Cost Calculation Interface**

Column Name	Type	Required	Derived	Optional
TRANSACTION_INTERFACE_ID	Number	x		
WIP_ENTITY_ID	Number	x		
OPERATION_SEQ_NUMBER	Number	x		
LAST_UPDATE_DATE	Date	x		
LAST_UPDATED_BY	Number	x		
CREATION_DATE	Date	x		
CREATED_BY	Number	x		
LAST_UPDATE_LOGIN	Number			x
NEW_OPERATION_FLAG			x	
PRIMARY_QUANTITY			x	
QUANTITY_COMPLETED	Number	x		
PRIOR_COMPLETION_QUANTITY			x	
PRIOR_SCRAP_QUANTITY			x	
REQUEST_ID	Number			x
PROGRAM_APPLICATION_ID	Number			x
PROGRAM_ID	Number			x
PROGRAM_UPDATE_DATE	Date			x

**WIP\_ENTITY\_ID**

The job number.

**OPERATION\_SEQ\_NUMBER**

You can use this column to enter operation sequence information. The operation sequence number is stored in the WIP operations table WIP\_OPERATIONS.

**Validation**

Oracle Inventory lets you choose the level of validation you want performed against interfaced transaction rows. Using the `VALIDATION_REQUIRED` flag, you can specify whether you want full validation or only partial validation of columns

required for derivation of other required columns. For example, ORGANIZATION\_ID is always validated because there are dependent attributes such as LOCATOR\_ID that require a valid organization for derivation. REVISION, on the other hand, has no dependencies, and therefore is not validated if the VALIDATION\_REQUIRED flag is not set.

The validation and derivation processes will provide an error code and description for all transaction rows that fail explicit validation checks. If an error occurs during reservation relief for a specific transaction, all rows in the transaction processing group will be errored out with a common error message. This should happen, however, only if there is an Oracle error or table deadlock during processing.

If an error occurs in the transaction processor, the entire transaction processing group is marked with the error code, while the transaction row(s) that actually failed will have an error explanation.

## Resolving Failed Transaction Interface Rows

### Viewing Failed Transactions

You can view both pending and failed Inventory transactions in the MTL\_TRANSACTION\_INTERFACE table using the Pending Transactions window. If your transactions errored out and you would like to resubmit them, you can do so using this window. If you set 'Resubmit=Yes', the interface processing flags will automatically be reset so the Transaction Manager will pick them up. See: Viewing Pending Transactions, *Oracle Inventory User's Guide*.

### Fixing Failed Transactions Options

Errors in the interface may be caused by problems unrelated to your interfaced transactions. For example, there may be validation that failed because an entity that was being checked had the wrong status (for example, disabled), or the failure could even be the result of a system error, such as running out of space. In these cases, it may be acceptable to simply resolve the conflict and resubmit the same interfaced rows by either using the Pending Transactions window to resubmit your transactions, or by directly updating the PROCESS\_FLAG and LOCK\_FLAG values via SQL\*PLUS.

If, however, you need to make changes to the transaction data itself, you need to either delete the failed transactions and resubmit them from the feeder system, or update the transaction in the interface table using SQL\*PLUS. When you resubmit updated transactions for processing, all validation is performed again.

## Open Replenishment Interface

Oracle Inventory provides an open interface for you to easily load replenishment requests from external systems such as a bar-code application. Such requests may be in the form of stock-take counts or requisition requests for subinventories in which you do not track quantities.

You may also use the Replenishment Interface to process requisition requests generated by external applications for tracked subinventories.

### Functional Overview

You must write the load program that inserts a single row for each replenishment count/request into the MTL\_REPLENISH\_HEADERS\_INT table. A record for each item included in the count header must be inserted into the MTL\_REPLENISH\_LINES\_INT table.

There are two modes you can use to send your replenishment counts through the interface. These are Concurrent and Background modes.

Under Concurrent mode processing, you populate the interface tables for a specific replenishment count and then call the replenishment validator from the Oracle Inventory menu (Counting/Replenishment Counts/Process Interface). The validator processes the replenishment count specified as a parameter at process submission, validating rows in both the MTL\_REPLENISH\_HEADER\_INT and MTL\_REPLENISH\_LINES\_INT tables. The validator derives any additional columns and updates the error flag if an error is detected.

For Background mode processing, you populate the interface tables and then let the Replenishment Validator asynchronously poll the tables for replenishment counts to process.

If the replenishment count, both header and lines, passes all required validation, the records are inserted into the MTL\_REPLENISH\_HEADERS and MTL\_REPLENISH\_LINES tables and are deleted from the interface tables. If an error is detected during the validation process, the header and corresponding replenishment lines will be left in the interface table.

Once the lines are in the internal replenishment tables, you use the Replenishment Processor as described in the *Oracle Inventory User's Guide* to process the counts and create requisitions. See: Entering and Processing Replenishment Counts, *Oracle Inventory User's Guide*.

## Setting Up the Replenishment Interface

Access the Replenishment Interface through the Oracle Inventory menu (Counting/Replenishment Counts/Process Interface). Select the type of request by choosing Single Request. In the Request Name field, select Validate Replenishment Interface. In the Parameters window, select Concurrent or Background as the Processing Mode and select the Count Name for processing. Select Submit Request to begin processing. You can also use the Schedule button to specify resubmission parameters that will control how frequently the Replenishment Validator polls for records in the interface tables.

## Inserting into the Replenishment Interface Tables

This section provides a chart for each interface table that lists all columns, followed by a section giving a brief description of a subset of columns requiring further explanation. The chart identifies each column's datatype and whether it is Required, Derived, or Optional.

Several of the attributes in the interface tables can be populated using either the user-friendly values or the internal identifiers. For example, you have the choice of specifying either the flexfield segment representation or the internal identifier (e.g. INVENTORY\_ITEM\_ID) for the required value. When specifying the organization, you may either use the organization code or the internal identifier (e.g. ORGANIZATION\_ID).

If you populate the user friendly values, the Replenishment Validator will validate them and will derive the internal identifiers. If the translation is available to the external system, it may be advantageous to use the internal identifiers to improve performance.

## Replenishment Headers Interface Tables

The following graphic describes the MTL\_REPLENISH\_HEADERS\_INT table:

**Table 7–8    Oracle Inventory Replenishment Headers Interface**

Column Name	Type	Required	Derived	Optional
REPLENISHMENT_HEADER_ID	Number	3		
REPLENISHMENT_COUNT_NAME	Varchar2(10)	3		
COUNT_DATE	Date	3		
LAST_UPDATE_DATE	Date	3		

**Table 7–8    Oracle Inventory Replenishment Headers Interface**

Column Name	Type	Required	Derived	Optional
CREATION_DATE	Date	3		
CREATED_BY	Number	3		
LAST_UPDATE_LOGIN	Number			3
LAST_UPDATED_BY	Number	3		
ORGANIZATION_ID	Number	3		
ORGANIZATION_CODE	Varchar2(3)	3		
SUBINVENTORY_CODE	Varchar2(10)	3		
SUPPLY_CUTOFF_DATE	Date		x	3
PROCESS_STATUS	Number	3		
PROCESS_MODE	Number	3		
ERROR_FLAG	Number		3	
REQUEST_ID	Number		3	
PROGRAM_APPLICATION_ID	Number		3	
PROGRAM_ID	Number		3	
PROGRAM_UPDATE_DATE	Date		3	
DELIVERY_LOCATION_ID	Number			3
DELIVERY_LOCATION_CODE	Varchar2(20)			3

**ERROR\_FLAG**

If a validation error occurs, the replenishment validator populates this column with an error code. The error flag for a replenishment header will be set if either the validation of the header fails or if the validation of any of the lines of the header fails.

**ORGANIZATION\_ID**

This column identifies the internal identifier of the organization from which the replenishment count originated. You must enter either the internal organization identifier or the user friendly organization code.

**ORGANIZATION\_CODE**

This column is the user friendly code for the organization that is the source of the replenishment count. It may be used instead of the internal identifier, in which case the internal identifier will be derived.

**PROCESS\_MODE**

This column determines how the interfaced replenishment count will be processed. The valid options are:

2 - Concurrent

3 - Background

Interface replenishment counts marked for Background processing will be picked up by the replenishment validator polling process. The validator will pick up and process all replenishment counts with a process mode of Background each time it runs.

You use Concurrent processing mode if you want to launch a dedicated replenishment validator process to explicitly process a single replenishment count, identified as a parameter to the program, from the interface table.

**PROCESS\_STATUS**

This column is used to identify the current processing status of the replenishment count. You should insert rows that you intend to be processed with a value of 2 (Pending). The valid values for this column are:

1. Hold
2. Pending
3. Processing
4. Error
5. Completed

If you want to insert records into the interface tables but temporarily prevent them from being processed, you can use this column by setting the value to 1 (Hold).

After the validator has run, it will set the value of this column to 5 (Completed). This status is used whenever the process completes, whether validation errors were detected or not.

A status of 4 (Error) indicates an internal error occurred. This error indicates an exceptional condition and should not occur.

**REPLENISH\_HEADER\_ID**

Enter a unique identifier for the replenishment count. This column is used to group the lines of a replenishment count with the header. You may use the sequence MTL\_REPLENISH\_HEADERS\_S to obtain a unique identifier.

**REPLENISH\_COUNT\_NAME**

Enter a unique name for the replenishment count.

**SUBINVENTORY\_CODE**

This column identifies the subinventory that is the source of the replenishment count.

**SUPPLY\_CUTOFF\_DATE**

Enter the date after which planned supply will not be considered in available quantity calculations. The value for this column will be derived from system date if it is left null.

**DELIVERY\_LOCATION\_ID**

Enter the internal identifier for the location to which the replenishment should be delivered. You may enter the delivery location identifier, the user friendly delivery location code or neither. If neither is specified, the default delivery location for the organization from which the replenishment originated is defaulted.

**DELIVERY\_LOCATION\_CODE**

Enter the user friendly code for the delivery location of the replenishment. You may enter this code instead of the internal identifier, in which case the internal identifier will be derived. You may specify neither the code or the identifier, in which case the default delivery location of the organization originating the replenishment will be used.

The following graphic describes the MTL\_REPLENISH\_LINES\_INT table:

**Table 7–9    Oracle Inventory Replenishment Lines Interface**

Column Name	Type	Required	Derived	Optional
REPLENISHMENT_HEADER_ID	Number	3		
REPLENISHMENT_LINE_ID	Number	3		
ORGANIZATION_ID	Number			3

**Table 7–9 Oracle Inventory Replenishment Lines Interface**

Column Name	Type	Required	Derived	Optional
LAST_UPDATE_DATE	Date	3		
CREATION_DATE	Date	3		
CREATED_BY	Number	3		
LAST_UPDATE_LOGIN	Number	3		
LAST_UPDATED_BY	Number	3		
INVENTORY_ITEM_ID	Number	3		
SEGMENT {1-20}	Varchar2(40)	3		
COUNT_TYPE_CODE	Number	3		
COUNT_QUANTITY	Number	3		
REFERENCE	Varchar2(240)			3
ERROR_FLAG	Number		3	
REQUEST_ID	Number		3	
PROGRAM_APPLICATION_ID	Number		3	
PROGRAM_ID	Number		3	
PROGRAM_UPDATE_DATE	Date		3	
COUNT_UNIT_OF_MEASURE	Varchar2(25)	3		
COUNT_UOM_CODE	Varchar2(3)	3		

**REPLENISHMENT\_HEADER\_ID**

Enter the unique identifier of the replenishment count. The identifier entered here is the foreign key reference which links the header table with the lines table to associate a group of lines with a single header.

**REPLENISHMENT\_LINE\_ID**

Enter the identifier for the line within the replenishment count. You may use the sequence MTL\_REPLENISH\_LINES\_S to obtain a unique identifier for the line.

**INVENTORY\_ITEM\_ID**

Enter the internal identifier for the item to be replenished.

### **SEGMENT{1-20}**

You may use these flexfield columns instead of INVENTORY\_ITEM\_ID to enter the item identifier in a more user-friendly form.

### **ORGANIZATION\_ID**

This column identifies the internal identifier of the organization from which the replenishment count originated. If you do not enter a value here, the organization identifier will be derived from the replenishment header.

### **COUNT\_TYPE\_CODE**

Enter the type of the replenishment count entry. The valid count types are:

1. On-hand Quantity
2. Order Quantity
3. Order Maximum

Use On-hand Quantity to identify counts that are the result of stock-takes of subinventories in which you do not track on-hand quantities.

Use Order Quantity when you want to specify the quantity to be ordered. This count type may be used with either tracked or non-tracked subinventories.

Use Order Maximum when you want to place an order for the min-max maximum quantity specified for item in the subinventory specified. This count type may be used with either tracked or non-tracked subinventories.

### **COUNT\_QUANTITY**

This column is used to specify the count quantity that corresponds to the count type entered for the line. When the count type is On-hand Quantity, the count quantity is the on-hand balance determined during the stock-take. When the count type is Order Quantity, the count quantity represents the quantity to be ordered. This column is not used when the count type is Order Maximum.

### **REFERENCE**

Use this column to enter any replenishment count reference information.

**COUNT\_UNIT\_OF\_MEASURE**

Enter the count unit of measure identifier. This column may be used to specify the full name for the unit of measure. This column is meaningful only when a value is entered in the COUNT\_QUANTITY columns.

**COUNT\_UOM\_CODE**

This column represents the unit of measure code used for the count. You may specify the code when populating this table or you may use the full name for the unit of measure, in which case this column will be derived. This column is meaningful only when a value is entered in the COUNT\_QUANTITY columns.

**ERROR\_FLAG**

This flag indicates the error status of the validation of a replenishment line. The replenishment validator populates this column with a line corresponding to the error detected during validation.

**Validation**

Oracle Inventory validates the following conditions:

- The value of REPLENISH\_HEADER\_ID must be unique among existing replenishment counts
- The value of REPLENISH\_COUNT\_NAME must be unique among existing count headers
- The value of LAST\_UPDATED\_BY must be a valid user name
- ORGANIZATION\_ID must be a valid identifier of an organization
- SUBINVENTORY\_CODE must refer to an existing subinventory
- DELIVERY\_LOCATION\_ID must be a valid identifier of a location associated with the organization generating the replenishment
- There must be at least one line per header
- The ORGANIZATION\_ID at the header level must be the same as that at the line level
- COUNT\_TYPE\_CODE must be either 1, 2, or 3 and must be consistent with whether the subinventory is tracked or non-tracked
- The value of COUNT\_QUANTITY must be consistent with COUNT\_TYPE\_CODE and must be greater than zero

- INVENTORY\_ITEM\_ID must refer to a transactable item in the organization specified
- The item must exist in the subinventory and must be min-max planned in that subinventory
- The COUNT\_UOM\_CODE must be valid and conversions to primary UOM must exist
- Each line must correspond to a header

## Viewing Failed Transactions

Replenishment counts that fail the validation process will remain in the MTL\_REPLENISH\_HEADERS\_INT and MTL\_REPLENISH\_LINES\_INT tables. You may use SQL\*PLUS to identify the headers that have failed by selecting those rows with a process\_status of 5 (Complete). The reason for the failure will be reflected in the ERROR\_FLAG column.

Possible values for the ERROR\_FLAG column in the MTL\_REPLENISH\_HEADERS\_INT table are:

- 1 - Non-unique replenishment header id
- 2 - Non-unique replenishment count name
- 3 - Invalid user name
- 4 - Invalid organization identifier
- 5 - Invalid subinventory
- 7 - Header with no corresponding replenishment lines
- 10 - Header failed because line failed
- 18 - Delivery location is not valid

Possible values for the ERROR\_FLAG column in the MTL\_REPLENISH\_LINES\_INT table are:

- 1 - No corresponding header id
- 3 - Invalid user name
- 8 - Invalid item identifier or item isn't transactable
- 9 - Invalid unit of measure or no conversion to primary unit of measure exists
- 11 - No item specified in either identifier or segments

- 12 - Invalid count type
- 13 - On-hand count type used for tracked subinventory
- 14 - Invalid count quantity
- 15 - Lines organization header does not match header organization identifier
- 17 - Item is not specified in the subinventory or is not min-max planned in the subinventory

## Fixing Failed Transactions

Frequently, errors in the interface are caused by problems external to the replenishment count itself. For example, there may be validation that failed because an entity that was being validated had the wrong status (i.e. disabled), or the failure could even be the result of a system error, such as running out of space. In these cases, the resolution is simple; once you have made the necessary changes, you simply need to resubmit the replenishment validator process.

If, however, you need to make changes to the data in the interface table, you need to either delete the failed records, correct them in the external feeder system and resubmit them, or update the interface record in the interface table using SQL\*PLUS. When you resubmit updated transactions for processing, all validation will be performed again.

## Open Item Interface

You can import items from any source into Oracle Inventory and Oracle Engineering using the Item Interface. With this interface, you can convert inventory items from another inventory system, migrate assembly and component items from a legacy manufacturing system, convert purchased items from a custom purchasing system, and import new items from a Product Data Management package. The Item Interface validates your data, insuring that your imported items contain the same item detail as items you enter manually in the Master Item window.

You can also import item category assignments. This can be done simultaneously with a process of importing items, or as a separate task of importing item category assignments only. For this purpose, the Inventory menu contains the Import submenu with the Import Items and Import Item Category Assignments menu entries.

See: *Defining Items, Oracle Inventory User's Guide*.

The purpose of this essay is to explain how to use the Item Interface.

## Functional Overview

The Item Interface lets you import items into Oracle Inventory and, if installed at your site, Oracle Engineering. When you import items through the Item Interface, you create new items in your item master organization, update existing items, or assign existing items to additional organizations. You can specify values for all the item attributes, or you can specify just a few attributes and let the remainder default or remain null. The Item Interface also lets you import revision details, including past and future revisions and effectivity dates. Validation of imported items is done using the same rules as the item definition windows, so you are insured of valid items. See: *Overview of Engineering Prototype Environment, Oracle Engineering User's Guide* and *Defining Items, Oracle Inventory User's Guide*.

The Item Interface reads data from three tables for importing items and item details. You use the `MTL_SYSTEMS_ITEM_INTERFACE` table for your new item numbers and all item attributes. This is the main item interface table, and may be the only table you choose to use. If you are importing revision details for your new items, you can use the `MTL_ITEM_REVISIONS_INTERFACE` table. This table is used only for revision information, and is not required. To import item category assignments, the `MTL_ITEM_CATEGORIES_INTERFACE` table is used to store data about item assignments to category sets, and categories to be imported into the Oracle Inventory `MTL_ITEM_CATEGORIES` table. A fourth table, `MTL_`

INTERFACE\_ERRORS, is used for error tracking of all items that the Item Interface fails.

Before you use the Item Interface, you must write and run a custom program that extracts item information from your source system and inserts the records into the MTL\_SYSTEM\_ITEM\_INTERFACE table, and (if revision detail is included) the MTL\_ITEMS\_REVISIONS\_INTERFACE table, as well as the MTL\_ITEM\_CATEGORIES\_INTERFACE table. After you load item, revision, and item category assignment records into these interface tables, you run the Item Interface to import the data. The Item Interface assigns defaults, validates data you include, and then imports the new items.

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**Note:** You can process both master and child item records in the same run; the records will import correctly.

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You can also use the Item Interface to import item material cost, material overhead, and revision details.

## Setting Up the Item Interface

### Create Indexes for Performance

You should create the following indexes to improve Item Interface performance.

First, determine which segments are enabled for the System Items flexfield.

Then, for example, if you have a two-segment flexfield, with SEGMENT8 and SEGMENT12 enabled, you would do the following:

```
SQL> create unique index MTL_SYSTEM_ITEMS_B_UC1 on MTL_SYSTEM_ITEMS_B  
(ORGANIZATION_ID, SEGMENT8, SEGMENT12);  
SQL> create unique index MTL_SYSTEM_ITEMS_INTERFACE_UC1 on MTL_SYSTEM_ITEMS_  
INTERFACE (ORGANIZATION_ID, SEGMENT8, SEGMENT12);
```

If you plan to populate the ITEM\_NUMBER column in mtl\_system\_items\_interface instead of the item segment columns, do not create the MTL\_SYSTEM\_ITEMS\_INTERFACE\_UC1 unique index. Instead, create MTL\_SYSTEM\_ITEMS\_INTERFACE\_NC1 non-unique index on the same columns.

Create the following indexes for optimum performance:

#### MTL\_SYSTEM\_ITEMS\_B

- Non-Unique Index on organization\_id, segment1  
You need at least one indexed, mandatory segment.

#### **MTL\_SYSTEM\_ITEMS\_INTERFACE**

- Non Unique Index on inventory\_item\_id, organization\_id
- Non Unique Index on Item\_number
- Unique Index on Transaction\_id
- Unique Index on organization\_id, segment1

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**Note:** This Index will have to be recreated as Non Unique if you are populating organization\_code, instead of organization\_id. It should include the segment (s) having been enabled for the System Item Key Flexfield. You are enabled to use the created default index if you are using segment1.

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#### **MTL\_ITEM\_REVISIONS\_INTERFACE**

- Non Unique Index on set\_process\_id
- Non Unique Index on Transaction\_id
- Non Unique Index on Organization\_id, Inventory\_item\_id, Revision

#### **MTL\_ITEM\_CATEGORIES\_INTERFACE**

- Non Unique Index on inventory\_item\_id, category\_id
- Non Unique Index on set\_process\_id
- Unique Index on transaction\_id

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**Suggestion:** Populate \_id fields whenever possible. Populating inventory\_item\_id instead of segment (n) for Update Mode will significantly improve performance. Populating organization\_id instead of organization\_code for both Create and Update modes, will also reduce processing time.

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### **Start the Concurrent Manager**

Since you launch and manage the Item Interface concurrent program through the concurrent manager, you must ensure that the concurrent manager is running before you can import any items.

### **Set Profile Option Defaults**

Some columns use profile options as default values. You must set these profiles if you want them to default. See: *Oracle Inventory Profile Options, Oracle Inventory User's Guide* and *Overview of Inventory Setup, Oracle Inventory User's Guide*.

## **Item Interface Runtime Options**

To run the Item Interface, select Import Items from the Import submenu, accessed from the Inventory menu, or select Import Items in the Request Name field in the All Reports window. See: *Importing Customer Items, Oracle Inventory User's Guide*.

When you run the Item Interface, you are prompted for report parameters. These are runtime options for the Item Interface:

### **All Organizations**

#### **Runtime Options**

Yes

Run the interface for all organization codes in the item interface table.

No

Run the interface only for the organization you are currently in. Item interface rows for organizations other than your current organization are ignored.

#### **Validate Items**

Yes

Validate all items and their data residing in the interface table that have not yet been validated. If items are not validated, they will not be processed into Oracle Inventory.

No

Do not validate items in the interface table. Note that items that have not been validated will not be processed into Oracle Inventory. You would use this option if

you had previously run the item interface and responded **Yes** for **Validate Items** and **No** for **Process Items**, and now want to process your items.

### **Process Items**

Yes

All qualifying items in the interface table are inserted into Oracle Inventory.

No

Do not insert items into Oracle Inventory. Use this option, along with **Yes** for **Delete Processed Items**, to remove successfully processed rows from the interface table without performing any other processing. You can also use this option, along with **Yes** for **Validate Items**, if you want to validate items without any processing.

### **Delete Processed Rows**

Yes

Delete successfully processed items from the item interface tables.

No

Leave all rows in the item interface tables.

### **Process Set**

Enter a set id number for the set of records in the interface table that you want to process. The program picks up the records having that id in the SET\_PROCESS\_ID column. If you leave this field blank, all rows are picked up for processing regardless of the SET\_PROCESS\_ID column value.

### **Create or Update Items**

#### **Create or Update Items**

1 Create new items.

2 Update existing items. See: Update Existing Items below.

You can create or update items via separate executions of the Import Items program.

## Inserting into the Item Interface Table

### Item Interface Table Description

The item interface table `MTL_SYSTEM_ITEMS_INTERFACE` contains *every* column in the Oracle Inventory item master table, `MTL_SYSTEM_ITEMS`. The columns in the item interface correspond directly to those in the item master table. Except for `ITEM_NUMBER` or `SEGMENTn` columns, `ORGANIZATION_CODE` or `ORGANIZATION_ID`, `DESCRIPTION`, `PROCESS_FLAG`, and `TRANSACTION_TYPE`, all of these columns are optional, either because they have defaults that can be derived, or because the corresponding attributes are optional and may be left null.

The item costing columns (those that begin **MATERIAL\_...**) and the `REVISION` column *are* used for importing item costs and revisions and are discussed in a later section of this chapter.

You may also put in details about other interface tables not used by the Item Interface.

Currently, the interface does not support the `MTL_CROSS_REFERENCE_INTERFACE` or `MTL_SECONDARY_LOCS_INTERFACE`.

The `MTL_ITEM_CATEGORIES_INTERFACE` is used by the Item interface for both internal processing of default category assignments, *and* to retrieve data populated by the user to be imported into the Oracle Inventory `MTL_ITEM_CATEGORIES` table.

**Table 7–10 Partial List of Columns, Oracle Inventory Item Interface `MTL_SYSTEM_ITEMS_INTERFACE`**

(Partial List of Columns) Column Name	Type	Required	Derived	Optional
<code>ITEM_NUMBER</code>	<code>Varchar2(81)</code>	conditionally		
<code>DESCRIPTION</code>	<code>Varchar2(240)</code>	conditionally		
<code>MATERIAL_COST</code>	<code>Number</code>			x
<code>MATERIAL_OVERHEAD_RATE</code>	<code>Number</code>			x
<code>MATERIAL_OVERHEAD_SUB_ELEM</code>	<code>Varchar2(50)</code>			x
<code>MATERIAL_OVERHEAD_SUB_ELEM_ID</code>	<code>Number</code>			x
<code>MATERIAL_SUB_ELEM</code>	<code>Varchar2(50)</code>			x
<code>MATERIAL_SUB_ELEM_ID</code>	<code>Number</code>			x
<code>ORGANIZATION_CODE</code>	<code>Varchar2(3)</code>	conditionally		

Table 7–10 Partial List of Columns, Oracle Inventory Item Interface MTL\_SYSTEM\_ITEMS\_INTERFACE

(Partial List of Columns) Column Name	Type	Required	Derived	Optional
PROCESS_FLAG	Number	x		
REVISION	Varchar2(3)			x
TRANSACTION_ID	Number		x	
TRANSACTION_TYPE	Varchar2(5)	x		
SET_PROCESS_ID	Number	x		

**Note:** For information about columns not discussed in the Interface Manual, see Table and View Definitions, *Oracle Inventory Technical Reference Manual*.

Required Data

Every row in the item interface table must identify the item and organization. To identify the item when importing it, you may specify either the ITEM\_NUMBER or SEGMENT $n$  columns—the Item Interface generates the INVENTORY\_ITEM\_ID for you. Specifying either the ORGANIZATION\_ID or ORGANIZATION\_CODE adequately identifies the organization. When more than one of these columns has been entered and they conflict, ITEM\_NUMBER overrides SEGMENT $n$  and ORGANIZATION\_ID overrides ORGANIZATION\_CODE. It is strongly recommended that you use SEGMENT column instead of ITEM\_NUMBER. See: Key Flexfield Segments, *Oracle Flexfields User's Guide*.

**Note:** If you enter a value for the ITEM\_NUMBER column and you are using a multi-segment item, you must insert the system item flexfield separator between each segment of your item number. For example, if you are using a two segment item and have defined a dash (-) as your separator, a typical item would be entered as 1234-5678. When the Item Interface derives the item's segment values, it searches for this separator to indicate the end of one segment value and the start of the next segment value. In our example, 1234 would be put in SEGMENT1, 5678 in SEGMENT2.

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**Note:** If you enter values for SEGMENT $n$  columns, be sure that the segments you use correspond to the key flexfield segments you defined for your items. No validation for the correct segments occurs when you run the Item Interface. Also, the Item Interface expects that all segments that you use for the system item flexfield be required segments. Your system items flexfield should not be defined with any optional segments.

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**Note:** No segment validation is done against value sets.

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When you import a new item, you are also required to specify the DESCRIPTION. This has to be the same as the master record when you import rows from the child organizations if the description attribute is maintained at the item master level. Of course, if the description is at the item-organization level, you are always able to override the master organization description by giving this column a value.

There are two other columns the Item Interface uses to manage processing. They are TRANSACTION\_TYPE, which tells the Item Interface how to handle the row, and PROCESS\_FLAG, which indicates the current status of the row.

Always set the TRANSACTION\_TYPE column to **CREATE**, to create an item record (true when both importing a new item and assigning an already existing item to another organization). This is the only value currently supported by the Item Interface.

The Item Interface uses the PROCESS\_FLAG to indicate whether processing of the row succeeded or failed. When a row is ready to be processed, give the PROCESS\_FLAG a value of 1 (Pending), so that the Item Interface can pick up the row and process it into the production tables.

**Table 7–11    *Meaning of PROCESS\_FLAG Values***

Code	Meaning
1	Pending
2	Assign complete
3	Assign/validation failed
4	Validation succeeded; import failed
5	Import in process
7	Import succeeded

A full list of values for the PROCESS\_FLAG is in Table 1–14, but you are unlikely to see all of these.

Other columns, although required in the production tables, are not required in the item interface table, because they have default values or their values can be derived from other sources. Check the defaults and derived values carefully, as they may not be the values you desire.

If the Item Interface successfully processes a row in the item interface table or the revision interface table, the program sets the PROCESS\_FLAG to **7** (Import succeeded) for the row. If the Item Interface cannot insert a row into the production table, the PROCESS\_FLAG column for the failed row is set to **4** (Import failed). If a row in the interface table fails validation, the PROCESS\_FLAG column is set to **3** (validation failed). A row is inserted into the MTL\_INTERFACE\_ERRORS table for all failed rows. You can review and update any failed rows in each interface table using custom reports and programs.

**Derived Data**

Many columns have defaults that the Item Interface uses when you leave that column null in the item interface table. Columns with defaults are listed in Table 7–12 .

**Table 7–12 Column Defaults in the Item Interface MTL\_SYSTEM\_ITEMS\_INTERFACE**

(Partial List of Columns) Column Name	Default Value	Value Displayed in Window
SUMMARY_FLAG <sup>1</sup>	Y	
ENABLED_FLAG	Y	
PURCHASING_ITEM_FLAG	N	No
SHIPPABLE_ITEM_FLAG	N	No
CUSTOMER_ORDER_FLAG	N	No
INTERNAL_ORDER_FLAG	N	No
SERVICE_ITEM_FLAG	N	No
SERVICE_STARTING_DELAY_DAYS	0	0
INVENTORY_ITEM_FLAG	N	No
ENG_ITEM_FLAG <sup>2</sup>	N	No
INVENTORY_ASSET_FLAG	N	No
PURCHASING_ENABLED_FLAG	N	No
CUSTOMER_ORDER_ENABLED_FLAG	N	No
INTERNAL_ORDER_ENABLED_FLAG	N	No
SO_TRANSACTIONS_FLAG	N	No
MTL_TRANSACTIONS_ENABLED_FLAG	N	No
STOCK_ENABLED_FLAG	N	No
BOM_ENABLED_FLAG	N	No
BUILD_IN_WIP_FLAG	N	No
WIP_SUPPLY_TYPE	1	Push
REVISION_QTY_CONTROL_CODE	1	Not under revision quantity control
ALLOW_ITEM_DESC_UPDATE_FLAG	from PO_SYSTEM_PARAMETERS_ALL. ALLOW_ITEM_DESC_UPDATE_FLAG	from Purchasing Options, otherwise Yes

**Table 7–12 Column Defaults in the Item Interface MTL\_SYSTEM\_ITEMS\_INTERFACE**

<b>(Partial List of Columns) Column Name</b>	<b>Default Value</b>	<b>Value Displayed in Window</b>
RECEIPT_REQUIRED_FLAG	<i>from</i> PO_SYSTEM_PARAMETERS_ALL.RECEIVING_FLAG	<i>from</i> Purchasing Options, otherwise No
RFQ_REQUIRED_FLAG	<i>from</i> PO_SYSTEM_PARAMETERS_ALL.RFQ_REQUIRED_FLAG	<i>from</i> Purchasing Options, otherwise No
LOT_CONTROL_CODE	1	No lot control
SHELF_LIFE_CODE	1	No shelf life control
SERIAL_NUMBER_CONTROL_CODE	1	No serial number control
RESTRICT_SUBINVENTORIES_CODE	2	Subinventories not restricted to predefined list
RESTRICT_LOCATORS_CODE	2	Locators not restricted to predefined list
LOCATION_CONTROL_CODE	1	No locator control
PLANNING_TIME__FENCE_CODE	4	User-defined time fence
PLANNING_TIME__FENCE_DAYS	1	1
BOM_ITEM_TYPE	4	Standard
PICK_COMPONENTS_FLAG	N	No
REPLENISH_TO_ORDER_FLAG	N	No
ATP_COMPONENTS_FLAG	N	No
ATP_FLAG	N	No
PRIMARY_UNIT_OF_MEASURE	<i>from profile</i> INV: Default Primary Unit of Measure	<i>from</i> Personal Profile Values
ALLOWED_UNITS_LOOKUP_CODE	3	Both standard and item specific
COST_OF_SALES_ACCOUNT	<i>from</i> MTL_PARAMETERS.COST_OF_SALES_ACCOUNT	<i>from</i> Organization Parameters
SALES_ACCOUNT_DSP	<i>from</i> MTL_PARAMETERS.SALES_ACCOUNT	<i>from</i> Organization Parameters

**Table 7–12 Column Defaults in the Item Interface MTL\_SYSTEM\_ITEMS\_INTERFACE**

<b>(Partial List of Columns) Column Name</b>	<b>Default Value</b>	<b>Value Displayed in Window</b>
ENCUMBRANCE_ACCOUNT	<i>from</i> MTL_ PARAMETERS.ENCUMBRAN CE_ACCOUNT	<i>from</i> Organization Parameters
EXPENSE_ACCOUNT	<i>from</i> MTL_ PARAMETERS.EXPENSE_ ACCOUNT	<i>from</i> Organization Parameters
LIST_PRICE_PER_UNIT	0	0
INVENTORY_ITEM_STATUS_CODE	<i>from profile</i> INV: Default Item Status	<i>from</i> Personal Profile Values
INVENTORY_PLANNING_CODE	6	Not planned
PLANNING_MAKE_BUY_CODE	2	Buy
MRP_SAFETY_STOCK_CODE	1	Non-MRP planned
TAXABLE_FLAG	Y	<i>from</i> Purchasing Options, otherwise No
MATERIAL_BILLABLE_FLAG	M	Material
EXPENSE_BILLABLE_FLAG	N	No
TIME_BILLABLE_FLAG	N	No
SERVICE_DURATION	0	0
MARKET_PRICE	0	0
PRICE_TOLERANCE_PERCENT	0	0
SHELF_LIFE_DAYS	0	0
RESERVABLE_TYPE	1	Reservable
REPETITIVE_PLANNING_FLAG	N	No
ACCEPTABLE_RATE_DECREASE	0	0
ACCEPTABLE_RATE_INCREASE	0	0
END_ASSEMBLY_PEGGING_FLAG	N	None
POSTPROCESSING_LEAD_TIME	0	0
VENDOR_WARRANTY_FLAG	N	No

**Table 7–12 Column Defaults in the Item Interface MTL\_SYSTEM\_ITEMS\_INTERFACE**

<b>(Partial List of Columns) Column Name</b>		<b>Default Value</b>	<b>Value Displayed in Window</b>
SERVICEABLE_COMPONENT_FLAG	N		No
SERVICEABLE_PRODUCT_FLAG	Y		Yes
PREVENTIVE_MAINTENANCE_FLAG	N		No
SHIP_MODEL_COMPLETE	N		No
RETURN_INSPECTION_REQUIREMENT	2		Inspection not required
PRORATE_SERVICE_FLAG	N		No
INVOICEABLE_ITEM_FLAG	N		No
INVOICE_ENABLED_FLAG	N		No
MUST_USE_APPROVED_VENDOR_FLAG	N		No
OUTSIDE_OPERATION_FLAG	N		No
COSTING_ENABLED_FLAG	N		No
CYCLE_COUNT_ENABLED_FLAG	N		No
AUTO_CREATED_CONFIG_FLAG	N		No
MRP_PLANNING_CODE	6		Not planned
CONTAINER_ITEM_FLAG	N		No
VEHICLE_ITEM_FLAG	N		No
END_ASSEMBLY_PEGGING_FLAG	N		None
SERVICE_DURATION	0		0
SET_PROCESS_ID	0		

**Notes:**

1 Defaulted to Y by the Item Interface, but the Master Items window defaults N for this column.

2 Defaulted to N by the Item Interface, but in the Master Items window the default value depends on whether the window is accessed from Oracle Engineering.

You can import item descriptive flexfield values when you have implemented a descriptive flexfield for items. To do this, simply include values for the descriptive flexfield columns (ATTRIBUTE\_CATEGORY and ATTRIBUTE columns) in the item interface table. No validation is performed on descriptive flexfield values.

In addition, the Item Interface uses the item's status (INVENTORY\_ITEM\_STATUS\_CODE) to determine the value of attributes under status control. If an attribute is under status control, then the attribute value always derives from the item's status, and any value in the attribute column of the item interface table is ignored. If an attribute is under default status control, then the attribute value derives from the item's status only if there is no value in the attribute column of the item interface table. If an attribute is not under any status control, then the item status has no effect on the attribute's value for the imported item.

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**Note:** If an attribute is under status control, it still must follow the attribute dependency rules. For example, if the BOM\_ENABLED\_FLAG is under status control, and a status is used setting BOM\_ENABLED\_FLAG to Yes, the INVENTORY\_ITEM\_FLAG must be set to Yes for the imported item. If the item has INVENTORY\_ITEM\_FLAG set to No (or it is left null and therefore defaults to No), the Item Interface processes the item with the BOM\_ENABLED\_FLAG set to No. This is because the attribute dependency rules stipulate that BOM\_ENABLED\_FLAG can be only Yes for an Inventory Item.

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**Note:** When you assign an item to a child organization, all item-level attributes default down from the master organization—but only when the attribute column is *null* in the item interface table. If you supply a value for a item-level attribute in a child organization record, the Item Interface rejects the record as an error. The exception is status attributes under status control. These attributes *always* derive from the item's status, never from the master record. See [Table 7-12](#) for the list of defaults supplied by the Item Interface.

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Whether you import a new item to an master organization or assign an existing item to a non-master organization, the Item Interface always enters a unique numeric identifier in the TRANSACTION\_ID column of the item interface table,

and the concurrent request number in the REQUEST\_ID column of the item master table.

### Item Categories

When the Item Interface imports an item, it also assigns the item to the mandatory category sets based on the item defining attributes. The default category for each category set is used. The Item Interface also allows you to assign items to other category sets and categories, when there is data for item category assignments in the MTL\_ITEM\_CATEGORIES\_INTERFACE table. See: *Defining Category Sets, Oracle Inventory User's Guide* and *Defining Default Category Sets, Oracle Inventory User's Guide*.

For example, suppose you define a category set *Inventory* with a default category of *glass*, and you designate *Inventory* as the mandatory category set for inventory items. When the interface imports an inventory item (INVENTORY\_ITEM\_FLAG = Y), the item is assigned to the *glass* category in the *Inventory* category set, and a corresponding row is inserted into MTL\_ITEM\_CATEGORIES.

When using the Item Interface to assign an existing item to another organization, the item is also assigned to mandatory category sets with the default category. As described above, the item defining attributes determine to which mandatory category sets the item is assigned. Even if the item is assigned to a item level category set (non-mandatory) in the master organization, it is not assigned to that category set in the item's new organization.

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**Note:** When running Import Items in update mode, if the defining attribute for a Functional area is enabled, the proper default category set and category is assigned to the item.

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## Validation

When you import or update an item, the Item Interface validates the data and any derived values the same way manually entered items are validated. This validation ensures that:

- Required columns have an included or defaulted value
- Control levels are reflected in item attribute values
- Status control settings for status attributes are maintained
- Interdependences between item attribute values are consistent

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**Note:** Before you can import an item into a child organization, it must exist in the master organization. The Master records are automatically separated from Children records, and processed first. However, as one Item Open Interface process is not aware of other Item Open Interfaces processes running in parallel, do not split a given item's separate organization records into two different set\_process\_id that are running in parallel. This may cause the Child record to be processed before the Master record. See: *Defining Items, Oracle Inventory User's Guide*

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When you import items, the Item Interface program validates all rows in the table that have a PROCESS\_FLAG set to 1 (Pending). The interface first assigns the default values to the derived columns of the row, then updates the value of the PROCESS\_FLAG column to 2 (Assign Succeeded).

The Item Interface then validates each row. If a row in the interface table fails validation, the program sets the PROCESS\_FLAG to 3 (Assign/Validation Failed) and inserts a row into the error table.

For all successfully validated rows, the interface inserts the rows into Oracle Inventory's item master table, MTL\_SYSTEM\_ITEMS. If a row cannot be inserted into the item master table, the program sets the PROCESS\_FLAG to 4 (Import Failed) and inserts a row into the error table.

After this program inserts the imported item into the item master table, the row is deleted or, depending on the runtime option, the PROCESS\_FLAG is set to 7 (Import Succeeded).

To minimize the number of rows stored in the interface table, you can specify at run time that the program delete successfully processed records after insertion. If you do not delete successfully processed records automatically, you can write custom programs that report and delete any successfully imported rows. The program can search for rows with a PROCESS\_FLAG value of 7 (Import Succeeded), list the rows in a report, and then delete them from the table. By defining a report set in Oracle Application Object Library, you can automatically run the custom program after each submission of the Item Interface. You can also run multiple Item Interface processes. See: Multi-Thread Capability below.

## Importing Additional Item Details

You can import additional cost and revision details for an imported item using interface tables listed in [Table 7-13](#). The Item Interface imports the details specified

in these tables at the same time that it imports the items themselves. The program validates all rows you insert into the interface tables, derives additional columns, and creates the item and item details in Oracle Inventory.

**Table 7–13    Oracle Inventory Item Details Interface**

Item Detail	Interface Table	Number of Rows per Item
Costs	MTL_SYSTEM_ITEMS_INTERFACE	1
Revisions	MTL_SYSTEM_ITEMS_INTERFACE <i>(for imported items only)</i>	1
	MTL_ITEM_REVISIONS_INTERFACE	1 or more

**Note:** Although there are many other tables in Oracle Inventory whose names may imply use, the tables listed in Table 7–13 are the *only* interface tables used by the Item Interface to import item details.

Before importing additional item details, you must complete the same setup steps required for manually defining these item details. For example, you must define your cost types and activities before you can assign item costs. The default cost category set must be specified using the Default Category Sets window, and the starting Revision must be set for all organizations. See: Overview of Inventory Setup, *Oracle Inventory User’s Guide*, Defining Default Category Sets, *Oracle Inventory User’s Guide*, and Defining Item Revisions, *Oracle Inventory User’s Guide*.

The Item Interface validates all required data and some optional data included in the item detail interface tables. When you import your cost or revision data, this program validates the included or derived values the same way Oracle Inventory validates manually entered details.

**Importing Cost Details**

When the Item Interface imports an item, it may also import costing information into Oracle Cost Management tables. The interface may import this costing information automatically using organization and category defaults, or you may specify the information for the item itself in the item interface table.

If you set up a default material overhead rate for the item’s organization or for the default cost category, this material overhead rate is inserted into the cost details table, CST\_ITEM\_COST\_DETAILS, and summarized in the item costs table, CST\_

ITEM\_COSTS. See: Defining Material Sub-Elements, *Oracle Cost Management User's Guide* and Defining Overhead, *Oracle Cost Management User's Guide*.

You may specify one material cost and one material overhead rate for the item directly in the item interface table itself. Remember to include the material sub-element for the material cost and overhead rate by specifying the sub-element.

The interface imports the basis type for the material sub-elements and material overhead subelements from the BOM\_RESOURCES table. If the default basis type is not defined, the basis type of these sub-elements is set to *Item* and *Total Value* respectively.

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**Note:** When running the Item Interface in update mode, item costs cannot be updated.

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## Importing Revision Details

You can import detailed revision history with your new items in any one of the following ways:

- Specify revisions and effectivity dates in the revision interface table
- Specify the current revision for each item in the item interface table
- Do not specify any revisions and let the Item Interface default the revision based on the starting revision defined in the Organization Parameters window. See: Organization Parameters Window, *Oracle Inventory User's Guide*.

To import multiple item revisions and effectivity dates, use the revision interface table, MTL\_ITEM\_REVISIONS\_INTERFACE. You may also include ECN information (see [Table 7-14](#)). You need to create your own program for populating this table.

Since revisions exist at the item-organization level, you need revision data for each item-organization you are updating. Include a row for each revision (with an effectivity date) to import, in ascending order. In other words, for each item-organization combination, revision A must have an effectivity date less than or equal to revision B, and so on. Each row in this table must correspond to a row in the item interface table. Each row must reference the item's ITEM\_NUMBER and ORGANIZATION\_ID or ORGANIZATION\_CODE.

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**Note:** When importing multiple revisions for the same item, if one of the revisions fails validation, all revisions for that item fail.

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To import an item and its current revision only, include a value for the REVISION column in the item interface table. The Item Interface automatically creates this revision with an effective date equal to the system date when it imports the item. (Use the revision interface table described above if you want to specify a revision effectivity date.)

If you choose not to use the revision interface table, and do not include a revision in the item interface table, the Item Interface assigns each item a beginning revision, using the default specified in the Organization Parameters. The system date is the effectivity date. Once established, you cannot add revisions with effectivity dates earlier than the date assigned by the Item Interface.

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**Note:** Although most item information defaults from the master organization when you assign an existing item to a child organization, the Item Interface does *not* default an item's revision detail from the master organization. See: *Defining Item Revisions, Oracle Inventory User's Guide*.

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As with the item interface table, the column PROCESS\_FLAG indicates the current state of processing for a row in the revision interface table. Possible values for the column are listed in [Table 7-11](#).

When you insert rows into the revision interface table, you should set the PROCESS\_FLAG to 1 (Pending) and TRANSACTION\_TYPE to CREATE.

**Table 7–14 Column-Mappings from Revision Interface Table to Oracle Inventory**

<b>MTL_ITEM_REVISIONS Column Name</b>	<b>MTL_ITEM_REVISIONS_INTERFACE Column Source</b>
INVENTORY_ITEM_ID	ITEM_NUMBER
ORGANIZATION_ID	ORGANIZATION_ID or ORGANIZATION_CODE
REVISION	REVISION
CHANGE_NOTICE	CHANGE_NOTICE
ECN_INITIATION_DATE	ECN_INITIATION_DATE
IMPLEMENTATION_DATE	IMPLEMENTATION_DATE
IMPLEMENTED_SERIAL_NUMBER	IMPLEMENTED_SERIAL_NUMBER
EFFECTIVITY_DATE	EFFECTIVITY_DATE
ATTRIBUTE_CATEGORY	ATTRIBUTE_CATEGORY
ATTRIBUTE <sub>n</sub>	ATTRIBUTE <sub>n</sub>
REVISED_ITEM_SEQUENCE_ID	REVISED_ITEM_SEQUENCE_ID
DESCRIPTION	DESCRIPTION

You can import revision descriptive flexfield values when you have implemented a descriptive flexfield for revisions. To do this, simply include values for the descriptive flexfield columns (ATTRIBUTE\_CATEGORY and ATTRIBUTE<sub>n</sub> columns) in the revision interface table when you import revisions.

The Item Interface may also be used to create revisions for existing items. Only revision labels and effectivity dates higher than existing revisions may be imported. To do this, simply load revision detail for the existing items into MTL\_ITEM\_REVISIONS\_INTERFACE and run the Item Interface.

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**Note:** New item revisions cannot be added to existing items, while running Import Items in update mode.

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## Importing Item Category Assignments

When the Item Interface imports items, it can also import item category assignments into Oracle Inventory. For this to happen, you insert item category assignments data into the MTL\_ITEM\_CATEGORIES\_INTERFACE table

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**Note:** Item category assignments are imported when running the Item Interface in either the Create mode or Update mode.

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Item category assignment import can also be done as a separate task by selecting Import Item Category Assignments from the Import submenu, accessed from the Inventory menu. In this case, items are not imported.

## Item Category Assignment Interface Runtime Options

To run the Item Interface, select Import Item Category Assignments from the Import submenu, accessed from the Inventory menu.

When you run the Item Category Interface, you are prompted for report parameters. These are runtime options for the Item Category Interface:

### Record Set Id

Enter a set id number for the set of records in the interface table that you want to process. The program picks up the records having that id in the SET\_PROCESS\_ID column. This column value cannot be NULL. In order to avoid set id value conflicts between record sets imported by different users, you should use the sequence MTL\_SYSTEM\_ITEMS\_INTF\_SETS\_S when populating the SET\_PROCESS\_ID column.

### Upload Processed Records

Yes

All qualifying item category assignment records in the interface table are inserted into Oracle Inventory.

No

Do not insert item category assignments into Oracle Inventory. Use this option if you want to validate items without any processing.

### Delete Processed Records

Yes

Delete successfully processed item category assignment records from the item categories interface table.

No

Leave all records in the item categories interface table.

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**Note:** In contrast to the Transaction Type control in the Item Interface, the Item Categories Interface processes all transaction types (CREATE, DELETE) in the current record set, as specified in the TRANSACTION\_TYPE column, and it is not controlled via runtime option (parameter).

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## Inserting into the Item Categories Interface Table

### Item Categories Interface Description

The item category interface table, MTL\_ITEM\_CATEGORIES\_INTERFACE, contains every column in the Oracle Inventory item category assignments table, MTL\_ITEM\_CATEGORIES. The columns in the item category interface table correspond directly to those in the item category assignments table. In addition, there are transaction control columns and attribute value columns, corresponding to the id columns. These are described below.

Before running item category assignment import, the following MTL\_ITEM\_CATEGORIES\_INTERFACE columns need to be populated:

### Transaction Control Columns

#### SET\_PROCESS\_ID

record set to be processed by a single import program run; this value will tie the categories interface rows back to the MTL\_SYSTEM\_ITEMS\_INTERFACE rows when item category assignments are imported together with Items; in order to prevent interference with other users' interface data, a SET\_PROCESS\_ID value should preferably be selected from the MTL\_SYSTEM\_ITEMS\_INTF\_SETS\_S sequence;

#### TRANSACTION\_TYPE

valid values are CREATE and DELETE; an Updated transaction can only be performed as a combination of DELETE assignment, then CREATE;

#### PROCESS\_FLAG

indicates current status of a record (initially = 1).

Attributes that define a particular assignment to be imported; these may be provided as either values or ids:

ORGANIZATION\_ID or ORGANIZATION\_CODE

INVENTORY\_ITEM\_ID or ITEM\_NUMBER

CATEGORY\_SET\_ID or CATEGORY\_SET\_NAME

CATEGORY\_ID or CATEGORY\_NAME

## Update Existing Items

You can run Import Items in update mode by setting the Create or Update Items parameter to 2. You can update existing item attributes, and assign templates to existing items.

### Item Attribute Update

Every item attribute can be updated, and all necessary validations are performed to enforce item attribute interdependencies, master/child attribute dependencies, and status controlled dependencies.

Master level controlled attributes are correctly propagated to the Child records when the Master Item record is updated. The Child records are copied into MTL\_SYSTEM\_ITEMS\_INTERFACE for validation and are identified with a transaction\_type, AUTO\_CHILD. These records are deleted if the Delete Processed Rows parameter has been passed as Yes, and remain for diagnostic purposes if the parameter is passed as No.

The status can be changed for existing items and the proper attributes default, accordingly. The status change is then recorded in the MTL\_PENDING\_ITEM\_STATUS table.

When the defining attribute for a Functional area is enabled, the proper default category set and category is assigned to the item.

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**Note:** If a given item record has been locked by another user or process, the update for the item in all organizations will error to maintain Master/Child relationship integrity. In this case, the transaction\_id column will populate with the inventory\_item\_id of the locked record, within the row written to the MTL\_INTERFACE\_ERRORS table.

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## Determining Batch Size

### Running the Item Interface in Create Mode

The optimum batch size depends upon the amount of data being imported and the power of your system. If you are processing 10,000 items or less, break the 10,000 items into smaller groups. A batch size of 1,000 to 2,000 should be adequate to process these rows efficiently. Load the records for one group, process them, then delete the records from the interface table. If you wish to maintain history, create separate history tables and move processed rows there, instead of deleting them. Leaving large numbers of processed rows in the interface table will degrade performance of the Open Item Interface.

For a greater number of records, you may also use a batch size of 2,000 but you may want to try larger batch sizes, up to 5,000 items. The best way to determine your batch size is by benchmarking.

First, try loading 2,000 items into interface tables. Note the time the Item Interface takes to process these rows in one batch. If this time is more than 20 minutes, stick with the batch size of 2,000 or less. Otherwise, you may want to try larger batch sizes.

If importing a large number of records, you should break down your records into batch size, determined above, and process them in parallel for optimum performance. See: Multi-Thread Capability (Parallel Runs of the Item Interface), for more information.

### Running the Item Interface in Update Mode

A proper batch size when running the Item Interface in Update mode is approximately five times smaller than when running the Item Interface in Create mode; there is extra processing required for Child records. For example, if you are updating 100 Master records, and each item is assigned to four organizations, then the Item Interface will process the 100 populated records, plus the 400 additional, automatically created, AUTO\_CHILD (transaction\_type within the MTL\_SYSTEM\_ITEMS\_INTERFACE table) records in the interface table.

## Resolving Failed Interface Rows

If a row fails validation, the Item Interface sets the PROCESS\_FLAG to 3 (Assign/validation failed) and inserts a row in the interface errors table, MTL\_INTERFACE\_ERRORS. To identify the error message for the failed row, the program automatically populates the TRANSACTION\_ID column in this table with

the TRANSACTION\_ID value from the corresponding item interface table. For example, if a row in the item interface table fails, the program inserts a row into the interface errors table with the failed row's TRANSACTION\_ID as the error row's TRANSACTION\_ID. Each error in the interface errors table has a value for the MESSAGE\_NAME and REQUEST\_ID columns. The Item Interface populates these columns for item detail errors the same way it populates the table for item errors.

The UNIQUE\_ID column in MTL\_INTERFACE\_ERRORS is populated from the sequence MTL\_SYSTEM\_ITEMS\_INTERFACE\_S. Thus, for a given row, the sequence of errors can be determined by examining UNIQUE\_ID for a given TRANSACTION\_ID.

For example, if your row with TRANSACTION\_ID 2000 failed with two errors in the MTL\_INTERFACE\_ERRORS table, then you can see which error occurred first by looking at the row with the smallest UNIQUE\_ID for TRANSACTION\_ID 2000.

You should resolve errors in the sequence that they were found by the interface, that is, in increasing order of UNIQUE\_ID for any TRANSACTION\_ID.

Quite often, resolving the first few errors and restarting the Item Interface will cause the other (spurious) errors for that failed row to disappear. However, several conditions that previously caused the Interface to error all rows have been modified so that only the offending row is marked in error, while the remaining rows process normally.

The Item Interface inserts validated rows into the production tables in Oracle Inventory and Oracle Cost Management. Depending on the item information you import, the interface inserts these rows into the item master, item categories, item costs, cost details, item revisions, pending item status, and unit of measure conversions tables. If a row cannot be inserted into one of these tables, the PROCESS\_FLAG column for all remaining rows is set to 4 (Import failed) and the Concurrent Item Interface inserts a row in the interface errors table. The program handles these processing errors in the same way it handles validation errors.

## **Reviewing Failed Rows**

You can review and report rows in any of the interface tables using SQL\*Plus or any custom reports you develop. Since all rows in the interface tables have a value for PROCESS\_FLAG, you can identify records that have not been successfully imported into Oracle Inventory.

## Resubmitting an Errored Row

During Item Interface processing, rows can error out either due to validation (indicated by `PROCESS_FLAG = 3` in `MTL_SYSTEM_ITEMS_INTERFACE` and the corresponding error in `MTL_INTERFACE_ERRORS`) or due to an Oracle Error.

When an Oracle Error is encountered, the processing is stopped and everything is rolled back to the previous save point. This could be at `PROCESS_FLAG = 1, 2, 3, or 4`.

**Table 7–15 Oracle Inventory Item Details Interface**

<b>PROCESS_FLAG</b>	<b>Error After and Before PROCESS_FLAG</b>	<b>Relaunch the Item Interface after</b>
1	1 and 2	Fixing the Oracle Error
2	2 and 3	Fixing the Oracle Error
3	2 and 3	Updating MSII <sup>1</sup> and fixing the corresponding error in MIE <sup>2</sup> . Then setting <code>PROCESS_FLAG = 1</code> and <code>INVENTORY_ITEM_ID = null</code> in MSII <sup>1</sup> , MICI <sup>3</sup> , and MIRI <sup>4</sup> .
4	4 and 7	Fixing the Oracle Error

Notes:

1 `MTL_SYSTEM_ITEMS_INTERFACE`

2 `MTL_INTERFACE_ERRORS`

3 `MTL_ITEM_CATEGORIES_INTERFACE`

4 `MTL_ITEM_REVISIONS_INTERFACE`

When you encounter rows errored out due to validations, you must first fix the row corresponding to the error with the appropriate value. Then reset `PROCESS_FLAG = 1`, `INVENTORY_ITEM_ID = null`, and `TRANSACTION_ID = null`. Then resubmit the row for reprocessing.

## Multi-Thread Capability (Parallel Runs of the Item Interface)

The following tables have a NOT NULL NUMBER column called `SET_PROCESS_ID`:

- `MTL_SYSTEM_ITEMS_INTERFACE`

- MTL\_ITEM\_REVISIONS\_INTERFACE
- MTL\_ITEM\_CATEGORIES\_INTERFACE

The SET\_PROCESS\_ID column has a database default value of zero in the three tables above.

To have parallel runs of the Item Interface, the SET\_PROCESS\_ID column for records in the interface tables has to be populated with a positive, nonzero number; you can enter any SET\_PROCESS\_ID between one and 2,147,483,647. If you enter a value greater than this, then that interface record is not processed.

You should assign all organization records of the same item to the same set\_process\_id.

Example:

You have 1000 records in the MTL\_SYSTEM\_ITEMS\_INTERFACE table that you want to insert into MTL\_SYSTEM\_ITEMS, and you decide to have four parallel Item Interface processes to accomplish this task.

In the scripts you use to insert data into the MTL\_SYSTEM\_ITEMS\_INTERFACE table, populate the first 250 records with SET\_PROCESS\_ID = 1, the next 250 records with SET\_PROCESS\_ID = 2, and so on. It is a good idea to divide your records into roughly equal batch sizes.

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**Note:** If you have custom scripts to insert data into the MTL\_SYSTEM\_ITEMS\_INTERFACE table, you must modify them to include the SET\_PROCESS\_ID column. Also remember that any corresponding records that you enter in the MTL\_ITEM\_REVISIONS\_INTERFACE table should have the matching SET\_PROCESS\_ID values.

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From the Item Interface SRS launch form, specify the Process Set for a given run in the Process Set parameter. This initiates four Item Interface concurrent programs with the Process Set parameter set to 1, 2, 3, and 4 respectively. The four Item Interface processes run in parallel, each working on the set you specified.

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**Note:** Leaving a null in the Process Set parameter will process all rows regardless of the process set value. If you do not want the new multi-thread capability, you can populate the interface tables as you always have. The SET\_PROCESS\_ID column will get the default value of zero. When you run the Item Interface with the Process Set parameter blank, the interface processes all rows (regardless of the SET\_PROCESS\_ID value) as it did in earlier releases.

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### Multi-threading Rules

The Applications DBA for the site should enforce these rules:

- If you run an Item Interface process with the Process Set value null, you should not concurrently run any other Item Interface processes.
- Do not have parallel runs of the Item Interface on the same process set.
- Do not create an enormous number of parallel processes. All processes must access the same tables; increasing the number of processes will not always increase throughput.
- Do not use the same set\_process\_id for your records run in Create mode, as your records run in Update mode.

Not following these rules will cause multiple Item Interface processes trying to work on the same set of rows and lead to unpredictable errors.

### Concurrent Requests Used To Facilitate Parallel Processing

Use the Import Items request to facilitate parallel processing. This request can be accessed via the Item Reports and All Reports menu options, within the Inventory Responsibility. The request will launch five INCOIN processes in parallel that either Create or Update items, depending on the parameter settings.

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**Note:** Using the System Administrator Responsibility, the request can be modified to launch a greater or lesser number of parallel processes. (Navigator > Request > Set)

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When run in Create mode, this request calls INCOIN with five parallel sessions. The parameters default in as follows:

## **Parameters**

All Organizations

Yes

Validate Items

Yes

Process Items

Yes

Delete Processed Rows

Yes

Process Set

101, 102, 103, 104, 105

Create or Update Items

1

When run in Update mode, this request calls INCOIN with five parallel sessions.  
The parameters default in as follows:

## **Default Parameters**

All Organizations

Yes

Validate Items

Yes

Process Items

Yes

Delete Processed Rows

Yes

Process Set

201, 202, 203, 204, 205

Create or Update Items

2



## Customer Item and Customer Item Cross-Reference Open Interfaces

A number of manufacturing industries are characterized by a multi-tiered, just-in-time supply chain structure. Today's manufacturing environment requires a close working relationship between customers and suppliers along the entire supply chain. Suppliers must be able to react quickly to their customers' often changing requirements. By cross-referencing customer items with their own inventory items, suppliers can achieve faster order processing and shipments by allowing customers to place orders using customer item numbers.

You can import customer items and customer item cross-references from any legacy system into Oracle Inventory using the Customer Item Interface and the Customer Item Cross-Reference Interface. These interfaces validate all data that you import into Oracle Inventory. They also perform foreign key validation and check for attribute inter-dependencies, acceptable values, and value ranges. The interfaces ensure that the imported customer items and cross-references contain the same detail as items entered manually using the Customer Items and Customer Item Cross-References windows. Error codes and corresponding error messages for all errors detected during validation are written to the interface tables.

### Functional Overview - Customer Item Interface

The Customer Item Interface lets you import customer items into Oracle Inventory. For each customer item you must define related information such as the Customer and Item Definition Level. Customer Address is required if you set Item Definition Level 3 while Customer Category is required for Item Definition Level 2. In addition, you can provide Master and Detail Container information, Commodity Codes, Model Items and other attributes such as Demand Tolerances and Departure Planning Flags for each customer item. See: *Defining Customer Items, Oracle Inventory User's Guide*.

After you add new customer items to the MTL\_CI\_INTERFACE table, you run the Customer Item Interface. The Customer Item Interface reads each record from the interface table and adds items that are successfully validated to the MTL\_CUSTOMER\_ITEMS table. Validation of the customer items uses the same rules as the Customer Items window to ensure that only valid items are imported.

### Functional Overview - Customer Item Cross-Reference Interface

The Customer Item Cross-Reference Interface lets you import cross-references between customer items and existing Oracle Inventory items into your Master organization. For each customer item cross-reference, you must define the Customer, Customer Item, Customer Item Definition Level, and Rank. You create a

cross-reference to the associated Oracle Inventory item by specifying the item and its Master Organization.

You can create multiple cross-references between customer items and one Oracle Inventory item. You can also create multiple cross-references between Oracle Inventory items and one customer item. Cross references are defined at the Master Organization level of the cross-referenced inventory item. Once a customer item cross-reference to an Inventory item has been defined, it is applicable to all organizations assigned the cross-referenced Inventory Item.

You first add the customer item cross-reference records to the MTL\_CI\_XREFS\_INTERFACE table. Then the Customer Item Cross-Reference Interface validates each record and moves the successfully validated items to the MTL\_CUSTOMER\_ITEM\_XREFS table. Validation of the customer items cross-references uses the same rules as the Customer Item Cross-References window to ensure that only valid cross-references are imported.

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**Attention:** The Customer Item Interface must be run successfully before the Customer Item Cross-Reference Interface. This is to ensure that a customer item has been defined before an attempt is made to cross-reference it with an Oracle Inventory item. The Customer Item Cross-Reference Interface errors out if an attempt is made to create a cross-reference to an invalid inventory item.

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## Workflow - Customer Item Interface and Customer Item Cross-Reference Interface

Before you use the Customer Item and Customer Item Cross-Reference Interfaces, you must write and run custom programs that extract customer item and customer item cross-reference information from your source system and insert it into the MTL\_CI\_INTERFACE and MTL\_CI\_XREFS\_INTERFACE tables. After you load the customer items and customer item cross-references into these interface tables, you run the Customer Item and Customer Item Cross-Reference Interfaces to import the data. These interfaces assign defaults, validate data you include, and then import the new customer items and customer item cross-references.

## Interface Runtime Options

You can access the Customer Item and Customer Item Cross-Reference Interfaces via the Reports, All menu in Oracle Inventory. (See: Importing Customer Items, *Oracle Inventory User's Guide* and Importing Customer Item Cross-References, *Oracle*

*Inventory User's Guide*.) Both Interfaces offer two options at runtime: Abort on Error and Delete Successful Records.

### **Abort on Error**

Valid values for this option are Yes or No. The default is No.

**Yes** - Both the Customer Item Interface and the Customer Item Cross-Reference Interface will abort execution if an error is encountered during validation of a record. No additional records will be processed. The ERROR\_CODE and ERROR\_EXPLANATION columns in the MTL\_CI\_INTERFACE and MTL\_CI\_XREFS\_INTERFACE tables are populated with the appropriate error code and error explanation for the record that caused the Interface to error out. Records that were successfully validated are transferred to the MTL\_CUSTOMER\_ITEMS and MTL\_CUSTOMER\_ITEM\_XREFS tables, respectively.

**No** - Processing of the records in the Interface tables continues until the end of the table is reached. For all errors encountered during validation of records in the Customer Item Interface or Customer Item Cross-Reference Interface, the ERROR\_CODE and the ERROR\_EXPLANATION columns in the MTL\_CI\_INTERFACE and MTL\_CI\_XREFS\_INTERFACE tables are populated with the appropriate error code and error description. Records that were successfully validated are transferred to the MTL\_CUSTOMER\_ITEMS and MTL\_CUSTOMER\_ITEM\_XREFS tables, respectively.

### **Delete Successful Records**

Valid values for this option are Yes or No. The default is Yes.

**Yes** - Successfully validated records in the Customer Item Interface are copied over to the MTL\_CUSTOMER\_ITEMS table and automatically deleted from the MTL\_CI\_INTERFACE table. Similarly, for the Customer Item Cross-Reference Interface, successfully validated records are copied to the MTL\_CUSTOMER\_ITEM\_XREFS table and automatically deleted from the MTL\_CI\_XREFS\_INTERFACE table.

**No** - For successfully validated records, the Customer Item Interface and Customer Item Cross-Reference Interface simply populate the MTL\_CUSTOMER\_ITEMS and MTL\_CUSTOMER\_ITEM\_XREFS tables without deleting records from the interface tables.

## Customer Item Interface Table

### Table Description

The Customer Item Interface table, `MTL_CI_INTERFACE`, includes all the columns in the Customer Items table, `MTL_CUSTOMER_ITEMS`. The columns are discussed after the table.

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**Note:** Information about columns that need to be populated for audit trail and maintenance purposes can be found in the Table Administration and Audit Trail section. See: [Cycle Count Entries Interface](#) on page 7-83.

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For information about columns not discussed in the Interface manual, see Table and View Definitions, *Oracle Inventory Technical Reference Manual*.

**Table 7–16 List of Columns, Customer Item Interface**

Field Name	Type	Required
PROCESS_FLAG	Varchar2(1)	x
PROCESS_MODE	Number	x
LAST_UPDATED_BY	Number	x
LAST_UPDATE_DATE	Date	x
LAST_UPDATE_LOGIN	Number	
CREATED_BY	Number	x
CREATION_DATE	Date	x
REQUEST_ID	Number	
PROGRAM_APPLICATION_ID	Number	
PROGRAM_ID	Number	
PROGRAM_UPDATE_DATE	Date	
TRANSACTION_TYPE	Varchar2(6)	x
CUSTOMER_NAME	Varchar2(50)	Conditionally
CUSTOMER_NUMBER	Varchar2(30)	Conditionally
CUSTOMER_ID	Number	Conditionally

**Table 7–16 List of Columns, Customer Item Interface**

Field Name	Type	Required
CUSTOMER_CATEGORY_CODE	Varchar2(30)	Conditionally
CUSTOMER_CATEGORY	Varchar2(80)	Conditionally
ADDRESS1	Varchar2(240)	Conditionally
ADDRESS2	Varchar2(240)	Conditionally
ADDRESS3	Varchar2(240)	Conditionally
ADDRESS4	Varchar2(240)	Conditionally
CITY	Varchar2(50)	Conditionally
STATE	Varchar2(50)	Conditionally
COUNTY	Varchar2(50)	Conditionally
COUNTRY	Varchar2(50)	Conditionally
POSTAL_CODE	Varchar2(30)	Conditionally
ADDRESS_ID	Number	Conditionally
CUSTOMER_ITEM_NUMBER	Varchar2(50)	x
CUSTOMER_ITEM_DESC	Varchar2(240)	
ITEM_DEFINITION_LEVEL	Varchar2(1)	Conditionally
ITEM_DEFINITION_LEVEL_DESC	Varchar2(30)	Conditionally
MODEL_CUSTOMER_ITEM_NUMBER	Varchar2(50)	
MODEL_CUSTOMER_ITEM_ID	Number	
COMMODITY_CODE	Varchar2(30)	
COMMODITY_CODE_ID	Number	
MASTER_CONTAINER_SEGMENTn	Varchar2(40)	
MASTER_CONTAINER	Varchar2(2000)	
MASTER_CONTAINER_ITEM_ID	Number	
CONTAINER_ITEM_ORG_NAME	Varchar2(60)	
CONTAINER_ITEM_ORG_CODE	Varchar2(3)	
CONTAINER_ITEM_ORG_ID	Number	
DETAIL_CONTAINER_SEGMENTn	Varchar2(40)	

**Table 7–16 List of Columns, Customer Item Interface**

Field Name	Type	Required
DETAIL_CONTAINER	Varchar2(2000)	
DETAIL_CONTAINER_ITEM_ID	Number	
MIN_FILL_PERCENTAGE	Number	
DEP_PLAN_REQUIRED_FLAG	Varchar2(1)	
DEP_PLAN_PRIOR_BLD_FLAG	Varchar2(1)	
INACTIVE_FLAG	Varchar2(1)	x
ATTRIBUTE_CATEGORY	Varchar2(30)	
ATTRIBUTE <sub>n</sub>	Varchar2(150)	
DEMAND_TOLERANCE_POSITIVE	Number	
DEMAND_TOLERANCE_NEGATIVE	Number	
ERROR_CODE	Varchar2(9)	
ERROR_EXPLANATION	Varchar2(2000)	

## Customer Item Interface - Defining a Unique Customer Item

You must define a unique record in each row of the MTL\_CI\_INTERFACE table. To create a unique record in the MTL\_CI\_INTERFACE table, you must define a Customer Item and the associated Customer, Category Code, Address, and Item Definition Level for each record.

### Customer Item

To create a unique Customer Item record in the MTL\_CI\_INTERFACE table, you must define a Customer Item number and Customer Item Description in the CUSTOMER\_ITEM\_NUMBER and CUSTOMER\_ITEM\_DESC fields respectively. The CUSTOMER\_ITEM\_NUMBER is a required field and is sufficient by itself for validation. However, it is strongly recommended that the CUSTOMER\_ITEM\_DESC field be populated with accurate information to clearly identify customer items by their description.

### Customer

You define a customer by populating either of the CUSTOMER\_NAME, CUSTOMER\_NUMBER, or CUSTOMER\_ID fields. Note that at least one of these

fields must be entered for validation. The information provided in these fields is validated against the Oracle table RA\_CUSTOMERS. The Interface will error out with the appropriate error code if the customer information cannot be validated. If more than one field is populated to identify a customer, then only the data in the highest priority field is used for validation according to the following rules of precedence:

- CUSTOMER\_ID has priority over CUSTOMER\_NUMBER.
- CUSTOMER\_NUMBER has priority over CUSTOMER\_NAME.

### **Address Category**

Address Category is a grouping of multiple customer ship-to addresses that have been defined in the RA\_ADDRESSES table. This grouping is based on functional rules specific to your business and allows you to select multiple customer addresses by specifying the Address Category. The Address Category can be defined in the Interface tables by populating either one of the CUSTOMER\_CATEGORY\_CODE or the CUSTOMER\_CATEGORY fields. However, these are conditionally required fields and may be Null. Address Category information is required if Item Definition Level is set to 2 or Item Definition Level Description is set to "Address Category." Any information entered in these fields is validated against the RA\_ADDRESSES table.

If both fields are populated to define an Address Category, only data in the highest priority field is used for validation against the RA\_ADDRESSES table according to the following rule of precedence:

- CUSTOMER\_CATEGORY\_CODE has precedence over CUSTOMER\_CATEGORY.

### **Customer Address**

You can define the Customer Address information by entering either the detail customer address or the customer ADDRESS\_ID. You must enter the detail customer address information, including the street address (ADDRESS1, ADDRESS2, ADDRESS3, ADDRESS4), CITY, STATE, COUNTY, COUNTRY and POSTAL\_CODE, exactly as it is entered in Oracle's RA\_ADDRESSES table, including any blank spaces, special characters and capitalized alphabets. The customer address you enter must exactly match the information in the RA\_ADDRESSES table for successful validation.

Alternatively, you can enter the customer's ADDRESS\_ID. This is also validated against the RA\_ADDRESSES table, and detail customer address information is picked up from this table for successful validation.

Customer Address information is required if the Item Definition Level is set to 3 or the Item Definition Level Description is set to Address.

### **Customer Item Definition Level**

A customer item can be defined at one of three different levels: Customer level, Address Category level or Address level.

A customer item defined at the Customer level is recognized across all Addresses and Address Categories for that customer. However, if you ship an item to multiple customer ship-to sites that have been grouped as an Address Category, you can define the customer item for that specific Address Category. You can define a customer item at the Address level if you ship the item to only one ship-to site for a customer.

You must define the Customer Item Definition Level by populating either the ITEM\_DEFINITION\_LEVEL or the ITEM\_DEFINITION\_LEVEL\_DESC column. Valid values for the ITEM\_DEFINITION\_LEVEL are 1, 2, or 3. The corresponding values for ITEM\_DEFINITION\_LEVEL\_DESC are seeded in the MFG\_LOOKUPS table and are Customer, Address Category, and Address respectively.

If both the fields are populated to identify the Item Definition Level, then only data in the highest priority field is used for validation according to the following rule of precedence:

- ITEM\_DEFINITION\_LEVEL has higher priority than the ITEM\_DEFINITION\_LEVEL\_DESC

## **Customer Item Interface - Other fields**

### **Transaction\_Type**

TRANSACTION\_TYPE is a required field. The interface will error out if a required field is missing or contains invalid data. Always set the TRANSACTION\_TYPE to CREATE to create a new item in the MTL\_CUSTOMER\_ITEMS table. This is the only value supported currently by this interface.

### **Model items**

You can define a customer item as a model item that can be referenced by other customer items. In order to define a model customer item, you must first reference the customer item to a valid Oracle model item, which has the BOM Item Type attribute set to Model. (See: Bills of Material Attribute Group, *Oracle Inventory User's*

*Guide.*) Once a model customer item has been defined successfully, you can reference other customer items to it.

The Interface performs validation starting with the first record in MTL\_CI\_INTERFACE until it reaches the end of the table, or errors out if the Abort on Error option is set to Yes. Thus, the base model customer item must precede any Customer items that reference it, in the MTL\_CI\_INTERFACE table. The base model customer item must be validated successfully before other model customer items can be created that reference it; otherwise the Interface will error out.

You can define a model customer item by either specifying the MODEL\_CUSTOMER\_ITEM\_ID or the MODEL\_CUSTOMER\_ITEM\_NUMBER. If both the fields are specified, then MODEL\_CUSTOMER\_ITEM\_ID has precedence over MODEL\_CUSTOMER\_ITEM\_NUMBER for validation. Any information in MODEL\_CUSTOMER\_ITEM\_NUMBER is completely ignored in this case.

### **Commodity Codes**

Commodity codes are used to group customer items in much the same fashion as the use of category codes to group inventory items. The business functionality and meaning of these codes are user-defined. For example, after the MTL\_CUSTOMER\_ITEMS table has been successfully populated, commodity codes can be used to query up all customer items that belong to a specific commodity code.

Commodity Codes are defined at the Master Organization level in Oracle Inventory and thus, are applicable to all organizations belonging to the Master Organization. You must define the Commodity code by specifying either the COMMODITY\_CODE or the COMMODITY\_CODE\_ID for each Customer Item. If both fields are populated to define a commodity code, only data in the highest priority field is used for validation according to the following rule of precedence:

- COMMODITY\_CODE\_ID has higher priority than the COMMODITY\_CODE

### **Containers**

A container item could be a pallet, box, bag or any other inventory item that needs to be tracked between a customer and a supplier. Container items can be defined by setting the Container item attribute to Yes. See: Physical Attribute Group, *Oracle Inventory User's Guide*.

In the Customer Item Interface, you set the default master or detail container for a customer item. A detail container is a subunit, or the inner container, of a larger outer unit, the master container. For example, a box can be a detail container for a customer item, while a pallet can be its master container.

Containers are defined at the master organization level in Oracle Inventory. You must specify the master organization for each master container in the Customer Item Interface. Similarly, you must specify the master container for each detail container. The interface will error out with the appropriate error code if no master organization is specified for a master container or if no master container is specified for a detail container.

A master container can be defined by populating either the MASTER\_CONTAINER or the MASTER\_CONTAINER\_ITEM\_ID fields. Alternatively, you can use the MASTER\_CONTAINER\_SEGMENTn field to specify a multi-segment container. If more than one field is populated to identify a master container, then only data in the highest priority field is used for validation according to the following rules of precedence:

- MASTER\_CONTAINER\_ITEM\_ID has priority over MASTER\_CONTAINER.
- MASTER\_CONTAINER has priority over SEGMENTn values.

Similarly, a detail container can be defined by populating either the DETAIL\_CONTAINER, DETAIL\_CONTAINER\_ITEM\_ID or the SEGMENTn values for the descriptive flexfield. The same rules of precedence apply as for master container above.

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**Warning:** The interface derives each item's segment values by searching for the segment separator to indicate the end of one segment value and the start of the next segment value. Include the appropriate segment separator when populating the MASTER\_CONTAINER or DETAIL\_CONTAINER fields for a multi-segment key flexfield.

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**Warning:** If you enter values for SEGMENTn columns, ensure that the segment values you populate correspond to the key flexfield segments that you defined for your items. The interface assumes that you are using segments in sequential order beginning with SEGMENT1.

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You can also specify the MIN\_FILL\_PERCENTAGE attribute when you define the master container. The Minimum Fill Percentage item attribute defines the minimum percentage of the master, or outer container, that should be filled by the detail, or

inner container, before the master container can be shipped. See: Physical Attribute Group, *Oracle Inventory User's Guide*.

### **Departure Planning Flags**

The DEP\_PLAN\_REQUIRED\_FLAG and DEP\_PLAN\_PRIOR\_BLD\_FLAG fields can have the values of 1 for Yes and 2 for No.

The DEP\_PLAN\_REQUIRED\_FLAG is used to signal Oracle Shipping to perform Departure Planning for this item. The DEP\_PLAN\_PRIOR\_BLD\_FLAG is used to indicate that Departure Planning is required before building this item. If the DEP\_PLAN\_PRIOR\_BLD\_FLAG is Yes, then the DEP\_PLAN\_REQUIRED\_FLAG must also be set to Yes.

### **Inactive\_Flag**

INACTIVE\_FLAG is a required field and can be set to 1 for Yes or 2 for No. You can set the INACTIVE\_FLAG to Yes to deactivate a customer item in Oracle Inventory. The customer item information is still carried over from MTL\_CI\_INTERFACE to the MTL\_CUSTOMER\_ITEMS table if the record is successfully validated. However, the Customer Item is considered as status Inactive in Oracle Inventory.

### **Descriptive Flex- SEGMENTn**

The ATTRIBUTE\_CATEGORY and ATTRIBUTE1 - ATTRIBUTE15 columns are used for the descriptive flexfield information. Note that the interface does not perform any validation on the SEGMENTn fields even though you may have defined a valid value set for the descriptive flexfield.

### **Demand Tolerance Range**

The DEMAND\_TOLERANCE\_POSITIVE and DEMAND\_TOLERANCE\_NEGATIVE fields are used to define the percentage range within which the order quantities for a customer item are acceptable. This range is based on a customer's last order for the same item. No range validation is performed for the first order of an item since no history information exists in the demand tables.

If a customer order falls outside the range defined by these fields then the demand processor will raise an exception to that order. This feature is designed to flag any order entry or EDI transfer errors, and to draw your attention towards substantial changes in order volume activity from a customer.

### Error Codes

If any errors are found during validation, then the error codes and the corresponding error description are written to the ERROR\_CODE and the ERROR\_EXPLANATION columns respectively. Note that the interface overwrites any data already in these fields.

### Record Status

The PROCESS\_FLAG and PROCESS\_MODE columns report the status of the record after the import and validation process is complete. Data already in these columns is ignored and overwritten if necessary. Note that these are required columns and should be populated with 1.

## Customer Item Cross-Reference Interface Table

### Table Description

The Customer Item Cross-Reference Interface table, MTL\_CI\_XREFS\_INTERFACE, contains all the columns in the Customer Item Cross-Reference table, MTL\_CUSTOMER\_ITEM\_XREFS.

Many columns in the Customer Item Cross-Reference Interface table are similar to columns in the Customer Item Interface table. Columns that identify the Customer, Customer Category, Address and Item Definition Level are subject to the same rules and definitions as those described for the Customer Item Interface table. You can also refer to the previous section for explanation of Descriptive Flexfields, PROCESS\_FLAG and PROCESS\_MODE, ERROR\_CODE and ERROR\_EXPLANATION, INACTIVE\_FLAG, and TRANSACTION\_TYPE columns. See: [Customer Item Interface Table](#) on page 7-71.

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**Note:** Information about columns that need to be populated for audit trail and maintenance purposes can be found in the Table Administration and Audit Trail section. See: [Cycle Count Entries Interface](#) on page 7-83.

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**Note:** For information about columns not discussed in the Interface manual, see Table and View Definitions, *Oracle Inventory Technical Reference Manual*.

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This section provides an explanation of fields used to define the Inventory Item, Master Organization, and Rank in the MTL\_CI\_XREFS\_INTERFACE table.

**Table 7–17 List of Columns, Customer Item Cross-Reference Interface**

Field Name	Type	Required	Derived	Optional
PROCESS_FLAG	Varchar2(1)	x		
PROCESS_MODE	Number	x		
LAST_UPDATE_DATE	Date	x		
LAST_UPDATED_BY	Number(15)	x		
CREATION_DATE	Date	x		
CREATED_BY	Number(15)	x		
LAST_UPDATE_LOGIN	Number(15)			
REQUEST_ID	Number(15)			
PROGRAM_APPLICATION_ID	Number(15)			
PROGRAM_ID	Number(15)			
PROGRAM_UPDATE_DATE	Date			
TRANSACTION_TYPE	Varchar2(6)	x		
CUSTOMER_NAME	Varchar2(50)	Conditionally		
CUSTOMER_NUMBER	Varchar2(30)	Conditionally		
CUSTOMER_ID	Number	Conditionally		
CUSTOMER_CATEGORY_CODE	Varchar2(30)	Conditionally		
CUSTOMER_CATEGORY	Varchar2(80)	Conditionally		
ADDRESS1	Varchar2(240)	Conditionally		
ADDRESS2	Varchar2(240)	Conditionally		
ADDRESS3	Varchar2(240)	Conditionally		
ADDRESS4	Varchar2(240)	Conditionally		
CITY	Varchar2(50)	Conditionally		
STATE	Varchar2(50)	Conditionally		
COUNTY	Varchar2(50)	Conditionally		
COUNTRY	Varchar2(50)	Conditionally		

**Table 7–17 List of Columns, Customer Item Cross-Reference Interface**

Field Name	Type	Required	Derived	Optional
POSTAL_CODE	Varchar2(30)	Conditionally		
ADDRESS_ID	Number	Conditionally		
CUSTOMER_ITEM_NUMBER	Varchar2(50)	x		
CUSTOMER_ITEM_ID	Number			
ITEM_DEFINITION_LEVEL_DESC	Varchar2(30)	Conditionally		
ITEM_DEFINITION_LEVEL	Varchar2(1)	Conditionally		
INVENTORY_ITEM_SEGMENTn	Varchar2(40)	Conditionally		
INVENTORY_ITEM	Varchar2(2000)	Conditionally		
INVENTORY_ITEM_ID	Number	Conditionally		
MASTER_ORGANIZATION_NAME	Varchar2(60)	Conditionally		
MASTER_ORGANIZATION_CODE	Varchar2(3)	Conditionally		
MASTER_ORGANIZATION_ID	Number	Conditionally		
PREFERENCE_NUMBER	Number	x		
INACTIVE_FLAG	Varchar2(1)	x		
ATTRIBUTE_CATEGORY	Varchar2(30)			
ATTRIBUTEn	Varchar2(150)			
ERROR_CODE	Varchar2(9)			
ERROR_EXPLANATION	Varchar2(2000)			

### Inventory Item

You must define a valid inventory item for each customer item to define a successful cross-reference relationship. The inventory item must be a valid item in the Master Organization for which the cross-reference is being defined. The interface errors out with the appropriate error code if an invalid inventory item is specified.

You can define an inventory item by specifying either the INVENTORY\_ITEM or the INVENTORY\_ITEM\_ID. Alternatively, you can define an inventory item by specifying the SEGMENTn values of the item key flexfield for a multi-segment item. The inventory item is validated against the MTL\_SYSTEM\_ITEMS table for the specified Master Organization.

If more than one field is populated to identify an inventory item, then only data in the highest priority field is used for validation according to the following rules of precedence:

- INVENTORY\_ITEM\_ID has priority over INVENTORY\_ITEM.
- INVENTORY\_ITEM has priority over SEGMENTn values.

### **Master Organization**

For each inventory item in the Customer Item Cross-Reference table, you must also specify the Master Organization for which the cross-reference is being defined. The interface errors out with the appropriate error code if an invalid Master Organization is specified.

You can define a Master Organization by specifying either the MASTER\_ORGANIZATION\_ID or the MASTER\_ORGANIZATION\_CODE of the organization. If both fields are specified, then MASTER\_ORGANIZATION\_ID has precedence over MASTER\_ORGANIZATION\_CODE.

### **Rank**

You can define multiple references between a customer item and several inventory items. This can be used to define alternate, or substitute, inventory items for a customer item. In this case, a preference ranking is established to determine the item that must be processed in Oracle Inventory when a customer item is demanded.

You must specify the Rank of the cross-referenced relationship for each cross-reference that you define. The top ranked Inventory item is processed before a lower ranked item in the supplying organization. Thus, an Inventory item with a rank of 1 will be processed before another item with a rank of 2 that references the same Customer Item. This is a required field and must be entered.

# Cycle Count Entries Interface

You can import cycle count entries from an external system into Oracle Inventory using the Cycle Count Entries Interface. This interface validates all data that you import into Oracle Inventory. It also performs foreign key validation and checks for attribute inter-dependencies, acceptable values, and value ranges. The interface ensures that the imported cycle count entries contain the same detail as items entered manually using the Cycle Count Entries window. Errors detected during validation are written to the Cycle Count Interface Errors table.

## Interface Runtime Options

You can access the Cycle Count Entries Interface via the Reports, All menu in Oracle Inventory. The Interface offers the following options at runtime:

- Cycle Count Name
- Number of Workers
- Commit Point
- Error Report Level
- Delete Successful Records

## Cycle Count Entries Interface Table

### Table Description

The Cycle Count Entries Interface table, `MTL_CC_ENTRIES_INTERFACE`, includes all the columns in the Cycle Count Entries table, `MTL_CYCLE_COUNT_ENTRIES`.

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**Note:** Information about columns that need to be populated for audit trail and maintenance purposes can be found in the Table Administration and Audit Trail section. See: [Table Administration and Audit Trail](#) on page 7-87.

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**Note:** For information about columns not discussed in the Interface manual, see Table and View Definitions, *Oracle Inventory Technical Reference Manual*.

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**Table 7–18 List of Columns, Cycle Count Entries Interface**

Field Name	Type	Null
CC_ENTRY_INTERFACE_ID	Number	N
ORGANIZATION_ID	Number	N
LAST_UPDATE_DATE	Date	N
LAST_UPDATED_BY	Number	N
CREATION_DATE	Date	N
CREATED_BY	Number	N
LAST_UPDATE_LOGIN	Number	Y
CC_ENTRY_INTERFACE_GROUP_ID	Number	Y
CYCLE_COUNT_ENTRY_ID	Number	Y
ACTION_CODE	Number	N
CYCLE_COUNT_HEADER_ID	Number	Y
CYCLE_COUNT_HEADER_NAME	Varchar2(30)	Y
COUNT_LIST_SEQUENCE	Number	Y
INVENTORY_ITEM_ID	Number	Y
ITEM_SEGMENT1-20	Varchar2(40)	Y
REVISION	Varchar2(3)	Y
SUBINVENTORY	Varchar2(10)	Y
LOCATOR_ID	Number	Y
LOCATOR_SEGMENT1-20	Varchar2(40)	Y
LOT_NUMBER	Varchar2(30)	Y
SERIAL_NUMBER	Varchar2(30)	Y
PRIMARY_UOM_QUANTITY	Number	Y
COUNT_UOM	Varchar2(3)	Y
COUNT_UNIT_OF_MEASURE	Varchar2(25)	Y
COUNT_QUANTITY	Number	Y
SYSTEM_QUANTITY	Number	Y
ADJUSTMENT_ACCOUNT_ID	Number	Y

**Table 7–18 List of Columns, Cycle Count Entries Interface**

Field Name	Type	Null
ACCOUNT_SEGMENT1-30	Varchar2(25)	Y
COUNT_DATE	Date	Y
EMPLOYEE_ID	Number	Y
EMPLOYEE_FULL_NAME	Varchar2(240)	Y
REFERENCE	Varchar2(240)	
TRANSACTION_REASON_ID	Number	Y
TRANSACTION_REASON	Varchar2(30)	Y
REQUEST_ID	Number	Y
PROGRAM_APPLICATION_ID	Number	Y
PROGRAM_ID	Number	Y
PROGRAM_UPDATE_DATE	Date	Y
LOCK_FLAG	Number	Y
PROCESS_FLAG	Number	Y
PROCESS_MODE	Number	Y
VALID_FLAG	Number	Y
DELETE_FLAG	Number	Y
STATUS_FLAG	Number	Y
ERROR_FLAG	Number	Y
ATTRIBUTE_CATEGORY	Varchar2(30)	Y
ATTRIBUTE1-15	Varchar2(150)	Y
PROJECT_ID	Number	Y
TASK_ID	Number	Y

## Cycle Count Interface Errors Table

### Table Description

The Cycle Count Interface Errors table, MTL\_CC\_INTERFACE\_ERRORS, is populated with errors encountered while processing interface rows. This table provides for the reporting of multiple errors for each interface record.

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**Note:** Information about columns that need to be populated for audit trail and maintenance purposes can be found in the Table Administration and Audit Trail section. See: [Cycle Count Entries Interface](#) on page 7-83.

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**Note:** For information about columns not discussed in the Interface manual, see Table and View Definitions, *Oracle Inventory Technical Reference Manual*.

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**Table 7–19 List of Columns, Cycle Count Interface Errors**

Field Name	Type	Null
INTERFACE_ERROR_ID	Number	N
CC_ENTRY_INTERFACE_ID	Number	N
LAST_UPDATE_DATE	Date	N
LAST_UPDATED_BY	Number	N
CREATION_DATE	Date	N
CREATED_BY	Number	N
LAST_UPDATE_LOGIN	Number	Y
REQUEST_ID	Number	Y
PROGRAM_APPLICATION_ID	Number	Y
PROGRAM_ID	Number	Y
PROGRAM_UPDATE_DATE	Date	Y
ERROR_MESSAGE	Varchar2(240)	Y
ERROR_COLUMN_NAME	Varchar2(32)	Y
ERROR_TABLE_NAME	Varchar2(30)	Y
MESSAGE_NAME	Varchar2(30)	Y

## Table Administration and Audit Trail

Some columns in the Interface tables are required for audit trail maintenance and table administration data. This section explains the purpose of these Standard Who columns.

- **LAST\_UPDATE\_DATE** should contain the date on which the record was last updated. Use the SQL function SYSDATE in this column to automatically record the current system date when the record is updated. This is a required field.
- **LAST\_UPDATED\_BY** field is populated with the user identification number of the person updating the customer item tables. Follow your organization's convention for the user identification number to populate this field. This is a required field.
- **CREATION\_DATE** contains the date on which a particular customer item record was created. Populate this field according to your organization's

convention if this information is not available from the legacy system. This is a required field.

- **CREATED\_BY** contains the user identification number of the person who originally created this customer item record. Follow your organization's convention for generating user identification numbers to populate this field if this information is not available from the legacy system. This is a required field.
- **LAST\_UPDATE\_LOGIN** is not a required field. This field is currently not being used and should be populated with -1.
- **REQUEST\_ID** is the concurrent request identifier of the last concurrent program to affect that record. This is not a required field and can be Null.
- **PROGRAM\_APPLICATION\_ID** is the application identifier of the owner of the program to last affect that record. This is not a required field and can be Null.
- **PROGRAM\_ID** is the program identifier of the last record to affect the record. This is not a required field and can be Null.
- **PROGRAM\_UPDATE\_DATE** is the last date on which a program updated that record. This is not a required field and can be Null.

# Cycle Count Application Program Interface

The Cycle Count API is a public API that allows you to perform on-line processing for cycle count records. This API takes a cycle count interface row that has been passed through the `p_interface_rec` parameter and processes it based on the values of the parameter fields. The Cycle Count API includes the public procedure `import_countrequest`.

## Setting Up the Cycle Count API

### Parameter Descriptions

The following chart lists all parameters used by the Cycle Count API. Additional information on these parameters follows the chart.

### IMPORT\_COUNTREQUEST

**Table 7–20** Cycle Count API Parameters

Parameter	Usage	Type	Required	Derived	Optional
<code>p_api_version_number</code>	IN	Number	x		
<code>p_init_msg_list</code>	IN	Varchar2			x
<code>p_commit</code>	IN	Varchar2			x
<code>p_validation_level</code>	IN	Number			x
<code>x_return_status</code>	OUT	Varchar2			
<code>x_msg_count</code>	OUT	Number			
<code>x_msg_data</code>	OUT	Varchar2			
<code>p_interface_rec</code>	IN	Record	x		

### `p_api_version_number`

Indicates the API version number.

### `p_init_msg_list`

Requests that the API initialize the message list on your behalf. If the `x_msg_count` is greater than 1, then the list of messages must be retrieved using the call `FND_MSG_PUB.GET`. The values are:

- `p_msg_index => I`
- `p_encoded => F`
- `p_data => 1_message`
- `p_msg_index_out => 1_msg_index_out`  
where `1_message` and `1_msg_index_out` are local variables of types `Varchar2(2000)` and `Number` respectively.

Default Value: `FND_API.G_FALSE`

**p\_commit**

Requests that the API update information for you after it completes its function.

Default Value: `FND_API.G_FALSE`

**p\_validation\_level**

Default Value: `FND_API.G_VALID_LEVEL_FULL`

**x\_return\_status**

Requests that the API return the status of the data for you after it completes its function. Valid values include:

- Success: `FND_API.G_RET_STS_SUCCESS`
- Error: `FND_API.G_RET_STS_ERROR`
- Unexpected Error: `FND_API.G_RET_STS_UNEXP_ERROR`

**x\_msg\_count**

Indicates the number of error messages the API has encountered.

**x\_msg\_data**

Displays error message text. If the `x_msg_count` is equal to 1, then this contains the actual message.

**p\_interface\_rec**

Indicates the complete interface record.

## Validation of Cycle Count API

### Standard Validation

Oracle Inventory validates all input parameters in the Cycle Count API. For specific information on the data implied by these parameters, see your Oracle Inventory Technical Reference Manual for details.

### Error Handling

If any validation fails, the API will return an error status to the calling module. The Cycle Count API processes the rows and reports the following values for every record.

**Table 7–21** *Cycle Count API Record Values*

Condition	Message Returned	Meaning of Message Returned
Success	S	Process succeeded
Failure	E	Expected error
Failure	U	Unexpected error

### See Also

*Oracle Applications Message Reference Manual* This manual is available in HTML format on the documentation CD-ROM for Release 11i.

# Kanban Application Program Interface

The Kanban API is a public API that allows you to update the supply status of kanban cards. To accomplish this task, you use the public procedure `update_card_supply_status`.

## Setting Up the Kanban API

### Parameter Descriptions

The following chart lists all parameters used by the `update_card_supply_status` procedure. Additional information on these parameters follows the chart.

### UPDATE\_CARD\_SUPPLY\_STATUS

*Table 7-22 Update\_Card\_Supply\_Status Parameters*

Parameter	Usage	Type	Required	Derived	Optional
<code>p_api_version_number</code>	IN	Number	x		
<code>p_init_msg_level</code>	IN	Varchar2		x	
<code>p_commit</code>	IN	Varchar2		x	
<code>x_msg_count</code>	OUT	Number			
<code>x_msg_data</code>	OUT	Varchar2			
<code>x_return_status</code>	OUT	Varchar2			
<code>p_kanban_card_id</code>	IN	Varchar2	x		
<code>p_supply_status</code>	IN	Varchar2	x		

#### **p\_api\_version\_number**

Indicates the API version number.

#### **p\_init\_msg\_list**

Requests that the API initialize the message list on your behalf. If the `x_msg_count` is greater than 1, then the list of messages must be retrieved using the call `FND_MSG_PUB.GET`. The values are:

- `p_msg_index => 1`
- `p_encoded => F`

- `p_data => 1_message`
- `p_msg_index_out => 1_msg_index_out`  
where `1_message` and `1_msg_index_out` are local variables of types `Varchar2(2000)` and `Number` respectively.

Default Value: `FND_API.G_FALSE`

#### **p\_commit**

Requests that the API update information for you after it completes its function.

Default Value: `FND_API.G_FALSE`

#### **x\_msg\_count**

Indicates the number of error messages the API has encountered.

#### **x\_msg\_data**

Displays error message text. If the `x_msg_count` is equal to 1, then this contains the actual message.

#### **x\_return\_status**

Requests that the API return the status of the data for you after it completes its function. Valid values include:

- Success: `FND_API.G_RET_STS_SUCCESS`
- Error: `FND_API.G_RET_STS_ERROR`
- Unexpected Error: `FND_API.G_RET_STS_UNEXP_ERROR`

#### **p\_kanban\_card\_id**

Indicates the kanban card identifier to be updated.

#### **p\_supply\_status**

Indicates the updated status of the kanban card.

## Validation of Kanban API

### Standard Validation

Oracle Inventory validates all input parameters in the `update_card_supply_status` procedure. For specific information on the data implied by these parameters, see your Oracle Inventory Technical Reference Manual for details.

### Error Handling

If any validation fails, the API will return an error status to the calling module. The Kanban API processes the rows and reports the following values for every record.

**Table 7–23    Error Handling**

Condition	Message Returned	Meaning of Message Returned
Success	S	Process succeeded
Failure	E	Expected error
Failure	U	Unexpected error

### See Also

*Oracle Applications Message Reference Manual* This manual is available in HTML format on the documentation CD-ROM for Release 11*i*.

## Lot Application Program Interface

The Lot API is a public API that allows you to insert a lot into the MTL\_LOT\_NUMBERS table. It performs all the necessary validation before it inserts the lot. This API derives the expiration date from the controls set for shelf\_life\_code and shelf\_life\_days for the item. If the API is able to insert the lot, it returns a status of success. If the lot already exists for the same item and organization, the API also returns a status of success; however, it places a message on the stack to indicate that the lot already exists. The Lot API returns an error status if there is any validation error. Standard WHO information is used from the FND\_GLOBAL API. The Lot API has one public procedure, insertlot.

### Setting Up the Lot API

#### Parameter Descriptions

The following chart lists all parameters used by the insertlot procedure. Additional information on these parameters follows the chart.

#### INSERTLOT

**Table 7–24** *Insertlot Procedure Parameters*

Parameter	Usage	Type	Required	Derived	Optional
p_inventory_item_id	IN	Number	x		
p_organization_id	IN	Number	x		
p_lot_number	IN	Varchar2	x		
p_expiration_date	IN/OUT	Date		x	x
x_return_status	OUT	Varchar2		x	

#### **p\_inventory\_item\_id**

Indicates the inventory item identifier.

#### **p\_organization\_id**

Indicates the organization identifier.

#### **p\_lot\_number**

Indicates the lot number.

**p\_expiration\_date**

Indicates the expiration date.

**x\_return\_status**

Requests that the API return the status of the data for you after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_ERROR
- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

**Validation of Lot API**

**Standard Validation**

Oracle Inventory validates all input parameters in the Lot API. For specific information on the data implied by these parameters, see your Oracle Inventory Technical Reference Manual for details.

**Error Handling**

If any validation fails, the API will return error status to the calling module. The Pick Release API processes the rows and reports the following values for every record.

**Table 7–25   Error Handling**

Condition	Message Returned	Meaning of Message Returned
Success	S	Process succeeded
Failure	E	Expected error
Failure	U	Unexpected error

**See Also**

*Oracle Applications Message Reference Manual* This manual is available in HTML format on the documentation CD-ROM for Release 11*i*.

## Material Reservation Application Program Interface

The Material Reservation API is a public API that allows you to do the following:

- Query existing reservations
- Create reservations
- Update existing reservations
- Transfer existing reservations
- Delete existing reservations

### Functional Overview

The Material Reservation API provides the following public procedures that allow you to accomplish the tasks listed above:

- `query_reservation`  
Returns all reservations that match the specified criteria.
- `create_reservation`  
Creates a material reservation for an item.
- `update_reservation`  
Updates the demand and supply information, including quantity, of an existing reservation.
- `transfer_reservation`  
Transfers either supply or demand information from one source to another.
- `delete_reservation`  
Deletes existing reservations. Used when a reservation is no longer needed or has been fulfilled.

### Setting Up the Material Reservation API

#### Parameter Descriptions

The following charts list all parameters used by the procedures listed above. Additional information on these parameters follows each chart.

## QUERY\_RESERVATION

**Table 7–26** *Query\_Reservation*

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	Number	x		
p_init_msg_list	IN	Varchar2		x	
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_query_input	IN	Record	x		
p_lock_records	IN	Varchar2	x		
p_sort_by_rec_date	IN	Number	x		
p_cancel_order_mode	IN	Number	x		
x_mtl_reservation_tbl	OUT	PL/SQL Table			
x_mtl_reservation_tbl_count	OUT	Number			
x_error_code	OUT	Number			

### **p\_api\_version\_number**

Indicates the API version number.

### **p\_init\_msg\_list**

Requests that the API initialize the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => 1
- p\_encoded => F
- p\_data => 1\_message
- p\_msg\_index\_out => 1\_msg\_index\_out

where 1\_message and 1\_msg\_index\_out are local variables of types Varchar2(2000 and Number respectively.

Default Value: FND\_API.G\_FALSE

**x\_return\_status**

Requests that the API returns the status of the data for you after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_EXC\_ERROR
- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

**x\_msg\_count**

Indicates the number of error messages the API has encountered.

**x\_msg\_data**

Displays error message text. If the x\_msg\_count is equal to 1, then this contains the actual message.

**p\_query\_input**

Contains information to be used to identify the reservations.

**p\_lock\_records**

Specifies whether to lock matching records.

Default Value: FND\_API.G\_FALSE

**p\_sort\_by\_req\_date**

Specifies whether to sort the return records by requirement date.

Default Value: INV\_RESERVATION\_GLOBAL.G\_QUERY\_NO\_SORT

**p\_cancel\_order\_mode**

If you intend to cancel an order and want to query related reservations, the reservations will be returned in a specific order.

Default Value: INV\_RESERVATION\_GLOBAL.G\_CANCEL\_ORDER\_NO

**x\_mtl\_reservation\_tbl**

Indicates reservations that match the criteria.

Default Value: INV\_RESERVATION\_GLOBAL.MTL\_RESERVATION\_TBL\_TYPE

**x\_mtl\_reservation\_tbl\_count**

Indicates the number of records in x\_mtl\_reservation\_tbl.

**x\_error\_code**

This error code is meaningful only if x\_return\_status equals fnd\_api.g\_ret\_sts\_error.

**CREATE\_RESERVATION**

*Table 7-27 Create\_Reservation*

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	Number	x		
p_init_msg_list	IN	Varchar2		x	
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_rsv_rec	IN	Record	x		
p_serial_number	IN	PL/SQL Table			x
x_serial_number	OUT	PL/SQL Table			
p_partial_reservation_flag	IN	Varchar2			
p_force_reservation_flag	IN	Varchar2			
x_quantity_reserved	OUT	Number			
x_reservation_id	OUT	Number			

**p\_api\_version\_number**

Indicates the API version number.

**p\_init\_msg\_list**

Requests that the API initialize the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => I
  - p\_encoded => F
  - p\_data => 1\_message
  - p\_msg\_index\_out => 1\_msg\_index\_out
- where 1\_message and 1\_msg\_index\_out are local variables of types Varchar2(2000 and Number respectively.

Default Value: FND\_API.G\_FALSE

**x\_return\_status**

Requests that the API returns the status of the data for you after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_EXC\_ERROR
- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

**x\_msg\_count**

Indicates the number of error messages the API has encountered.

**x\_msg\_data**

Displays error message text. If the x\_msg\_count is equal to 1, then this contains the actual message.

**p\_rsv\_rec**

Contains information to create the reservations.

Default Value: INV\_RESERVATION\_GLOBAL.MTL\_RESERVATION\_REC\_TYPE

**p\_serial\_number**

Contains serial numbers to be reserved.

Default Value: INV\_RESERVATION\_GLOBAL.SERIAL\_NUMBER\_TBL\_TYPE

**X\_serial\_number**

The serial numbers actually reserved if procedure succeeded.

Default Value: INV\_RESERVATION\_GLOBAL.SERIAL\_NUMBER\_TBL\_TYPE

**p\_partial\_reservation\_flag**

If not enough quantity is available, specifies whether to reserve the amount that is available. Possible values are FND\_API.G\_FALSE and FND\_API.G\_TRUE

Default Value: FND\_API.G\_FALSE

**p\_force\_reservation\_flag**

Specifies whether to reserve the quantity without performing a quantity check.

Default Value: FND\_API.G\_FALSE

**p\_validation\_flag**

Specifies whether to reserve the quantity without performing a validation.

Default Value: FND\_API.G\_TRUE.

**x\_quantity\_reserved**

The actual quantity reserved if the procedure succeeded.

**x\_reservation\_id**

This reservation identifier for the reservation is created if the procedure succeeded.

**UPDATE\_RESERVATION**

**Table 7–28   Update\_Reservation**

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	Number	x		
p_init_msg_list	IN	Varchar2		x	
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_original_rsv_rec	IN	Record	x		

**Table 7–28 Update\_Reservation**

Parameter	Usage	Type	Required	Derived	Optional
p_to_rsv_rec	IN	Record	x		
p_original_serial_number	IN	PL/SQL Table			
p_to_serial_number	IN	PL/SQL Table			
p_validation_flag	IN	Varchar2			

**p\_api\_version\_number**

Indicates the API version number.

**p\_init\_msg\_list**

Requests that the API initialize the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => I
- p\_encoded => F
- p\_data => 1\_message
- p\_msg\_index\_out => 1\_msg\_index\_out  
     where 1\_message and 1\_msg\_index\_out are local variables of types  
     Varchar2(2000 and Number respectively.

Default Value: FND\_API.G\_FALSE

**x\_return\_status**

Requests that the API returns the status of the data for you after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_EXC\_ERROR
- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

**x\_msg\_count**

Indicates the number of error messages the API has encountered.

**x\_msg\_data**

Displays error message text. If the x\_msg\_count is equal to 1, then this contains the actual message.

**p\_original\_rsv\_rec**

Contains information to identify the existing reservation. If the reservation identifier is passed (not null and not equal to FND\_API.G\_MISS\_NUM), it identifies the existing reservation and all other attributes in this record are ignored.

Default Value: INV\_RESERVATION\_GLOBAL.MTL\_RESERVATION\_REC\_TYPE

**p\_to\_rsv\_rec**

Contains new values of the attributes to be updated. If the value of an attribute of the existing reservation requires updating, the new value of the attribute is assigned to the attribute in this record.

Default Value: INV\_RESERVATION\_GLOBAL.MTL\_RESERVATION\_REC\_TYPE

**p\_original\_serial\_number**

Contains the serial numbers reserved by the existing reservation.

Default Value: INV\_RESERVATION\_GLOBAL.SERIAL\_NUMBER\_TBL\_TYPE

**p\_to\_serial\_number**

Contains the new serial numbers to be reserved.

Default Value: INV\_RESERVATION\_GLOBAL.SERIAL\_NUMBER\_TBL\_TYPE

**p\_validation\_flag**

Indicates whether to reserve without validation.

Default Value: FND\_API.G\_TRUE

**TRANSFER\_RESERVATION**

**Table 7–29   Transfer\_Reservation**

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	Number	x		
p_init_msg_list	IN	Varchar2		x	

**Table 7–29 Transfer\_Reservation**

Parameter	Usage	Type	Required	Derived	Optional
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Varchar2			
x_msg_data	OUT	Varchar2			
p_is_transfer_supply	IN	Varchar2	x		
p_original_rsv_rec	IN	Record	x		
p_original_serial_number	IN	Number			x
p_to_serial_number	IN	Number			x
p_validation_flag	IN	Varchar2			
x_to_reservation_id	OUT	Number			

**p\_api\_version\_number**

Indicates the API version number.

**p\_init\_msg\_list**

Requests that the API initialize the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => I
- p\_encoded => F
- p\_data => 1\_message
- p\_msg\_index\_out => 1\_msg\_index\_out  
     where 1\_message and 1\_msg\_index\_out are local variables of types  
     Varchar2(2000 and Number respectively.

Default Value: FND\_API.G\_FALSE

**x\_return\_status**

Requests that the API returns the status of the data for you after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS

- Error: FND\_API.G\_RET\_STS\_EXC\_ERROR
- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

**x\_msg\_count**

Indicates the number of error messages the API has encountered.

**x\_msg\_data**

Displays error message text. If the x\_msg\_count is equal to 1, then this contains the actual message.

**p\_is\_transfer\_supply**

Default Value: FND\_API.G\_TRUE

**p\_original\_rsv\_rec**

Contains information to identify the existing reservation. If the reservation identifier is passed (not null and not equal to FND\_API.G\_MISS\_NUM), it identifies the existing reservation and all other attributes in this record are ignored.

Default Value: INV\_RESERVATION\_GLOBAL.MTL\_RESERVATION\_REC\_TYPE

**p\_to\_rsv\_rec**

Contains new values of the attributes to be updated. If the value of an attribute of the existing reservation requires updating, the new value of the attribute is assigned to the attribute in this record.

Default Value: INV\_RESERVATION\_GLOBAL.MTL\_RESERVATION\_REC\_TYPE

**p\_original\_serial\_number**

Contains the serial numbers reserved by the existing reservation.

Default Value: INV\_RESERVATION\_GLOBAL.SERIAL\_NUMBER\_TBL\_TYPE

**p\_to\_serial\_number**

Contains the new serial numbers to be reserved.

Default Value: INV\_RESERVATION\_GLOBAL.SERIAL\_NUMBER\_TBL\_TYPE

**p\_validation\_flag**

Indicates whether to reserve without validation.

Default Value: FND\_API.G\_TRUE

**x\_to\_reservation\_id**

Indicates the new reservation identifier.

**DELETE\_RESERVATION****Table 7–30** *Delete\_Reservation*

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	Number	x		
p_init_msg_list	IN	Varchar2		x	
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_rsv_rec	IN	Record	x		
p_serial_number	IN				x

**p\_api\_version\_number**

Indicates the API version number.

**p\_init\_msg\_list**

Requests that the API initialize the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => I
- p\_encoded => F
- p\_data => 1\_message
- p\_msg\_index\_out => 1\_msg\_index\_out  
 where 1\_message and 1\_msg\_index\_out are local variables of types Varchar2(2000) and Number respectively.

Default Value: FND\_API.G\_FALSE

### **x\_return\_status**

Requests that the API returns the status of the data for you after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_EXC\_ERROR
- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

### **x\_msg\_count**

Indicates the number of error messages the API has encountered.

### **x\_msg\_data**

Displays error message text. If the x\_msg\_count is equal to 1, then this contains the actual message.

### **p\_rsv\_rec**

Contains information to identify the existing reservation.

Default Value: INV\_RESERVATION\_GLOBAL.MTL\_RESERVATION\_REC\_TYPE

### **p\_serial\_number**

Contains serial numbers reserved by the existing reservation.

Default Value: INV\_RESERVATION\_GLOBAL.SERIAL\_NUMBER\_TBL\_TYPE

## **Validation of Material Reservation API**

### **Standard Validation**

Oracle Inventory validates all input parameters in the Material Reservation API. For specific information on the data implied by these parameters, see your Oracle Inventory Technical Reference Manual for details.

### **Error Handling**

If any validation fails, the API will return an error status to the calling module. The Material Reservation API processes the rows and reports the following values for every record.

**Table 7–31 Record Values**

Condition	Message Returned	Meaning of Message Returned
Success	S	Process succeeded
Failure	E	Expected error
Failure	U	Unexpected error

**See Also**

*Oracle Applications Message Reference Manual* This manual is available in HTML format on the documentation CD-ROM for Release 11*i*.

# Reservations Manager Application Program Interface

The Reservations Manager API is a public API that allows you to call the reservation manager on-line or submit reservation requests concurrently. The Reservations Manager processes reservation requests from the MTL\_RESERVATIONS\_INTERFACE table for creating, updating, transferring, and deleting reservations. The Reservations Manager API includes the public procedure rsv\_interface\_manager.

## Setting Up the Reservations Manager API

### Parameter Descriptions

The following chart lists all parameters used by Reservations Manager API. Additional information on these parameters follow the chart.

### RSV\_INTERFACE\_MANAGER

Table 7–32 RSV\_INTERFACE\_MANAGER

Parameter	Usage	Type	Required	Derived	Optional
x_errbuf	OUT	Varchar2			
x_retcode	OUT	Number			
p_api_version_number	IN	Number	x		
p_init_msg_lst	IN	Varchar2		x	
p_form_mode	IN	Varchar2			x

#### x\_errbuf

A mandatory concurrent program parameter.

#### x\_retcode

A mandatory concurrent program parameter.

#### p\_api\_version\_number

Indicates the API version number.

Default Value: 1

**p\_init\_msg\_list**

Requests that the API initialize the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => I
- p\_encoded => F
- p\_data => 1\_message
- p\_msg\_index\_out => 1\_msg\_index\_out

where 1\_message and 1\_msg\_index\_out are local variables of types Varchar2(2000) and Number respectively.

Default Value: FND\_API.G\_FALSE

**p\_form\_mode**

Specifies whether the Reservations Manager is called from the form. Possible values include:

Y to indicate the Reservations Manager is called from the form.

N to indicate the Reservations Manager is not called from the form

Default Value: N

## Validation of Reservations Manager API

**Standard Validation**

Oracle Inventory validates all input parameters in the Reservations Manager API. For specific information on the data implied by these parameters, see your Oracle Inventory Technical Reference Manual for details.

**Error Handling**

If any validation fails, the API will return an error status to the calling module. The Reservations Manager API processes the rows and reports the following values for every record.

**Table 7–33 Record Values**

Condition	Message Returned	Meaning of Message Returned
Success	S	Process succeeded
Failure	E	Expected error
Failure	U	Unexpected error

**See Also**

*Oracle Applications Message Reference Manual* This manual is available in HTML format on the documentation CD-ROM for Release 11*i*.

## Sales Order Application Program Interface

The Sales Order API is a public API that allows you to do the following:

- Create a sales order in Oracle Inventory's local definition of a sales order
- Update a sales order in Oracle Inventory's local definition of a sales order
- Get a corresponding Oracle Order Management order header identifier given a sales order identifier
- Get a corresponding sales order identifier given an Order Management order header identifier.

### Functional Overview

The Sales Order API provides three public procedures that allow you to accomplish the tasks listed above. The procedures are as follows:

- `create_salesorder`  
Creates a sales order in Oracle Inventory's local definition of a sales order.
- `get_oeheader_for_salesorder`  
Allows you to get a corresponding Oracle Order Management order header identifier given a sales order identifier. A value of negative one (-1) is returned if the sales order identifier was created by a system other than Oracle Order Management.
- `get_salesorder_for_oeheader`  
Allows you to get a corresponding sales order identifier given an Oracle Order Management order header identifier. If there is no matching sales order identifier, a null is returned.

### Setting Up the Sales Order API

#### Parameter Descriptions

The following charts list all parameters used by the Sales Order API. Additional information on these parameters follows each chart.

CREATE\_SALESORDER

Table 7–34 CREATE\_SALESORDER

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	Number	x		
p_init_msg_list	IN	Varchar2	x		
p_segment1	IN	Number	x		
p_segment2	IN	Varchar2	x		
p_segment3	IN	Varchar2	x		
p_validate_full	IN	Number	x		
p_validation_date	IN	Date	x		
x_salesorder_id	OUT	Number			
x_msg_data	OUT	Varchar2			
x_msg_count	OUT	Number			
x_return_status	OUT	Varchar2			

p\_api\_version\_number

Indicates the API version number.

p\_init\_msg\_list

Requests that the API initialize the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => I
  - p\_encoded => F
  - p\_data => 1\_message
  - p\_msg\_index\_out => 1\_msg\_index\_out
- where 1\_message and 1\_msg\_index\_out are local variables of types Varchar2(2000 and Number respectively.

Default Value: FND\_API.G\_FALSE

**p\_segment1**

Indicates the order number, which is not unique in the Oracle Order Management system.

**p\_segment2**

Indicates the order type.

**p\_segment3**

Indicates the order source.

**p\_validate\_full**

Indicates whether flexfield APIs are used to create sales order flexfields. When set to a value of 1, flexfield APIs are used to create sales order flexfields. When set to a value of 0, the sales order flexfield is created manually.

Default Value: 1

**p\_validation\_date**

Indicates the date of creation.

**x\_salesorder\_id**

Indicates the returned sales order identifier.

**x\_msg\_data**

Displays error message text. If the x\_msg\_count is equal to 1, then this contains the actual message.

**x\_msg\_count**

Indicates the number of error messages the API has encountered.

**x\_return\_status**

Requests that the API return the status of the data for you after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_SUCCESS
- Error: FND\_API.G\_EXC\_ERROR
- Unexpected Error: FND\_API.G\_EXC\_UNEXPECTED\_ERROR

GET\_OEHEADER\_FOR\_SALESORDER

Table 7–35 GET\_OEHEADER\_FOR\_SALESORDER

Parameter	Usage	Type	Required	Derived	Optional
p_salesorder_id	IN	Number	x		
x_oe_header_id	OUT	Number			
x_return_status	OUT	Varchar2			

p\_salesorder\_id

Indicates the sales order identifier

x\_oe\_header\_id

Indicates the Oracle Order Management order header identifier.

x\_return\_status

Requests that the API return the status of the data for you after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_SUCCESS
- Error: FND\_API.G\_EXC\_ERROR
- Unexpected Error: FND\_API.G\_EXC\_UNEXPECTED\_ERROR

GET\_SALESORDER\_FOR\_OEHEADER

Table 7–36 GET\_SALESORDER\_FOR\_OEHEADER

Parameter	Usage	Type	Required	Derived	Optional
p_oe_header_id	IN	Number	x		

p\_oe\_header\_id

Returns a sales order identifier when an Oracle Order Management order header is passed to it.

## Validation of Sales Order API

### Standard Validation

Oracle Inventory validates all input parameters in the Sales Order API. For specific information on the data implied by these parameters, see your Oracle Inventory Technical Reference Manual for details.

### Error Handling

If any validation fails, the API will return an error status to the calling module. The Sales Order API processes the rows and reports the following values for every record.

**Table 7–37 Record Values**

Condition	Message Returned	Meaning of Message Returned
Success	S	Process succeeded
Failure	E	Expected error
Failure	U	Unexpected error

### See Also

*Oracle Applications Message Reference Manual* This manual is available in HTML format on the documentation CD-ROM for Release 11i.

## Move Order Application Program Interface

The Move Order API is a public API that allows you to do the following:

- Create a move order header
- Create a move order line
- Process a move order (create or update)
- Lock a move order
- Get a move order for a given header or header identifier
- Process a move order line (cancel or update)

### Functional Overview

The Move Order API provides the following public procedures that allow you to accomplish the tasks listed above:

- `create_move_order_header`
- `create_move_order_lines`
- `process_move_order`
- `lock_move_order`
- `get_move_order`
- `process_move_order_line`

### Setting Up the Move Order API

#### Parameter Descriptions

The following charts list all parameters used by the Move Order API. Additional information on the parameters follows each chart.

**CREATE\_MOVE\_ORDER\_HEADER****Table 7–38 CREATE\_MOVE\_ORDER\_HEADER**

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	Number	x		
p_init_msg_list	IN	Varchar2		x	
p_return_values	IN	Varchar2		x	
p_commit	IN	Varchar2		x	
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_trohdr_rec	IN	Record	x		
p_trohdr_val_rec	IN	Record	x		
x_trohdr_rec	OUT	Record			
x_trohdr_val_rec	OUT	Record			
p_validation_flag	IN	Varchar2			

**p\_api\_version\_number**

Indicates the API version number.

**p\_init\_msg\_list**

Requests that the API initializes the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => I
- p\_encoded => F
- p\_data => 1\_message
- p\_msg\_index\_out => 1\_msg\_index\_out

where 1\_message and 1\_msg\_index\_out are local variables of types Varchar2(2000) and Number respectively.

Default Value: FND\_API.G\_FALSE

**p\_return\_values**

Requests that the API sends back the values on your behalf.

Default Value: FND\_API.G\_FALSE

**p\_commit**

Requests that the API update information for you after it completes its function.

Default Value: FND\_API.G\_FALSE

**x\_return\_status**

Requests that the API return the status of the data for you after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_ERROR
- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

**x\_msg\_count**

Indicates the number of error messages the API has encountered.

**x\_msg\_data**

Displays error message text. If the x\_msg\_count is equal to 1, then this contains the actual message.

**p\_trohdr\_rec**

The record that contains the information to be used to create the move order header.

Default Value: G\_MISS\_TROHDR\_REC

**p\_trohdr\_val\_rec**

Contains information values rather than internal identifiers used to create the move order header.

Default Value: G\_MISS\_TRODHDR\_VAL\_REC

**x\_trohdr\_rec**

The information of the move order header that was created.

**x\_trohdr\_val\_rec**

The information values of the move order header that was created.

**p\_validation\_flag**

Flag that indicates whether the data needs to be validated. If this is set to 'N', the move order lines are directly created from the input header record type passed. If this is set to 'Y', the move order header is created after performing the appropriate validations.

**CREATE\_MOVE\_ORDER\_LINES****Table 7–39 CREATE\_MOVE\_ORDER\_LINES**

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	Number	x		
p_init_msg_list	IN	Varchar2		x	
p_return_values	IN	Varchar2		x	
p_commit	IN	Varchar2		x	
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_trolin_tbl	IN	PL/SQL Table	x		
p_trolin_val_tbl	IN	PL/SQL Table	x		
x_trolin_tbl	OUT	PL/SQL Table			
x_trolin_val_tbl	OUT	PL/SQL Table			
p_validation_flag	IN	Varchar2			

**p\_api\_version\_number**

Indicates the API version number.

### **p\_init\_msg\_list**

Requests that the API initializes the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => I
  - p\_encoded => F
  - p\_data => 1\_message
  - p\_msg\_index\_out => 1\_msg\_index\_out
- where 1\_message and 1\_msg\_index\_out are local variables of types Varchar2(2000) and Number respectively.

Default Value: FND\_API.G\_FALSE

### **p\_return\_values**

Requests that the API sends back the values on your behalf.

Default Value: FND\_API.G\_FALSE

### **p\_commit**

Requests that the API update information for you after it completes its function.

Default Value: FND\_API.G\_FALSE

### **x\_return\_status**

Requests that the API return the status of the data for you after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_ERROR
- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

### **x\_msg\_count**

Indicates the number of error messages the API has encountered.

### **x\_msg\_data**

Displays error message text. If the x\_msg\_count is equal to 1, then this contains the actual message.

**p\_trolin\_tbl**

A table of records that contains the information to be used to create the move order lines.

Default Value: G\_MISS\_TROLIN\_TBL

**p\_trolin\_val\_tbl**

Contains information values rather than internal identifiers used to create the move order header.

Default Value: G\_MISS\_TROLIN\_VAL\_TBL

**x\_trolin\_tbl**

The information of the move order lines that were created.

**x\_trolin\_val\_tbl**

The information values of the move order lines that were created.

**p\_validation\_flag**

Flag that indicates whether the data needs to be validated. If this is set to 'N', the move order lines are directly created from the input header record type passed. If this is set to 'Y', the move order header is created after performing the appropriate validations.

**PROCESS\_MOVE\_ORDER**

**Table 7–40** *PROCESS\_MOVE\_ORDER*

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	Number	x		
p_init_msg_list	IN	Varchar2		x	
p_return_values	IN	Varchar2		x	
p_commit	IN	Varchar2			
x_return_status	OUT	Varchar2		x	
x_msg_count	OUT	Number			

**Table 7–40    *PROCESS\_MOVE\_ORDER***

Parameter	Usage	Type	Required	Derived	Optional
x_msg_data	OUT	Varchar2			
p_trohdr_rec	IN	Record	x		
p_trohdr_val_rec	IN	Record	x		
p_trolin_tbl	IN	PL/SQL Table	x		
p_trolin_val_tbl	IN	PL/SQL Table	x		
x_trohdr_rec	OU	Record			
x_trohdr_val_rec	OUT	Record			
x_trolin_tbl	OUT	PL/SQL Table			
x_trolin_val_tbl	OUT	PL/SQL Table			

**p\_api\_version\_number**

Indicates the API version number.

**p\_init\_msg\_list**

Requests that the API initializes the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => I
  - p\_encoded => F
  - p\_data => 1\_message
  - p\_msg\_index\_out => 1\_msg\_index\_out
- where 1\_message and 1\_msg\_index\_out are local variables of types Varchar2(2000) and Number respectively.

Default Value: FND\_API.G\_FALSE

**p\_return\_values**

Requests that the API sends back the values on your behalf.

Default Value: FND\_API.G\_FALSE

**p\_commit**

Requests that the API update information for you after it completes its function.

Default Value: FND\_API.G\_FALSE

**x\_return\_status**

Requests that the API return the status of the data for you after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_ERROR
- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

**x\_msg\_count**

Indicates the number of error messages the API has encountered.

**x\_msg\_data**

Displays error message text. If the x\_msg\_count is equal to 1, then this contains the actual message.

**p\_trohdr\_rec**

The record that contains the information to be used to create the move order header.

Default Value: G\_MISS\_TROHDR\_REC

**p\_trohdr\_val\_rec**

Contains information values rather than internal identifiers used to create the move order header.

Default Value: G\_MISS\_TROHDR\_VAL\_REC

**p\_trolin\_tbl**

A table of records that contains the information to create the move order lines.

Default Value: G\_MISS\_TROLIN\_TBL

**p\_trolin\_val\_tbl**

Contains information values rather than internal identifiers used to create the move order header.

Default Value: G\_MISS\_TROLIN\_VAL\_TBL

**x\_trohdr\_rec**

The information of the move order header that was created.

**x\_trohdr\_val\_rec**

The information values of the move order header that was created.

**x\_trolin\_tbl**

The information of the move order lines that were created.

**x\_trolin\_val\_tbl**

The information values of the move order lines that were created.

**LOCK\_MOVE\_ORDER**

*Table 7-41 LOCK\_MOVE\_ORDER*

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	Number	x		
p_init_msg_list	IN	Varchar2		x	
p_return_values	IN	Varchar2		x	
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_trohdr_rec	IN	Record	x		
p_trohdr_val_rec	IN	Record	x		
p_trolin_tbl	IN	PL/SQL Table	x		
p_trolin_val_tbl	IN	PL/SQL Table	x		

**Table 7–41 LOCK\_MOVE\_ORDER**

Parameter	Usage	Type	Required	Derived	Optional
x_trohdr_rec	OUT	Record			
x_trohdr_val_rec	OUT	Record			
x_trolin_tbl	OUT	PL/SQL Table			
x_trolin_val_tbl	OUT	PL/SQL Table			

**p\_api\_version\_number**

Indicates the API version number.

**p\_init\_msg\_list**

Requests that the API initializes the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => I
- p\_encoded => F
- p\_data => 1\_message
- p\_msg\_index\_out => 1\_msg\_index\_out  
     where 1\_message and 1\_msg\_index\_out are local variables of types  
     Varchar2(2000) and Number respectively.

Default Value: FND\_API.G\_FALSE

**p\_return\_values**

Requests that the API sends back the values on your behalf.

Default Value: FND\_API.G\_FALSE

**x\_return\_status**

Requests that the API return the status of the data for you after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_ERROR

- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

**x\_msg\_count**

Indicates the number of error messages the API has encountered.

**x\_msg\_data**

Displays error message text. If the x\_msg\_count is equal to 1, then this contains the actual message.

**p\_trohdr\_rec**

The record that contains the information to create the move order header.

Default Value: G\_MISS\_TROHDR\_REC

**p\_trohdr\_val\_rec**

Contains information values rather than internal identifiers used to create the move order header.

Default Value: G\_MISS\_TROHDR\_VAL\_REC

**p\_trolin\_tbl**

A table of records that contains the information to create the move order lines.

Default Value: G\_MISS\_TROLIN\_TBL

**p\_trolin\_val\_tbl**

Contains information values rather than internal identifiers used to create the move order header.

Default Value: G\_MISS\_TROLIN\_VAL\_TBL

**x\_trohdr\_rec**

The information of the move order header that was created.

**x\_trohdr\_val\_rec**

The information values of the move order header that was created.

**x\_trolin\_tbl**

The information of the move order lines that were created.

**x\_trolin\_val\_tbl**

The information values of the move order lines that were created.

**GET\_MOVE\_ORDER****Table 7–42 GET\_MOVE\_ORDER**

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	Number	x		
p_init_msg_list	IN	Varchar2		x	
p_return_values	IN	Varchar2		x	
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_header_id	IN	Number			x (you must indicate either this parameter or the following)
p_header	IN	Varchar2			x (you must indicate either this parameter or the preceding)
x_trohdr_rec	OUT	Record			
x_trohdr_val_rec	OUT	Record			
x_trolin_tbl	OUT	PL/SQL Table			
x_trolin_val_tbl	OUT	PL/SQL Table			

**p\_api\_version\_number**

Indicates the API version number.

### **p\_init\_msg\_list**

Requests that the API initializes the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => I
  - p\_encoded => F
  - p\_data => 1\_message
  - p\_msg\_index\_out => 1\_msg\_index\_out
- where 1\_message and 1\_msg\_index\_out are local variables of types Varchar2(2000) and Number respectively.

Default Value: FND\_API.G\_FALSE

### **p\_return\_values**

Requests that the API sends back the values on your behalf.

Default Value: FND\_API.G\_FALSE

### **x\_return\_status**

Requests that the API return the status of the data for you after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_ERROR
- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

### **x\_msg\_count**

Indicates the number of error messages the API has encountered.

### **x\_msg\_data**

Displays error message text. If the x\_msg\_count is equal to 1, then this contains the actual message.

### **p\_header\_id**

The header identifier of the move order that you want to get.

Default Value: FND\_API.G\_MISS\_NUM

**p\_header**

The header description of the move order that you want to get.

Default Value: FND\_API.G\_MISS\_CHAR

**x\_trohdr\_rec**

The information of the move order header that was created.

**x\_trohdr\_val\_rec**

The information values of the move order header that was created.

**x\_trolin\_tbl**

The information of the move order lines that were created.

**x\_trolin\_val\_tbl**

The information values of the move order lines that were created.

**PROCESS\_MOVE\_ORDER\_LINE**

**Table 7–43** *PROCESS\_MOVE\_ORDER\_LINE*

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	Number	x		
p_init_msg_list	IN	Varchar2		x	
p_return_values	IN	Varchar2		x	
p_commit	IN	Varchar2		x	
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_trolin_tbl	IN	PL/SQL Table	x		
p_trolin_old_tbl	IN	PL/SQL Table	x		
x_trolin_tbl	OUT	PL/SQL Table	x		

**p\_api\_version\_number**

Indicates the API version number.

**p\_init\_msg\_list**

Requests that the API initializes the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => I
- p\_encoded => F
- p\_data => 1\_message
- p\_msg\_index\_out => 1\_msg\_index\_out

where 1\_message and 1\_msg\_index\_out are local variables of types Varchar2(2000) and Number respectively.

Default Value: FND\_API.G\_FALSE

**p\_return\_values**

Requests that the API sends back the values on your behalf.

Default Value: FND\_API.G\_FALSE

**p\_commit**

Requests that the API update information for you after it completes its function.

Default Value: FND\_API.G\_TRUE

**x\_return\_status**

Requests that the API return the status of the data for you after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_ERROR
- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

**x\_msg\_count**

Indicates the number of error messages the API has encountered.

**x\_msg\_data**

Displays error message text. If the x\_msg\_count is equal to 1, then this contains the actual message.

**p\_trolin\_tbl**

Contains information to be used to process move order lines.

## Validation of Move Order API

### Standard Validation

Oracle Inventory validates all input parameters in the Move Order API. For specific information on the data implied by these parameters, see your Oracle Inventory Technical Reference Manual for details.

### Error Handling

If any validation fails, the API will return an error status to the calling module. The Move Order API processes the rows and reports the following values for every record.

**Table 7–44** Record Values

Condition	Message Returned	Meaning of Message Returned
Success	S	Process succeeded
Failure	E	Expected error
Failure	U	Unexpected error

### See Also

*Oracle Applications Message Reference Manual* This manual is available in HTML format on the documentation CD-ROM for Release 11i.

# Pick Release Application Program Interface

The Pick Release API is a public API that allows you to release a set of move order lines for pick wave move orders. This API creates move order line details for the lines that are released, and, depending on the parameters passed in, runs the pick confirm process immediately afterwards. The Pick Release API includes the public procedure `pick_release`.

## Setting Up the Pick Release API

### Parameter Descriptions

The following chart lists all parameters used by the `pick_release` procedure. Additional information on these parameters follows the chart.

### PICK\_RELEASE

Table 7–45 PICK\_RELEASE

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	Number	x		
p_init_msg_list	IN	Varchar2		x	
p_commit	IN	Varchar2		x	
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_mo_line_tbl	IN	PL/SQL Table	x		
p_auto_pick_confirm	IN	Number	x		
p_grouping_rule_id	IN	Number	x		
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Varchar2			
x_msg_data	OUT	Varchar2			

**Table 7–45 PICK\_RELEASE**

Parameter	Usage	Type	Required	Derived	Optional
x_pick_release_status	Out	PL/SQL Table			

**p\_api\_version\_number**

Indicates the API version number.

**p\_init\_msg\_list**

Requests that the API initialize the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => I
- p\_encoded => F
- p\_data => 1\_message
- p\_msg\_index\_out => 1\_msg\_index\_out  
where 1\_message and 1\_msg\_index\_out are local variables of types Varchar2(2000 and Number respectively.

Default Value: FND\_API.G\_FALSE

**p\_commit**

Requests that the API update information for you after it completes its function.

Default Value: FND\_API.G\_FALSE

**x\_return\_status**

Requests that the API return the status of the data for you after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_ERROR
- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

**x\_msg\_count**

Indicates the number of error messages the API has encountered.

**x\_msg\_data**

Displays error message text. If the x\_msg\_count is equal to 1, then this contains the actual message.

**p\_mo\_line\_tbl**

Indicates the PL/SQL table from which move order line records are chosen.

**p\_auto\_pick\_confirm**

Overrides the organization level parameter to indicate whether the Pick Confirm API is automatically called after the records have been pick released.

Default Value: FND\_API.G\_MISS\_NUM

**p\_grouping\_rule\_id**

Overrides the organization level parameter and the move order header level grouping rule for generating pick slip numbers.

Default Value: FND\_API.G\_MISS\_NUM

**x\_return\_status**

Requests that the API return the status of the data for you after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_ERROR
- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

**x\_msg\_count**

Indicates the number of error messages the API has encountered.

**x\_msg\_data**

Displays error message text. If the x\_msg\_count is equal to 1, then this contains the actual message.

**x\_pick\_release\_status**

A table of records that specifies the pick release status for each move order line that is passed in.

## Validation of Pick Release API

### Standard Validation

Oracle Inventory validates all input parameters in the Pick\_Release procedure. For specific information on the data implied by these parameters, see your Oracle Inventory Technical Reference Manual for details.

### Error Handling

If any validation fails, the API will return an error status to the calling module. The Pick Release API processes the rows and reports the following values for every record.

**Table 7–46** Record Values

Condition	Message Returned	Meaning of Message Returned
Success	S	Process succeeded
Failure	E	Expected error
Failure	U	Unexpected error

### See Also

*Oracle Applications Message Reference Manual* This manual is available in HTML format on the documentation CD-ROM for Release 11i.

# Pick Confirm Application Program Interface

The Pick Confirm API is a public API that allows you to perform pick confirmations on move order line detail records. To transact the records, the API calls the transaction processor, which then updates the move order line delivered quantity as well as shipping and reservation information.

## Functional Overview

The Pick Confirm API provides one public procedure, `pick_confirm`, which transfers move order line detail records from the `MTL_MATERIAL_TRANSACTIONS_TEMP` table into the `MTL_MATERIAL_TRANSACTIONS` table.

## Setting Up the Pick Confirm API

### Parameter Descriptions

The following chart lists all parameters used by the `Pick_Confirm` procedure. Additional information on these parameters follows the chart.

### PICK\_CONFIRM

Table 7–47 PICK\_CONFIRM

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	Number	x		
p_init_msg_list	IN	Varchar2		x	
p_commit	IN	Varchar2		x	
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Varchar2			
x_msg_data	OUT	Varchar2			
p_move_order_type	IN	Number	x		
p_transaction_mode	IN	Number	x		

**Table 7–47 PICK\_CONFIRM**

Parameter	Usage	Type	Required	Derived	Optional
p_trolin_tbl	IN				x (you must indicate either this parameter or the following)
p_mold_tbl	IN				x (you must indicate either this parameter or the preceding)
x_mmtt_tbl	OUT				
x_trolin_tbl	OUT				

**p\_api\_version\_number**

Indicates the API version number.

**p\_init\_msg\_list**

Requests that the API initialize the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => I
- p\_encoded => F
- p\_data => 1\_message
- p\_msg\_index\_out => 1\_msg\_index\_out  
where 1\_message and 1\_msg\_index\_out are local variables of types Varchar2(2000 and Number respectively.

Default Value: FND\_API.G\_FALSE

**p\_commit**

Requests that the API updates information for you after it completes its function.

Default Value: FND\_API.G\_FALSE

**x\_return\_status**

Requests that the API returns the status of the data for you after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_ERROR
- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

**x\_msg\_count**

Indicates the number of error messages the API has encountered.

**x\_msg\_data**

Displays error message text. If the x\_msg\_count is equal to 1, then this contains the actual message.

**p\_move\_order\_type**

Indicates the move order type.

**p\_transaction\_mode**

Indicates the transaction mode. A value of 1 refers to on-line, 2 to concurrent, and 3 to background.

**p\_trolin\_tbl**

Indicates the PL/SQL table from which the move order line records are chosen.

**p\_mold\_tbl**

Indicates the PL/SQL table from which the move order line detail records are chosen.

**x\_mmtt\_tbl**

Indicates the return value of the p\_mold\_tbl parameter.

**x\_trolin\_tbl**

Indicates the return value of the p\_trolin\_tbl parameter.

## Validation of Pick Confirm API

### Standard Validation

Oracle Inventory validates all input parameters in the Pick\_Confirm procedure. For specific information on the data implied by these parameters, see your Oracle Inventory Technical Reference Manual for details.

### Error Handling

If any validation fails, the API will return an error status to the calling module. The Pick Confirm API processes the rows and reports the following values for every record.

**Table 7–48** Record Values

Condition	Message Returned	Meaning of Message Returned
Success	S	Process succeeded
Failure	E	Expected error
Failure	U	Unexpected error

### See Also

*Oracle Applications Message Reference Manual* This manual is available in HTML format on the documentation CD-ROM for Release 11i.

# Quantity Tree Program Interface

**Procedure Name:** CLEAR\_QUANTITY\_CACHE

The CLEAR\_QUANTITY\_CACHE procedure deletes all quantity trees in memory. Call this procedure when you call rollback. Otherwise, the trees in memory may not be in sync with the data in the corresponding database tables.

**Procedure Name:** QUERY\_QUANTITIES

The QUERY\_QUANTITIES procedure is used to find the values for quantity onhand, revervable quantity onhand, quantity reserved, quantity suggested, available to transact (ATT), and available to reserve (ATR). If the tree in the database is being queried in transaction mode, and the transaction is a subinventory transfer, then you need to pass the subinventory code of the destination sub in the p\_transfer\_subinventory\_code parameter. In all other cases, set the P\_Transfer\_Subinventory\_Code parameter to NULL. The table below provides the specifications for this API:

**Table 7–49    QUERY\_QUANTITIES**

Parameter	Usage	Default	Type	Required	Derived	Optional
p_api_version_number	IN		Number	x		
p_init_msg_lst	IN	False	Varchar2		x	
x_return_status	OUT		Varchar2			
x_msg_count	OUT		Number			
x_msg_data	OUT		Varchar2	x		
p_organization_id	IN		Number	x		
p_inventory_item_id	IN		Number	x		
p_tree_mode	IN		Integer	x		
p_is_revision_control	IN		Boolean	x		
p_is_lot_control	IN		Boolean	x		
p_is_serial_control	IN		Boolean	x		
p_demand_source_type_id	IN	-9999	Number			x

**Table 7–49 QUERY\_QUANTITIES**

Parameter	Usage	Default	Type	Required	Derived	Optional
p_demand_source_header_id	IN	-9999	Number			x
p_demand_source_line_id	IN	-9999	Number			x
p_demand_source_name	IN	Null	Varchar2			x
p_lot_expiration_date	IN	Null	Date			x
p_revision	IN		Varchar2	x		
p_lot_number	IN		Varchar2	x		
p_subinventory_code	IN		Varchar2	x		
p_locator_id	IN		Number	x		
p_onhand_source	IN	3	Number		x	
x_qoh	OUT		Number			
x_rqoh	OUT		Number			
x_qr	OUT		Number			
x_qs	OUT		Number			
x_att	OUT		Number			
x_atr	OUT		Number			
p_transfer_subinventory_code	IN	Null	Varchar2	Null		x
p_cost_group_id	IN	Null	Number			x
p_lpn_id	IN	Null	Number			x
p_transfer_locator_id	IN	Null	Number			x

**p\_api\_version\_number**

Indicates the API version number.

**p\_init\_msg\_list**

Requests API initialization of the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => I
  - p\_encoded => F
  - p\_data => 1\_message
  - p\_msg\_index\_out => 1\_msg\_index\_out
- where 1\_message and 1\_msg\_index\_out are local variables of types Varchar2(2000 and Number respectively.

Default Value: FND\_API.G\_FALSE

**x\_return\_status**

Returns Fnd\_Api.G\_Ret\_Sts\_Success for success, Fnd\_Api.G\_Ret\_Sts\_error for failure to process request due to incorrect input or for an unexpected error fnd\_Api.G\_Ret\_Sts\_Unexp\_Error.

**x\_msg\_count**

Indicates the number of error messages the API has encountered.

**x\_msg\_data**

Contains the error message if x\_msg\_count =1.

**p\_organization\_id**

This column identifies the internal identifier of the Organization.

**p\_inventory\_item\_id**

This column identifies the internal identifier of the Inventory item.

**p\_tree\_mode**

Either reservation mode (1), Transaction mode, (2), Loose Only mode (3) or No LPN Reservation mode (4).

**p\_is\_revision\_control**

Item is Revision Controlled.

**p\_is\_lot\_control**

Item is Lot Controlled.

**p\_is\_serial\_control**

Item is Serial Controlled.

**p\_demand\_source\_type\_id**

Demand Source Type ID.

**p\_demand\_source\_header\_id**

Demand Source Header ID.

**p\_demand\_source\_line\_id**

Demand Source Line ID.

**p\_demand\_source\_name**

Demand Source Name.

**p\_lot\_expiration\_date**

Only consider lots that will not expire at or before this date.

**p\_revision**

Item Revision.

**p\_lot\_number**

Lot Number.

**p\_subinventory\_code**

Subinventory Code.

**p\_locator\_id**

Locator ID.

**p\_onhand\_source**

Describes subinventories in which to search for onhand: ATPable (1), Nettable (2), All (3), ATPable or Nettable (4).

**x\_qoh**

Quantity On Hand.

**x\_rqoh**

Reservable Quantity On Hand.

**x\_qr**

Quantity Reserved.

**x\_qs**

Quantity Suggested.

**x\_att**

Quantity Available to Transact.

**p\_transfer\_subinventory\_code**

Destination Subinventory for Subinventory Transfer transactions. Should be NULL otherwise.

**p\_cost\_group\_id**

Cost Group ID.

**p\_lpn\_id**

LPN ID.

**p\_transfer\_locator\_id**

Destination Locator for Subinventory Transfer transactions. Should be NULL otherwise.

**Procedure Name:** UPDATE\_QUANTITIES

The UPDATE\_QUANTITIES procedure changes the quantity in the quantity tree at the level specified by the input. It returns the quantities at the level after the update. The quantity updated depends on the quantity type parameter. If the quantity type is g\_qoh, then the p\_primary\_quantity value is added to the quantity onhand. If the quantity type g\_qs\_txn, then the quantity suggested value is updated. Update\_quantity does not update the database. The UPDATE\_QUANTITIES procedure

updates the local version of the quantity tree. The database must be updated separately.

- The quantity passed into `update_quantities` is important. The quantity is always added to the appropriate node quantity. For a receipt transaction, the quantity passed in should be positive. For an issue transaction, the quantity passed in should have a negative sign (to decrement on hand quantity). For reserving items or suggesting an issue, the value passed in should be positive incrementing quantity reserved or quantity suggested. Do not update the tree with suggested receipts. Including suggested receipts could lead to missing inventory if the suggestion is not transacted
- For a subinventory transfer transaction, which updates both the destination location and the source location, `UPDATE_QUANTITIES` must be called twice. First, add the quantity to the destination sub or location. Then decrement the quantity from the source sub or location. The updates to both the destination and source should happen for actual transactions, not suggested transfers. The table below provides the specifications for this API:

**Table 7–50 UPDATE\_QUANTITIES**

Parameter	Usage	Default	Type	Required	Derived	Optional
p_api_version_number	IN		Number	x		
p_init_msg_lst	IN	False	Varchar2		x	
x_return_status	OUT		Varchar2			
x_msg_count	OUT		Number			
x_msg_data	OUT		Varchar2	x		
p_organization_id	IN		Number	x		
p_inventory_item_id	IN		Number	x		
p_tree_mode	IN		Integer	x		
p_is_revision_control	IN		Boolean	x		
p_is_lot_control	IN		Boolean	x		
p_is_serial_control	IN		Boolean	x		
p_demand_source_type_id	IN	-9999	Number			x

**Table 7–50 UPDATE\_QUANTITIES**

Parameter	Usage	Default	Type	Required	Derived	Optional
p_demand_source_ header_id	IN	-9999	Number			x
p_demand_source_ line_id	IN	-9999	Number			x
p_demand_source_ name	IN	Null	Varchar2			x
p_lot_expiration_ date	IN	Null	Date			x
p_revision	IN		Varchar2	x		
p_lot_number	IN		Varchar2	x		
p_subinventory_ code	IN		Varchar2	x		
p_locator_id	IN		Number	x		
p_primary_quantity	IN		Number	x		
p_quantity_type	IN		Integer	x		
p_onhand_source	IN	3	Number		x	
x_qoh	OUT		Number			
x_rqoh	OUT		Number			
x_qr	OUT		Number			
x_qs	OUT		Number			
x_att	OUT		Number			
x_atr	OUT		Number			
p_transfer_ subinventory_code	IN	Null	Varchar2	Null		x
p_cost_group_id	IN	Null	Number			x
p_containerized	IN	Null	Number			
p_lpn_id	IN	Null	Number			x
p_transfer_locator_ id	IN	Null	Number			x

**p\_api\_version\_number**

Indicates the API version number.

**p\_init\_msg\_list**

Requests that the API initialize the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => I
- p\_encoded => F
- p\_data => 1\_message
- p\_msg\_index\_out => 1\_msg\_index\_out

where 1\_message and 1\_msg\_index\_out are local variables of types  
Varchar2(2000 and Number respectively.

Default Value: FND\_API.G\_FALSE

**x\_return\_status**

Returns fnd\_api.g\_ret\_sts\_success for success, fnd\_api.g\_ret\_sts\_error for failure to process request due to incorrect input or for an unexpected error fnd\_api.g\_ret\_sts\_unexp\_error.

**x\_msg\_count**

Indicates the number of error messages the API has encountered.

**x\_msg\_data**

Contains the error message if x\_msg\_count =1.

**p\_organization\_id**

Organization id.

**p\_inventory\_item\_id**

Inventory item id.

**p\_tree\_mode**

Either reservation mode (1), Transaction mode, (2), Loose Only mode (3) or No LPN Reservation mode (4).

**p\_is\_revision\_control**

Item is Revision Controlled.

**p\_is\_lot\_control**

Item is Lot Controlled.

**p\_is\_serial\_control**

Item is Serial Controlled.

**p\_demand\_source\_type\_id**

Demand Source Type ID.

**p\_demand\_source\_header\_id**

Demand Source Header ID.

**p\_demand\_source\_line\_id**

Demand Source Line ID.

**p\_demand\_source\_name**

Demand Source Name.

**p\_lot\_expiration\_date**

Only consider lots that will not expire at or before this date.

**p\_revision**

Item Revision.

**p\_lot\_number**

Lot Number.

**p\_subinventory\_code**

Subinventory Code.

**p\_locator\_id**

Locator ID.

**p\_primary\_quantity**

Quantity to update tree with (in primary UOM).

**p\_quantity\_type**

Used to specify which quantity to change: quantity onhand (1), quantity reserved same demand source (2), quantity reserved other demand (3), quantity suggested for reservation (4), quantity suggested for transaction (5).

**p\_onhand\_source**

Describes subinventories in which to search for onhand: ATPable (1), Nettable (2), All (3), ATPable or Nettable (4).

**x\_qoh**

Quantity On Hand.

**x\_rqoh**

Reservable Quantity On Hand.

**x\_qr**

Quantity Reserved.

**x\_qs**

Quantity Suggested.

**x\_att**

Quantity Available to Transact.

**p\_transfer\_subinventory\_code**

Destination Subinventory for Subinventory Transfer transactions. Should be NULL otherwise.

**p\_cost\_group\_id**

Cost Group ID.

**p\_lpn\_id**

LPN ID.

**p\_transfer\_locator\_id**

Destination Locator for Subinventory Transfer transactions. Should be NULL otherwise.

**Procedure Name: DO\_CHECK**

The DO\_CHECK procedure checks to determine whether tree updates are still valid. It should be called before committing quantity updates to the database. There can be multiple quantity trees for each item and organization. Updates in a quantity tree are not reflected in other quantity trees of the same organization or item. Thus, it would be possible for two different sessions to try to reserve or transact the same quantity. Either sessions would lead to a negative quantity. To solve this problem, call do-check before committing. The DO\_CHECK procedure rebuilds the quantity tree with the current information in the database. If your updates result in negative quantities (and if negative quantities are not allowed), then x\_no\_violation will be false. Updates should then be rolled back. The table below provides the specifications for this procedure:

**Table 7-51 DO\_CHECK**

Parameter	Usage	Default	Type	Required	Derived	Optional
p_api_version_number	IN		Number	x		
p_init_msg_lst	IN	False	Varchar2		x	
x_return_status	OUT		Varchar2			
x_msg_count	OUT		Number			
x_msg_data	OUT		Varchar2			
x_no_violation	OUT		Boolean			

**p\_api\_version\_number**

Indicates the API version number.

**p\_init\_msg\_list**

Requests that the API initialize the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => I

- p\_encoded => F
- p\_data => 1\_message
- p\_msg\_index\_out => 1\_msg\_index\_out  
where 1\_message and 1\_msg\_index\_out are local variables of types  
Varchar2(2000) and Number respectively.

Default Value: FND\_API.G\_FALSE

#### **x\_return\_status**

Returns fnd\_api.g\_ret\_sts\_success for success, fnd\_api.g\_ret\_sts\_error for failure to process request due to incorrect input or for an unexpected error fnd\_api.g\_ret\_sts\_unexp\_error.

#### **x\_msg\_count**

Indicates the number of error messages the API has encountered.

#### **x\_msg\_data**

Contains the error message if x\_msg\_count =1.

#### **x\_no\_violation**

Return true if no validation found, otherwise value equal false.

## **Validation of Quantity Tree API**

### **Standard Validation**

Oracle Inventory validates all input parameters in the Quantity Tree API. For specific information on the data implied by these parameters, see your Oracle Inventory Technical Reference Manual.

### **Error Handling**

If any validation fails, the API will return an error status to the calling module.

**Table 7–52 VALIDATION OF QUANTITY TREE API**

<b>Condition</b>	<b>Message Returned</b>	<b>Description</b>
Success	S	Process succeeded

**Table 7–52    VALIDATION OF QUANTITY TREE API**

Condition	Message Returned	Description
Failure	E	Expected Error
Failure	U	Unexpected Error

## Transaction Processing Program Interface

The Inventory Transaction Manager Program is a public API, that enables you to process transactions from the interface table, mtl\_transactions\_interface. It also enables you to process pending transaction from table, Mtl\_Material\_Transaction\_Temp. The API will process the transactions and create a historical record in mtl\_material\_transactions and update onhand.

### Setting Up Transaction Processing API

Package Name: INV\_TXN\_MANAGER\_PUB

Function Name: PROCESS\_TRANSACTION

Return: 0 for sucess, -1 for failure

Description: This function is used to process records in the table Mtl\_Transactions\_Interface, or Mtl\_Material\_Transactions\_Temp. The assumption is that records being processed via mtl\_material\_transactions\_temp have been validated. Records created through non-Oracle applications should be inserted in Mtl\_Transactions\_Interface, as they will be validated before being processed.

**Table 7–53    PROCESS\_TRANSACTION**

Parameter	Usage	Default	Type	Required	Derived	Optional
p_api_version_number	IN		Number	x		
p_init_msg_lst	IN	fnd_api.g_false	Varchar2		x	x
p_commit	IN	fnd_api.g_false	Varchar2			x

**Table 7–53    *PROCESS\_TRANSACTION***

Parameter	Usage	Default	Type	Required	Derived	Optional
p_validate_level	IN	fnd_ api.g_ valid_ level_ full	Number			x
x_return_status	OUT		Varchar2			
x_msg_count	OUT		Number			
x_msg_data	OUT		Varchar2		x	
x_trans_count	OUT		Number		x	
p_table	IN	1	Number			x
p_header_id	IN		Number	x		

**p\_api\_version\_number**

Indicates the API version number.

**p\_init\_msg\_list**

Requests that the API initialize the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => I
- p\_encoded => F
- p\_data => 1\_message
- p\_msg\_index\_out => 1\_msg\_index\_out  
     where 1\_message and 1\_msg\_index\_out are local variables of types  
     Varchar2(2000 and Number respectively.

Default Value: FND\_API.G\_FALSE

**p\_commit**

Requests that the API update information for you after it completes its function.  
 Default Value: FND\_API.G\_FALSE.

**p\_validate\_level**

P\_Validate\_Level can have two possible values: G\_Valid\_Level\_Full or G\_Valid\_Level\_None. G\_valid\_level\_full, implies the records from Mtl\_Transactions\_Interface will undergo thorough validations. A value of G\_Valid\_Level\_none is for internal use only. Default value: Fnd\_Api.G\_Valid\_Level\_Full.

**x\_return\_status**

Returns fnd\_api.g\_ret\_sts\_success for success, fnd\_api.g\_ret\_sts\_error for failure to process request due to incorrect input or for an unexpected error fnd\_api.g\_ret\_sts\_unexp\_error.

**x\_msg\_count**

Indicates the number of error messages that API has encountered.

**x\_msg\_data**

Display error message text. If the x\_msg\_count is equal to 1, then this contains the actual message.

**x\_trans\_count**

Number of records processed.

**p\_table**

Value 2 implies the records to be processed reside in mtl\_material\_transactions\_temp. Value 1 implies the records to be processed reside in mtl\_transactions\_interface. Oracle does not expect third party to invoke this API with a value of 2 (records in mtl\_material\_transactions\_temp).

**p\_header\_id**

This is an input parameter corresponding to the transaction\_header\_id of the batch to be processed from mtl\_transactions\_interface or mtl\_material\_transactions\_temp.

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# Oracle Master Scheduling/MRP and Oracle Supply Chain Planning Open Interfaces and APIs

This chapter contains information about the following Oracle Master Scheduling/MRP and Oracle supply Chain Planning open interfaces and application program interfaces:

- [Open Forecast Interface](#) on page 8-2
- [Open Master Schedule Interface](#) on page 8-8
- [Open Forecast Entries Application Program Interface](#) on page 8-14
- [Sourcing Rule Application Program Interface](#) on page 8-21

# Open Forecast Interface

You can import forecasts from any source using the Open Forecast Interface table. Oracle Master Scheduling/MRP automatically validates and implements imported forecasts as new forecasts in Oracle Master Scheduling/MRP.

The purpose of this essay is to explain how to use the Open Forecast Interface so that you can integrate other applications with Oracle Master Scheduling/MRP.

## Functional Overview

All processing is performed by the Forecast Interface Load program. The Forecast Interface Load program is launched by the Planning Manager, which periodically checks the Open Forecast Interface to see if there are any new rows waiting to be processed.

## Setting Up the Open Forecast Interface

You must define at least one organization, item, forecast set, and forecast name before using the Open Forecast Interface. Since the Planning Manager decides when to call the Forecast Interface Load program, the Planning Manager must also be running before you can import forecasts via the Open Forecast Interface.

## Inserting into the Open Forecast Interface Table

You must load your forecasts into the MRP\_FORECAST\_INTERFACE table. The Forecast Interface Load program validates your forecasts, derives any additional data as necessary, and then processes it by creating new forecasts in Oracle Master Scheduling/MRP.

### Open Forecast Interface Table Description

The Open Forecast Interface Table is described in the following table. This is typically used for batch loads, performed when the load is low on the concurrent processing system. It is not interactive.

**Table 8–1** *Open Forecast Interface Table Description*

Column Name	Type	Required	Derived	Optional
INVENTORY_ITEM_ID	Number			
FORECAST_DESIGNATOR	Varchar2(10)	x		
ORGANIZATION_ID	Number	x		

**Table 8–1 Open Forecast Interface Table Description**

Column Name	Type	Required	Derived	Optional
FORECAST_DATE	Date	x		
LAST_UPDATE_DATE	Date	x		
LAST_UPDATED_BY	Number	x		
CREATION_DATE	Date	x		
CREATED_BY	Number	x		
LAST_UPDATE_LOGIN	Number			x
QUANTITY	Number	x		
PROCESS_STATUS	Number	x		
CONFIDENCE_PERCENTAGE	Number	x		
COMMENTS	Varchar2(240)			x
ERROR_MESSAGE	Varchar2(240)		x	
REQUEST_ID	Number		x	
PROGRAM_APPLICATION_ID	Number		x	
PROGRAM_ID	Number		x	
PROGRAM_UPDATE_DATE	Date		x	
WORKDAY_CONTROL	Number			x
BUCKET_TYPE	Number			x
FORECAST_END_DATE	Date			x
TRANSACTION_ID	Number			x
SOURCE_CODE	Varchar2(10)			x
SOURCE_LINE_ID	Number			x
ATTRIBUTE_CATEGORY	Varchar230)			x
ATTRIBUTE1 - ATTRIBUTE15	Varchar2(150)			x
PROJECT ID	Number(15)			x
TASK ID	Number(15			x
LINE ID	Number(15			x

## Legend

1: Multiple Period Forecast Entries only

## Required Data

ORGANIZATION\_ID, FORECAST\_DESIGNATOR, INVENTORY\_ITEM\_ID, FORECAST\_DATE, and QUANTITY are used by the Forecast Interface Load program to create new forecast entries in MRP\_FORECAST\_DATES.

PROCESS\_STATUS indicates the current state of processing of each new forecast entry in the Open Forecast Interface. Valid values include:

- 1. Do not process
- 2. Waiting to be processed
- 3. Being processed
- 4. Error
- 5. Processed

When you first load a new forecast entry into the Open Forecast Interface, set PROCESS\_STATUS to 2 (Waiting to be processed).

## Derived Data

ERROR\_MESSAGE indicates a problem that prevents the Forecast Interface Load program from successfully processing a new forecast entry in the Open Forecast Interface.

The Forecast Interface Load program creates a new row in MRP\_FORECAST\_ITEMS for each new forecast entry that refers to an item that has not been assigned to the forecast referenced in the Open Forecast Interface.

## Optional Data

Use WORKDAY\_CONTROL to indicate the action that the Forecast Interface Load should take if it finds a forecast date or forecast end date that is not a valid workday. Enter one of the following:

- 1. Reject
- 2. Shift forward
- 3. Shift backward

If `WORKDAY_CONTROL` is set to Null, the Forecast Interface Load program assumes a value of 1 (Reject).

Use `BUCKET_TYPE` to indicate the bucket type of each new forecast entry. Enter one of the following:

- 1. Days
- 2. Weeks
- 3. Periods

If `BUCKET_TYPE` is null, the Forecast Interface Load program assumes a value of 1 (Days).

Use `FORECAST_END_DATE` for forecast entries that span multiple periods.

Use `TRANSACTION_ID` if you wish to replace an existing entry in `MRP_FORECAST_DATES` with a new forecast entry that you have loaded into the Open Forecast Interface. The Forecast Interface Load deletes any existing entries in `MRP_FORECAST_DATES` with the same `TRANSACTION_ID` before importing the new forecast entry.

Use `SOURCE_CODE` and `SOURCE_LINE_ID` to identify the source of new forecast entries.

### **See Also**

*Oracle Master Scheduling/MRP and Oracle Supply Chain Planning Technical Reference Manual*

## **Validation**

### **Standard Validation**

Oracle Master Scheduling/MRP validates all required columns in the interface table. For specific information on the data implied by these columns, see your *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning Technical Reference Manual* for details.

### **Other Validation**

Oracle Master Scheduling/MRP also performs the following validation:

**INVENTORY\_ITEM\_ID** Must be a valid item defined IN `MTL_SYSTEM_ITEMS`.

**ORGANIZATION\_ID** Must be a valid organization defined in ORG\_ORGANIZATION\_DEFINITIONS.

**FORECAST\_DESIGNATOR** Must be a valid, non-disabled forecast name defined in MRP\_FORECAST\_DESIGNATORS.

**FORECAST\_DATE** Must be less than or equal to RATE\_END\_DATE if RATE\_END\_DATE is provided.

**FORECAST\_END\_DATE** Must be greater than or equal to FORECAST\_DATE.

**FORECAST\_QUANTITY** Must be greater than 0 and less than or equal to 99999999.9.

**PROCESS\_STATUS** Must be one of:

- 1. Do not process
- 2. Waiting to be processed
- 3. Being processed
- 4. Error
- 5. Processed

**WORKDAY\_CONTROL** Must be one of:

- 1. Reject
- 2. Shift forward
- 3. Shift backward

**BUCKET\_TYPE** Must be one of:

- 1. Days
- 2. Weeks
- 3. Periods

**TRANSACTION\_ID** If provided, TRANSACTION\_ID must match an existing TRANSACTION\_ID in MRP\_FORECAST\_DATES.

## Resolving Failed Open Forecast Interface Rows

### Error Messages

Oracle Master Scheduling/MRP may display specific error messages during interface processing.

### See Also

The *Oracle Applications Message Reference Manual*. This manual is available in HTML format on the documentation CD-ROM for Release 11i.

### Viewing Failed Transactions

Use SQL\*Plus to view failed transactions in the Open Forecast Interface. The ERROR\_MESSAGE column indicates why the Forecast Interface Load program was unable to successfully process each failed transaction.

### Fixing Failed Transactions Options

Use SQL\*Plus to manually correct failed transactions. You can either:

- Delete the failed row in the Open Forecast Interface, correct the error in your external forecast, and reload the corrected forecast into the Open Forecast Interface, or
- Correct the error in the Open Forecast Interface, reset the PROCESS\_STATUS column to 2 (Waiting to be processed), and set the REQUEST\_ID and ERROR\_MESSAGE columns to Null

The Planning Manager will detect the new rows when it next checks the Open Forecast Interface, and launch the Forecast Interface Load program accordingly.

# Open Master Schedule Interface

You can import master schedules from any source using the Open Master Schedule Interface. Oracle Master Scheduling/MRP automatically validates and implements imported master schedules as new master schedules in Oracle Master Scheduling/MRP.

The purpose of this essay is to explain how to use the Open Master Schedule Interface so that you can integrate other applications with Oracle Master Scheduling/MRP.

## Functional Overview

All processing is performed by the Master Schedule Interface Load program. The Master Schedule Interface Load program is launched by the Planning Manager, which periodically checks the Open Master Schedule Interface to see if there are any new rows waiting to be processed.

## Setting Up the Open Master Schedule Interface

You must define at least one organization, item, and master schedule name before using the Open Master Schedule Interface. Since the Planning Manager decides when to call the Master Schedule Interface Load program, the Planning Manager must also be running before you can import master schedules via the Open Master Schedule Interface.

## Inserting into the Open Master Schedule Interface Table

You must load your master schedules into the MRP\_SCHEDULE\_INTERFACE table. The Master Schedule Interface Load program validates your master schedules, derives any additional data as necessary, and then processes it by creating new master schedules in Oracle Master Scheduling/MRP.

### Open Master Schedule Interface Table Description

The Open Master Schedule Interface Table is described in the following table:

**Table 8–2   Open Master Schedule Interface Table Description**

Column Name	Type	Required	Derived	Optional
INVENTORY_ITEM_ID	Number	x		
SCHEDULE_DESIGNATOR	Varchar2(10)	x		

**Table 8–2 Open Master Schedule Interface Table Description**

Column Name	Type	Required	Derived	Optional
ORGANIZATION_ID	Number	x		
LAST_UPDATE_DATE	Date			x
LAST_UPDATED_BY	Number			x
CREATION_DATE	Date			x
CREATED_BY	Number			x
LAST_UPDATE_LOGIN	Number			x
SCHEDULE_DATE	Date	x		
NEW_SCHEDULE_DATE	Date		x	
RATE_END_DATE	Date			x
NEW_RATE_END_DATE	Date		x	
SCHEDULE_QUANTITY	Number	x		
SCHEDULE_COMMENTS	Varchar2(240)			x
ERROR_MESSAGE	Varchar2(240)		x	
WORKDAY_CONTROL	Number			x
TRANSACTION_ID	Number			x
PROCESS_STATUS	Number	x		
SOURCE_CODE	Varchar2(10)			x
SOURCE_LINE_ID	Number			x
REQUEST_ID	Number		x	
PROGRAM_APPLICATION_ID	Number		x	
PROGRAM_ID	Number		x	
PROGRAM_UPDATE_DATE	Date		x	
ATTRIBUTE_CATEGORY	Varchar2(30)			x
ATTRIBUTE1 - ATTRIBUTE15	Varchar2(150)			x
PROJECT ID	Number(15)			x
TASK ID	Number(15)			x
LINE ID	Number(15)			x

## Legend

1: Rate-based Master Schedule Entries only

## Required Data

ORGANIZATION\_ID, SCHEDULE\_DESIGNATOR, INVENTORY\_ITEM\_ID, SCHEDULE\_DATE, and SCHEDULE\_QUANTITY are used by the Master Schedule Interface Load program to create new schedule entries in MRP\_SCHEDULE\_DATES.

PROCESS\_STATUS indicates the current state of processing of each new schedule entry in the Open Master Schedule Interface. Possible values include:

- 1. Do not process
- 2. Waiting to be processed
- 3. Being processed
- 4. Error
- 5. Processed

When you first load a new schedule entry into the Open Master Schedule Interface, set PROCESS\_STATUS to 2 (Waiting to be processed).

## Derived Data

ERROR\_MESSAGE indicates a problem that prevents the Master Schedule Interface Load program from successfully processing a new schedule entry in the Open Master Schedule Interface.

The Master Schedule Interface Load program creates a new row in MRP\_SCHEDULE\_ITEMS for each new schedule entry that refers to an item that has not been assigned to the master schedule referenced in the Open Master Schedule Interface.

## Optional Data

Use WORKDAY\_CONTROL to indicate the action that the Master Schedule Interface Load should take if it finds a schedule date or schedule end date that is not a valid workday. Enter one of the following:

- 1. Reject
- 2. Shift forward
- 3. Shift backward

If `WORKDAY_CONTROL` is set to Null, the Master Schedule Interface Load program assumes a value of 1 (Reject).

Use `SCHEDULE_END_DATE` for rate-based master schedule entries.

Use `TRANSACTION_ID` if you wish to replace an existing entry in `MRP_SCHEDULE_DATES` with a new schedule entry that you have loaded into the Open Master Schedule Interface. The Master Schedule Interface Load deletes any existing entries in `MRP_SCHEDULE_DATES` with the same `TRANSACTION_ID` before importing the new schedule entry.

Use `SOURCE_CODE` and `SOURCE_LINE_ID` to identify the source of new schedule entries.

### See Also

*Oracle Master Scheduling/MRP and Oracle Supply Chain Planning Technical Reference Manual*

## Validation

### Standard Validation

Oracle Master Scheduling/MRP validates all required columns in the interface table. For specific information on the data implied by these columns, see your *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning Technical Reference Manual* for details.

### Other Validation

Oracle Master Scheduling/MRP also performs the following validation:

**INVENTORY\_ITEM\_ID** Must be a valid item defined in `MTL_SYSTEM_ITEMS`. Master Demand Schedules can only include MPS planned or MRP planned items. Master Production Schedules can only include MPS planned items.

**ORGANIZATION\_ID** Must be a valid organization defined in `ORG_ORGANIZATION_DEFINITIONS`.

**SCHEDULE\_DESIGNATOR** Must be a valid, non-disabled master schedule name defined in `MRP_SCHEDULE_DESIGNATORS`.

**SCHEDULE\_DATE** Must be less than or equal to RATE\_END\_DATE if RATE\_END\_DATE is provided.

**RATE\_END\_DATE** Must be greater than or equal to SCHEDULE\_DATE.

Only repetitively planned items can have a RATE\_END\_DATE.

**SCHEDULE\_QUANTITY** Must be greater than 0 and less than or equal to 99999999.9.

**WORKDAY\_CONTROL** Must be one of:

- 1. Reject
- 2. Shift forward
- 3. Shift backward

**PROCESS\_STATUS** Must be one of:

- 1. Do not process
- 2. Waiting to be processed
- 3. Being processed
- 4. Error
- 5. Processed

**TRANSACTION\_ID** If provided, TRANSACTION\_ID must match an existing TRANSACTION\_ID in MRP\_SCHEDULE\_DATES.

## Resolving Failed Open Master Schedule Interface Rows

### Error Messages

Oracle Master Scheduling/MRP may display specific error messages during interface processing.

### See Also

*The Oracle Applications Message Reference Manual*. This manual is available in HTML format on the documentation CD-ROM for Release 11i.

## Viewing Failed Transactions

Use Scalpels to view failed transactions in the Open Master Schedule Interface. The `ERROR_MESSAGE` column indicates why the Master Schedule Interface Load program was unable to successfully process each failed transaction.

## Fixing Failed Transactions Options

Use Scalpels to manually correct failed transactions. You can either:

- Delete the failed row in the Open Master Schedule Interface, correct the error in your external schedule, and reload the corrected schedule into the Open Master Schedule Interface, or
- Correct the error in the Open Master Schedule Interface, reset the `PROCESS_STATUS` column to 2 (Waiting to be processed), and set the `REQUEST_ID` and `ERROR_MESSAGE` columns to Null

The Planning Manager will detect the new rows when it next checks the Open Master Schedule Interface, and launch the Master Schedule Interface Load program accordingly.

## Open Forecast Entries Application Program Interface

The Open Forecast Entries Application Program Interface(API) allows you to create, replace, or delete forecast entries for existing forecasts and forecast sets in Oracle Master Scheduling/MRP.

The purpose of this essay is to explain how to use the Open Forecast Entries API so that you can integrate other applications with Oracle Master Scheduling/MRP. The Open Forecast Entries API differs from the Open Forecast Interface in two ways:

- There is tighter coupling between the calling interface and the MRP system.
- It is used for synchronous actions on the forecasting data, and you can manipulate data within a commit cycle controlled by the calling module.

This is achieved by the use of a PL/SQL table instead of a database table.

### Functional Overview

You can process MRP Forecast Entries directly from within your calling module without running a concurrent process, it is PL/SQL based. This program allows you to create new forecasts, replace existing forecasts, and delete forecast entries within a defined forecast name or designator. The forecast data that needs to be imported is loaded from a table and inserted into the MRP\_FORECAST\_DATES parameter.

### Setting Up the Open Forecast Entries API

The Open Forecast Entries API is a stored PL/SQL function, **MRP\_FORECAST\_INTERFACE\_PK.MRP\_FORECAST\_INTERFACE**, with two parameters. One parameter is a PL/SQL table structured the same as MRP\_FORECAST\_INTERFACE. The second parameter is a table defining the forecast and organization.

### Inserting into the Open Forecast Entries API Tables

You must load your forecast data into the T\_FORECAST\_INTERFACE PL/SQL table, and the FORECAST\_DESIGNATOR PL/SQL table.

#### Open Forecast Entries Application Program Interface PL/SQL Table Description

The Open Forecast Entries Application Program Interface PL/SQL table is described in the following table:

**Table 8–3 Oracle Master Scheduling/MRP Open Forecast Entries API**

<b>T_FORECAST_INTERFACE Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
INVENTORY_ITEM_ID	Number	x		
FORECAST_DESIGNATOR	Varchar2(10)	x		
ORGANIZATION_ID	Number	x		
FORECAST_DATE	Date	x		
LAST_UPDATE_DATE	Number		x	
CREATION_DATE	Date		x	
CREATED_BY	Number		x	
LAST_UPDATE_LOGIN	Number		x	x
QUANTITY	Number	x		
PROCESS_STATUS	Number	x		
CONFIDENCE_PERCENTAGE	Number	x		
COMMENTS	Varchar2(240)			x
ERROR_MESSAGE	Varchar2(240)		x	
REQUEST_ID	Number		x	
PROGRAM_APPLICATION_ID	Number		x	
PROGRAM_ID	Number		x	
PROGRAM_UPDATE_DATE	Date		x	
WORKDAY_CONTROL	Number			x
BUCKET_TYPE	Number			x
FORECAST_END_DATE	Date			x
TRANSACTION_ID	Number			x
SOURCE_CODE	Varchar2(10)			x
SOURCE_LINE_ID	Number			x
ATTRIBUTE1 - ATTRIBUTE15	Varchar2(150)			x
PROJECT ID	Number(15)			x
TASK ID	Number(15)			x

**Table 8–3 Oracle Master Scheduling/MRP Open Forecast Entries API**

T_FORECAST_INTERFACE				
Column Name	Type	Required	Derived	Optional
LINE ID	Number(15			x

Open Forecast Interface Designator Table Description

The Open Forecast Interface Designator Table is described in the following table:

**Table 8–4 Oracle Master Scheduling/MRP Open Forecast Interface Designator**

T_FORECAST_DESIGNATOR				
Column Name	Type	Required	Derived	Optional
ORGANIZATION_ID	Number	x		
FORECAST_DESIGNATOR	Varchar2(10)	x		

Legend

1: Multiple Period Forecast Entries only

Returns

True if successful.

False if failure.

Parameters

**Table 8–5 Parameters**

Name	Type	In/Out
T_FORECAST_INTERFACE	Table of MRP_FORECAST_INTERFACE ROWTYPE	In and Out
T_FORECAST_DESIGNATOR	Table of User-defined record REC_FORECAST_DESG (Organization_id number, Forecast Designator Varchar2(10)	In

Required Data

ORGANIZATION\_ID, FORECAST\_DESIGNATOR, INVENTORY\_ITEM\_ID, FORECAST\_DATE, and QUANTITY are used by the Forecast Interface Entries program to create, replace, or delete forecast entries in T\_FORECAST\_INTERFACE.

PROCESS\_STATUS indicates the current state of processing of each new forecast entry. Valid values include:

- 1. Do not process
- 2. Waiting to be processed

When you first load a new forecast entry into the Open Forecast Entries Interface, set PROCESS\_STATUS to 2 (Waiting to be processed). The values 3 (Being processed), 4 (Error), and 5 (Processed) are used to report back to the calling program.

### **Derived Data**

The concurrent program and WHO columns, along with the error message column, are derived and set by the API accordingly.

### **Optional Data**

Use WORKDAY\_CONTROL to indicate the action that the Forecast Interface Entry should take if it finds a forecast date or forecast end date that is not a valid workday. Enter one of the following:

- 1. Reject
- 2. Shift forward
- 3. Shift backward

If WORKDAY\_CONTROL is set to Null, the Forecast Interface Entry program assumes a value of 1 (Reject).

Use BUCKET\_TYPE to indicate the bucket type of each new forecast entry. Enter one of the following:

- 1. Days
- 2. Weeks
- 3. Periods

If BUCKET\_TYPE is null, the Forecast Interface Load program assumes a value of 1 (Days).

Use FORECAST\_END\_DATE for forecast entries that span multiple periods.

Use TRANSACTION\_ID if you wish to replace an existing entry in MRP\_FORECAST\_DATES with a new forecast entry that you have loaded into the Open Forecast Interface. The Forecast Interface Load deletes any existing entries in MRP\_

FORECAST\_DATES with the same TRANSACTION\_ID before importing the new forecast entry.

Use SOURCE\_CODE and SOURCE\_LINE\_ID to identify the source of new forecast entries.

### **See Also**

*Oracle Master Scheduling/MRP Technical Reference Manual*

## **Validation**

### **Standard Validation**

Oracle Master Scheduling/MRP validates all required columns in the interface table. For specific information on the data implied by these columns, see your *Oracle Master Scheduling/MRP Reference Manual* for details.

### **Other Validation**

Oracle Open Forecast Entries Interface also performs the following validation:

**INVENTORY\_ITEM\_ID** Must be a valid item defined IN MTL\_SYSTEM\_ITEMS.

**FORECAST\_DESIGNATOR** Must be a valid, non-disabled forecast name defined in MRP\_FORECAST\_DESIGNATORS.

**ORGANIZATION\_ID** Must be a valid organization defined in ORG\_ORGANIZATION\_DEFINITIONS.

**FORECAST\_DATE** Must be less than or equal to FORECAST\_END\_DATE if FORECAST\_END\_DATE is provided.

**PROCESS\_STATUS** Must be one of:

- 1. Do not process
- 2. Waiting to be processed

**FORECAST\_END\_DATE** Must be greater than or equal to FORECAST\_DATE.  
Must be greater than 0 and less than or equal to 99999999.9.

**FORECAST\_QUANTITY** Must be greater than 0 and less than or equal to 99999999.9.

**WORKDAY\_CONTROL** Must be one of:

- 1. Reject
- 2. Shift forward
- 3. Shift backward

**BUCKET\_TYPE** Must be one of:

- 1. Days
- 2. Weeks
- 3. Periods

**TRANSACTION\_ID** If provided, TRANSACTION\_ID must match an existing TRANSACTION\_ID in MRP\_FORECAST\_DATES.

## Using the Open Forecast Entries API

### Creating New Forecast Entries

- Populate table T\_FORECAST\_INTERFACE with all the forecast data that needs to be imported. Set PROCESS\_STATUS to a value of 2 for all rows.
- Call MRP\_FORECAST\_INTERFACE\_PK.MRP\_FORECAST\_INTERFACE using parameter T\_FORECAST\_INTERFACE and T\_FORECAST\_DESIGNATOR.
- The Forecast Interface Entry program creates a new row in MRP\_FORECAST\_ITEMS for each new forecast entry that refers to an item that has not been assigned to the forecast referenced in the Open Forecast Interface.
- The application program interface will process the rows and set the column PROCESS\_STATUS to a value of either 4 or 5:
  - 4 an error occurred, the column ERROR\_MESSAGE will indicate the error
  - 5 the row was inserted into MRP\_FORECAST\_DATES

### Replacing Forecast Entries

- Populate table T\_FORECAST\_INTERFACE with all the forecast data that needs to be imported. Set PROCESS\_STATUS to a value of 2 for all rows.

- Populate table T\_FORECAST\_DESIGNATOR with all the forecast desIgnators for which entries need to be deleted.
- Call MRP\_FORECAST\_INTERFACE\_PK.MRP\_FORECAST\_INTERFACE with the following parameters:  
FORECAST\_INTERFACE, T\_FORECAST\_DESIGNATOR.
- The application program interface will delete the existing entries for each forecast designator in T\_FORECAST\_DESIGNATOR. It will process the rows in T\_FORECAST\_INTERFACE and set the column PROCESS\_STATUS to a value of either 4 or 5:
  - 4 an error occurred, the column ERROR\_MESSAGE will indicate the error
  - 5 the row was inserted into MRP\_FORECAST\_DATES

**Deleting All Forecast Entries in Multiple Forecast Designators**

- Populate table T\_FORECAST\_DESIGNATOR with all the forecast desIgnators for which entries need to be deleted.
- Call MRP\_FORECAST\_INTERFACE\_PK.MRP\_FORECAST\_INTERFACE with parameter T\_FORECAST\_DESIGNATOR.
- The application program interface will delete the existing entries for each forecast desIgnator in T\_FORECAST\_DESIGNATOR.

**Error Handling**

The Open Forecast Entries Interface program will process the rows and report the following values for every record in the FORECAST\_\_INTERFACE entry table.

**Table 8–6   Record Values**

Condition	PROCESS_STATUS	ERROR_MESSAGE
Success	5	Null
Failure	4	actual error message

## Sourcing Rule Application Program Interface

The Sourcing Rule Application Program Interface (API) is a public API that allows you to create, maintain, and delete sourcing rule or bill of distribution information in Oracle Master Scheduling/MRP and Oracle Supply Chain Planning.

This API differs from the planning interfaces because it puts information directly into the Oracle Master Scheduling/MRP tables rather than inserting information into an interface table. You can process sourcing rule entries directly from within your calling module without running a concurrent process. It is PL/SQL based, you can process one sourcing rule or bill of distribution per call.

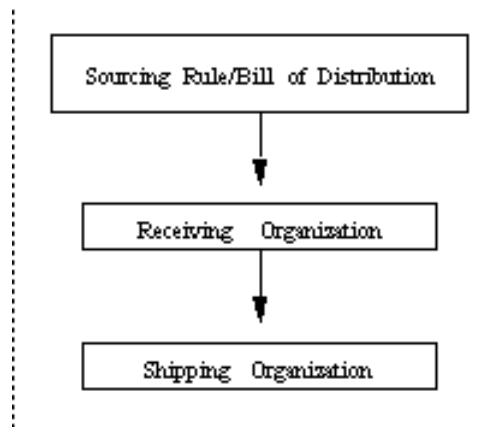
It can be used for both custom applications and legacy systems. The Sourcing Rule API consists of two objects: the Sourcing Rule object and the Assignment object. Each of these objects consists of several entities.

This section explains how to use the Sourcing Rule API and how it functions in Oracle planning products.

### Sourcing Rule/Bill of Distribution API Features

The Sourcing Rule/Bill of Distribution API object consists of three entities:

**Figure 8–1 Three Entities of the Sourcing Rule/Bill of Distribution API Object**



- Sourcing Rule/Bill of Distribution

You can create new entries, update existing sourcing rule/bill of distribution information, and delete entries.

Table: MRP\_SOURCING\_RULES

- Receiving Organization

You can process multiple receiving organizations belonging to the sourcing rule/bill of distribution. You can create new entries, update existing information, and delete receiving organizations.

Table: MRP\_SR\_RECEIPT\_ORG

- Shipping Organization

You can process multiple shipping organizations belonging to the sourcing rule/bill of distribution. You can create new entries, update existing information, and delete shipping organizations.

Table: MRP\_SR\_SOURCE\_ORG

The relationships between these tables create the sourcing information used in MPS, MRP, and DRP plans. The MRP\_SOURCING\_RULES table stores sourcing rule names and descriptions. It contains receiving organization data for material sources. The receiving organization information is in the MRP\_SR\_RECEIPT\_ORG table, each row of the table specifies a receiving organization for a date range. The MRP\_SR\_SOURCE\_ORG table stores data on the source suppliers for the sourcing rule or bill of distribution.

A sourcing rule is paired with an assignment from the MRP\_SR\_ASSIGNMENTS table, all this information is fed into the material items and categories tables.

For more information on planning table, see: *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning Technical Reference Manual*.

## Functional Overview

The Sourcing Rule/Bill of Distribution API provides three public procedures for calling the create, update, delete, and get operations:

- Process\_Sourcing\_Rule

Accepts object specific information (through the parameters) and handles Create, Update and Delete operation.

- Get\_Sourcing\_Rule

Handles the Select Operation Lock\_Sourcing\_Rule.

- Select Operation Lock\_Sourcing\_Rule

Locks records that define a particular Sourcing Rule and associated child entities.

Each of these three procedures first performs a check for call compatibility and then calls the respective private API. There is a specific order of processing information into the parameters and it is as follows:

- First, Sourcing Rule information is processed by passing in through the p\_sourcing\_rule\_rec parameter.
- Next, the receiving organization information is passed to the p\_receiving\_org parameter.
- And then the shipping organization information is processed through the p\_shipping\_org parameter.

## Setting Up the Sourcing Rule/Bill of Distribution API

The Sourcing Rule API is a stored PL/SQL function. Before using the API, set up and activate the following parameters:

- Version number
- Sourcing rule
- Receiving organization
- Shipping organization

### Procedure Parameter Descriptions

#### MRP\_SOURCING\_RULE\_PUB.PROCESS\_SOURCING\_RULE

The following chart describes all parameters used by the public API MRP\_SOURCING\_RULE\_PUB.PROCESS\_SOURCING\_RULE procedure. All of the inbound and outbound parameters are listed. Additional information on these parameters follows.

**Table 8–7 Parameters**

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	Number	x		
p_init_msg_list	IN	Varchar2			x

**Table 8–7 Parameters**

Parameter	Usage	Type	Required	Derived	Optional
p_return_values	IN	Varchar2			x
p_commit	IN	Varchar2			x
x_return_status	OUT	Varchar2			x
x_msg_count	OUT	Number			x
x_msg_data	OUT	Varchar2		x	
p_sourcing_rule_rec	IN	Record	x		
p_sourcing_rule_val_rec	IN	Record	x		
p_receiving_org_tbl	IN	PL/SQL Table	x		
p_receiving_org_val_tbl	IN	PL/SQL Table	x		
p_shipping_org_tbl	IN	PL/SQL Table	x		
p_shipping_org_val_tbl	IN	PL/SQL Table	x		
x_sourcing_rule_rec	OUT	Record			x
x_sourcing_rule_val_rec	OUT	Record			x
x_receiving_org_tbl	OUT	PL/SQL Table			x
x_receiving_org_val_tbl	OUT	PL/SQL Table			x
x_shipping_org_tbl	OUT	PL/SQL Table			x
x_shipping_org_val_tbl	OUT	PL/SQL Table		x	

**p\_api\_version\_number**

Used to compare the incoming API call's version number with the current version number. An error is returned if the version numbers are incompatible.

**p\_init\_msg\_list**

Requests that the API initialize the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET. The values are:

- p\_msg\_index => 1
- p\_encoded => F
- p\_data => 1\_message

- `p_msg_index_out => 1_msg_index_out`  
where `1_message` and `1_msg_index_out` are local variables of types `Varchar2(2000)` and `Number` respectively.

Default Value: `FND_API.G_FALSE`

**p\_return\_values**

Requests that the API send back the values on your behalf.

Default Value: `FND_API.G_FALSE`

**p\_commit**

Requests that the API update information for you after it completes its function.

Default Value: `FND_API.G_FALSE`

**x\_return\_status**

Requests that the API return the status of the data for you after it completes its function. Valid values include:

- Success: `FND_API.G_RET_STS_SUCCESS`
- Error: `FND_API.G_RET_STS_ERROR`
- Unexpected Error: `FND_API.G_RET_STS_UNEXP_ERROR`

**x\_msg\_count**

Indicates number of error messages API has encountered.

**x\_msg\_data**

Displays error message text. If the `x_msg_count` is equal to 1, then this contains the actual message.

**p\_sourcing\_rule\_rec**

The sourcing rule or bill of distribution record referenced by the API.

Default Value: `G_MISS_SOURCING_RULE_REC`

**p\_sourcing\_rule\_val\_rec**

Resolves the values for the API, and then returns the information for the sourcing rule/bill of distribution record.

Default Value: G\_MISS\_SOURCING\_RULE\_VAL\_REC

**p\_receiving\_org\_tbl**

The receiving organization information listed in the rule is returned to this parameter.

Default Value: G\_MISS\_RECEIVING\_ORG\_TBL

**p\_receiving\_org\_val\_tbl**

Resolves the values for the API, and then returns the information for the receiving organization listed in the sourcing rule.

Default Value: G\_MISS\_RECEIVING\_ORG\_VAL\_TBL

**p\_shipping\_org\_tbl**

The shipping organization information listed in the rule is returned to this parameter.

Default Value: G\_MISS\_SHIPPING\_ORG\_TBL

**p\_shipping\_org\_val\_tbl**

Resolves the values for the API, and then returns the information for the shipping organization listed in the sourcing rule.

Default Value: G\_MISS\_SHIPPING\_ORG\_VAL\_TBL

**x\_sourcing\_rule\_rec**

Result of the API data after it completes its function for the sourcing rule/bill of distribution record.

**x\_sourcing\_rule\_val\_rec**

Resolves the values for the API, and then returns the information for the sourcing rule/bill of distribution record.

**x\_receiving\_org\_tbl**

Resolves the values for the API, and then returns the information for the receiving organization listed in the sourcing rule/bill of distribution record.

**x\_receiving\_org\_val\_tbl**

Resolves the values for the API, and then returns the information for the receiving organization listed in the rule.

**x\_shipping\_org\_tbl**

Resolves the values for the API, and then returns the information for the shipping organization listed in the sourcing rule/bill of distribution record.

**x\_shipping\_org\_val\_tbl**

Resolves the values for the API, and then returns the information for the shipping organization listed in the rule.

**Record Parameter Descriptions****SOURCING\_RULE\_REC\_TYPE**

The procedure passes information to record groups and PL/SQL tables. The chart below describes all records that are used by the SOURCING\_RULE\_REC\_TYPE record. Additional information on these parameters follows.

**Table 8–8 SOURCING\_RULE\_REC\_TYPE**

Parameter	Type	Required	Derived	Optional
sourcing_rule_id	Number	x update, delete		
attribute 1 - 15	Varchar2(150)			x
attribute_category	Varchar2(30)			x
created_by	Number		x	
creation_date	Date		x	
description	Varchar2(80)			x
last_updated_by	Number		x	
last_update_date	Date		x	
last_update_login	Number		x	
organization_id	Number	x		
planning_active	Number			x
program_application_id	Number			x
program_id	Number		x	
program_update_date	Date		x	
request_id	Number			x

**Table 8–8 SOURCING\_RULE\_REC\_TYPE**

Parameter	Type	Required	Derived	Optional
sourcing_rule_name	Varchar2(30)	x insert		x
sourcing_rule_type	Number	x		x
status	Number			x
return_status	Varchar2(1)			x
db_flag	Varchar2(1)		x	
operation	Varchar2(30)		x	

**sourcing\_rule\_id**

Identification number for the sourcing rule or bill of distribution record referenced by the API.

Default Value: FND\_API.G\_MISS\_NUM

**attribute 1 - 15**

Descriptive text for flexfields.

Default Value: FND\_API.G\_MISS\_CHAR

**attribute\_category**

The category of the flexfield described in the attribute column.

Default Value: FND\_API.G\_MISS\_CHAR

**created\_by**

Identification number for user initiating this program session.

Default Value: FND\_API.G\_MISS\_NUM

**creation\_date**

Date this program session was created.

Default Value: FND\_API.G\_MISS\_DATE

**description**

Text describing the sourcing rule record type.

Default Value: FND\_API.G\_MISS\_CHAR

**last\_updated\_by**

User ID for user creating this program session.

Default Value: FND\_API.G\_MISS\_NUM

**last\_update\_date**

Date program was last updated.

Default Value: FND\_API.G\_MISS\_DATE

**last\_update\_login**

User login for user updating this program.

Default Value: FND\_API.G\_MISS\_NUM

**organization\_id**

The identification number for the organization referenced in the sourcing rule or bill of distribution record.

Default Value: FND\_API.G\_MISS\_NUM

**planning\_active**

Rule is active when the sum of the allocation percentages equals 100.

Default Value: FND\_API.G\_MISS\_NUM

**program\_application\_id**

Application identifier of the program that has made a call to the Sourcing Rule API if it is registered as a concurrent program in Oracle Application Object Library.

Default Value: FND\_API.G\_MISS\_NUM

**program\_id**

Identifier of the program that has made a call to the Sourcing Rule API, if it is registered as a concurrent program in Oracle Application Object Library.

Default Value: FND\_API.G\_MISS\_NUM

**program\_update\_date**

The date when the program inserts or updates the sourcing records into the appropriate tables.

Default Value: FND\_API.G\_MISS\_DATE

**request\_id**

The request ID determines which profile values are used as a default.

Default Value: FND\_API.G\_MISS\_NUM

**sourcing\_rule\_name**

Valid name of rule defined in the MRP\_SOURCING\_RULES table.

Default Value: FND\_API.G\_MISS\_CHAR

**sourcing\_rule\_type**

Valid types must be one of the following values:

- (1) Sourcing Rule
- (2) Bill of Distribution

Default Value: FND\_API.G\_MISS\_NUM

**status**

If any validation fails, the API will return error status to the calling module. The Sourcing Rule API processes the rows and reports the following values for every record. If the sourcing rule does not already exist in the system - the Status attribute is set to 1.

Processing status of the sourcing rule, valid values are:

- (1)
- (2)

Default Value: FND\_API.G\_MISS\_NUM

**return\_status**

Processing status of the API after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_ERROR

- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

Default Value: FND\_API.G\_MISS\_CHAR

### **db\_flag**

Indicator of the record existing in the database.

Default Value: FND\_API.G\_MISS\_CHAR

### **operation**

Indicator of whether the record is inserted, updated, or deleted. Valid values include:

- Create
- Update
- Delete

Default Value: FND\_API.G\_MISS\_CHAR

### **See Also**

*Oracle Master Scheduling/MRP and Oracle Supply Chain Planning Technical Reference Manual*

### **RECEIVING\_ORG\_REC\_TYPE**

The procedure passes information to record groups and PL/SQL tables. The chart below describes all records that are used by the RECEIVING\_ORG\_REC\_TYPE record. Additional information on these parameters follows.

**Table 8–9 RECEIVING\_ORG\_REC\_TYPE**

Parameter	Type	Required	Derived	Optional
sr_receipt_id	Number	x		
attribute 1 - 15	Varchar2(150)			x
attribute_category	Varchar2(30)			x
created_by	Number		x	
creation_date	Date		x	
disable_date	Date		x	
effective_date	Date		x	

**Table 8–9 RECEIVING\_ORG\_REC\_TYPE**

Parameter	Type	Required	Derived	Optional
last_updated_by	Number		x	
last_update_date	Date		x	
last_update_login	Number		x	
program_application_id	Number		x	
program_id	Number		x	
program_update_date	Date		x	
receipt_organization_id	Number	x		
request_id	Number		x	
sourcing_rule_id	Number	x		
return_status	Varchar2(1)			x
db_flag	Varchar2(1)		x	
operation	Varchar2(30)		x	

**sr\_receipt\_id**

Identification number for the receiving organization referenced in the sourcing rule or bill of distribution record.

Default Value: FND\_API.G\_MISS\_NUM

**attribute 1 - 15**

Descriptive text for flexfields.

Default Value: FND\_API.G\_MISS\_CHAR

**attribute\_category**

The category of the flexfield described in the attribute column.

Default Value: FND\_API.G\_MISS\_CHAR

**created\_by**

Identification number for user initiating this program session.

Default Value: FND\_API.G\_MISS\_NUM

**creation\_date**

Date this program session was created.

Default Value: FND\_API.G\_MISS\_DATE

**disable\_date**

Date the receipt organization is no longer effective.

Default Value: FND\_API.G\_MISS\_DATE

**effective\_date**

Beginning date the receipt organization becomes effective.

Default Value: FND\_API.G\_MISS\_DATE

**last\_updated\_by**

User ID for user creating this program session.

Default Value: FND\_API.G\_MISS\_NUM

**last\_update\_date**

Date program was last updated.

Default Value: FND\_API.G\_MISS\_DATE

**last\_update\_login**

User login for user updating this program.

Default Value: FND\_API.G\_MISS\_NUM

**program\_application\_id**

Application identifier of the program that has made a call to the Sourcing Rule API if it is registered as a concurrent program in Oracle Application Object Library.

Default Value: FND\_API.G\_MISS\_NUM

**program\_id**

Identifier of the program that has made a call to the Sourcing Rule API, if it is registered as a concurrent program in Oracle Application Object Library.

Default Value: FND\_API.G\_MISS\_NUM

**program\_update\_date**

The date when the program inserts or updates the sourcing records into the appropriate tables.

Default Value: FND\_API.G\_MISS\_DATE

**receipt\_organization\_id**

Identifier of the organization that serves as the destination for the sourcing rule or bill of distribution.

Default Value: FND\_API.G\_MISS\_NUM

**request\_id**

The request ID determines which profile values are used as a default.

Default Value: FND\_API.G\_MISS\_NUM

**sourcing\_rule\_id**

Identification number for the sourcing rule or bill of distribution record referenced by the API.

Default Value: FND\_API.G\_MISS\_NUM

**return\_status**

Processing status of the API after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_ERROR
- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

Default Value: FND\_API.G\_MISS\_CHAR

**db\_flag**

Indicator of the record existing in the database.

Default Value: FND\_API.G\_MISS\_CHAR

**operation**

Indicator of whether the record is inserted, updated, or deleted. Valid values include:

- Create

- Update
- Delete

Default Value: FND\_API.G\_MISS\_CHAR

### SHIPPING\_ORG\_REC\_TYPE

The procedure passes information to record groups and PL/SQL tables. The chart below describes all records that are used by the SHIPPING\_ORG\_REC\_TYPE record. Additional information on these parameters follows.

**Table 8–10 SHIPPING\_ORG\_REC\_TYPE**

Parameter	Type	Required	Derived	Optional
sr_source_id	Number	x		
allocation_percent	Number	x		
attribute 1 - 15	Varchar2(150)			x
attribute_category	Varchar2(30)			x
created_by	Number		x	
creation_date	Date		x	
last_updated_by	Number		x	
last_update_date	Date		x	
last_update_login	Number		x	
program_application_id	Number		x	
program_id	Number		x	
program_update_date	Date		x	
rank	Number	x		
request_id	Number		x	
secondary_inventory	Varchar2(10)		x	
ship_method	Varchar2(30)	x		
source_organization_id	Number	x		
source_type	Number			
sr_receipt_id	Number			

**Table 8–10 SHIPPING\_ORG\_REC\_TYPE**

Parameter	Type	Required	Derived	Optional
vendor_id	Number			
vendor_site_id	Number			
return_status	Varchar2(1)			x
db_flag	Varchar2(1)		x	
operation	Varchar2(30)		x	
receiving_org_index	Number			

**sr\_source\_id**

Primary key in the sourcing rule or bill of distribution table.

Default Value: FND\_API.G\_MISS\_NUM

**allocation\_percent**

Percentage allocated to each source organization/supplier site destination.

Default Value: FND\_API.G\_MISS\_NUM

**attribute 1 - 15**

Descriptive text for flexfields.

Default Value: FND\_API.G\_MISS\_CHAR

**attribute\_category**

The category of the flexfield described in the attribute column.

Default Value: FND\_API.G\_MISS\_CHAR

**created\_by**

Identification number for user initiating this program session.

Default Value: FND\_API.G\_MISS\_NUM

**creation\_date**

Date this program session was created.

Default Value: FND\_API.G\_MISS\_DATE

**last\_updated\_by**

User ID for user creating this program session.

Default Value: FND\_API.G\_MISS\_NUM

**last\_update\_date**

Date program was last updated.

Default Value: FND\_API.G\_MISS\_DATE

**last\_update\_login**

User login for user updating this program.

Default Value: FND\_API.G\_MISS\_NUM

**program\_application\_id**

Application identifier of the program that has made a call to the Sourcing Rule API if it is registered as a concurrent program in Oracle Application Object Library.

Default Value: FND\_API.G\_MISS\_NUM

**program\_id**

Identifier of the program that has made a call to the Sourcing Rule API, if it is registered as a concurrent program in Oracle Application Object Library.

Default Value: FND\_API.G\_MISS\_NUM

**program\_update\_date**

The date when the program inserts or updates the sourcing records into the appropriate tables.

Default Value: FND\_API.G\_MISS\_DATE

**rank**

Rank of the sources, valid values are non-zero integers.

Default Value: FND\_API.G\_MISS\_NUM

**request\_id**

The request ID determines which profile values are used as a default.

Default Value: FND\_API.G\_MISS\_NUM

**secondary\_inventory**

Not currently used.

**ship\_method**

Method used when transporting material between source and destination.

Default Value: FND\_API.G\_MISS\_CHAR

**source\_organization\_id**

Identifier of the source organization.

Default Value: FND\_API.G\_MISS\_NUM

**source\_type**

Indicator of the type of source. Valid values are:

- Make
- Transfer
- Buy

Default Value: FND\_API.G\_MISS\_NUM

**sr\_receipt\_id**

Identification number for the receiving organization referenced in the sourcing rule or bill of distribution record.

Default Value: FND\_API.G\_MISS\_NUM

**vendor\_id**

Identifier of the vendor supplying the materials.

Default Value: FND\_API.G\_MISS\_NUM

**vendor\_site\_id**

Identifier where the vendor's materials are located.

Default Value: FND\_API.G\_MISS\_NUM

**return\_status**

Processing status of the API after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_ERROR
- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

Default Value: FND\_API.G\_MISS\_CHAR

**db\_flag**

Indicator of the record existing in the database.

Default Value: FND\_API.G\_MISS\_CHAR

**operation**

Indicator of whether the record is inserted, updated, or deleted. Valid values include:

- Create
- Update
- Delete

Default Value: FND\_API.G\_MISS\_CHAR

**receiving\_org\_index**

Foreign key to the receipt organization PL/SQL table.

Default Value: FND\_API.G\_MISS\_NUM

**See Also**

*Oracle Master Scheduling/MRP and Oracle Supply Chain Planning Technical Reference Manual*

## Validation of Sourcing Rule /Bill of Distribution API

### Standard Validation

Oracle Master Scheduling/MRP validates all required columns in the Sourcing Rule/Bill of Distribution API. For specific information on the data implied by these columns, see your Oracle Master Scheduling/MRP Technical Reference Manual for details.

If you do not want to update a particular column in:

- `MRP_SOURCING_RULE_PUB.PROCESS_SOURCING_RULE`

do not enter NULL for its corresponding interface parameter unless the default in the PL/SQL specification is NULL. Either use one of the missing parameter constants defined in the FND\_API package (`G_MISS_...`), or do not pass any value at all.

For all flag parameters, pass in a Boolean constant defined in FND\_API (`G_TRUE` or `G_FALSE`).

Each time the API is called, it will check the allocation percent for each receiving organization that belongs to the sourcing rule or bill of distribution. If the total allocation percent is 100, the `planning_active` attribute is set to a value of 1. Otherwise the attribute is set to 2.

### Creating Sourcing Rule API Entries

When you create a new sourcing rule the following item level validations:

- `sourcing_rule_name`: must be defined in the `MRP_SOURCING_RULES` table.
- `sourcing_rule_type`: must be either (1) Sourcing Rule or (2) Bill of Distribution. If the sourcing rule does not already exist in the system - the Status attribute is set to 1.

When you create a new sourcing rule, the following record level validations occur:

- `organization_id`: must be a valid organization defined in `ORG_ORGANIZATION_DEFINITIONS`.
- The `organization_id` attribute is associated with a valid organization, unless it is null.

When you create a new sourcing rule, the following object level validations occur:

- At least one receiving organization record is created.

- At least one shipping organization record is created.

If validation is successful, a record is inserted into the MRP\_SOURCING\_RULES table.

### Updating Sourcing Rule API Entries

When you update an existing sourcing rule, the following item level validations occur:

- If the sourcing rule name is changed, the new name cannot already exist in the system.
- The organization cannot be changed and the sourcing rule type cannot be changed.

When you update an existing sourcing rule, the following record level validations occur:

- Required attributes are either sourcing\_rule\_id, or sourcing\_rule\_name, and organization\_id, and all flexfields must be validated.

If validation is successful, a record is updated in the MRP\_SOURCING\_RULES table.

### Deleting Sourcing Rule API Entries

You cannot delete a sourcing rule if assignment data exists for the rule. When you delete an existing sourcing rule, the following record level validation occurs:

- Required attributes are either sourcing\_rule\_id, or sourcing\_rule\_name and organization\_id.

When you delete an existing sourcing rule, the following object level validations occur:

- All receiving organization records associated with the rule/bill of distribution record in the MRP\_SR\_RECEIPT\_ORG table.
- All shipping organization records associated with the rule/bill of distribution record in the MRP\_SR\_SOURCE\_ORG table.
- The sourcing rule/bill of distribution record from MRP\_SOURCING\_RULES table.

If deletion is successful, the API returns a success status to the calling module.

**Error Handling**

If any validation fails, the API will return error status to the calling module. The Sourcing Rule API processes the rows and reports the following values for every record.

**Table 8–11   Record Values**

Condition	PROCESS_STATIS	ERROR_MESSAGE
Success	5	null
Failure	4	actual error message

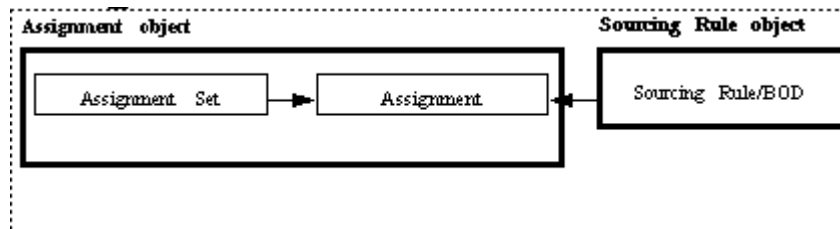
**See Also**

*Oracle Applications Message Reference Manual*

## Sourcing Rule Assignment API Features

The Sourcing Rule Assignment API object consists of two entities. The following chart demonstrates the relationship between the assignment object and the sourcing rule /bill of distribution object:

**Figure 8–2 Relationship Between the Assignment Object and the Sourcing Rule/Bill of Distribution Object**



- Assignment Set

You can create new entries, update existing assignment information, and delete entries.

Table: MRP\_ASSIGNMENT\_SETS

- Assignment

You can process multiple assignments belonging to the sourcing rule/bill of distribution. This includes creating new, updating or deleting existing entries.

Table: MRP\_SR\_ASSIGNMENTS

The relationship between these tables create the sourcing assignment information used in MPS, MRP, and DRP plans. Once you have defined your sourcing rules and bills of distribution, you must assign them to items and organizations. These assignments are grouped together in sets. The MRP\_ASSIGNMENT\_SET table stores assignment set names and the different levels of assignment. For example, you may assign an items in all organizations, or just in an inventory organization. The MRP\_SR\_ASSIGNMENTS table stores data on the sourcing rule or bill of distribution for the assignment.

### See Also

*Oracle Master Scheduling/MRP and Oracle Supply Chain Planning Technical Reference Manual*

## Functional Overview

The Sourcing Assignment API provides three public procedures for calling the create, update, delete and get operations:

- **Process\_Assignment**  
Accepts object specific information (through the parameters) and handles Create, Update and Delete Operation.
- **Get\_Assignment**  
Handles the Select Operation Lock\_Assignment.
- **Select Operation Lock\_Assignment**  
Locks records that define a particular Sourcing Rule and associated child entities.

Each of these three procedures first performs a check for call compatibility and then calls the respective private API. There is a specific order of processing information into the parameters and it is as follows:

- Assignment set information is processed by passing in through the p\_assignment\_set\_rec table parameter.
- Next, the assignment information is passed to the p\_assignment\_set\_tbl table parameter.

## Setting Up the Sourcing Rule Assignment API

The Sourcing Rule Assignment API is a stored PL/SQL function. You need to define certain data before you create or update assignment information. Before using the API, set up and/or activate the following parameters:

- Version number
- Sourcing Assignment Set Number
- Assignment records

## Procedure Parameter Descriptions

### MRP\_SRC\_ASSIGNMENT\_PUB.PROCESS\_ASSIGNMENT

The table below describes all parameters that are used by the public API MRP\_SRC\_ASSIGNMENT\_PUB.PROCESS\_ASSIGNMENT procedure. All of the inbound and outbound parameters are listed. Additional information on these parameters follows.

**Table 8–12 Inbound and Outbound Parameters**

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	Number	x		
p_init_msg_list	IN	Varchar2			x
p_return_values	IN	Varchar2			x
p_commit	IN	Varchar2			x
x_return_status	OUT	Varchar2			x
x_msg_count	OUT	Number			x
x_msg_data	OUT	Varchar2		x	
p_assignment_set_rec	IN	Record	x		
p_assignment_set_val_rec	IN	Record	x		
p_assignment_tbl	IN	PL/SQL Table	x		
p_assignment_val_tbl	IN	PL/SQL Table	x		
x_assignment_set_rec	OUT	Record			x
x_assignment_set_val_rec	OUT	Record			x
x_assignment_tbl	OUT	PL/SQL Table			x
x_assignment_val_tbl	OUT	PL/SQL Table			x

**p\_api\_version\_number**

Used to compare the incoming API call's version number with the current version number. An error is returned if the version numbers are incompatible.

**p\_init\_msg\_list**

Requests that the API initialize the message list on your behalf. If the x\_msg\_count is greater than 1, then the list of messages must be retrieved using the call FND\_MSG\_PUB.GET.

Default Value: FND\_API.G\_FALSE

**p\_return\_values**

Requests that the API send back the values on your behalf.

Default Value: FND\_API.G\_FALSE

**p\_commit**

Requests that the API update information for you after it completes its function.

Default Value: FND\_API.G\_FALSE

**x\_return\_status**

Requests that the API return the status of the data for you after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_ERROR
- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

**x\_msg\_count**

Indicates number of error messages API has encountered.

**x\_msg\_data**

Displays error message text. If the x\_msg\_count is equal to 1, then this contains the actual message.

**p\_assignment\_set\_rec**

Enter the assignment set record.

Default Value: G\_MISS\_ASSIGNMENT\_SET\_REC

**p\_assignment\_set\_val\_rec**

Resolves the values for the API, and then returns the information for the assignment set listed in the sourcing rule/bill of distribution record.

Default Value: G\_MISS\_ASSIGNMENT\_SET\_VAL\_REC

**p\_assignment\_tbl**

References the assignment parameters listed in the assignment set.

Default Value: G\_MISS\_ASSIGNMENT\_TBL

**p\_assignment\_val\_tbl**

Resolves the values for the API, and then returns the information for the assignment set listed in the rule.

Default Value: G\_MISS\_ASSIGNMENT\_VAL\_TBL

**x\_assignment\_set\_rec**

The assignment set record.

**x\_assignment\_set\_val\_rec**

Resolves the values for the API, and then returns the information for the assignment set listed in the sourcing rule/bill of distribution record.

**x\_assignment\_tbl**

References the assignment listed in the assignment set.

Resolves the values for the API, and then returns the information for the assignment set listed in the sourcing rule/bill of distribution record.

**x\_assignment\_val\_tbl**

Resolves the values for the API, and then returns the information for the assignment set listed in the rule.

**See Also**

*Oracle Master Scheduling/MRP and Oracle Supply Chain Planning Technical Reference Manual*

## Record Parameter Descriptions

### ASSIGNMENT\_SET\_REC\_TYPE

The procedure passes information to record groups and PL/SQL tables. The table below describes all record parameters that are used by the ASSIGNMENT\_SET\_REC\_TYPE record. Additional information on these parameters follows.

**Table 8–13** *ASSIGNMENT\_SET\_REC\_TYPE*

Parameter	Type	Required	Derived	Optional
assignment_set_id	Number	x		
assignment_set_name	Varchar2(30)	x		
attribute 1 - 15	Varchar2(150)			x
attribute_category	Varchar2(30)			x
created_by	Number		x	
creation_date	Date		x	
description	Varchar2(80)			x
last_updated_by	Number		x	
last_update_date	Date		x	
last_update_login	Number		x	
program_application_id	Number		x	
program_id	Number		x	
program_update_date	Date		x	
request_id	Number		x	
return_status	Varchar2(1)		x	
db_flag	Varchar2(1)		x	
operation	Varchar2(30)	x		

#### assignment\_set\_id

Identification number for the assignment set record referenced by the API.

Default Value: FND\_API.G\_MISS\_NUM

**assignment\_set\_name**

Valid name of the assignment set defined in the MRP\_ASSIGNMENT\_SETS table.

Default Value: FND\_API.G\_MISS\_CHAR

**attribute 1 - 15**

Descriptive text for flexfields.

Default Value: FND\_API.G\_MISS\_CHAR

**attribute\_category**

The category of the flexfield described in the attribute column.

Default Value: FND\_API.G\_MISS\_CHAR

**created\_by**

Identification number for user initiating this program session.

Default Value: FND\_API.G\_MISS\_NUM

**creation\_date**

Date this program session was created.

Default Value: FND\_API.G\_MISS\_DATE

**description**

Text describing the sourcing rule record type.

Default Value: FND\_API.G\_MISS\_CHAR

**last\_updated\_by**

User ID for user creating this program session.

Default Value: FND\_API.G\_MISS\_NUM

**last\_update\_date**

Date program was last updated.

Default Value: FND\_API.G\_MISS\_DATE

**last\_update\_login**

User login for user updating this program.

Default Value: FND\_API.G\_MISS\_NUM

**program\_application\_id**

Application identifier of the program that has made a call to the Sourcing Rule API if it is registered as a concurrent program in Oracle Application Object Library.

Default Value: FND\_API.G\_MISS\_NUM

**program\_id**

Identifier of the program that has made a call to the Sourcing Rule API, if it is registered as a concurrent program in Oracle Application Object Library.

Default Value: FND\_API.G\_MISS\_NUM

**program\_update\_date**

The date when the program inserts or updates the sourcing records into the appropriate tables.

Default Value: FND\_API.G\_MISS\_DATE

**request\_id**

The request ID determines which profile values are used as a default.

Default Value: FND\_API.G\_MISS\_NUM

**return\_status**

Processing status of the API after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_ERROR
- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

Default Value: FND\_API.G\_MISS\_CHAR

**db\_flag**

Indicator of the record existing in the database.

Default Value: FND\_API.G\_MISS\_CHAR

**operation**

Indicator of whether the record is inserted, updated, or deleted. Valid values include:

- Create
- Update
- Delete

Default Value: FND\_API.G\_MISS\_CHAR

**See Also**

*Oracle Master Scheduling/MRP and Oracle Supply Chain Planning Technical Reference Manual*

**ASSIGNMENT\_REC\_TYPE**

The procedure passes information to record groups and PL/SQL tables. The table below describes all record parameters that are used by the ASSIGNMENT\_REC\_TYPE record. Additional information on these parameters follows.

**Table 8–14 Parameters**

Parameter	Type	Required	Derived	Optional
assignment_id	Number	x		
assignment_set_id	Number	x		
assignment_type	Number	x		
attribute 1 - 15	Varchar2(150)	x		
attribute_category	Varchar2(30)			
category_id	Number			
category_set_id	Number			
created_by	Number			
creation_date	Date			
customer_id	Number			
inventory_item_id	Number			
last_updated_by	Number			
last_update_date	Date			

**Table 8–14 Parameters**

Parameter	Type	Required	Derived	Optional
last_update_login	Number			
organization_id	Number			
program_application_id	Number			
program_id	Number			
program_update_date	Date			
request_id	Number			
secondary_inventory	Varchar2(10)			
ship_to_site_id	Number			
sourcing_rule_id	Number			
sourcing_rule_type	Number			
return_status	Varchar2(1)			
db_flag	Varchar2(1)			
operation	Varchar2(30)	x		

**assignment\_id**

Identification number for the assignment record referenced by the API.

Default Value: FND\_API.G\_MISS\_NUM

**assignment\_set\_id**

Identification number for the assignment set record referenced by the API.

Default Value: FND\_API.G\_MISS\_NUM

**assignment\_type**

Valid types of sourcing assignments include the following values:

- (1) Global
- (2) Category
- (3) Item
- (4) Organization
- (5) Category/Organization

- (6) Item/Organization

Default Value: FND\_API.G\_MISS\_NUM

**attribute 1 - 15**

Descriptive text for flexfields.

Default Value: FND\_API.G\_MISS\_CHAR

**attribute\_category**

The category of the flexfield described in the attribute column.

Default Value: FND\_API.G\_MISS\_CHAR

**created\_by**

Identification number for user initiating this program session.

Default Value: FND\_API.G\_MISS\_NUM

**creation\_date**

Date this program session was created.

Default Value: FND\_API.G\_MISS\_DATE

**customer\_id**

Identification number for the customer record referenced by the API.

Default Value: FND\_API.G\_MISS\_NUM

**inventory\_item\_id**

Identification number for the item record referenced by the API.

Default Value: FND\_API.G\_MISS\_NUM

**last\_updated\_by**

User ID for user creating this program session.

Default Value: FND\_API.G\_MISS\_NUM

**last\_update\_date**

Date program was last updated.

Default Value: FND\_API.G\_MISS\_DATE

**last\_update\_login**

User login for user updating this program.

Default Value: FND\_API.G\_MISS\_NUM

**organization\_id**

The identification number for the organization referenced in the assignment record.

**program\_application\_id**

Application identifier of the program that has made a call to the Sourcing Rule API if it is registered as a concurrent program in Oracle Application Object Library.

Default Value: FND\_API.G\_MISS\_NUM

**program\_id**

Identifier of the program that has made a call to the Sourcing Rule API, if it is registered as a concurrent program in Oracle Application Object Library.

Default Value: FND\_API.G\_MISS\_NUM

**program\_update\_date**

The date when the program inserts or updates the sourcing records into the appropriate tables.

Default Value: FND\_API.G\_MISS\_DATE

**request\_id**

The request ID determines which profile values are used as a default.

Default Value: FND\_API.G\_MISS\_NUM

**secondary\_inventory**

Currently not used.

**ship\_to\_site\_id**

Used with customer identification attribute and organization assignment type to define shipping location.

Default Value: FND\_API.G\_MISS\_NUM

**sourcing\_rule\_id**

Identification number for the sourcing rule or bill of distribution record referenced by the API.

Default Value: FND\_API.G\_MISS\_NUM

**sourcing\_rule\_type**

Valid types must be one of the following values:

- (1) Sourcing Rule
- (2) Bill of Distribution

Default Value: FND\_API.G\_MISS\_NUM

**return\_status**

Processing status of the API after it completes its function. Valid values include:

- Success: FND\_API.G\_RET\_STS\_SUCCESS
- Error: FND\_API.G\_RET\_STS\_ERROR
- Unexpected Error: FND\_API.G\_RET\_STS\_UNEXP\_ERROR

Default Value: FND\_API.G\_MISS\_CHAR

**db\_flag**

Indicator of the record existing in the database.

Default Value: FND\_API.G\_MISS\_CHAR

**operation**

Indicator of whether the record is inserted, updated, or deleted. Valid values include:

- Create
- Update
- Delete

Default Value: FND\_API.G\_MISS\_CHAR

**See Also**

*Oracle Master Scheduling/MRP and Oracle Supply Chain Planning Technical Reference Manual*

## Validation of Sourcing Rule Assignment API

### Standard Validation

Oracle Master Scheduling/MRP validates all required columns in the Sourcing Assignment API. For specific information on the data implied by these columns, see your Oracle Master Scheduling/MRP Reference Manual for details.

If you do not want to update a particular column in:

- `MRP_SRC_ASSIGNMENT_PUB.PROCESS_ASSIGNMENT`

do not enter NULL for its corresponding interface parameter unless the default in the PL/SQL specification is NULL. Either use one of the missing parameter constants defined in the `FND_API` package (`G_MISS_...`), or do not pass any value at all.

For all flag parameters, pass in a Boolean constant defined in `FND_API` (`G_TRUE` or `G_FALSE`).

For each call, the procedure performs a check for call compatibility and then processes the assignment set and the assignment information.

### Creating Assignment API Entries

When you create a new assignment, the following item level validations occur:

- `Assignment_type` must be Global Category, item, organization, Category-Org, Item-Org
- `Sourcing_rule_id`
- `Assignment_set_id`
- `Organization_id`

When you create a new assignment, the following record level validations occur:

- Assignment type attributes are conditionally required:
  - Global—sourcing rule type
  - Category—item/category, sourcing rule type
  - Item—tem/category, sourcing rule type
  - Organization—organization id, customer id, ship-to -site id, sourcing rule type

- Category-Org—organization id, customer id, ship-to -site id, item/category, sourcing rule type
- Item-Org—organization id, customer id, ship-to -site id, item/category, sourcing rule type

When you create a new assignment, the following object level validations occur:

- Sourcing rules or bills of distribution are applicable to different assignment types:
  - Global—bill of distribution, global sourcing rule
  - Category—bill of distribution, global sourcing rule
  - Item—bill of distribution, global sourcing rule
  - Organization—local sourcing rule, global sourcing rule
  - Category-Org—local sourcing rule, global sourcing rule
  - Item-Org—local sourcing rule, global sourcing rule
- API can only assign a sourcing rule or bill of distribution to a category if there is a default value in the profile option MRP:Sourcing Rule Category Set.

If validation is successful, a record is inserted into the MRP\_SR\_ASSIGNMENTS table.

### Updating Assignment API Entries

When you update an existing assignment, the following item level validations occur:

- Assignment\_type
- Sourcing\_rule\_id
- Assignment\_set\_id
- Organization\_id
- Assignment\_id attribute
- If the assignment set name is changed, the new name cannot already exist in the system.
- Either assignment set name or assignment set id is required.

When you update an assignment, the following record level validation occurs:

- Assignment type attributes are conditionally required depending on assignment type. See: [Creating Assignment API Entries](#).
- When you update an assignment, the following object level validation occurs:
- Sourcing rules or bills of distribution are applicable to different assignment types. See: [Creating Assignment API Entries](#).

If validation is successful, a record is updated in the MRP\_ASSIGNMENT\_SETS table.

**Deleting Assignment API Entries**

When you delete an existing assignment set, the following item level validations occur:

- Assignment\_id is required.
- The assignment record is deleted from MRP\_SR\_ASSIGNMENT table.

**Error Handling**

If any validation fails, the API will return error status to the calling module. The Sourcing Assignment API processes the rows and reports the following values for every record.

**Table 8–15** Record Values

Condition	PROCESS_STATIS	ERROR_MESSAGE
Success	5	null
Failure	4	actual error message

**See Also**

*Oracle Applications Message Reference Manual*

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# Oracle Shop Floor Management Open Interfaces

This chapter contains information about the following Oracle Shop Floor Management open interfaces and application program interfaces:

- [Import Lot Jobs Concurrent Program](#) on page 9-2
- [Lot Move Transactions Concurrent Program](#) on page 9-17
- [Import WIP Lot Transactions Concurrent Program](#) on page 9-37
- [Inventory Lot Transactions Interface Concurrent Program](#) on page 9-91

## Import Lot Jobs Concurrent Program

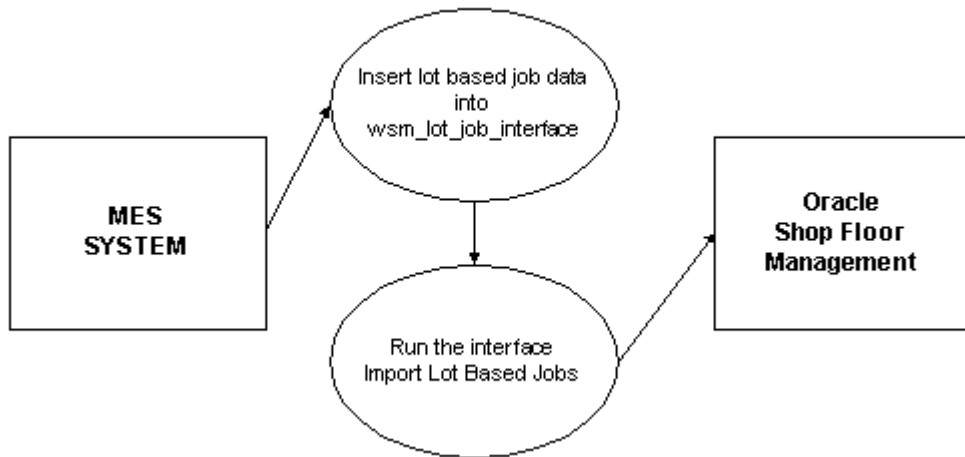
You can insert records into the import jobs interface from any manufacturing execution system or any other third party planning system.

Import Lot Based Jobs interface has two major components. The first one relates to the import of lot based jobs for the first sector, while the second component relates to import/ creation of lot jobs for subsequent sectors. Once the lot jobs are imported successfully, you can use the lot based job forms to view the job and carry out subsequent move transactions through a move transaction form or move interface.

Import lot based jobs are processed in parallel based on user-configurable parameters set at installation. There are two profile options that can be adjusted according to capability and workload: Maximum number of import lot job workers, and maximum number of rows processed by a lot based job worker as a batch. Maximum number of import lot job workers sets the number of worker programs launched in parallel that process rows from `wsm_lot_job_interface` table. Maximum number of rows processed by a lot based job worker as a batch specifies the number of rows from the interface table each worker can process at a time. The values for these two options are typically set by the database administrator. When specifying values for these options, the total available memory and the load profile of the system should be taken into account. These profile options allow fine tuning to optimize processing and reduce the total execution time depending on system processor availability and memory capability.

[Figure 9–1](#) below describes the basic flow of the Import Lot Jobs Concurrent Program. The lot based job data from MES is inserted into the `WSM_LOT_JOB_INTERFACE` table by running a script. The Import Lot Based Job program validates the data and then imports the lot based job data from MES into Oracle Applications.

**Figure 9–1 Basic Flow of the Import Lot Jobs Concurrent Program**



## Import Lot Jobs Concurrent Program Features

There are two modes of lot based jobs, one for the first sector and one for the other subsequent sectors. The two modes are discriminated by the MODE\_FLAG value. Creation of a lot for the first sector is indicated by a MODE\_FLAG value of 1. This lot is released and moves through a series of operations to an inventory location, where it becomes an Inventory Lot. The Inventory Lot then moves into the next BOM level where it becomes a primary component for a new WIP lot in the next sector. MODE\_FLAG has a value 2 when a WIP lot is created from an Inventory lot under these circumstances.

All these types of transactions create records in the existing WIP tables. A mode 1 job creates records into the following WIP base tables: WIP\_DISCRETE\_JOBS, WIP\_ENTITIES, WIP\_OPERATION\_RESOURCES, WIP\_REQUIREMENT\_OPERATIONS, WIP\_OPERATIONS, WIP\_OPERATIONAL\_YIELDS, and, if the job is in released status, WIP\_PERIOD\_BALANCES. A mode 2 job, additionally, creates rows into MTL\_MATERIAL\_TRANSACTIONS.

## Functional Overview

Following are the major design features of this interface:

1. For creating a mode 1 job, the user inserts a row into WSM\_LOT\_JOB\_INTERFACE. For creating a mode 2 job, the user, additionally, inserts a row into WSM\_STARTING\_LOTS\_INTERFACE table. For a mode 2 job, the HEADER\_ID of the row in WSM\_STARTING\_LOTS\_INTERFACE table should be equal to the SOURCE\_LINE\_ID of the corresponding row in WSM\_LOT\_JOB\_INTERFACE. For a mode 1 job, SOURCE\_LINE\_ID will have NULL.
2. While populating the interface table, the user has to take care that the HEADER\_ID column is populated using some sequence. HEADER\_ID is a NOT NULL column and it should be unique. The processor code uses the HEADER\_ID as a unique identifier for each row in the interface table.
3. The processor selects only rows from WLJI which are in the Pending status. All these rows are internally assigned GROUP\_IDs and assigned to workers launched by the import program.

### Errors and Validations:

4. Errors and warnings, if any, are written into the WSM\_INTERFACE\_ERRORS table. Appropriate messages are also given in the interface tables to refer to the WSM\_INTERFACE\_ERRORS table when there is any error.

## Calling the Import Lot Based Jobs Concurrent Program

In Oracle Shop Floor Management, from the Run Requests menu, select Import Lot Based Jobs.

## Validation of Import Lot Based Jobs

### Standard

Oracle Shop Floor Management validates all required columns in the Import Lot Based Jobs Concurrent Program.

### Error Handling

If any validation fails, that particular row is errored out. The Import Lot Based Jobs Concurrent Program processes the rows and reports the following values for every record.

**Table 9–1   Error Handling Table**

Condition	PROCESS_STATUS	ERROR_MESSAGE
Failure	3	actual error message
Running	2	null
New Record	1	null

Load type of 5 should be used when creating a new lot based job.

Load type 6 indicates that an update will be performed on an exsiting job. The following update scenarios are currently supported:

1. Update of status of existing jobs.
2. Update of quantity of non-transacted jobs.
3. Rescheduling suggestions on start and end dates will be supported.
4. Update of co-product supply flag is supported.
5. For unreleased standard lot based job, updating alternate BOM and routing designator is supported.
6. For unreleased non-standard lot based job, updating BOM and routing reference is supported.



## WSM\_LOT\_JOB\_INTERFACE Table

The following table lists the columns in the WSM\_LOT\_JOB\_INTERFACE table and provides their load/update type and validation information. Some columns are not used by the program and marked as ignored.

**Table 9–2 WSM\_LOT\_JOB\_INTERFACE (WLJI) Table**

Column	Type	Required	Derived	Optional	Permitted Values
mode_flag	number	x			1 - Create Lot based Job 2 - lot created from an inventory lot
last_update_date	date	x			
last_updated_by	number	x	Fnd_ global.user_ id	x	
creation date	date	x			
created_by	number	x	Fnd_ global.user_ id	x	
last_update_login	number			x	
request_id	number		fnd_ global.conc_ request_id		
program_id	number		fnd_ global.comc_ _program_ id		
program_application_ id	number		fnd_ global.prog_ appl_id		
program_update_date	date			x	
group_id	number		wsm_lot_ job_ interface_s		
source_code	varchar2(30)			x	

**Table 9–2 WSM\_LOT\_JOB\_INTERFACE (WLJI) Table**

Column	Type	Required	Derived	Optional	Permitted Values
source_line_id	number	required for mode_ flag 2			
process_type	number				Ignored
organization_id	number	x			
load_type	number	x			5 - Job creation 6 - Job update
status_type	number	x			1 - Unreleased 3 - Released 4 - Complete 6 - On hold 7 - Canceled
old_status_type	number				Ignored
last_unit_completion_date	date	x			This column or the first_ unit_completion_date are required.
old_completion_date	date				Ignored
processing_work_days	number				Ignored
daily_production_rate	number				Ignored
line_id	number				Ignored
primary_item_id	number	x			
bom_reference_id	number			x	
routing_reference_id	number			x	
bom_revision_date	date			x	
routing_revision_date	date			x	

**Table 9–2 WSM\_LOT\_JOB\_INTERFACE (WLJI) Table**

Column	Type	Required	Derived	Optional	Permitted Values
wip_supply_type	number				1 - Push 2 - Assembly Pull 3 - Operation Pull 4 - Bulk 5 - Vendor 6 - Based on BOM
class_code	varchar2(10)			x	
lot_number	varchar2(30)			x	
lot_control_code	number				Ignored
job_name	varchar2(240)			x	
description	varchar2(240)			x	
firm_planned_flag	number			x	1 - Yes 2 - No
alternate_routing_designator	varchar2(10)	x			
alternate_bom_designator	varchar2(10)	x			
demand_class	varchar2(30)				Ignored
start_quantity	number	x			
old_start_quantity	number				Ignored
wip_entity_id	number			x (for load type 6)	
repetitive_schedule_id	number				Ignored
error	varchar2(2000)		x		Ignored
parent_group_id	number				Ignored
attribute_category	varchar2(30)			x	
attribute1 - 15	varchar2(150)			x	
last_updated_by_name	varchar2(100)				Ignored

**Table 9–2 WSM\_LOT\_JOB\_INTERFACE (WLJI) Table**

Column	Type	Required	Derived	Optional	Permitted Values
created_by_name	varchar2(100)				Ignored
process_phase	number				Ignored
process_status	number	x			1 - Pending
organization_code	varchar2(3)		x		
first_unit_start_date	date	x			This column or the last_unit_completion_date are required.
first_unit_completion_date	date				Ignored
last_unit_start_date	date				Ignored
scheduling method	number	x			2 - Lead time 3 - Manual
line_code	varchar2(10)				Ignored
primary_item_segments	varchar2(2000)				Ignored
bom_reference_segments	varchar2(2000)			x	Ignored
routing_reference_segments	varchar2(2000)				Ignored
routing_revision	varchar2(3)			x	
bom_revision	varchar2(3)			x	
completion_subinventory	varchar2(10)			x	
completion_locator_id	number			x	
completion_locator_segments	varchar2(2000)				Ignored
schedule_group_id	number			x	
schedule_group_name	varchar2(30)			x	
build_sequence	number			x	
project_id	number				Ignored

**Table 9–2 WSM\_LOT\_JOB\_INTERFACE (WLJI) Table**

Column	Type	Required	Derived	Optional	Permitted Values
project_name	varchar2(30)				Ignored
task_id	number				Ignored
task_name	varchar2(20)				Ignored
net_quantity	number			x	
descriptive_flex_segments	varchar2(2000)			x	
project_number	varchar2(25)				Ignored
task_number	varchar2(25)				Ignored
project_costed	number				Ignored
end_item_unit_number	varchar2(30)				Ignored
overcompletion_tolerance_type	number				Ignored
overcompletion_tolerance_value	number				Ignored
kanban_card_id	number				Ignored
priority	number				Ignored
due_date	date				
allow_explosion	varchar2(1)	x			
header_id	number	x			
delivery_id	number				Ignored
error_code	number		x		
error_msg	varchar2(2000)		x		
interface_id	number				Ignored

### Control Columns

The following columns are control columns for the Import Lot Based Jobs program.

- **ALLOW\_EXPLOSION:** This should always be set to Y to ensure that the bill of material and the routing of the assembly specified are exploded, else error is reported.
- **HEADER\_ID:** Identifies each individual row in the table. Should have a unique value for each row.
- **LOAD\_TYPE:** Determines whether the current interface record is to create a new lot-based job or to update an existing job. It also controls whether interface table columns are Required, Optional, Optional/Derived if Null, or Derived or Ignored, and has a NOT NULL restriction. You must assign one of the following possible values or an error occurs:
  - 5 Create Lot Based Job
  - 6 Reschedule Lot Based Job
- **PROCESS\_STATUS:** The PROCESS\_STATUS column indicates the current status of each record. Possible PROCESS\_STATUS values include:
  - 1 Pending
  - 2 Running
  - 3 Error

Records should be inserted into the WSM\_LOT\_JOB\_INTERFACE table with a PROCESS\_STATUS = 1 (Pending). These values indicate that the record is ready to be processed. If the program fails at any stage when processing a record, the PROCESS\_STATUS of that record is set to 3 (Error).
- **STATUS TYPE:** You can only create lot based jobs with a status of 3, Released or 1, Unreleased.
- **Group\_id:** When launching 'Import Lot Based Job', user can specify group\_id. Only rows with the given group\_id will be picked up by the concurrent program.

### Required Columns

You must specify values for columns in this category. If you do not enter a required value, the Import Lot Based Jobs program does not process the record and inserts an error record in the WSM\_INTERFACE\_ERRORS table for the appropriate record. Sometime it is not possible to write a row into WSM\_LOT\_JOB\_INTERFACE table without specifying values for certain columns. For attributes that have a name and an associated id, if you specify values for both the name and the ID, the value for

the ID is used and the value for the name is ignored during validation. If the entered or derived ID is NULL, you receive an error.

### **Optional Columns**

You do not have to enter values for columns in this category.

### **Derived or Ignored Columns**

These columns are for internal processing only. You should leave all columns in this category blank (NULL), since values entered in these columns are ignored or overwritten.

## Mode-2 Job Creation through Interface

Following are the major design features of Mode 2 job creation through the interfaces:

1. User can create a lot based job of any name from a source lot as long as the name is unique.
2. Jobs can be created for any quantity as long as the quantity required to be issued from the inventory lot is less than or equal to the available quantity in the source lot.
3. Thus job quantity will be checked against the actual available quantity determined using the quantity tree.
4. A parameter 'group\_id' is introduced to WSM\_LOT\_JOB\_INTERFACES, when user launches 'Import Lot Based Job' with a group\_id. Rows with the given group\_id will be picked up by the concurrent program.
5. For creating a mode 1 job, the user inserts a row into WSM\_LOT\_JOB\_INTERFACE. For creating a mode 2 job, the user, additionally, inserts a row into WSM\_STARTING\_LOTS\_INTERFACE table. For a mode 2 job, the HEADER\_In WSLI should be equal to the source line id in WLJI. Oracle Shop Floor Management, from the Run Requests menu, select Import Lot Based Jobs.

**Table 9–3 WSM\_STARTING\_LOTS\_INTERFACE Table**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number	x			
lot_number	varchar2(30)	x			
inventory_item_id	number	x			
organization_id	number	x			
quantity	number	x			This quantity is ignored
component_issue_quantity	number		x		If not entered, this quantity will be derived from job quantity and quantity per assembly defined in BOM; Otherwise, it will be honored
subinventory_code	varchar2(10)	x			

**Table 9–3    WSM\_STARTING\_LOTS\_INTERFACE Table**

Column	Type	Required	Derived	Optional	Permitted Values
last_update_date	date	x			
last_update_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number			x	

## Lot Move Transactions Concurrent Program

You can load Move Transaction information into the Open Move Transaction Interface table from a variety of sources, including external data collection devices such as bar code readers, automated test equipment or other manufacturing execution systems.

You then use the interface to load these transactions into the appropriate tables. All transactions are validated. Invalid transactions are marked so that you can correct and resubmit them.

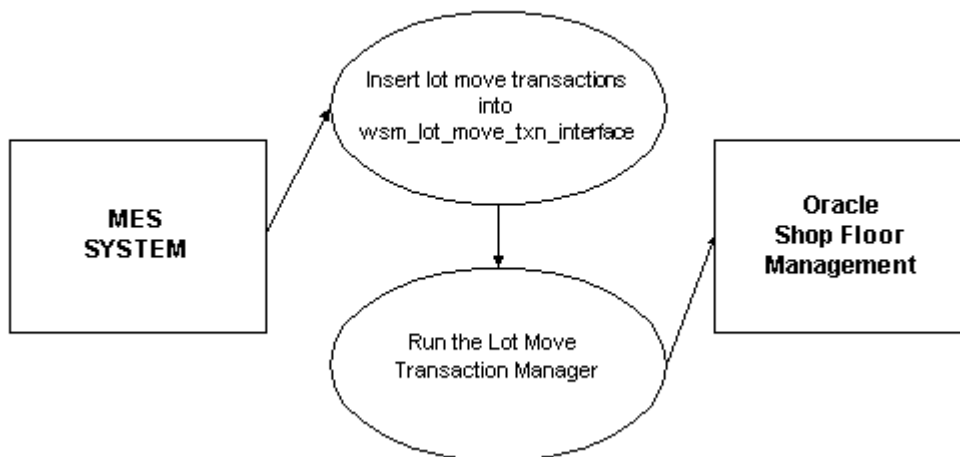
The open interface enables you to perform many of the functions possible from the Move Transactions form. For example, you can:

- Move jobs between operations and intraoperation steps
- Jump to any standard operation defined inside or outside the network routing
- Scrap certain quantities of a job
- Return assemblies into WIP
- Undo the last move, jump, or scrap transaction

Lot move transactions are processed in parallel. The Move concurrent transaction manager (WSCMTM) program picks up a set of records from `wsm_lot_move_txn_` interface, assigns a group id to them and spawns any necessary workers (WSCMTI).

[Figure 9–2](#) below describes the basic flow of the Lot Move Transactions interface. The lot move transactions in MES are inserted into the `WSM_LOT_MOVE_TXN_INTERFACE` table by running a script. The Move Transactions worker validates the lot move transactions to be interfaced. The lot move transactions from MES are then imported into Oracle Applications.

**Figure 9–2 Basic Flow of the Lot Move Transactions Concurrent Program**



## Lot Move Transactions Concurrent Program Features

The interface requires WSM\_LOT\_MOVE\_TXN\_INTERFACE (WLMTI) and WIP\_MOVE\_TXN\_INTERFACE (WMTI) tables.

The requisite data is to be inserted into the WLMTI table only.

## Functional Overview

You must write the load program that inserts a single row for each move transaction into the WSM\_LOT\_MOVE\_TXN\_INTERFACE table. The system uses this information to calculate completion cost. The Move Transaction Manager selects the pending move transactions for processing and spawns any necessary workers.

The Move Transaction Worker calls the WSM Transaction Validation Engine program, which validates the row, derives or defaults any additional columns, and inserts errors into the WIP\_TXN\_INTERFACE\_ERRORS table.

Next, the Move Transaction Worker performs the actual move transaction. It writes it to history, initiates related resource and overhead transactions and requisitions for outside resources (for outside processing only), updates operation balances, initiates completion transactions (for combination move and completion/return

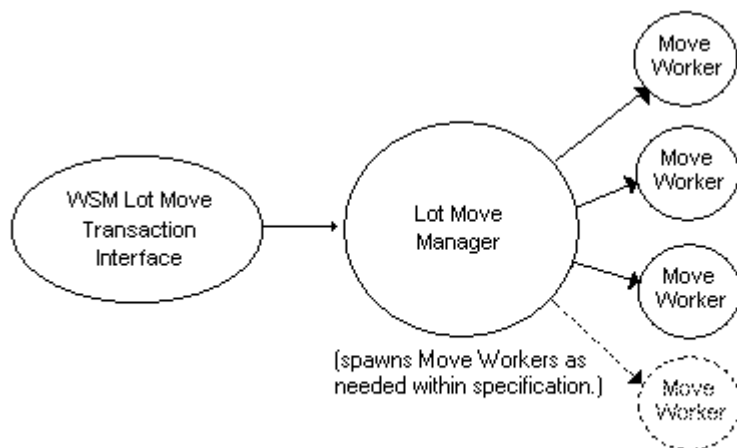
transactions), and deletes successfully processed transaction rows from the WIP\_MOVE\_TXN\_INTERFACE table. The Backflush Setup program then determines and initiates related operation pull backflushes.

Following are the major design features of this interface:

1. The user inserts rows into the WSM\_LOT\_MOVE\_TXN\_INTERFACE (WLMTI) table. HEADER\_ID is populated using the sequence given in the table requirements section below.
2. The transaction manager picks up a transaction for processing according to the following criteria:
  - The group\_id must be NULL
  - A valid wip\_entity\_id or wip\_entity\_name
  - The transaction date is no later than the current date
  - A transaction from the same job is not currently running in another move worker.
3. The manager assigns a set of move transactions to one or more workers in the following order: transaction\_date, organization\_id, wip\_entity\_id, and processing\_order. The number of transactions that are assigned to a worker are determined by the worker rows that you set up for Lot Move transactions. To make this change, select Interface Managers under Run Requests in Oracle Shop Floor Management.
4. Although many transactions can be processed simultaneously, only one worker at a time can process transactions that belong to the same job.

[Figure 9–3](#) below describes the basic flow of the Lot Move Transactions Manager. The manager picks up pending records in wsm\_lot\_move\_txn\_interface and processes them in parallel, starting workers as necessary.

**Figure 9–3 Lot Move Transaction Manager**



## Validation of Import Lot Based Move Transactions

### Standard Validation

Oracle Shop Floor Management validates all required columns in the Import Lot Based Move Transactions Concurrent Program. For specific information on the data implied by these columns, see Oracle Shop Floor Management Technical Reference Manual or eTRM for details.

### Error Handling

If any validation fails, the Concurrent Program will return error status to the calling module. The Import Lot Based Move Transactions Concurrent Program processes the rows and reports the following values for every record.

1. Whenever any transaction errors out, the error column contains the error message.
2. Errors and warnings, if any, are also written into the WSM\_LOT\_MOVE\_TXN\_INTERFACE table and the WSM\_INTERFACE\_ERRORS table.
3. To resubmit the errored transactions for processing, first rectify the error and then do the following:

- a. Change the PROCESS\_STATUS of the required transactions from 3 (ERROR) to 1 (PENDING).
  - b. Set the group\_id to NULL.
4. The interface makes the following validation checks:
- a. The details of the job are correct. The details include the job name, qty, uom's, current status in terms of operation sequence number, operation code, department, etc.
  - b. The details of the operation to which the move is to be done are valid. These include TO\_OPERATION\_SEQ\_NUM, TO\_OPERATION\_CODE, TO\_DEPARTMENT\_ID, and TO\_INTRAOPERATION\_STEP\_TYPE.
  - c. For return transactions, the job must have been completed.

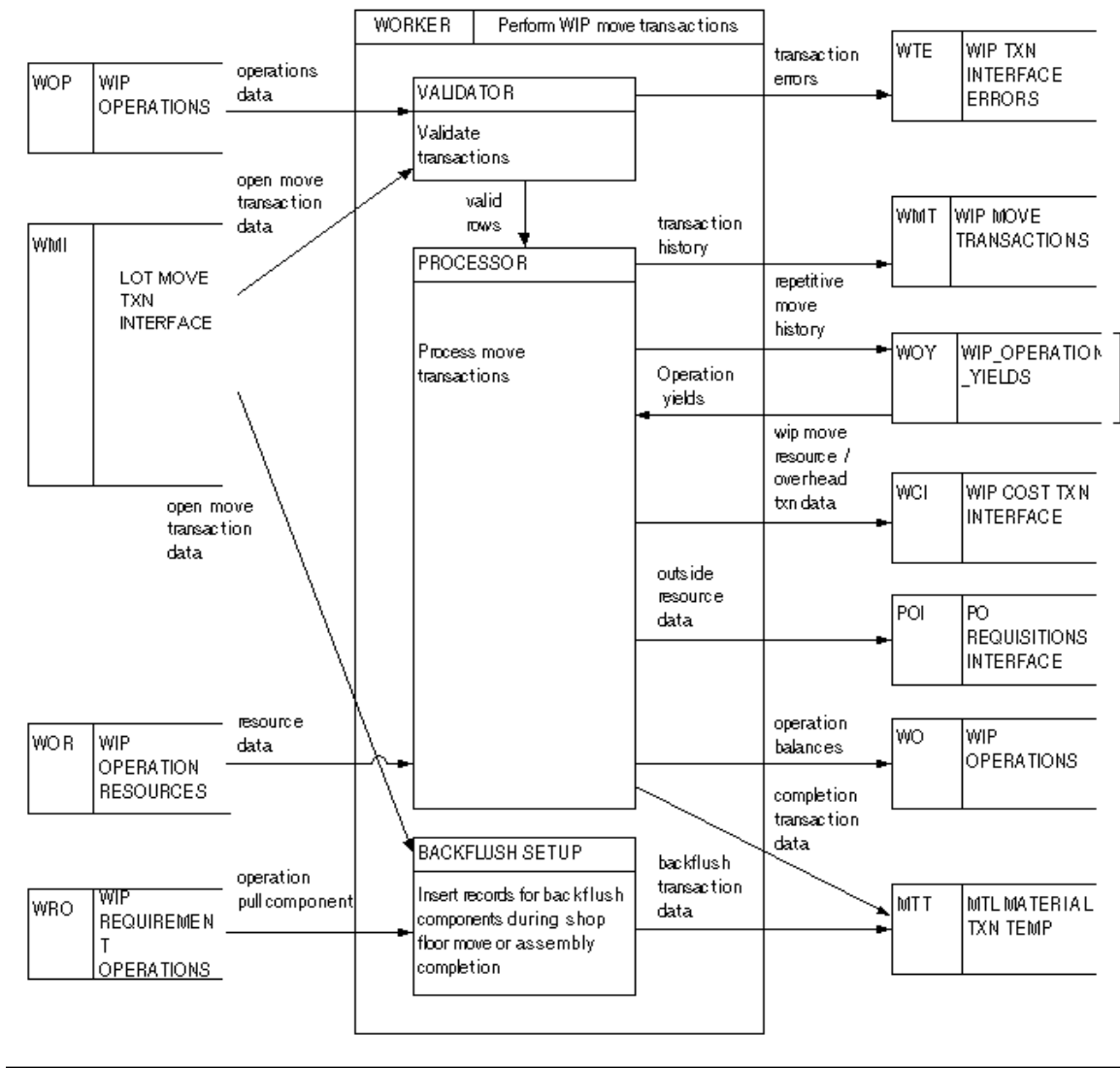
**Table 9–4 Error Handling Table**

Condition	PROCESS_STATIS	ERROR_MESSAGE
Success	4	null
Failure	3	actual error message
Running	2	null

### See Also

*Oracle Shop Floor Management Technical Reference Manual 11i*

Figure 9-4 Move Transaction Worker



## Setting Up the Move Transaction Interface

You must perform all the Oracle Bills of Material, Oracle Work in Process and Oracle Shop Floor Management setup activities required for move transactions. In addition, you must launch the Import Move Transaction program to import from external sources

### Launching the Move Transaction Processor

Launch the Lot Move Transaction Manager in the Interface Managers window by selecting Interface Managers under Run Requests in Oracle Shop Floor Management. You can specify the resubmit interval and number of transactions processed by each worker during each interval when you launch the Lot Move Transaction Manager. After polling the WSM\_LOT\_MOVE\_TXN\_INTERFACE table for eligible rows, the Lot Move Transaction Manager creates the necessary number of Move Transaction Workers to process the load.

The use of multiple transaction workers enables parallel processing of transactions that can be especially helpful when importing a large batch of transactions through the Move Transaction Interface. For more information, see: [Transaction Managers, Oracle Inventory User's Guide](#).

Inserting Records into the WSM\_LOT\_MOVE\_TXN\_INTERFACE Table

You must insert your Move, Move Complete and Move Return transactions into the WSM\_LOT\_MOVE\_TXN\_INTERFACE table. The system validates each transaction row, derives any additional data as necessary, then processes each transaction.

The following tables describe the WSM\_LOT\_MOVE\_TXN\_INTERFACE table:

Table 9–5 Number Types and Descriptions

Number Type	Transaction Type Description
1	Move Transaction (defined by TRANSACTION_TYPE = 1 and valid from and to operation information)
2	Move Completion (defined by TRANSACTION_TYPE = 2)
3	Move Return (defined by TRANSACTION_TYPE = 3)
4	Move Undo (defined by TRANSACTION_TYPE = 4)

Table 9–6 FORWARD MOVES AND COMPLETIONS WSM\_LOT\_MOVE\_TXN\_INTERFACE (WLMTI)

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number	=wsm_lot_move_txn_interface_s			
transaction_id	number		wip_interface_s		
last_update_date	date	x			
last_updated_by	number	x			
last_updated_by_name	varchar2(100)		x	x	
creation_date	date	x			
created_by	number	x			
created_by_name	varchar2(100)		x	x	
last_update_login	number				
request_id	number				
program_application_id	number				
program_id	number				

**Table 9–6 FORWARD MOVES AND COMPLETIONS WSM\_LOT\_MOVE\_TXN\_INTERFACE (WLMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
program_update_date	date				
group_id	number		wip_ interface_s		
source_code	varchar2(30)				
source_line_id	number				
status	number	=1 (PENDING)			
transaction_type	number	=1 (MOVE) / 2 (COMPLETION)			
organization_id	number	x			
organization_code	varchar2(3)		x	x	
wip_entity_id	number		x	x	
wip_entity_name	varchar2(240)	x			
entity_type	number	=5			
primary_item_id	number		x	x	
line_id	number				
line_code	varchar2(10)				
repetitive_schedule_id	number				
transaction_date	date	x			
acct_period_id	number				
fm_operation_seq_ num	number	x			
fm_operation_code	varchar2(4)	x			
fm_department_id	number	x			
fm_department_code	varchar2(10)		x		
fm_intraoperation_ step_type	number	x			
to_operation_seq_num	number	x			
to_operation_code	varchar2(4)	x			
to_department_id	number	x			

**Table 9–6 FORWARD MOVES AND COMPLETIONS      WSM\_LOT\_MOVE\_TXN\_INTERFACE (WLMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
to_department_code	varchar2(10)		x		
to_intraoperation_ step_type	number	x			
transaction_quantity	number	x			
transaction_uom	varchar2(3)	x			
primary_quantity	number				
primary_uom	varchar2(3)	x			
scrap_account_id	number	for scrap txns			
reason_id	number				
reason_name	varchar2(30)				
reference	varchar2(240)				
attribute_category	varchar2(30)				
attribute1 - 15	varchar2(150)				
qa_collection_id	number				
kanban_card_id	number				
overcompletion_ transaction_qty	number				
overcompletion_ primary_qty	number				
overcompletion_ transaction_id	number				
error	varchar2(240)				
jump_flag	varchar2(1)	for Jumps			
processing_order	number				

**Table 9–7 UNDO MOVES WSM\_LOT\_MOVE\_TXN\_INTERFACE (WLMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number	=wsm_lot_move_txn_interface_s			
transaction_id	number		wip_transaction_s		
last_update_date	date	x			
last_updated_by	number	x			
last_updated_by_name	varchar2(100)		x	x	
creation_date	date	x			
created_by	number	x			
created_by_name	varchar2(100)		x	x	
last_update_login	number				
request_id	number				
program_application_id	number				
program_id	number				
program_update_date	date				
group_id	number		wip_interface_s		
source_code	varchar2(30)				
source_line_id	number				
status	number	=1 (PENDING)			
transaction_type	number	=4 (UNDO)			
organization_id	number	x			
organization_code	varchar2(3)		x	x	
wip_entity_id	number		x	x	
wip_entity_name	varchar2(240)	x			
entity_type	number	=5			

**Table 9–7 UNDO MOVES WSM\_LOT\_MOVE\_TXN\_INTERFACE (WLMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
primary_item_id	number		x	x	
line_id	number				
line_code	varchar2(10)				
repetitive_schedule_id	number				
transaction_date	date	x			
acct_period_id	number				
fm_operation_seq_num	number		x	x	
fm_operation_code	varchar2(4)		x	x	
fm_department_id	number		x	x	
fm_department_code	varchar2(10)		x		
fm_intraoperation_step_type	number		x	x	
to_operation_seq_num	number		x	x	
to_operation_code	varchar2(4)		x	x	
to_department_id	number		x	x	
to_department_code	varchar2(10)		x		
to_intraoperation_step_type	number		x	x	
transaction_quantity	number		x	x	
transaction_uom	varchar2(3)	x			
primary_quantity	number				
primary_uom	varchar2(3)	x			
scrap_account_id	number		for scrap txns	for scrap txns	
reason_id	number				
reason_name	varchar2(30)				
reference	varchar2(240)				

**Table 9–7 UNDO MOVES    WSM\_LOT\_MOVE\_TXN\_INTERFACE (WLMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
attribute_category	varchar2(30)				
attribute1 - 15	varchar2(150)				
qa_collection_id	number				
kanban_card_id	number				
overcompletion_transaction_qty	number				
overcompletion_primary_qty	number				
overcompletion_transaction_id	number				
error	varchar2(240)				
jump_flag	varchar2(1)				
processing_order	number				

**Table 9–8 RETURNS    WSM\_LOT\_MOVE\_TXN\_INTERFACE (WLMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number	=wsm_lot_move_txn_interface_s			
transaction_id	number		wip_transaction_s		
last_update_date	date	x			
last_updated_by	number	x			
last_updated_by_name	varchar2(100)		x	x	
creation_date	date	x			
created_by	number	x			
created_by_name	varchar2(100)		x	x	
last_update_login	number				

**Table 9–8 RETURNS WSM\_LOT\_MOVE\_TXN\_INTERFACE (WLMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
request_id	number				
program_application_id	number				
program_id	number				
program_update_date	date				
group_id	number		wip_interface_s		
source_code	varchar2(30)				
source_line_id	number				
status	number	=1 (PENDING)			
transaction_type	number	=3 (RETURN)			
organization_id	number	x			
organization_code	varchar2(3)		x	x	
wip_entity_id	number		x	x	
wip_entity_name	varchar2(240)	x			
entity_type	number	=5			
primary_item_id	number		x	x	
line_id	number				
line_code	varchar2(10)				
repetitive_schedule_id	number				
transaction_date	date	x			
acct_period_id	number				
fm_operation_seq_num	number		x	x	
fm_operation_code	varchar2(4)		x	x	
fm_department_id	number		x	x	
fm_department_code	varchar2(10)		x		

**Table 9–8 RETURNS WSM\_LOT\_MOVE\_TXN\_INTERFACE (WLMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
fm_intraoperation_ step_type	number		x	x	
to_operation_seq_num	number		x	x	
to_operation_code	varchar2(4)		x	x	
to_department_id	number		x	x	
to_department_code	varchar2(10)		x		
to_intraoperation_ step_type	number		x	x	
transaction_quantity	number		x	x	
transaction_uom	varchar2(3)	x			
primary_quantity	number				
primary_uom	varchar2(3)	x			
scrap_account_id	number				
reason_id	number				
reason_name	varchar2(30)				
reference	varchar2(240)				
attribute_category	varchar2(30)				
attribute1 - 15	varchar2(150)				
qa_collection_id	number				
kanban_card_id	number				
overcompletion_ transaction_qty	number				
overcompletion_ primary_qty	number				
overcompletion_ transaction_id	number				

**Table 9–8 RETURNS    WSM\_LOT\_MOVE\_TXN\_INTERFACE (WLMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
error	varchar2(240)				
jump_flag	varchar2(1)				
processing_order	number				

You must include data in each of the required columns. Overall, very few columns are required because the system derives or defaults many column values and/or allows these column values to be optional.

Columns are derived using foreign key relationships within Oracle Manufacturing. The following derived columns are control columns that the Move Transaction Manager uses to provide closed loop transaction processing control and relational integrity throughout the interface process:

**Control Columns**

- **ATTRIBUTE1 through ATTRIBUTE15 (Optional):** the descriptive flexfield attributes in the columns ATTRIBUTE1 through ATTRIBUTE15 map to ATTRIBUTE1 through ATTRIBUTE15 in WIP\_MOVE\_TRANSACTIONS.
- **FM\_INTRAOPERATION\_STEP\_TYPE (Required):** this column is only required when performing Move and Move Completion transactions. It must be an enabled intraoperation step.
- **FM\_OPERATION\_SEQ\_NUM (Required):** in Move transactions, this column represents the operation from which you are moving the jobs.

In Move and Completion transactions, this column represents the operation from which you are moving the jobs before they are completed into inventory.

In Undo Move and Return transactions, you may leave this column and the FM\_INTRAOPERATION\_STEP\_TYPE column blank. If you do not wish to leave these columns blank when performing an Undo Move and Return transaction, you must set the values of these columns to their derived values. FM\_OPERATION\_SEQ\_NUM and FM\_INTRAOPERATION\_STEP\_TYPE must be set to the operation sequence on the routing at which the job currently exists.

- **ORGANIZATION\_CODE (Derived):** this column is derived from the Organization ID. The Organization ID identifies the organization to which the transaction belongs.

- PRIMARY\_QUANTITY (Derived): this column is the transaction quantity in the assembly's primary unit of measure, calculated using TRANSACTION\_QUANTITY and TRANSACTION\_UOM.
- STATUS (Required): this column control describes the transaction state of the row and controls whether rows in the interface table are processed. You should insert a row that you intend to be processed with a value of 1.

1 Pending

2 Running

3 Error

4 Completed

You should always load 1 (Pending)

- SCRAP\_ACCOUNT\_ID (Optional): if the TO\_INTRAOPERATION\_STEP\_TYPE is scrap and a scrap account is required, you must insert a SCRAP\_ACCOUNT\_ID.
- SOURCE\_CODE and SOURCE\_LINE\_ID (Optional): the SOURCE\_CODE and SOURCE\_LINE\_ID columns can be used to identify the source of your Move transactions. For example, if you collect Move transaction information from a bar code reader and a radio frequency device, you could use a different source code to identify each collection method.
- TO\_INTRAOPERATION\_STEP\_TYPE (Required): If you are undoing a move or returning an assembly from inventory back to WIP, you cannot specify the To Move intraoperation step. If you specify the Scrap intraoperation step, you must insert a SCRAP\_ACCOUNT\_ID if the WIP Require Scrap Account parameter is set.
- TO\_OPERATION\_SEQ\_NUM (Required): in Move transactions, this column represents the operation step into which you are moving the job. If you are undoing a move or returning an assembly from inventory to WIP leave this column and the TO\_INTRAOPERATION\_STEP\_TYPE columns blank, both columns are derived.

For forward move transactions and jumps within the current routing, the TO\_OPERATION\_SEQ\_NUM should be populated with the OPERATION\_SEQUENCE\_NUMBER defined in the network routing.

For undo transactions, this column need not be populated.

For jumps outside the network routing this column must be left blank.

In Return transactions, this column represents the operation that the assemblies are being returned to from inventory.

**JUMP\_FLAG:** Jump is a move transaction in which the operation to which the job is to be moved is not the immediately next operation on the network routing attached to the job. Jumps can be made either within the same network routing or outside of the network routing. Whenever jumps are made, the jump flag needs to be set to Y.

- **TRANSACTION\_QUANTITY** (Required): enter the transaction quantity in the same unit of measure used in the transaction.
- **TRANSACTION\_TYPE** (Optional): This column indicates the type of Move transaction. The options are:
  - 1 Move
  - 2 Move Completion
  - 3 Move Return
  - 4 Undo

If the transaction type is set to 1 and you are moving into the last operation To Move intraoperation step, the program defaults the transaction type to 2 and performs the completion transaction.

- **TRANSACTION\_UOM** (Required): you can enter the **TRANSACTION\_QUANTITY** in any unit of measure that has conversion rates defined for the item's primary unit of measure. Use this column to specify the transacted unit of measure, even if it is the same as the primary unit of measure.
- **WIP\_ENTITY\_NAME** (Required): this column represents the job name used to derive the **WIP\_ENTITY\_ID**.

### Required Columns

- For normal Move transactions, set **TRANSACTION\_TYPE** to 1 or NULL.
- The **FROM** and **TO OPERATION\_SEQ\_NUM**, **OPERATION\_CODE**, **INTRAOPERATION\_STEP**, and **DEPARTMENT\_ID** must be set by the user.
- For completion transactions, set **TRANSACTION\_TYPE** to 2.
- For return transactions, set **TRANSACTION\_TYPE** to 3. When **TRANSACTION\_TYPE** is 3, the Move transaction processor returns the assemblies from the completion subinventory/locator back into WIP.

- The column STATUS contains the state of the transaction. You should always load 1 (Pending):
  - 1 Pending
  - 2 Running
  - 3 Error
  - 4 Complete

### **Derived Data**

The WSM Transaction Validation Engine derives columns using foreign key relationships within Oracle Manufacturing. The following derived columns are control columns that the Move Transaction Worker uses to provide closed loop transaction processing control and relational integrity throughout the interface process:

- CREATED\_BY\_NAME
- GROUP\_ID
- LAST\_UPDATED\_BY\_NAME
- PROGRAM\_APPLICATION\_ID
- PROGRAM\_ID
- PROGRAM\_UPDATE\_DATE
- REQUEST\_ID
- TRANSACTION\_ID

You can insert data into certain derived columns. The WSM Transaction Validation Engine will validate your data, but not override it. You can insert data into the following derived columns:

- LINE\_ID
- REASON\_ID

### **Optional Columns**

- The columns SOURCE\_CODE and SOURCE\_LINE\_ID can be used to identify the source of Move transactions. For example, if you collect Move transaction information from a bar code reader and a radio frequency device, you could use a different source code to identify each collection method.

- The descriptive flexfield attributes in the columns ATTRIBUTE1 through ATTRIBUTE15 map to ATTRIBUTE1 through ATTRIBUTE15 in WIP\_MOVE\_TRANSACTIONS.

## Import WIP Lot Transactions Concurrent Program

The WIP Lot Transactions interface supports the following types of transactions:

**Table 9–9 Transaction Types and Descriptions**

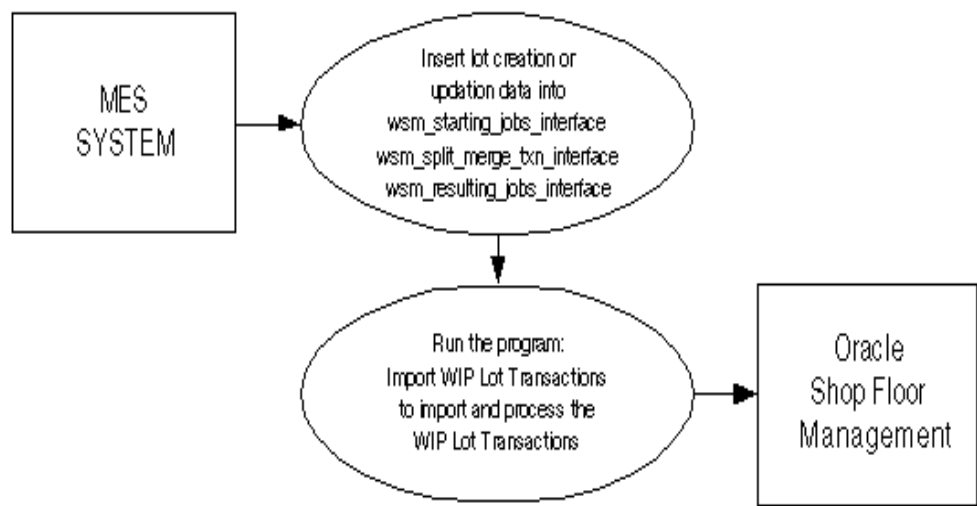
Transaction Type	Transaction Description
1	Split
2	Merge
3	Update Assembly
4	Bonus
5	Update Routing
6	Update Quantity
7	Update Lot Name

The transactions in this interface can be broadly divided into two categories: transactions and update records. Split, merge and bonus can be classified as transactions, where as updates of assembly, routings, quantity and lot names can be classified as update records.

This is a two step process. First, use the concurrent program Import WIP Lot Transactions to validate each transaction record in the interfaces tables, import it into the base tables and then process it. The PROCESS\_STATUS of affected transaction records in the base tables will be COMPLETE once these transaction have been successfully imported and processed. Finally, use the concurrent program Cost Manager to cost the record with process\_status = complete. After this step, the COSTED status of the records will also be changed to COMPLETE.

Figure 9–5 below describes the basic flow of the WIP Lot Transactions Concurrent Program for transactions. The WIP split, merge, update and bonus lot data in MES is inserted into Oracle Shop Floor Management interface tables by running interface loader scripts from the external system. This import program validates the WIP split, merge, update and bonus lot data to be interfaced. The WIP split, merge, update and bonus lot transactions in MES are then imported into Oracle Applications.

**Figure 9–5 Basic Flow of the Import WIP Lot Transactions Concurrent Program for Transactions**



## Functional Overview

In Oracle Shop Floor Management, the run Requests menu, select Import WIP Lot Transactions.

To run from the command line, enter the following command:

```
WSMPLOAD.load          (errbuf          OUT   VARCHAR2,
                        retcode          OUT   NUMBER,
                        p_copy_qa        IN    VARCHAR2,
                        p_group_id        IN    NUMBER NULL);
```

p\_copy\_qa is ignored currently.

Following are the major design features of this interface:

1. The user inserts rows into WSM\_SPLIT\_MERGE\_TXN\_INTERFACE (WSMTI), WSM\_STARTING\_JOBS\_INTERFACE (WSJI), and WSM\_RESULTING\_JOBS\_INTERFACE (WRJI) tables. Transactions in WSMTI are joined with the transactions in WSJI and WRJI by the HEADER\_ID column in these tables.
2. The user groups transactions in WSMTI by using the same GROUP\_ID. He/she may or may not enter a GROUP\_ID.
3. When a concurrent request is launched for WIP Lot Transaction Interface, the user can specify a GROUP\_ID. If a GROUP\_ID is specified, only the PENDING transactions with the given GROUP\_ID will be processed. If no GROUP\_ID is specified, all the PENDING transactions are processed group by group. In this case, a unique GROUP\_ID is assigned for each PENDING transaction which has a NULL GROUP\_ID, by the order of TRANSACTION\_DATE.
4. Within a group, transactions are processed according to TRANSACTION\_DATE.

### Errors and Validations:

1. Whenever any one row errors out within a given group, the PROCESS\_STATUS of the entire group is set to ERROR. But only the transactions that actually errored out will have the ERROR\_MESSAGE column containing the error message.
2. Preferably, independent transactions should be grouped together. No interdependent transactions should exist within a group. Ideally, the GROUP\_

ID should be left blank so that each transaction is assigned a unique GROUP\_ID according to TRANSACTION\_DATE and the transactions are processed row-by-row as if they were a group with a single transaction in it.

- 3. If GROUP\_ID is not specified when a concurrent request is launched and any one group errors out, the status of the concurrent program is set to WARNING. On the other hand, if a GROUP\_ID is specified when a concurrent request is launched and the group errors out, the status of the concurrent program is set to ERROR.
- 4. Errors and warnings, if any, will be written into the WSM\_INTERFACE\_ERRORS table. Appropriate messages will be given in the parent and child interface tables to refer to WSM\_INTERFACE\_ERRORS table when there is any error.
- 5. To resubmit the errored transactions for processing, the user has to rectify the error and change the PROCESS\_STATUS of the required transactions from 3 (ERROR) to 1 (PENDING).
- 6. The interface makes all the validations that get done when going through the front-end.

## Setting Up the Import WIP Lot Transactions Concurrent Program

### Parameter Descriptions

The following chart describes all parameters used by the public WIP LOT Transaction Concurrent Program. All of the inbound and outbound parameters are listed.

**Table 9–10    *Parameter Descriptions***

Parameter	Usage	Type	Required	Derived	Optional
group_id					x

## Validation of Import WIP Lot Transactions Program

### Standard Validation

Oracle Shop Floor Management validates all required columns in the Import WIP Lot Processor Transactions Concurrent Program. For specific information on the data implied by these columns, see your Oracle Shop Floor Management Technical Reference Manual for details.

### Error Handling

If any validation fails, the Concurrent Program will return error status to the calling module. The Import WIP Lot Processor Transactions Concurrent Program processes the rows and reports the following values for every record.

**Table 9–11 Error Handling Table**

Condition	PROCESS_STATIS	ERROR_MESSAGE
Success	4	null
Failure	3	actual error message
Running	2	null

### See Also

*Oracle Shop Floor Management Technical Reference Manual 11i*

[Figure 9–6](#) below describes the same process for updating records.

**Figure 9–6 Basic Flow for processing WIP Lot Transactions through Interface**

<b>WIP LOT TRANSACTIONS - Functional Data Flow</b>	
WIP Lot Transactions Interface table	Unprocessed Records in WSM_SPLIT_MERGE_TXN_INTERFACE (WSMTI), WSM_STARTING_JOBS_INTERFACE (WSJI) and WSM_RESULTING_JOBS_INTERFACE (WRJI) with PROCESS_STATUS = 1.
Import WIP Lot Transactions	Successfully Imported (validated and processed) Interface Records in WSM_SPLIT_MERGE_TRANSACTIONS (WSMT), WSM_SM_STARTING_JOBS (WSSJ) and WSM_SM_RESULTING_JOBS (WSRJ) with PROCESS_STATUS = 4 (COMPLETE), but UNCLOSED.
Cost Manager	Successfully processed Records in WSM_SPLIT_MERGE_TRANSACTIONS (WSMT), WSM_SM_STARTING_JOBS (WSSJ) and WSM_SM_RESULTING_JOBS (WSRJ) with PROCESS_STATUS = 4 (COMPLETE), and COSTED = 4 (COMPLETE).

## Important Columns in WSM\_SPLIT\_MERGE\_TXN\_INTERFACE, WSM\_STARTING\_JOBS\_INTERFACE, and WSM\_RESULTING\_JOBS\_INTERFACE Tables

The interface requires WSM\_SPLIT\_MERGE\_TXN\_INTERFACE (WSMTI), WSM\_STARTING\_JOBS\_INTERFACE (WSJI), and WSM\_RESULTING\_JOBS\_INTERFACE (WRJI) tables.

The system validates each transaction row, derives any additional data as necessary, then processes each transaction. Some columns are not used by the program and marked as ignored.

The following three tables describe the important columns in the WSM\_SPLIT\_MERGE\_TXN\_INTERFACE (WSMTI), WSM\_STARTING\_JOBS\_INTERFACE (WSJI,) and WSM\_RESULTING\_JOBS\_INTERFACE (WRJI) tables.

**Table 9–12 IMPORTANT COLUMNS WSM\_SPLIT\_MERGE\_TXN\_INTERFACE (WSMTI)**

Column	Description
group_id	User populated / Program generated if NULL, using sequence wsm_sm_txn_int_group_s
header_id	User populated - using sequence wsm_sm_txn_interface_s
transaction_id	Program generated using sequence wsm_split_merge_transactions_s
transaction_type_id	Type of transaction: 1 - Split 2 - Merge 3 - Update Assembly 4 - Bonus 5 - Update Routing 6 - Update Quantity 7 - Update Lot Name
process_status	1 - PENDING

**Table 9–13    IMPORTANT COLUMNS    WSM\_STARTING\_JOBS\_INTERFACE (WSJI)**

Column	Description
group_id	User populated / System generated if NULL. Value same as that in WSM TI table
header_id	User populated - using sequence wsm_sm_txn_interface_s. Matches the value for the txn entered in WSM TI table
process_status	1 - PENDING

**Table 9–14    IMPORTANT COLUMNS    WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Description
group_id	User populated / System generated if NULL. Value same as that in WSM TI table
header_id	User populated - using sequence wsm_sm_txn_interface_s. Matches the value for the txn entered in WSM TI table
process_status	1 - PENDING

## Inserting Records into the WSM\_SPLIT\_MERGE\_TXN\_INTERFACE, WSM\_STARTING\_JOBS\_INTERFACE, and WSM\_RESULTING\_JOBS\_INTERFACE Tables

The following tables describe WSM\_SPLIT\_MERGE\_TXN\_INTERFACE (WSMTI), WSM\_STARTING\_JOBS\_INTERFACE (WSJI), and WSM\_RESULTING\_JOBS\_INTERFACE (WRJI) tables for each of the seven transaction types.

### Bonus Transaction:

**Table 9–15 BONUS WSM\_SPLIT\_MERGE\_TXN\_INTERFACE (WSMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_interface_s			
transaction_type_id	number(15)	=4			
transaction_date	date	x			
organization_id	number(15)	x			
reason_id	number				
suspense_acct_id	number(15)				
transaction_reference	varchar2(240)				
group_id	number(15)		=wsm_sm_txn_int_group_s, if NULL	x	
process_status	number	=1 (PENDING)			
transaction_id	number(15)		=wsm_split_merge_transactions_s		
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				

**Table 9–15 BONUS WSM\_SPLIT\_MERGE\_TXN\_INTERFACE (WSMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
attribute_category	varchar2(30)				
attribute1 - 15	varchar2(150)				Ignored
request_id	number(15)				System generated
program_application_id	number(15)				System generated
program_id	number(15)				System generated
program_update_date	date				System generated
xml_document_id	number				
internal_group_id	number				Not for use. For internal purposes only. Any Previous value will be overwritten

Note: No records are required for insertion to WSJI table for bonus transactions.

**Table 9–16 BONUS WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_interface_s & =WSMTI.header_id			
group_id	number(15)		=wsm_sm_txn_int_group_s, if NULL		
wip_entity_name	varchar2(240)	x			Length cannot exceed 30 characters excluding sector extensions and lot separators
xml_document_id	varchar2(240)				
job_type	number				

**Table 9–16 BONUS WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
organization_id	number				
description	varchar2(240)				
primary_item_id	number	x			
class_code	varchar2(10)		x	x	If class_code can not be derived using defaults, then the record will error out.
start_quantity	number	x			
bom_reference_id	number				
routing_reference_id	number				
common_bom_sequence_id	number		x	x	Derived using organization_id, primary_item_id and alternate_bom_designator.
common_routing_sequence_id	number		x	x	Derived using organization_id, primary_item_id and alternated_routing_designator. If NO Network routing exists for this condition, then error out.
routing_revision	varchar2(3)		x	x	
routing_revision_date	date		x	x	
bom_revision	varchar2(3)		x	x	
bom_revision_date	date		x	x	
alternate_bom_designator	varchar2(10)		x	x	NULL value is PRIMARY BOM.
alternate_routing_designator	varchar2(10)		x	x	NULL value is PRIMARY Routing.

**Table 9–16 BONUS WSM\_RESULTIING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
completion_ subinventory	varchar2(10)		x		
starting_operation_ code	varchar2(4)		x (if op_ seq_num given)	x	If starting operation is a standard operation.
starting_operation_ seq_num	number		x (if op_ code given)	x	Starting Operation Sequence Number in the PRIMARY PATH of the network routing. This can be a Non-standard operation also.
starting_std_op_id	number		x (if op_ code / op_ seq_num given)		
starting_ intraoperation_step	number		x = 1 (QUEUE)	x	BONUS Transactions are supported only at QUEUE Intra-operation step.
scheduled_start_date	date	x			
scheduled_ completion_date	date	x			
starting_wip_entity_ rename	varchar2(240)				
forward_op_option	number		x = 4		
bonus_acct_id	number(15)	x			Should be a valid account id from the organization's Set of Books.
demand_class	varchar2(30)				
process_status	number	= 1 (PENDING)			

**Table 9–16 BONUS WSM\_RESULTIING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				
attribute_category	varchar2(30)				Ignored
attribute1 - 15	varchar2(150)				Ignored
request_id	number(15)				System Generated
program_application_id	number(15)				System Generated
program_id	number(15)				System Generated
program_update_date	date				System Generated
completion_locator_id	number(15)		x		
coproducts_supply	number		x	x	
net_quantity	number		x	x	Should be less than start quantity
internal_group_id	number				Not for use. For internal purposes only. Any Previous value will be overwritten

**Split Transaction:****Table 9-17 SPLIT WSM\_SPLIT\_MERGE TXN\_INTERFACE (WSMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_ interface_s			
transaction_type_id	number(15)	= 1			
transaction_date	date	x			
organization_id	number(15)	x			
reason_id	number				
suspense_acct_id	number(15)				
transaction_reference	varchar2(240)				
group_id	number(15)		=wsm_sm_ txn_int_ group_s, if NULL	x	
process_status	number	=1 (PENDING)			
transaction_id	number(15)		=wsm_ split_ merge_ transactions_ _s		
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				
attribute_category	varchar2(30)				Ignored
attribute1 - 15	varchar2(150)				Ignored
request_id	number(15)				System Generated
program_application_ id	number(15)				System Generated

**Table 9–17 SPLIT WSM\_SPLIT\_MERGE\_TXN\_INTERFACE (WSMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
program_id	number(15)				System Generated
program_update_date	date				System Generated
xml_document_id	number				
internal_group_id	number				Not for use. For internal purposes only. Any Previous value will be overwritten

**Table 9–18 SPLIT WSM\_STARTING\_JOBS\_INTERFACE (WSJI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_interface_s & =WSMTI.header_id			
wip_entity_id	number				either wip_entity_id or wip_entity_name must be entered
xml_document_id	varchar2(240)				
wip_entity_name	varchar2(240)				either wip_entity_id or wip_entity_name must be entered
organization_id	number				
operation_seq_num	number	x			
intraoperation_step	number	x			1 or 3
representative_flag	varchar2(1)				
group_id	number(15)		=wsm_sm_txn_int_group_s, if NULL	x	
process_status	number	= 1 (PENDING)			

**Table 9–18 SPLIT WSM\_STARTING\_JOBS\_INTERFACE (WSJI)**

Column	Type	Required	Derived	Optional	Permitted Values
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				
attribute_category	varchar2(30)				Ignored
attribute1 - 15	varchar2(150)				Ignored
request_id	number(15)				System Generated
program_application_id	number				System Generated
program_id	number(15)				System Generated
program_update_date	date				System Generated
routing_seq_id	number				
primary_item_id	number				
internal_group_id	number				Not for use. For internal purposes only. Any Previous value will be overwritten

**Table 9–19 SPLIT WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_ interface_s & =WSMTI.header_ _id			
group_id	number(15)		=wsm_sm_ txn_int_ group_s, if NULL	x	
wip_entity_name	varchar2(240)	x			Length cannot exceed 30 characters excluding sector extensions and lot separators
xml_document_id	varchar2(240)				
job_type	number				
organization_id	number				
description	varchar2(240)				
primary_item_id	number	x			
class_code	varchar2(10)		x		Should be the same as starting job
start_quantity	number	x			
bom_reference_id	number				To be specified for non-standard jobs
routing_reference_id	number				To be specified for non-standard jobs
common_bom_ sequence_id	number		x		From primary_ item_id (for standard jobs) or bom_reference_id (for non-standard jobs) and alternate_bom_ designator

**Table 9–19 SPLIT WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
common_routing_ sequence_id	number		x		From primary_ item_id (for standard jobs) or routing_ reference_id (for non-standard jobs) and alternate_routing_ designator
routing_revision	varchar2(3)		x	x	
routing_revision_date	date		x	x	
bom_revision	varchar2(3)		x	x	
bom_revision_date	date			x	
alternate_bom_ designator	varchar2(10)		x	x	
alternate_routing_ designator	varchar2(10)		x	x	
completion_ subinventory	varchar2(10)		x		
starting_operation_ code	varchar2(4)				
starting_operation_ seq_num	number				
starting_std_op_id	number				
starting_ intraoperation_step	number		x = 1 (QUEUE) / 3 (TO MOVE)	x	Derived from the starting lots.
scheduled_start_date	date	x			
scheduled_ completion_date	date	x			
starting_wip_entity_ rename	varchar2(240)				
forward_op_option	number		x = 4		Ignored
bonus_acct_id	number(15)				

**Table 9–19 SPLIT WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
demand_class	varchar2(30)				
process_status	number	= 1 (PENDING)			
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				
attribute_category	varchar2(30)				Ignored
attribute1 - 15	varchar2(150)				Ignored
request_id	number(15)				System Generated
program_application_id	number				System Generated
program_id	number(15)				System Generated
program_update_date	date				System Generated
completion_locator_id	number(15)		x		
coproducts_supply	number		x		
net_quantity	number		x		Should be less than start quantity
internal_group_id	number				Not for use. For internal purposes only. Any Previous value will be overwritten

Note: For a Split transaction, a minimum of two records will be inserted if all the quantities in the starting lots are split.

**Merge Transaction:****Table 9–20 MERGE WSM\_SPLIT\_MERGE\_TXN\_INTERFACE (WSMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_ interface_s			
transaction_type_id	number(15)	= 2			
transaction_date	date	x			
organization_id	number(15)	x			
reason_id	number				
suspense_acct_id	number(15)				Ignored
transaction_reference	varchar2(240)				
group_id	number(15)		=wsm_sm_ txn_int_ group_s, if NULL	x	
process_status	number	=1 (PENDING)			
transaction_id	number(15)		=wsm_ split_ merge_ transactions_ _s		
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				
attribute_category	varchar2(30)				Ignored
attribute1 - 15	varchar2(150)				Ignored
request_id	number(15)				System Generated
program_application_ id	number(15)				System Generated

**Table 9–20 MERGE WSM\_SPLIT\_MERGE\_TXN\_INTERFACE (WSMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
program_id	number(15)				System Generated
program_update_date	date				System Generated
xml_document_id	number				
internal_group_id	number				Not for use. For internal purposes only. Any Previous value will be overwritten

**Table 9–21 MERGE WSM\_STARTING\_JOBS\_INTERFACE (WSJI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_interface_s & =WSMTI.header_id			
wip_entity_id	number				either wip_entity_id or wip_entity_name must be entered
xml_document_id	varchar2(240)				
wip_entity_name	varchar2(240)				either wip_entity_id or wip_entity_name must be entered
organization_id	number				
operation_seq_num	number	x			Merge is NOT permitted at a Non-standard operation.
intraoperation_step	number	x			1 or 3
representative_flag	varchar2(1)	x			1 or 2. Only one record can have a value of 1 for a Merge Transaction

**Table 9–21 MERGE WSM\_STARTING\_JOBS\_INTERFACE (WSJI)**

Column	Type	Required	Derived	Optional	Permitted Values
group_id	number(15)		=wsm_sm_ txn_int_ group_s, if NULL	x	
process_status	number	= 1 (PENDING)			
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				
attribute_category	varchar2(30)				
attribute1 - 15	varchar2(150)				Ignored
request_id	number(15)		x		System generated
program_application_ id	number				
program_id	number(15)		x		
program_update_date	date				
routing_seq_id	number				
primary_item_id	number				
internal_group_id	number				Not for use. For internal purposes only. Any Previous value will be overwritten

**Table 9–22 MERGE WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_ interface_s & =WSMTI.header _id			
group_id	number(15)		=wsm_sm_ txn_int_ group_s, if NULL	x	
wip_entity_name	varchar2(240)	x			Length cannot exceed 30 characters excluding sector extensions and lot separators
xml_document_id	varchar2(240)				
job_type	number				
organization_id	number				
description	varchar2(240)				
primary_item_id	number	x			
class_code	varchar2(10)		x		Should be the same as parent representative job
start_quantity	number	x			
bom_reference_id	number				Derived based on Representative Lot
routing_reference_id	number				Derived based on Representative Lot
common_bom_ sequence_id	number		x		Derived based on Representative Lot

**Table 9–22 MERGE WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
common_routing_ sequence_id	number		x		Derived based on Representative Lot
routing_revision	varchar2(3)		x	x	Derived based on Representative Lot
routing_revision_date	date		x	x	Derived based on Representative Lot
bom_revision	varchar2(3)		x	x	Derived based on Representative Lot
bom_revision_date	date			x	Derived based on Representative Lot
alternate_bom_ designator	varchar2(10)		x	x	Derived based on Representative Lot
alternate_routing_ designator	varchar2(10)		x	x	Derived based on Representative Lot
completion_ subinventory	varchar2(10)		x	x	Derived based on Representative Lot
starting_operation_ code	varchar2(4)				Derived based on Representative Lot

**Table 9–22 MERGE WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
starting_operation_ seq_num	number				Derived based on Representative Lot
starting_std_op_id	number				Derived based on Representative Lot
starting_ intraoperation_step	number		x = 1 (QUEUE) / 3 (TO MOVE)	x	Derived based on Representative Lot
scheduled_start_date	date	x			
scheduled_ completion_date	date	x			
starting_wip_entity_ rename	varchar2(240)				
forward_op_option	number				Ignored
bonus_acct_id	number(15)				
demand_class	varchar2(30)				
process_status	number	= 1 (PENDING)			
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				
attribute_category	varchar2(30)				Ignored
attribute1 - 15	varchar2(150)				Ignored
request_id	number(15)				System Generated
program_application_ id	number				System Generated
program_id	number(15)				System Generated

**Table 9–22 MERGE WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
program_update_date	date				System Generated
completion_locator_id	number(15)				Derived based on Representative Lot
coproducts_supply	number				
net_quantity	number				Should be less than the resulting job start quantity.
internal_group_id	number				Not for use. For internal purposes only. Any previous value will be overwritten

Note: For a merge, a transaction minimum of two records are inserted into this table. One of the records is a representative lot.

### Update Assembly Transaction:

**Table 9–23 UPDATE ASSEMBLY WSM\_SPLIT\_MERGE\_TXN\_INTERFACE (WSMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_interface_s			
transaction_type_id	number(15)	= 3			
transaction_date	date	x			
organization_id	number(15)	x			
reason_id	number				
suspense_acct_id	number(15)				
transaction_reference	varchar2(240)				

**Table 9–23 UPDATE ASSEMBLY WSM\_SPLIT\_MERGE\_TXN\_INTERFACE (WSMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
group_id	number(15)		=wsm_sm_ txn_int_ group_s, if NULL	x	
process_status	number	=1 (PENDING)			
transaction_id	number(15)		=wsm_ split_ merge_ transactions_ _s		
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				
attribute_category	varchar2(30)				Ignored
attribute1 - 15	varchar2(150)				Ignored
request_id	number(15)				System Generated
program_application_id	number(15)				System Generated
program_id	number(15)				System Generated
program_update_date	date				System Generated
xml_document_id	number				
internal_group_id	number				Not for use. For internal purposes only. Any previous value will be overwritten

**Table 9–24 UPDATE ASSEMBLY WSM\_STARTING\_JOBS\_INTERFACE (WSJI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_ interface_s & =WSMTI.header_ _id			
wip_entity_id	number				either wip_entity_ id or wip_entity_ name must be entered
xml_document_id	varchar2(240)				
wip_entity_name	varchar2(240)				either wip_entity_ id or wip_entity_ name must be entered
organization_id	number				
operation_seq_num	number	x			
intraoperation_step	number	=Q/TM			
representative_flag	varchar2(1)				
group_id	number(15)		=wsm_sm_ txn_int_ group_s, if NULL	x	
process_status	number	= 1 (PENDING)			
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				
attribute_category	varchar2(30)				Ignored
attribute1 - 15	varchar2(150)				Ignored
request_id	number(15)		x		System Generated

**Table 9–24 UPDATE ASSEMBLY WSM\_STARTING\_JOBS\_INTERFACE (WSJI)**

Column	Type	Required	Derived	Optional	Permitted Values
program_application_id	number				System Generated
program_id	number(15)		x		System Generated
program_update_date	date				System Generated
routing_seq_id	number				
primary_item_id	number				New Lot controlled Assembly Item. Should have a valid Network Routing in WSM.TI.organization_id.
internal_group_id	number				Not for use. For internal purposes only. Any previous value will be overwritten

**Table 9–25 UPDATE ASSEMBLY WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_interface_s & =WSMTI.header_id			
group_id	number(15)		=wsm_sm_txn_int_group_s, if NULL	x	
wip_entity_name	varchar2(240)	x			Length cannot exceed 30 characters excluding sector extensions and lot separators
xml_document_id	varchar2(240)				

**Table 9–25 UPDATE ASSEMBLY WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
job_type	number				
organization_id	number				
description	varchar2(240)				
primary_item_id	number	x			
class_code	varchar2(10)		x		Should be the same as starting job
start_quantity	number	x			
bom_reference_id	number				To be specified for non-standard jobs
routing_reference_id	number				To be specified for non-standard jobs
common_bom_sequence_id	number		x		From primary_item_id (for standard jobs) or bom_reference_id (for non-standard jobs) and alternate_bom_designator
common_routing_sequence_id	number		x		From primary_item_id (for standard jobs) or routing_reference_id (for non-standard jobs) and alternate_routing_designator
routing_revision	varchar2(3)		x	x	
routing_revision_date	date		x	x	
bom_revision	varchar2(3)		x	x	
bom_revision_date	date			x	
alternate_bom_designator	varchar2(10)		x	x	

**Table 9–25 UPDATE ASSEMBLY WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
alternate_routing_designator	varchar2(10)		x	x	
completion_subinventory	varchar2(10)		x		
starting_operation_code	varchar2(4)				
starting_operation_seq_num	number				Ignored if the starting lot is at TO_MOVE Intra-operation.
starting_std_op_id	number				
starting_intraoperation_step	number		x = 1 (QUEUE) / 3 (TO MOVE)	x	3 is disallowed, if the starting operation sequence num is the last operation in the target routing.
scheduled_start_date	date	x			
scheduled_completion_date	date	x			
starting_wip_entity_rename	varchar2(240)				
forward_op_option	number				
bonus_acct_id	number(15)				
demand_class	varchar2(30)				
process_status	number	= 1 (PENDING)			
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				

**Table 9–25 UPDATE ASSEMBLY WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
attribute_category	varchar2(30)				Ignored
attribute1 - 15	varchar2(150)				Ignored
request_id	number(15)				System Generated
program_application_id	number				System Generated
program_id	number(15)				System Generated
program_update_date	date				System Generated
completion_locator_id	number(15)				
coproducts_supply	number				
net_quantity	number				
internal_group_id	number				Not for use. For internal purposes only. Any previous value will be overwritten

### Update Routing Transaction:

**Table 9–26 UPDATE ROUTING WSM\_SPLIT\_MERGE\_TXN\_INTERFACE (WSMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_interface_s			
transaction_type_id	number(15)	= 5			
transaction_date	date	x			
organization_id	number(15)	x			
reason_id	number				
suspense_acct_id	number(15)				
transaction_reference	varchar2(240)				

**Table 9–26 UPDATE ROUTING WSM\_SPLIT\_MERGE\_TXN\_INTERFACE (WSMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
group_id	number(15)		=wsm_sm_ txn_int_ group_s, if NULL	x	
process_status	number	=1 (PENDING)			
transaction_id	number(15)		=wsm_ split_ merge_ transactions_ _s		
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				
attribute_category	varchar2(30)				Ignored
attribute1 -15	varchar2(150)				Ignored
request_id	number(15)				
program_application_id	number(15)				System Generated
program_id	number(15)				System Generated
program_update_date	date				System Generated
xml_document_id	number				
internal_group_id	number				Not for use. For internal purposes only. Any previous value will be overwritten

**Table 9-27 UPDATE ROUTING WSM\_STARTING\_JOBS\_INTERFACE (WSJI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_ interface_s & =WSMTI.header_ _id			System Generated
wip_entity_id	number				either wip_entity_ id or wip_entity_ name must be entered
xml_document_id	varchar2(240)				
wip_entity_name	varchar2(240)				either wip_entity_ id or wip_entity_ name must be entered
organization_id	number				
operation_seq_num	number	x			
intraoperation_step	number	=Q/TM			1 or 3
representative_flag	varchar2(1)				
group_id	number(15)		=wsm_sm_ txn_int_ group_s, if NULL	x	
process_status	number	= 1 (PENDING)			
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				
attribute_category	varchar2(30)				Ignored
attribute1 - 15	varchar2(150)				Ignored
request_id	number(15)		x		System Generated

**Table 9–27 UPDATE ROUTING WSM\_STARTING\_JOBS\_INTERFACE (WSJI)**

Column	Type	Required	Derived	Optional	Permitted Values
program_application_id	number				System Generated
program_id	number(15)		x		System Generated
program_update_date	date				System Generated
routing_seq_id	number				
primary_item_id	number				
internal_group_id	number				Not for use. For internal purposes only. Any previous value will be overwritten

**Table 9–28 UPDATE ROUTING WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_interface_s & =WSMTI.header_id			
group_id	number(15)		=wsm_sm_txn_int_group_s, if NULL	x	
wip_entity_name	varchar2(240)	x			Length cannot exceed 30 characters excluding sector extensions and lot separators
xml_document_id	varchar2(240)				
job_type	number				
organization_id	number				
description	varchar2(240)				
primary_item_id	number	x			

**Table 9–28 UPDATE ROUTING WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
class_code	varchar2(10)		x		Should be the same as starting job
start_quantity	number	x			
bom_reference_id	number				To be specified for non-standard jobs
routing_reference_id	number				To be specified for non-standard jobs
common_bom_sequence_id	number		x		From primary_item_id (for standard jobs) or bom_reference_id (for non-standard jobs) and alternate_bom_designator
common_routing_sequence_id	number		x		From primary_item_id (for standard jobs) or routing_reference_id (for non-standard jobs) and alternate_routing_designator
routing_revision	varchar2(3)		x	x	
routing_revision_date	date		x	x	
bom_revision	varchar2(3)		x	x	
bom_revision_date	date			x	
alternate_bom_designator	varchar2(10)		x	x	
alternate_routing_designator	varchar2(10)	x	x	x	NULL value permitted if different from current designator
completion_subinventory	varchar2(10)		x		

**Table 9–28 UPDATE ROUTING WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
starting_operation_code	varchar2(4)				
starting_operation_seq_num	number				Ignored if the starting lot is at TO_MOVE Intra-operation.
starting_std_op_id	number				
starting_intraoperation_step	number		x = 1 (QUEUE) / 3 (TO MOVE)	x	3 is disallowed, if the starting operation sequence num is the last operation in the target routing.
scheduled_start_date	date	x			
scheduled_completion_date	date	x			
starting_wip_entity_rename	varchar2(240)				
forward_op_option	number				
bonus_acct_id	number(15)				
demand_class	varchar2(30)				
process_status	number	= 1 (PENDING)			
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				
attribute_category	varchar2(30)				Ignored
attribute1 - 15	varchar2(150)				Ignored
request_id	number(15)				System Generated

**Table 9–28 UPDATE ROUTING WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
program_application_id	number				System Generated
program_id	number(15)				System Generated
program_update_date	date				System Generated
completion_locator_id	number(15)				
coproducts_supply	number			x	1 or 2
net_quantity	number				
internal_group_id	number				Not for use. For internal purposes only. Any previous value will be overwritten

**Update Quantity Transaction:****Table 9–29 UPDATE QUANTITY WSM\_SPLIT\_MERGE\_TXN\_INTERFACE (WSMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_interface_s			
transaction_type_id	number(15)	= 6			
transaction_date	date	x			
organization_id	number(15)	x			
reason_id	number				
suspense_acct_id	number(15)				
transaction_reference	varchar2(240)				
group_id	number(15)		=wsm_sm_txn_int_group_s, if NULL	x	

**Table 9–29 UPDATE QUANTITY WSM\_SPLIT\_MERGE\_TXN\_INTERFACE (WSMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
process_status	number	=1 (PENDING)			
transaction_id	number(15)		=wsm_split_merge_transactions_s		
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				
attribute_category	varchar2(30)				Ignored
attribute1 - 15	varchar2(150)				Ignored
request_id	number(15)				System Generated
program_application_id	number(15)				System Generated
program_id	number(15)				System Generated
program_update_date	date				System Generated
xml_document_id	number				
internal_group_id	number				Not for use. For internal purposes only. Any previous value will be overwritten

**Table 9–30 UPDATE QUANTITY WSM\_STARTING\_JOBS\_INTERFACE (WSJI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_ interface_s & =WSMTI.header_ _id			
wip_entity_id	number				either wip_entity_ id or wip_entity_ name must be entered
xml_document_id	varchar2(240)				
wip_entity_name	varchar2(240)				either wip_entity_ id or wip_entity_ name must be entered
organization_id	number				
operation_seq_num	number	x			
intraoperation_step	number	=Q/TM			
representative_flag	varchar2(1)				
group_id	number(15)		=wsm_sm_ txn_int_ group_s, if NULL	x	
process_status	number	= 1 (PENDING)			
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				
attribute_category	varchar2(30)				Ignored
attribute1 - 15	varchar2(150)				Ignored
request_id	number(15)		x		System Generated

**Table 9–30 UPDATE QUANTITY WSM\_STARTING\_JOBS\_INTERFACE (WSJI)**

Column	Type	Required	Derived	Optional	Permitted Values
program_application_id	number		x		System Generated
program_id	number(15)		x		System Generated
program_update_date	date		x		System Generated
routing_seq_id	number				
primary_item_id	number				
internal_group_id	number				Not for use. For internal purposes only. Any previous value will be overwritten

**Table 9–31 UPDATE QUANTITY WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_interface_s & =WSMTI.header_id			
group_id	number(15)		=wsm_sm_txn_int_group_s, if NULL	x	
wip_entity_name	varchar2(240)	x			Length cannot exceed 30 characters excluding sector extensions and lot separators
xml_document_id	varchar2(240)				
job_type	number				
organization_id	number				
description	varchar2(240)				
primary_item_id	number	x			

**Table 9–31 UPDATE QUANTITY WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
class_code	varchar2(10)		x		Derived from Starting Lots
start_quantity	number	x			
bom_reference_id	number				Derived from Starting Lots
routing_reference_id	number				
common_bom_sequence_id	number		x		Derived from Starting Lots
common_routing_sequence_id	number		x		Derived from Starting Lots
routing_revision	varchar2(3)		x	x	Derived from Starting Lots
routing_revision_date	date		x	x	Derived from Starting Lots
bom_revision	varchar2(3)		x	x	Derived from Starting Lots
bom_revision_date	date			x	Derived from Starting Lots
alternate_bom_designator	varchar2(10)		x	x	Derived from Starting Lots
alternate_routing_designator	varchar2(10)		x	x	Derived from Starting Lots
completion_subinventory	varchar2(10)		x	x	Derived from Starting Lots
starting_operation_code	varchar2(4)				Derived from Starting Lots
starting_operation_seq_num	number				Derived from Starting Lots
starting_std_op_id	number				Derived from Starting Lots
starting_intraoperation_step	number		x = 1 (QUEUE) / 3 (TO MOVE)	x	Derived from Starting Lots

**Table 9–31 UPDATE QUANTITY WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
scheduled_start_date	date	x			
scheduled_completion_date	date	x			
starting_wip_entity_rename	varchar2(240)				
forward_op_option	number				
bonus_acct_id	number(15)	x			Valid account Id from the organization's set of books. Important for proper valuation of the job.
demand_class	varchar2(30)				
process_status	number	= 1 (PENDING)			
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				
attribute_category	varchar2(30)				Ignored
attribute1 -15	varchar2(150)				Ignored
request_id	number(15)				System Generated
program_application_id	number				System Generated
program_id	number(15)				System Generated
program_update_date	date				System Generated
completion_locator_id	number(15)				Derived from Starting Lots

**Table 9–31 UPDATE QUANTITY WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
coproducts_supply	number				Derived from Starting Lots
net_quantity	number				Should be less than the start quantity in resulting jobs.
internal_group_id	number				Not for use. For internal purposes only. Any previous value will be overwritten

### Update Lot Name Transaction:

**Table 9–32 UPDATE LOT NAME WSM\_SPLIT\_MERGE\_TXN\_INTERFACE (WSMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_interface_s			
transaction_type_id	number(15)	=7			7
transaction_date	date	x			
organization_id	number(15)	x			
reason_id	number				
suspense_acct_id	number(15)				
transaction_reference	varchar2(240)				
group_id	number(15)		=wsm_sm_txn_int_group_s, if NULL	x	
process_status	number	=1 (PENDING)			

**Table 9–32 UPDATE LOT NAME WSM\_SPLIT\_MERGE\_TXN\_INTERFACE (WSMTI)**

Column	Type	Required	Derived	Optional	Permitted Values
transaction_id	number(15)		=wsm_ split_ merge_ transactions _s		
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				
attribute_category	varchar2(30)				Ignored
attribute1 - 15	varchar2(150)				Ignored
request_id	number(15)				System Generated
program_application_id	number(15)				System Generated
program_id	number(15)				System Generated
program_update_date	date				System Generated
xml_document_id	number				
internal_group_id	number				Not for use. For internal purposes only. Any previous value will be overwritten

**Table 9–33 UPDATE LOT NAME WSM\_STARTING\_JOBS\_INTERFACE (WSJI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_ interface_s & =WSMTI.header_ _id			
wip_entity_id	number				either wip_entity_ id or wip_entity_ name must be entered
xml_document_id	varchar2(240)				
wip_entity_name	varchar2(240)				either wip_entity_ id or wip_entity_ name must be entered
organization_id	number				
operation_seq_num	number	x			
intraoperation_step	number	=Q/TM			
representative_flag	varchar2(1)				
group_id	number(15)		=wsm_sm_ txn_int_ group_s, if NULL	x	
process_status	number	= 1 (PENDING)			
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				
attribute_category	varchar2(30)				Ignored
attribute1 - 15	varchar2(150)				Ignored
request_id	number(15)		x		System Generated

**Table 9–33 UPDATE LOT NAME WSM\_STARTING\_JOBS\_INTERFACE (WSJI)**

Column	Type	Required	Derived	Optional	Permitted Values
program_application_id	number				System Generated
program_id	number(15)		x		System Generated
program_update_date	date				System Generated
routing_seq_id	number				
primary_item_id	number				
internal_group_id	number				Not for use. For internal purposes only. Any previous value will be overwritten

**Table 9–34 UPDATE LOT NAME WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
header_id	number(15)	=wsm_sm_txn_interface_s & =WSMTI.header_id			
group_id	number(15)		=wsm_sm_txn_int_group_s, if NULL	x	
wip_entity_name	varchar2(240)	x			Length cannot exceed 30 characters excluding sector extensions and lot separators
xml_document_id	varchar2(240)				
job_type	number				
organization_id	number				
description	varchar2(240)				
primary_item_id	number	x			

**Table 9–34 UPDATE LOT NAME WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
class_code	varchar2(10)		x		Derived from Starting Lots
start_quantity	number	x			
bom_reference_id	number				Derived from Starting Lots
routing_reference_id	number				Derived from Starting Lots
common_bom_sequence_id	number		x		Derived from Starting Lots
common_routing_sequence_id	number		x		Derived from Starting Lots
routing_revision	varchar2(3)		x	x	Derived from Starting Lots
routing_revision_date	date		x	x	Derived from Starting Lots
bom_revision	varchar2(3)		x	x	Derived from Starting Lots
bom_revision_date	date			x	Derived from Starting Lots
alternate_bom_designator	varchar2(10)		x	x	Derived from Starting Lots
alternate_routing_designator	varchar2(10)		x	x	Derived from Starting Lots
completion_subinventory	varchar2(10)		x	x	Derived from Starting Lots
starting_operation_code	varchar2(4)				
starting_operation_seq_num	number				
starting_std_op_id	number				
starting_intraoperation_step	number		x = 1 (QUEUE) / 3 (TO MOVE)	x	Derived from Starting Lots

**Table 9–34 UPDATE LOT NAME WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

Column	Type	Required	Derived	Optional	Permitted Values
scheduled_start_date	date	x			
scheduled_completion_date	date	x			
starting_wip_entity_rename	varchar2(240)				Not used
forward_op_option	number				Ignored
bonus_acct_id	number(15)				
demand_class	varchar2(30)				
process_status	number	= 1 (PENDING)			
error_message	varchar2(240)				
last_update_date	date	x			
last_updated_by	number	x			
creation_date	date	x			
created_by	number	x			
last_update_login	number				
attribute_category	varchar2(30)				Ignored
attribute1 -15	varchar2(150)				Ignored
request_id	number(15)				System Generated
program_application_id	number				System Generated
program_id	number(15)				System Generated
program_update_date	date				System Generated
completion_locator_id	number(15)				Derived from Starting Lots

**Table 9–34    UPDATE LOT NAME    WSM\_RESULTING\_JOBS\_INTERFACE (WRJI)**

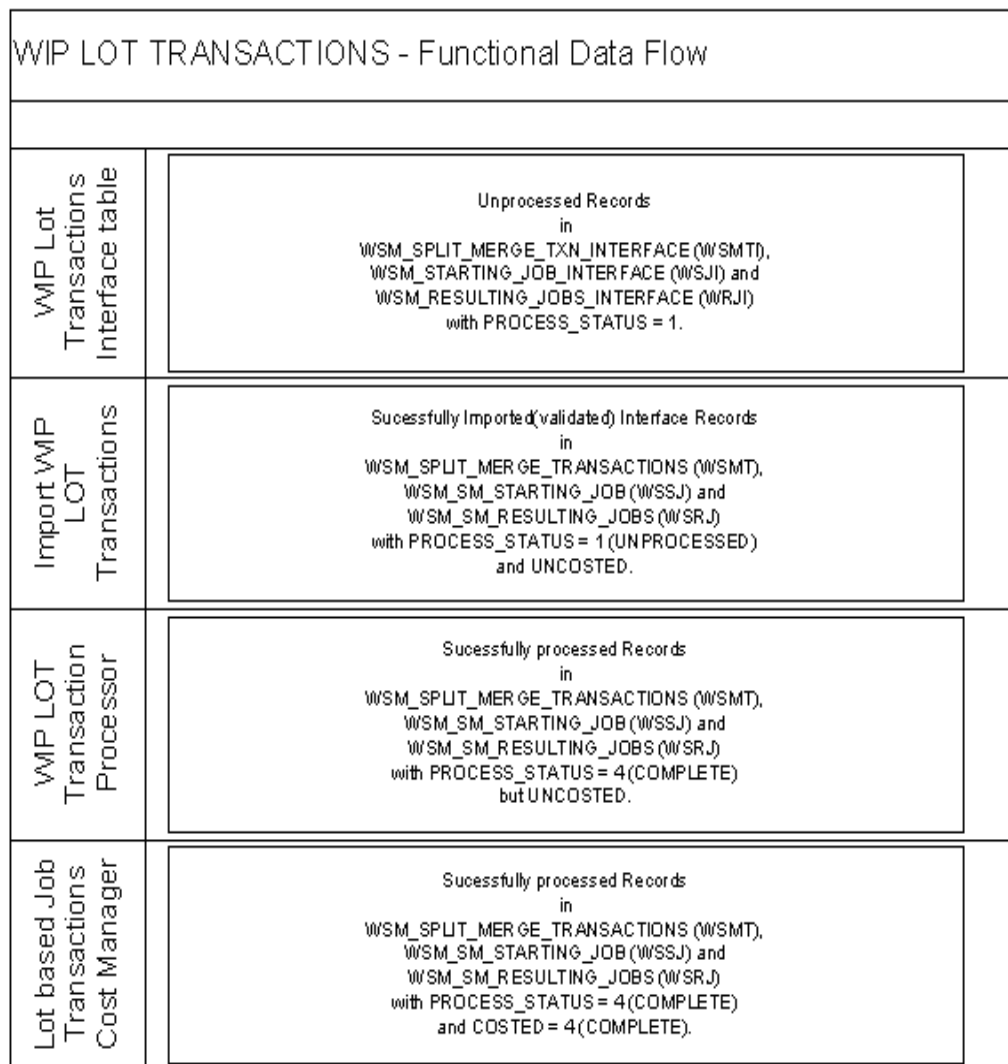
Column	Type	Required	Derived	Optional	Permitted Values
coproducts_supply	number				Derived from Starting Lots
net_quantity	number				Derived from Starting Lots
internal_group_id	number				Not for use. For internal purposes only. Any previous value will be overwritten

## Upgrade to Patchset I

Prior to Patchset I, Importing WIP Lot Transactions was a three-step process

- Import WIP Lot Transactions
- WIP Lot Transactions Processor
- Lot Based Transaction Cost Manager

**Figure 9–7 Basic Flow of Import WIP Lot Transactions Concurrent Program before Patchset I**



But from Patchset I onwards, it will be a two-step process

- Import WIP Lot Transactions
- Cost Manager

The Import WIP Lot Transactions Concurrent Program will pickup the transactions submitted in the Interfaces tables, one by one, by the order of transaction date. Each transaction is validated and processed immediately. If the validations as well as the processing completes successfully, the `PROCESS_STATUS` is set to `COMPLETE`, else the interface transaction errors with the appropriate message populated in `ERROR_MESSAGE` column. Thus, the additional step of running the WIP Lot Transactions Processor prior to Patchset I has been eliminated.

If there is any `ERRORed` transaction for a lot based job in the WIP Lot Transactions interface tables, the further `PENDING` transactions (with transaction dates after the `ERRORed` transaction) for this lot based job will not be picked up for processing. In such a case, the `ERRORed` transaction should be corrected and resubmitted with `PENDING` status.

**Figure 9–8 Basic Flow of Import WIP Lot Transactions Concurrent Program from Patchset I**

WIP LOT TRANSACTIONS - Functional Data Flow	
WIP Lot Transactions Interface table	Unprocessed Records in WSM_SPLIT_MERGE_TXN_INTERFACE (WSMTI), WSM_STARTING_JOBS_INTERFACE (WSJI) and WSM_RESULTING_JOBS_INTERFACE (WRJI) with PROCESS_STATUS = 1.
Import WIP Lot Transactions	Successfully Imported (validated and processed) Interface Records in WSM_SPLIT_MERGE_TRANSACTIONS (WSMT), WSM_SM_STARTING_JOBS (WSSJ) and WSM_SM_RESULTING_JOBS (WSRJ) with PROCESS_STATUS = 4 (COMPLETE), but UNCLOSED.
Cost Manager	Successfully processed Records in WSM_SPLIT_MERGE_TRANSACTIONS (WSMT), WSM_SM_STARTING_JOBS (WSSJ) and WSM_SM_RESULTING_JOBS (WSRJ) with PROCESS_STATUS = 4 (COMPLETE), and COSTED = 4 (COMPLETE).

## Inventory Lot Transactions Interface Concurrent Program

The Inventory Lot Transactions interface supports the following types of transactions:

**Table 9–35** *Transaction Types and Descriptions*

Transaction Type	Transaction Description
1	Split—creation of new Inventory lots
2	Merge—increases quantity of an existing Inventory lot by combining 2 or more lots
3	Translate—updates item, lot name, or both
4	Transfer—creates a subinventory transfer

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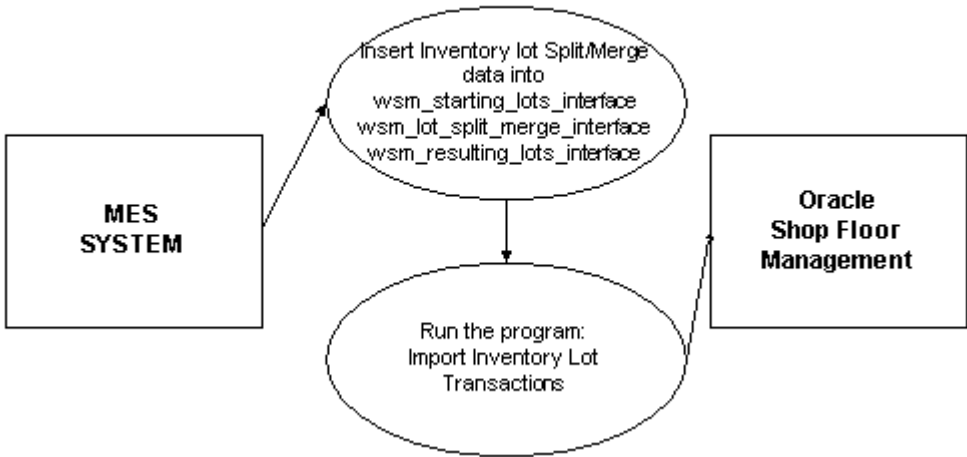
**Note:** All of these transactions are identified as Miscellaneous Issues and Receipts in inventory material transactions.

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[Figure 9–9](#) describes how data is imported from MES to Oracle Shop Floor Management through interface tables.

**Figure 9–9 Basic Flow of the Inventory Lot Transactions Interface for Updating Records**



## Calling the Import Inventory Lot Transactions Interface Program

In Oracle Shop Floor Management, the Run Requests menu, select Import Inventory Lot Transactions.

To run from the command line, enter the following command:

```
WSMPINVL.process_interface_rows      (errbuf      OUT  VARCHAR2,  
                                       retcode      OUT  NUMBER,  
                                       p_group_id   IN   NUMBER,  
                                       p_header_id  IN   NUMBER,  
                                       p_mode       IN   NUMBER);
```

When calling this API, p\_mode = 2 should be used to process all rows corresponding to group\_id = p\_group\_id and row corresponding to header\_id = p\_header\_id. Usually either p\_group\_id or p\_header\_id should be populated but both can be simultaneously specified.

## WSM\_LOT\_SPLIT\_MERGES\_INTERFACE Table

The following table lists the columns in the WSM\_LOT\_SPLIT\_MERGES\_INTERFACE table and provides their load/update type and validation information. Some columns are not used by the program and marked as ignored.

**Table 9–36 WSM\_LOT\_SPLIT\_MERGES\_INTERFACE**

Column	Null	Data Type	Required	Derived	Optional
transaction_id	yes	number		y (wsm_split_merge_transactions_s.nextval)	
transaction_type_id	no	number	x		1 - split 2 - merge 3 - translate 4 - transfer
organization_id	no	number	x		
wip_flag	no	number	x		IGNORED
split_flag	no	number	x		IGNORED
last_update_date	no	date	x		
last_updated_by	no	number	x		
creation_date	no	date	x		
created_by	no	number	x		
transaction_reference	yes	varchar2(240)			
reason_id	yes	number			y
transaction_date	yes	date	x		
last_update_login	yes	number			y (FND_Global.Login_id)
attribute_category	yes	varchar2(30)			Ignored
attribute1 - 15	yes	varchar2(150)			Ignored
request_id	yes	number		y (FND_Global.conc_request_id)	System Generated

**Table 9–36 WSM\_LOT\_SPLIT\_MERGES\_INTERFACE**

Column	Null	Data Type	Required	Derived	Optional
program_application_id	yes	number		y (FND_GLOBAL.program_appl_id)	System Generated
Program_id	yes	number		y (FND_GLOBAL.concat(program_id))	System Generated
program_update_date	yes	date			y (SYSDATE)
process_status	yes	number	x		1 - pending 2 - running 3 - error 4 - complete
error_message	yes	varchar2(2000)			
group_id	yes	number	x		System Generated if NULL
transaction_reason	yes	varchar2(30)			
header_id	no	number	x		

## WSM\_STARTING\_LOTS\_INTERFACE Table

The following table lists the columns in the WSM\_STARTING\_LOTS\_INTERFACE table and provides their load/update type and validation information:

**Table 9–37 WSM\_STARTING\_LOTS\_INTERFACE**

Column	Null	Data Type	Required	Derived	Optional
transaction_id	yes	number		y (wsm_split_merge_transactions_s.nextval)	
lot_number	no	varchar2(30)	x		
inventory_item_id	no	number	x		
organization_id	no	number	x		
quantity	no	number	x		
subinventory_code	no	varchar2(10)	x		
locator_id	yes	number	x (conditional)		if subinventory is locator controlled
revision	yes	varchar2(3)			y
last_update_date	no	date	x		
last_updated_by	no	number	x		
creation_date	no	date	x		
created_by	no	number	x		
last_update_login	yes	number			y (FND_Global.Login_id)
attribute_category	yes	varchar2(30)			Ignored
attribute1 - 15	yes	varchar2(150)			Ignored
request_id	yes	number		y (FND_GLOBAL.concat_request_id)	System Generated
program_application_id	yes	number		y (FND_GLOBAL.program_appl_id)	System Generated

**Table 9–37 WSM\_STARTING\_LOTS\_INTERFACE**

Column	Null	Data Type	Required	Derived	Optional
program_id	yes	number		y (FND_GLOBAL.co nc_ program_ id)	System Generated
program_update_date	yes	date			y (SYSDATE)
header_id	no	number	x		

## WSM\_RESULTING\_LOTS\_INTERFACE Table

The following table lists the columns in the WSM\_RESULTING\_LOTS\_INTERFACE table and provides their load/update type and validation information:

**Table 9–38 WSM\_RESULTING\_LOTS\_INTERFACE**

Column	Null	Data Type	Required	Derived	Optional
transaction_id	yes	number		y (wsm_split_merge_transactions_s.nextval	
lot_number	no	varchar2(30)	x		
inventory_item_id	no	number	x		
organization_id	no	number	x		
wip_entity_id	yes	number		x	used only by mode 2 - lot controlled for imported lot based jobs
quantity	no	number	x		
subinventory_code	no	varchar2(10)	x		
locator_id	yes	number	x (conditional)		if subinventory is locator controlled
revision	yes	varchar2(3)			y
last_update_date	no	date	x		
last_updated_by	no	number	x		
creation_date	no	date	x		
created_by	no	number	x		
last_update_login	yes	number			y (FND_Global.Login_id)
attribute_category	yes	varchar2(30)			Ignored
attribute1 - 15	yes	varchar2(150)			Ignored
request_id	yes	number		y (FND_GLOBAL.concat_request_id)	System Generated

**Table 9–38 WSM\_RESULTING\_LOTS\_INTERFACE**

Column	Null	Data Type	Required	Derived	Optional
program_application_ id	yes	number		y (FND_ GLOBAL.pr og_appl_id)	System Generated
program_id	yes	number		y (FND_ GLOBAL.co nc_ program_ id)	System Generated
program_update_date	yes	date			y (SYSDATE)
header_id	no	number	x		

## Validation of Inventory Lot Transactions

### Standard Validation

Oracle Shop Floor Management validates all required columns in the Inventory Lot Transactions interface. For specific information on the data implied by these columns, see your Oracle Shop Floor Management Technical Reference Manual for details.

### Error Handling

If any validation fails, the program will return error status to the calling module. The Inventory Lot Transactions processes the rows and reports the following values for every record.

**Table 9–39    Error Handling Table**

Condition	PROCESS_STATIS	ERROR_MESSAGE
Success	4	null
Failure	3	actual error message
Running	2	null

### See Also

*Oracle Shop Floor Management Technical Reference Manual 11i*

## Functional Overview

Following are the major design features of the interface:

1. Insert rows into the WSM\_LOT\_SPLIT\_MERGE\_INTERFACE, WSM\_STARTING\_LOTS\_INTERFACE, WSM\_RESULTING\_LOTS\_INTERFACE tables. Transactions in one of these tables are joined with the transactions in the other two tables through the HEADER\_ID column.
2. Use the wsm\_lot\_sm\_ifc\_header sequence to populate the header\_id and group\_id columns; header\_id column must be NOT NULL.
3. You can group the transactions to be put into the interface table by providing a GROUP\_ID.
4. When a concurrent request is launched for importing Inventory Lot Transactions, the user can specify a GROUP\_ID. If a GROUP\_ID is specified, then only those records in the group and in the Pending status would be considered for processing. If no group is specified while launching the import program, then the processing is done group by group for all the pending records in the respective group. Unique GROUP\_IDs are assigned to records in which the GROUP\_ID is null.
5. Within a group, transactions are processed in the order of TRANSACTION\_DATE.

## Errors and Validations

1. The interface makes all the necessary validations that would be typically done from the front-end.
2. Whenever one record errors out within a group, the PROCESS\_STATUS of the corresponding header id is set to ERROR.
3. Typically, interdependent transactions should not be grouped together. It is preferable to group only independent transactions.
4. If a GROUP\_ID is not specified, then the import program would assign a GROUP\_ID to each and every transaction based on the TRANSACTION\_DATE.
5. If the import program is run without specifying a GROUP\_ID, and if some GROUP\_ID errors out, then the status of the concurrent request is set to WARNING. But if a group is specified and it errors out, then the status of the concurrent request is set to ERROR.
6. All errors and warnings are written to the WSM\_INTERFACE\_ERRORS table.



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## Oracle Purchasing Open Interfaces

This chapter contains information about the following Oracle Purchasing open interfaces:

- [Requisitions Open Interface](#) on page 10-2
- [Purchasing Documents Open Interface](#) on page 10-31
- [Receiving Open Interface](#) on page 10-87
- [Purchase Order Change APIs](#) on page 10-123
- [Cancel PO API](#) on page 10-131

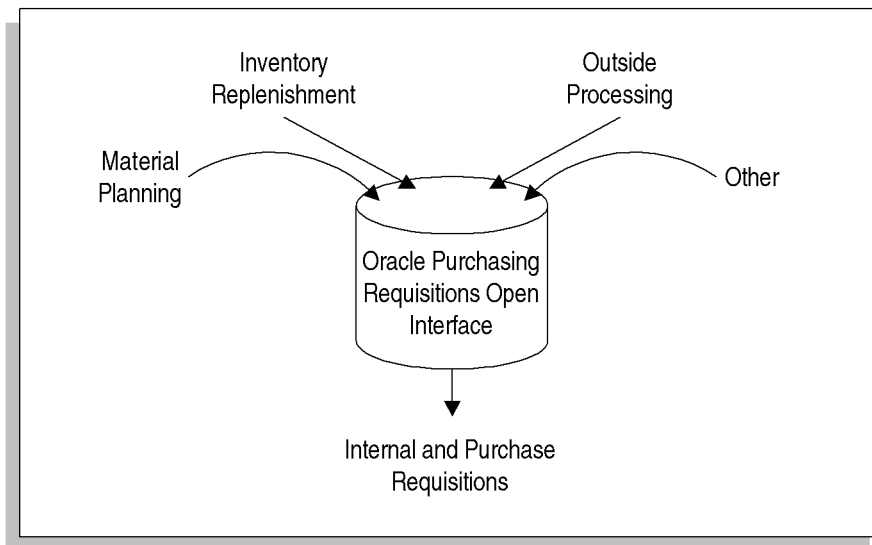
## Requisitions Open Interface

You can automatically import requisitions from other Oracle Applications or your existing non-Oracle systems using the Requisitions Open Interface. This interface lets you integrate Oracle Purchasing quickly with new or existing applications such as material requirements planning, inventory management, and production control systems. Purchasing automatically validates your data and imports your requisitions. You can import requisitions as often as you want. Then, you can review these requisitions, approve or reserve funds for them if necessary, and place them on purchase orders or internal sales orders.

The purpose of this essay is to explain how to use the Requisitions Open Interface so that you can integrate other applications with Purchasing.

### Functional Overview

**Figure 10–1 Functional Overview**



The diagram above shows the inputs and outputs that comprise the interface process.

You must write the program that inserts a single row into the PO\_REQUISITIONS\_INTERFACE\_ALL and/or the PO\_REQ\_DIST\_INTERFACE\_ALL table for each requisition line that you want to import. Then you use the Submit Request window to launch the Requisition Import program for any set of rows. You identify the set of rows you want to import by setting the INTERFACE\_SOURCE\_CODE and BATCH\_ID columns appropriately in the PO\_REQUISITIONS\_INTERFACE\_ALL table. You then pass these values as parameters to the Requisition Import program. If you do not specify any values for these parameters, the program imports all the requisition lines in the PO\_REQUISITIONS\_INTERFACE\_ALL table. You also specify the requisition grouping and numbering criteria as parameters to the Requisition Import program.

Each run of the Requisition Import program picks up distribution information from either the PO\_REQUISITIONS\_INTERFACE\_ALL or the PO\_REQ\_DIST\_INTERFACE\_ALL table. The PO\_REQ\_DIST\_INTERFACE\_ALL table was used in Release 11, for Self-Service Purchasing (known then as Web Requisitions). In Self-Service Purchasing 4.0 and later, multiple distributions and the PO\_REQ\_DIST\_INTERFACE\_ALL table are not used, since Self-Service Purchasing updates the Purchasing interface tables directly rather than using Requisition Import. Therefore, in Release 11i, you should use the PO\_REQ\_DIST\_INTERFACE\_ALL table to create multiple distributions only for requisitions created in non-Oracle systems that use multiple distributions. As long as the Multiple Distributions field in the Requisition Import program is No (or blank), Requisition Import looks for distribution information in the PO\_REQUISITIONS\_INTERFACE\_ALL table.

If MULTI\_DISTRIBUTIONS is set to Y, the column REQ\_DIST\_SEQUENCE\_ID in the PO\_REQUISITIONS\_INTERFACE\_ALL table points to the primary key column, DIST\_SEQUENCE\_ID, in the PO\_REQ\_DIST\_INTERFACE\_ALL table to determine what distributions belong to which requisition line.

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**Note:** If you import the requisitions from Oracle Master Scheduling/MRP, Oracle Order Management, or Oracle Inventory (INV), enter No for Multiple Distributions (set MULTI\_DISTRIBUTIONS to N).

---

---

The Requisition Import program operates in three phases. In the first phase, the program validates your data and derives or defaults additional information. The program generates an error message for every validation that fails and creates a row in the PO\_INTERFACE\_ERRORS table with detailed information about each error. If the column MULTI\_DISTRIBUTIONS in the PO\_REQUISITIONS\_INTERFACE\_ALL table is Y, Requisition Import also checks for any records in the PO\_

REQUISITIONS\_INTERFACE\_ALL table without corresponding distribution information in the PO\_REQ\_DIST\_INTERFACE\_ALL table and loads these as errors in the PO\_INTERFACE\_ERRORS table.

In the second phase, the program groups and numbers the validated requisition lines according to the following criteria. If you specify a value in the REQ\_NUMBER\_SEGMENT1 column of the PO\_REQUISITIONS\_INTERFACE\_ALL table, all lines with the same value for this column are grouped together under a requisition header. If you provide a value in the GROUP\_CODE column, all lines with the same value in this column are grouped together under a requisition header. If you do not provide values in either of these columns, the Requisition Import program uses the Group By parameter to group lines together. If you do not provide a value for this parameter, the program uses the default Group By that you set up to group requisition lines. You can group requisition lines in one of the following ways that the Requisition Import program supports by:

- BUYER
- CATEGORY
- LOCATION
- VENDOR
- ITEM
- ALL (all requisition lines grouped under one header)

If you provide a value in the REQ\_NUMBER\_SEGMENT1 column of the PO\_REQUISITIONS\_INTERFACE\_ALL table, this value becomes the requisition number. If not, the Requisition Import program uses either the Last Requisition Number parameter if specified or the next unique number stored in the PO\_UNIQUE\_IDENTIFIER\_CONTROL table, adds 1 to this number, and starts numbering requisitions. If any of the requisition numbers generated already exists, the program loops until it finds a unique number. For every line that is successfully imported, a default distribution is created with the account information that you specify. (You specify account information in any of the following columns in either the PO\_REQUISITIONS\_INTERFACE\_ALL or the PO\_REQ\_DIST\_INTERFACE\_ALL table: CHARGE\_ACCOUNT\_ID, ACCRUAL\_ACCOUNT\_ID, VARIANCE\_ACCOUNT\_ID, BUDGET\_ACCOUNT\_ID, or any of the CHARGE\_ACCOUNT\_SEGMENT columns.) Requisition supply is also created for every approved requisition that is successfully imported.

In the third phase, the program deletes all the successfully processed rows in the interface tables, and creates a report which lists the number of interface records that were successfully imported and the number that were not imported. This report

can be viewed by choosing View Output for the Requisition Import concurrent Request ID in the Requests window.

You can launch the Requisition Import Exceptions Report to view the rows that were not imported by the Requisition Import program along with the failure reason(s) for each row.

You can import approved or unapproved requisitions using the Requisitions Open Interface. If you are using requisition encumbrance, approved requisitions that you import automatically become pre-approved.

**See Also**

Requisition Import Process, *Oracle Purchasing User's Guide, Release 11i*

Requisition Import Exceptions Report, *Oracle Purchasing User's Guide, Release 11i*

## Setting Up the Requisitions Interface

You must complete the following setup steps in Oracle Purchasing to use the Requisitions Open Interface. You must define a Requisition Import Group-By method in the Default region of the Purchasing Options window. For internally sourced requisitions, you must associate a customer with your deliver-to location using the Customer Addresses window.

All processing is initiated through standard report submission using the Submit Request window. The concurrent manager manages all processing, and as such it must be set up and running.

**See Also**

Defining Default Options, *Oracle Purchasing User's Guide, Release 11i*

Assigning a Business Purpose to a Customer Address, *Oracle Receivables User's Guide, Release 11i*

## Inserting into the Requisitions Interface Tables

You load requisition lines from your source system or form into the requisitions interface table and/or the requisition distributions interface table. You insert one row for each requisition line that you want to import. You must provide values for all columns that are required. You may also have to provide values for columns that are conditionally required.

## Requisitions Interface Table Description

The following graphic describes the requisitions interface table

**Table 10–1 Requisitions Open Interface (Requisitions)**

<b>PO_REQUISITIONS_INTERFACE_</b>				
<b>ALL</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
TRANSACTION_ID	Number		x	
PROCESS_FLAG	Varchar2		x	
REQUEST_ID	Number		x	
PROGRAM_ID	Number		x	
PROGRAM_APPLICATION_ID	Number		x	
PROGRAM_UPDATE_DATE	Date		x	
LAST_UPDATED_BY	Number		x	
LAST_UPDATE_DATE	Date		x	
LAST_UPDATE_LOGIN	Number		x	
CREATION_DATE	Date		x	
CREATED_BY	Number		x	
INTERFACE_SOURCE_CODE	Varchar2	x		
INTERFACE_SOURCE_LINE_ID	Number			x
BATCH_ID	Number			x
GROUP_CODE	Varchar2			x
DELETE_ENABLED_FLAG	Varchar2	No longer used		
UPDATE_ENABLED_FLAG	Varchar2	No longer used		
SOURCE_TYPE_CODE	Varchar2	conditionall y	conditionall y	
REQUISITION_TYPE	Varchar2		x	
DESTINATION_TYPE_CODE	Varchar2	x		
AUTHORIZATION_STATUS	Varchar2	x		
PREPARER_ID	Number	x		conditionall y

**Table 10–1 Requisitions Open Interface (Requisitions)**

<b>PO_REQUISITIONS_INTERFACE_</b>				
<b>ALL</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
PREPARER_NAME	Varchar2			x
APPROVER_ID	Number		x	
APPROVER_NAME	Varchar2			x
APPROVAL_PATH_ID	Number			x
REQUISITION_HEADER_ID	Number		x	
REQUISITION_LINE_ID	Number		x	
REQ_DISTRIBUTION_ID	Number		x	
REQ_NUMBER_SEGMENT1	Varchar2			x
REQ_NUMBER_SEGMENT2	Varchar2			x
REQ_NUMBER_SEGMENT3	Varchar2			x
REQ_NUMBER_SEGMENT4	Varchar2			x
REQ_NUMBER_SEGMENT5	Varchar2			x
HEADER_DESCRIPTION	Varchar2			x
HEADER_ATTRIBUTE_CATEGORY	Varchar2			x
HEADER_ATTRIBUTE1	Varchar2			x
HEADER_ATTRIBUTE2	Varchar2			x
HEADER_ATTRIBUTE3	Varchar2			x
HEADER_ATTRIBUTE4	Varchar2			x
HEADER_ATTRIBUTE5	Varchar2			x
HEADER_ATTRIBUTE6	Varchar2			x
HEADER_ATTRIBUTE7	Varchar2			x
HEADER_ATTRIBUTE8	Varchar2			x
HEADER_ATTRIBUTE9	Varchar2			x
HEADER_ATTRIBUTE10	Varchar2			x
HEADER_ATTRIBUTE11	Varchar2			x

**Table 10–1 Requisitions Open Interface (Requisitions)**

<b>PO_REQUISITIONS_INTERFACE_</b>				
<b>ALL</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
HEADER_ATTRIBUTE12	Varchar2			x
HEADER_ATTRIBUTE13	Varchar2			x
HEADER_ATTRIBUTE14	Varchar2			x
HEADER_ATTRIBUTE15	Varchar2			x
URGENT_FLAG	Varchar2			x
RFQ_REQUIRED_FLAG	Varchar2			x
JUSTIFICATION	Varchar2			x
NOTE_TO_BUYER	Varchar2			x
NOTE_TO_RECEIVER	Varchar2			x
NOTE_TO_APPROVER	Varchar2			x
ITEM_ID	Number	conditionall y	conditionall y	
ITEM_SEGMENT1	Varchar2			x
ITEM_SEGMENT2	Varchar2			x
ITEM_SEGMENT3	Varchar2			x
ITEM_SEGMENT4	Varchar2			x
ITEM_SEGMENT5	Varchar2			x
ITEM_SEGMENT6	Varchar2			x
ITEM_SEGMENT7	Varchar2			x
ITEM_SEGMENT8	Varchar2			x
ITEM_SEGMENT9	Varchar2			x
ITEM_SEGMENT10	Varchar2			x
ITEM_SEGMENT11	Varchar2			x
ITEM_SEGMENT12	Varchar2			x
ITEM_SEGMENT13	Varchar2			x
ITEM_SEGMENT14	Varchar2			x

**Table 10–1 Requisitions Open Interface (Requisitions)**

<b>PO_REQUISITIONS_INTERFACE_</b> <b>ALL</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
ITEM_SEGMENT15	Varchar2			x
ITEM_SEGMENT16	Varchar2			x
ITEM_SEGMENT17	Varchar2			x
ITEM_SEGMENT18	Varchar2			x
ITEM_SEGMENT19	Varchar2			x
ITEM_SEGMENT20	Varchar2			x
ITEM_DESCRIPTION	Varchar2		x	
ITEM_REVISION	Varchar2			x
CATEGORY_ID	Number	conditionall y	conditionall y	
CATEGORY_SEGMENT1	Varchar2			x
CATEGORY_SEGMENT2	Varchar2			x
CATEGORY_SEGMENT3	Varchar2			x
CATEGORY_SEGMENT4	Varchar2			x
CATEGORY_SEGMENT5	Varchar2			x
CATEGORY_SEGMENT6	Varchar2			x
CATEGORY_SEGMENT7	Varchar2			x
CATEGORY_SEGMENT8	Varchar2			x
CATEGORY_SEGMENT9	Varchar2			x
CATEGORY_SEGMENT10	Varchar2			x
CATEGORY_SEGMENT11	Varchar2			x
CATEGORY_SEGMENT12	Varchar2			x
CATEGORY_SEGMENT13	Varchar2			x
CATEGORY_SEGMENT14	Varchar2			x
CATEGORY_SEGMENT15	Varchar2			x
CATEGORY_SEGMENT16	Varchar2			x

**Table 10–1 Requisitions Open Interface (Requisitions)**

<b>PO_REQUISITIONS_INTERFACE_</b>				
<b>ALL</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
CATEGORY_SEGMENT17	Varchar2			x
CATEGORY_SEGMENT18	Varchar2			x
CATEGORY_SEGMENT19	Varchar2			x
CATEGORY_SEGMENT20	Varchar2			x
QUANTITY	Number	x		
UNIT_PRICE	Number		x	
CHARGE_ACCOUNT_ID	Number	x	conditionall y	
CHARGE_ACCOUNT_SEGMENT1	Varchar2			x
CHARGE_ACCOUNT_SEGMENT2	Varchar2			x
CHARGE_ACCOUNT_SEGMENT3	Varchar2			x
CHARGE_ACCOUNT_SEGMENT4	Varchar2			x
CHARGE_ACCOUNT_SEGMENT5	Varchar2			x
CHARGE_ACCOUNT_SEGMENT6	Varchar2			x
CHARGE_ACCOUNT_SEGMENT7	Varchar2			x
CHARGE_ACCOUNT_SEGMENT8	Varchar2			x
CHARGE_ACCOUNT_SEGMENT9	Varchar2			x
CHARGE_ACCOUNT_SEGMENT10	Varchar2			x
CHARGE_ACCOUNT_SEGMENT11	Varchar2			x
CHARGE_ACCOUNT_SEGMENT12	Varchar2			x
CHARGE_ACCOUNT_SEGMENT13	Varchar2			x
CHARGE_ACCOUNT_SEGMENT14	Varchar2			x
CHARGE_ACCOUNT_SEGMENT15	Varchar2			x
CHARGE_ACCOUNT_SEGMENT16	Varchar2			x
CHARGE_ACCOUNT_SEGMENT17	Varchar2			x
CHARGE_ACCOUNT_SEGMENT18	Varchar2			x

**Table 10–1 Requisitions Open Interface (Requisitions)**

<b>PO_REQUISITIONS_INTERFACE_</b>				
<b>ALL</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
CHARGE_ACCOUNT_SEGMENT19	Varchar2			x
CHARGE_ACCOUNT_SEGMENT20	Varchar2			x
CHARGE_ACCOUNT_SEGMENT21	Varchar2			x
CHARGE_ACCOUNT_SEGMENT22	Varchar2			x
CHARGE_ACCOUNT_SEGMENT23	Varchar2			x
CHARGE_ACCOUNT_SEGMENT24	Varchar2			x
CHARGE_ACCOUNT_SEGMENT25	Varchar2			x
CHARGE_ACCOUNT_SEGMENT26	Varchar2			x
CHARGE_ACCOUNT_SEGMENT27	Varchar2			x
CHARGE_ACCOUNT_SEGMENT28	Varchar2			x
CHARGE_ACCOUNT_SEGMENT29	Varchar2			x
CHARGE_ACCOUNT_SEGMENT30	Varchar2			x
ACCRUAL_ACCOUNT_ID	Number		x	
VARIANCE_ACCOUNT_ID	Number		x	
BUDGET_ACCOUNT_ID	Number		x	
UNIT_OF_MEASURE	Varchar2	conditionall y	conditionall y	
UOM_CODE	Varchar2			x
LINE_TYPE_ID	Number		x	
LINE_TYPE	Varchar2			x
UN_NUMBER_ID	Number		conditionall y	
UN_NUMBER	Varchar2			x
HAZARD_CLASS_ID	Number		conditionall y	
HAZARD_CLASS	Varchar2			x

**Table 10–1 Requisitions Open Interface (Requisitions)**

<b>PO_REQUISITIONS_INTERFACE_</b>				
<b>ALL</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
MUST_USE_SUGG_VENDOR_FLAG	Varchar2			x
REFERENCE_NUM	Varchar2			x
SOURCE_ORGANIZATION_ID	Number		conditionall y	
SOURCE_ORGANIZATION_CODE	Varchar2			x
SOURCE_SUBINVENTORY	Varchar2			x
DESTINATION_ORGANIZATION_ID	Number	x	conditionall y	
DESTINATION_ORGANIZATION_CODE	Varchar2			x
DESTINATION_SUBINVENTORY	Varchar2	conditionall y		
DELIVER_TO_LOCATION_ID	Number	x	conditionall y	
DELIVER_TO_LOCATION_CODE	Varchar2			x
DELIVER_TO_REQUESTOR_ID	Number	x	conditionall y	
DELIVER_TO_REQUESTOR_NAME	Varchar2			x
AUTOSOURCE_FLAG	Varchar2			x
AUTOSOURCE_DOC_HEADER_ID	Number		conditionall y	
AUTOSOURCE_DOC_LINE_NUM	Number		conditionall y	
DOCUMENT_TYPE_CODE	Varchar2		conditionall y	
SUGGESTED_BUYER_ID	Number		conditionall y	
SUGGESTED_BUYER_NAME	Varchar2			x
SUGGESTED_VENDOR_ID	Number		conditionall y	

**Table 10–1 Requisitions Open Interface (Requisitions)**

<b>PO_REQUISITIONS_INTERFACE_</b>				
<b>ALL</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
SUGGESTED_VENDOR_NAME	Varchar2			x
SUGGESTED_VENDOR_SITE_ID	Number		conditionall y	
SUGGESTED_VENDOR_SITE	Varchar2			x
SUGGESTED_VENDOR_Contact_ID	Number		conditionall y	
SUGGESTED_VENDOR_CONTACT	Varchar2		conditionall y	
SUGGESTED_VENDOR_PHONE	Varchar2		conditionall y	
SUGGESTED_VENDOR_ITEM_NUM	Varchar2			x
LINE_ATTRIBUTE_CATEGORY	Varchar2			x
LINE_ATTRIBUTE1	Varchar2			x
LINE_ATTRIBUTE2	Varchar2			x
LINE_ATTRIBUTE3	Varchar2			x
LINE_ATTRIBUTE4	Varchar2			x
LINE_ATTRIBUTE5	Varchar2			x
LINE_ATTRIBUTE6	Varchar2			x
LINE_ATTRIBUTE7	Varchar2			x
LINE_ATTRIBUTE8	Varchar2			x
LINE_ATTRIBUTE9	Varchar2			x
LINE_ATTRIBUTE10	Varchar2			x
LINE_ATTRIBUTE11	Varchar2			x
LINE_ATTRIBUTE12	Varchar2			x
LINE_ATTRIBUTE13	Varchar2			x
LINE_ATTRIBUTE14	Varchar2			x
LINE_ATTRIBUTE15	Varchar2			x

**Table 10–1 Requisitions Open Interface (Requisitions)**

<b>PO_REQUISITIONS_INTERFACE_</b>				
<b>ALL</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
NEED_BY_DATE	Date	conditionall y		
NOTE1_ID	Number		conditionall y	
NOTE2_ID	Number		conditionall y	
NOTE3_ID	Number		conditionall y	
NOTE4_ID	Number		conditionall y	
NOTE5_ID	Number		conditionall y	
NOTE6_ID	Number		conditionall y	
NOTE7_ID	Number		conditionall y	
NOTE8_ID	Number		conditionall y	
NOTE9_ID	Number		conditionall y	
NOTE10_ID	Number		conditionall y	
NOTE1_TITLE	Varchar2			x
NOTE2_TITLE	Varchar2			x
NOTE3_TITLE	Varchar2			x
NOTE4_TITLE	Varchar2			x
NOTE5_TITLE	Varchar2			x
NOTE6_TITLE	Varchar2			x
NOTE7_TITLE	Varchar2			x
NOTE8_TITLE	Varchar2			x

**Table 10–1 Requisitions Open Interface (Requisitions)**

<b>PO_REQUISITIONS_INTERFACE_</b>				
<b>ALL</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
NOTE9_TITLE	Varchar2			x
NOTE10_TITLE	Varchar2			x
DIST_ATTRIBUTE_CATEGORY	Varchar2			x
DISTRIBUTION_ATTRIBUTE1	Varchar2			x
DISTRIBUTION_ATTRIBUTE2	Varchar2			x
DISTRIBUTION_ATTRIBUTE3	Varchar2			x
DISTRIBUTION_ATTRIBUTE4	Varchar2			x
DISTRIBUTION_ATTRIBUTE5	Varchar2			x
DISTRIBUTION_ATTRIBUTE6	Varchar2			x
DISTRIBUTION_ATTRIBUTE7	Varchar2			x
DISTRIBUTION_ATTRIBUTE8	Varchar2			x
DISTRIBUTION_ATTRIBUTE9	Varchar2			x
DISTRIBUTION_ATTRIBUTE10	Varchar2			x
DISTRIBUTION_ATTRIBUTE11	Varchar2			x
DISTRIBUTION_ATTRIBUTE12	Varchar2			x
DISTRIBUTION_ATTRIBUTE13	Varchar2			x
DISTRIBUTION_ATTRIBUTE14	Varchar2			x
DISTRIBUTION_ATTRIBUTE15	Varchar2			x
GOVERNMENT_CONTEXT	Varchar2			x
GL_DATE	Date		conditionall y	
USSGL_TRANSACTION_CODE	Varchar2			x
PREVENT_ENCUMBRANCE_FLAG	Varchar2		x	
CURRENCY_CODE	Varchar2			x
CURRENCY_UNIT_PRICE	Number		conditionall y	

**Table 10–1 Requisitions Open Interface (Requisitions)**

<b>PO_REQUISITIONS_INTERFACE_</b> <b>ALL</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
RATE	Number		conditionall y	
RATE_DATE	Date	conditionall y		
RATE_TYPE	Varchar2	conditionall y		
WIP_ENTITY_ID	Number	conditionall y		
WIP_LINE_ID	Number			x
WIP_OPERATION_SEQ_NUM	Number			x
WIP_RESOURCE_SEQ_NUM	Number			x
WIP_REPETITIVE_SCHEDULE_ID	Number	conditionall y		
BOM_RESOURCE_ID	Number	conditionall y		
EXPENDITURE_ORGANIZATION_ ID	Number	conditionall y		
EXPENDITURE_TYPE	Varchar2	conditionall y		
PROJECT_ACCOUNTING_ CONTEXT	Varchar2			x
PROJECT_ID	Number	conditionall y	conditionall y	
PROJECT_NUM	Varchar2			x
TASK_ID	Number	conditionall y	conditionall y	
TASK_NUM	Varchar2			x
EXPENDITURE_ITEM_DATE	Date			x
TRANSACTION_REASON_CODE	Varchar2			x
ORG_ID	Number	conditionall y		

**Table 10–1 Requisitions Open Interface (Requisitions)**

<b>PO_REQUISITIONS_INTERFACE_</b> <b>ALL</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
ALLOCATION_TYPE	Varchar2			x
ALLOCATION_VALUE	Number			x
MULTI_DISTRIBUTIONS	Varchar2			x
REQ_DIST_SEQUENCE_ID	Number			x
KANBAN_CARD_ID	Number			x
EMERGENCY_PO_NUM	Varchar2	No longer used		
AWARD_ID	Number			
TAX_NAME	Varchar2	No longer used		
END_ITEM_UNIT_NUMBER	Varchar2			x
TAX_CODE_ID	Number			x

### Requisition Distributions Interface Table Description

The following graphic describes the requisition distributions interface table. This table was used in Release 11 to create multiple distributions for Self-Service Purchasing requisitions but is no longer used by Oracle iProcurement in Release 11i. The table remains in case you need to import multiple-distribution requisitions from non-Oracle systems.

**Table 10–2 Requisitions Open Interface (Distributions)**

<b>PO_REQ_DIST_INTERFACE_</b> <b>ALL</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
PROJECT_ACCOUNTING_CONTEXT	Varchar2			x
EXPENDITURE_ORGANIZATION_ID	Number	conditionall y		
PROJECT_ID	Number	conditionall y	conditionall y	
TASK_ID	Number	conditionall y	conditionall y	

**Table 10–2 Requisitions Open Interface (Distributions)**

<b>PO_REQ_DIST_INTERFACE_</b>				
<b>ALL</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
EXPENDITURE_ITEM_DATE	Date			x
GL_DATE	Date		conditionall y	
DIST_ATTRIBUTE_CATEGORY	Varchar2			x
DISTRIBUTION_ATTRIBUTE1	Varchar2			x
DISTRIBUTION_ATTRIBUTE2	Varchar2			x
DISTRIBUTION_ATTRIBUTE3	Varchar2			x
DISTRIBUTION_ATTRIBUTE4	Varchar2			x
DISTRIBUTION_ATTRIBUTE5	Varchar2			x
DISTRIBUTION_ATTRIBUTE6	Varchar2			x
DISTRIBUTION_ATTRIBUTE7	Varchar2			x
DISTRIBUTION_ATTRIBUTE8	Varchar2			x
DISTRIBUTION_ATTRIBUTE9	Varchar2			x
DISTRIBUTION_ATTRIBUTE10	Varchar2			x
DISTRIBUTION_ATTRIBUTE11	Varchar2			x
DISTRIBUTION_ATTRIBUTE12	Varchar2			x
DISTRIBUTION_ATTRIBUTE13	Varchar2			x
DISTRIBUTION_ATTRIBUTE14	Varchar2			x
DISTRIBUTION_ATTRIBUTE15	Varchar2			x
CHARGE_ACCOUNT_ID	Number	x	conditionall y	
CHARGE_ACCOUNT_SEGMENT1	Varchar2			x
CHARGE_ACCOUNT_SEGMENT2	Varchar2			x
CHARGE_ACCOUNT_SEGMENT3	Varchar2			x

**Table 10–2 Requisitions Open Interface (Distributions)**

<b>PO_REQ_DIST_INTERFACE_</b>				
<b>ALL</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
CHARGE_ACCOUNT_SEGMENT4	Varchar2			x
CHARGE_ACCOUNT_SEGMENT5	Varchar2			x
CHARGE_ACCOUNT_SEGMENT6	Varchar2			x
CHARGE_ACCOUNT_SEGMENT7	Varchar2			x
CHARGE_ACCOUNT_SEGMENT8	Varchar2			x
CHARGE_ACCOUNT_SEGMENT9	Varchar2			x
CHARGE_ACCOUNT_SEGMENT10	Varchar2			x
CHARGE_ACCOUNT_SEGMENT11	Varchar2			x
CHARGE_ACCOUNT_SEGMENT12	Varchar2			x
CHARGE_ACCOUNT_SEGMENT13	Varchar2			x
CHARGE_ACCOUNT_SEGMENT14	Varchar2			x
CHARGE_ACCOUNT_SEGMENT15	Varchar2			x
CHARGE_ACCOUNT_SEGMENT16	Varchar2			x
CHARGE_ACCOUNT_SEGMENT17	Varchar2			x
CHARGE_ACCOUNT_SEGMENT18	Varchar2			x
CHARGE_ACCOUNT_SEGMENT19	Varchar2			x

**Table 10–2 Requisitions Open Interface (Distributions)**

<b>PO_REQ_DIST_INTERFACE_</b>				
<b>ALL</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
CHARGE_ACCOUNT_SEGMENT20	Varchar2			x
CHARGE_ACCOUNT_SEGMENT21	Varchar2			x
CHARGE_ACCOUNT_SEGMENT22	Varchar2			x
CHARGE_ACCOUNT_SEGMENT23	Varchar2			x
CHARGE_ACCOUNT_SEGMENT24	Varchar2			x
CHARGE_ACCOUNT_SEGMENT25	Varchar2			x
CHARGE_ACCOUNT_SEGMENT26	Varchar2			x
CHARGE_ACCOUNT_SEGMENT27	Varchar2			x
CHARGE_ACCOUNT_SEGMENT28	Varchar2			x
CHARGE_ACCOUNT_SEGMENT29	Varchar2			x
CHARGE_ACCOUNT_SEGMENT30	Varchar2			x
GROUP_CODE	Varchar2			x
PROJECT_NUM	Varchar2			x
TASK_NUM	Varchar2			x
EXPENDITURE_TYPE	Varchar2	conditionall y		
DIST_SEQUENCE_ID	Number	conditionall y		
ALLOCATION_TYPE	Varchar2	conditionall y		

**Table 10–2 Requisitions Open Interface (Distributions)**

<b>PO_REQ_DIST_INTERFACE_</b> <b>ALL</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
ALLOCATION_VALUE	Number	conditionall y		
BATCH_ID	Number			x
DISTRIBUTION_NUMBER	Number	x		
ITEM_ID	Number	conditionall y	conditionall y	
ACCRUAL_ACCOUNT_ID	Number		x	
VARIANCE_ACCOUNT_ID	Number		x	
BUDGET_ACCOUNT_ID	Number		x	
USSGL_TRANSACTION_CODE	Varchar2			x
GOVERNMENT_CONTEXT	Varchar2			x
PREVENT_ENCUMBRANCE_FLAG	Varchar2			x
TRANSACTION_ID	Number		x	
PROCESS_FLAG	Varchar2		x	
REQUEST_ID	Number		x	
PROGRAM_ID	Number		x	
PROGRAM_APPLICATION_ID	Number		x	
PROGRAM_UPDATE_DATE	Date		x	
LAST_UPDATED_BY	Number		x	
LAST_UPDATE_DATE	Date		x	
LAST_UPDATE_LOGIN	Number		x	
CREATION_DATE	Date			x
DESTINATION_ORGANIZATION_ID	Number	x	conditionall y	
DESTINATION_SUBINVENTORY	Varchar2	conditionall y		
DESTINATION_TYPE_CODE	Varchar2	x		

**Table 10–2 Requisitions Open Interface (Distributions)**

<b>PO_REQ_DIST_INTERFACE_</b>				
<b>ALL</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
CREATED_BY	Number			x
INTERFACE_SOURCE_CODE	Varchar2	x		
INTERFACE_SOURCE_LINE_ID	Number			x
REQUISITION_HEADER_ID	Number		x	
REQUISITION_LINE_ID	Number		x	
REQ_DISTRIBUTION_ID	Number		x	
REQ_NUMBER_SEGMENT1	Varchar2			x
QUANTITY	Number	conditionall y	conditionall y	
ORG_ID	Number	conditionall y		
UPDATE_ENABLED_FLAG	Varchar2	No longer used		

**Required Data**

You must always enter values for the following required columns when you load rows into the PO\_REQUISITIONS\_INTERFACE\_ALL table:

- INTERFACE\_SOURCE\_CODE to identify the source of your imported requisitions
- DESTINATION\_TYPE\_CODE
- AUTHORIZATION\_STATUS
- PREPARER\_ID or PREPARER\_NAME
- QUANTITY
- CHARGE\_ACCOUNT\_ID or charge account segment values
- DESTINATION\_ORGANIZATION\_ID or DESTINATION\_ORGANIZATION\_CODE
- DELIVER\_TO\_LOCATION\_ID or DELIVER\_TO\_LOCATION\_CODE
- DELIVER\_TO\_REQUESTOR\_ID or DELIVER\_TO\_REQUESTOR\_NAME

You must always enter values for the following required columns if you load rows into the PO\_REQ\_DIST\_INTERFACE\_ALL table:

- CHARGE\_ACCOUNT\_ID or charge account segment values
- DISTRIBUTION\_NUMBER (Although Requisition Import won't give an error if you don't provide a value, a DISTRIBUTION\_NUMBER makes it easier to query multiple distributions in the Distributions windows in Purchasing.)
- DESTINATION\_ORGANIZATION\_ID
- DESTINATION\_TYPE\_CODE
- INTERFACE\_SOURCE\_CODE

Additionally, you may have to enter values for the following conditionally required columns.

In the PO\_REQUISITIONS\_INTERFACE\_ALL table:

- You must provide a SOURCE\_TYPE\_CODE if the DESTINATION\_TYPE\_CODE is 'EXPENSE' or 'SHOP FLOOR'. You must provide an ITEM\_ID or item segment values if the SOURCE\_TYPE\_CODE or DESTINATION\_TYPE\_CODE is 'INVENTORY'.
- For one-time items and amount-based line types, you must provide a CATEGORY\_ID or category segment values. You must additionally provide a UNIT\_OF\_MEASURE or UOM\_CODE for one-time items. For MRP or Inventory planned items, you must also provide a NEED\_BY\_DATE.
- You must provide the RATE\_DATE and RATE\_TYPE if you provide a value in the CURRENCY\_CODE column.
- If you are using Oracle Work in Process and the DESTINATION\_TYPE\_CODE is 'SHOP FLOOR', you must provide values for the following columns:

WIP\_ENTITY\_ID

BOM\_RESOURCE\_ID

WIP\_REPETITIVE\_SCHEDULE\_ID, if the entity is a repetitive schedule

- ITEM\_ID may also be required. See: [Validation](#) on page 10-27.

In the PO\_REQ\_DIST\_INTERFACE\_ALL table:

- You must provide a DIST\_SEQUENCE\_ID if MULTI\_DISTRIBUTIONS is set to Y.

- If you do not enter a value in the QUANTITY column, you must enter values in the ALLOCATION\_TYPE and ALLOCATION\_VALUE columns.

In both the PO\_REQUISITIONS\_INTERFACE\_ALL and PO\_REQ\_DIST\_INTERFACE\_ALL tables:

- You must provide an ORG\_ID if you have a Multiple Organization Support setup.
- If you are using Oracle Projects and the PROJECT\_ACCOUNTING\_CONTEXT is 'Y', you must enter the relevant project accounting information in the following columns:

PROJECT\_NUM or PROJECT\_ID

TASK\_NUM or TASK\_ID

EXPENDITURE\_TYPE

EXPENDITURE\_ORGANIZATION\_ID

If Oracle Project Manufacturing is installed, Project Reference Enabled is selected in the Project Manufacturing Organization Parameters window, and the PROJECT\_ACCOUNTING\_CONTEXT is 'Y', you must enter the relevant project information in the following columns:

PROJECT\_NUM or PROJECT\_ID

TASK\_NUM or TASK\_ID, if the destination type is Inventory or Shop Floor

If you are creating multiple distributions, project information must be entered in the PO\_REQ\_DIST\_INTERFACE\_ALL table.

- You must provide a DESTINATION\_SUBINVENTORY if the DESTINATION\_TYPE\_CODE is 'INVENTORY'.

For additional information on conditionally required columns, see: [Validation](#) on page 10-27.

### Derived Data

The Requisition Import program derives or defaults the columns identified as derived using logic similar to that used by the Requisitions window. Oracle Purchasing never overrides information that you provide in derived columns. (Supplier sourcing is an exception to this rule). Column pairs like APPROVER\_ID / APPROVER\_NAME, NOTE\_ID / NOTE\_TITLE, and DESTINATION\_ORGANIZATION\_ID / DESTINATION\_ORGANIZATION\_CODE in the requisitions interface table allow you to enter the user-displayed value in the

interface table and the program derives the associated unique identifier. If there is a conflict between the two values, the identifier overrides the user-displayed value.

In the PO\_REQUISITIONS\_INTERFACE\_ALL table:

- For interface lines with a DESTINATION\_TYPE\_CODE of 'INVENTORY', the program derives the SOURCE\_TYPE\_CODE. The REQUISITION\_TYPE is derived from the SOURCE\_TYPE\_CODE.
- The Requisition Import program automatically derives sourcing information for both your inventory and purchase requisition lines if you set the AUTOSOURCE\_FLAG to 'Y' and set up the sourcing rules for the item. For inventory-sourced requisition lines, the program derives the following columns:

SOURCE\_ORGANIZATION\_ID

SOURCE\_SUBINVENTORY

For supplier-sourced requisition lines, the program derives the following columns:

SUGGESTED\_VENDOR\_ID

SUGGESTED\_VENDOR\_SITE\_ID

SUGGESTED\_VENDOR\_CONTACT\_ID

SUGGESTED\_BUYER\_ID

AUTOSOURCE\_DOC\_HEADER\_ID

AUTOSOURCE\_DOC\_LINE\_NUM

DOCUMENT\_TYPE\_CODE

- If you set the AUTOSOURCE\_FLAG to 'P' (for Partially required) and set up the sourcing rules for the item, the program derives the following columns for inventory-sourced requisition lines:

SOURCE\_ORGANIZATION\_ID

SOURCE\_SUBINVENTORY

If you set the AUTOSOURCE\_FLAG to 'P' and set up the sourcing rules for the item, the program uses the following columns for supplier-sourced requisition lines, if they're provided in the requisitions interface table:

SUGGESTED\_VENDOR\_ID

SUGGESTED\_VENDOR\_SITE\_ID

If the above columns are not provided when the AUTOSOURCE\_FLAG is set to 'P', the program derives them from the sourcing rules.

- If you set the AUTOSOURCE\_FLAG to 'P' and set up the sourcing rules for the item, the program derives the following columns for supplier-sourced requisition lines:

SUGGESTED\_VENDOR\_CONTACT\_ID

SUGGESTED\_BUYER\_ID

AUTOSOURCE\_DOCUMENT\_HEADER\_ID

AUTOSOURCE\_DOCUMENT\_LINE\_NUM

DOCUMENT\_TYPE\_CODE

- Item pricing information is also derived in the UNIT\_PRICE and CURRENCY\_UNIT\_PRICE columns. If no sourcing rules are found for the item, supplier sourcing fails and the UNIT\_PRICE is defaulted from the item master for supplier requisition lines and from the CST\_ITEM\_COSTS\_FOR\_GL\_VIEW for internal requisitions.

In the PO\_REQ\_DIST\_INTERFACE\_ALL table:

- The Requisition Import program derives the QUANTITY (if a QUANTITY is not indicated) if ALLOCATION\_TYPE and ALLOCATION\_VALUE are provided.

In both the PO\_REQUISITIONS\_INTERFACE\_ALL and PO\_REQ\_DIST\_INTERFACE\_ALL tables:

- You can provide the segment values for the item, category, and charge account. The Requisition Import program derives the ITEM\_ID and CATEGORY\_ID from the requisitions interface table and the CHARGE\_ACCOUNT\_ID from either the requisitions interface table or the requisition distributions interface table. In both the requisitions and requisition distributions interface tables, the ACCRUAL\_ACCOUNT\_ID, BUDGET\_ACCOUNT\_ID, and VARIANCE\_ACCOUNT\_ID are derived based on the DESTINATION\_TYPE\_CODE.
- The following columns are control columns that the Requisition Import program derives to provide audit trail and relational integrity throughout the interface process:

CREATION\_DATE

CREATED\_BY

LAST\_UPDATE\_DATE

LAST\_UPDATED\_BY  
LAST\_UPDATE\_LOGIN  
PROGRAM\_ID  
PROGRAM\_APPLICATION\_ID  
PROGRAM\_UPDATE\_DATE  
REQUEST\_ID

### **Optional Data**

You can enter header, line, and distribution-level descriptive flexfield information in the interface tables. You can enter up to ten notes for each requisition that you import. The Requisitions Open Interface also lets you enter foreign currency information, project accounting information, UN number, and hazard class information. You can enter the justification for the requisition and indicate whether the requisition is urgent. You can also provide item revision, source, and destination subinventory information. If you are using requisition encumbrance, you can also provide a USSGL transaction code.

## **Validation**

### **Standard Validation**

Oracle Purchasing validates all required columns in the interface table. For specific information on the data implied by these columns, see the *Oracle eTechnical Reference Manuals* for details.

### **Other Validation**

Purchasing also performs the following cross validations. If a row in the interface tables fails validation for any reason, the program sets the PROCESS\_FLAG in the interface table to 'ERROR' and enters details about every error on that row into the PO\_INTERFACE\_ERRORS table.

If you enter a SOURCE\_TYPE\_CODE of 'INVENTORY', the ITEM\_ID is required and the item must be stock-enabled for the source organization and internal-order-enabled for the purchasing and destination organizations. The DELIVER\_TO\_LOCATION\_ID must be valid for the destination organization and a customer must be associated with that location in Purchasing. If you also enter a SOURCE\_SUBINVENTORY, the item must either be valid in the subinventory, or it must not be restricted to a subinventory. For MRP-sourced internal requisitions, the

SOURCE\_SUBINVENTORY must be a non-nettable subinventory for intra-organization transfers.

If you enter a SOURCE\_TYPE\_CODE of 'VENDOR' and provide an ITEM\_ID, the item must be purchasing-enabled for the purchasing and destination organizations.

If you enter a DESTINATION\_TYPE\_CODE of 'INVENTORY', the ITEM\_ID is required and it must be stock-enabled for the destination organization. If you also enter a DESTINATION\_SUBINVENTORY, the item must either be valid in the subinventory or it must not be restricted to a subinventory.

If you enter a DESTINATION\_TYPE\_CODE of 'SHOP FLOOR', the ITEM\_ID is required, and it must be an outside-operation item and purchasing-enabled for the purchasing and destination organizations. The LINE\_TYPE\_ID must be an outside-operation line type as well.

If you provide a CURRENCY\_CODE, the RATE, RATE\_DATE, and RATE\_TYPE must be provided.

If you are using requisition encumbrance, the GL\_DATE that you enter must be in an open or future General Ledger period and an open Purchasing period. Furthermore, if you are using Oracle Inventory, the GL\_DATE must be in an open Inventory period for inventory-sourced requisitions.

## Resolving Failed Requisitions Interface Rows

### Error Messages

Oracle Purchasing may display specific error messages during interface processing. For more details on these messages, please see the *Oracle Applications Message Reference Manual*, in HTML format on the documentation CD-ROM for Release 11i.

### Viewing Failed Transactions

You can report on all rows that failed validation by using the Requisition Import Exceptions report. For every transaction in the interface table that fails validation, the Requisition Import Exceptions report lists all the columns that failed validation along with the reason for the failure.

You can identify failed transactions in the requisitions interface tables by selecting rows with a PROCESS\_FLAG of 'ERROR'. For any previously processed set of rows identified by INTERFACE\_SOURCE\_CODE and BATCH\_ID, only rows that failed validation remain in the interface table, as all the successfully imported rows are deleted.

For each row in the requisitions interface or requisition distributions interface table that fails validation, the Requisition Import program creates one or more rows with error information in the PO\_INTERFACE\_ERRORS table.

## Rescheduling Requisitions

If you use Oracle Master Scheduling/MRP or a non-Oracle MRP system with Oracle Purchasing, you may find that you need to reschedule requisitions as your planning requirements change. Purchasing's Requisition Import program lets you reschedule requisition lines according to changes in your planned orders.

### Reschedule Interface Table

You can reschedule requisitions from your planning application with the Reschedule Interface table. Since you have already loaded your requisitions into Purchasing, you simply need to identify for Purchasing the requisition lines you want to reschedule. After you identify each line to reschedule, you can update the quantity and the need-by date for the corresponding requisition line. You decide when to import the information from the requisitions interface table into Purchasing. Purchasing lets you use the Reschedule Interface table as often as you want.

### Understanding the PO\_RESCHEDULE\_INTERFACE Table

PO\_RESCHEDULE\_INTERFACE is the table Purchasing uses to import information for requisition lines your planning system has rescheduled. One row in the table corresponds to a requisition line whose quantity or need-by date you want to change. Requisition Import updates your requisition lines within Purchasing with the information in this table. The table PO\_RESCHEDULE\_INTERFACE consists of columns Purchasing uses to identify requisition lines for update. The table PO\_RESCHEDULE\_INTERFACE contains the following columns:

**Table 10–3 PO\_RESCHEDULE\_INTERFACE**

Column Name	Null?	Type
LINE_ID	NOT NULL	NUMBER
QUANTITY		NUMBER
NEED_BY_DATE		DATE
PROCESS_ID		NUMBER
LAST_UPDATE_DATE		DATE

**Table 10–3 PO\_RESCHEDULE\_INTERFACE**

Column Name	Null?	Type
LAST_UPDATED_BY		NUMBER
LAST_UPDATE_LOGIN		NUMBER
CREATION_DATE		DATE
CREATED_BY		NUMBER
REQUEST_ID		NUMBER
PROGRAM_APPLICATION_ID		NUMBER
PROGRAM_ID		NUMBER
PROGRAM_UPDATE_DATE		DATE

The columns listed below are foreign keys to the following tables and columns:

**Table 10–4 Foreign Keys**

Foreign Key	Table	Column
LINE_ID	PO_REQUISITION_LINES	LINE_ID
QUANTITY	PO_REQUISITION_LINES	QUANTITY
NEED_BY_DATE	PO_REQUISITION_LINES	NEED_BY_DATE

The column LINE\_ID identifies a requisition line which your planning system reschedules. The columns QUANTITY and NEED\_BY\_DATE contain new information for the requisition lines your planning system updates.

The other columns in the table store the same information the PO\_REQUISITIONS\_INTERFACE\_ALL table uses to track when you place data in the PO\_RESCHEDULE\_INTERFACE table.

**Columns Reserved for Requisition Import**

Requisition Import inserts values into the column PROCESS\_ID. Requisition Import inserts the PROCESS\_ID to identify all requisition lines which you reschedule at one time. You should not insert any data in this column.

## Purchasing Documents Open Interface

You can automatically import and update price/sales catalog information and request for quotation (RFQ) responses from suppliers through the Purchasing Documents Open Interface. You can also import standard purchase orders (for example, from a legacy system) through the Purchasing Documents Open Interface.

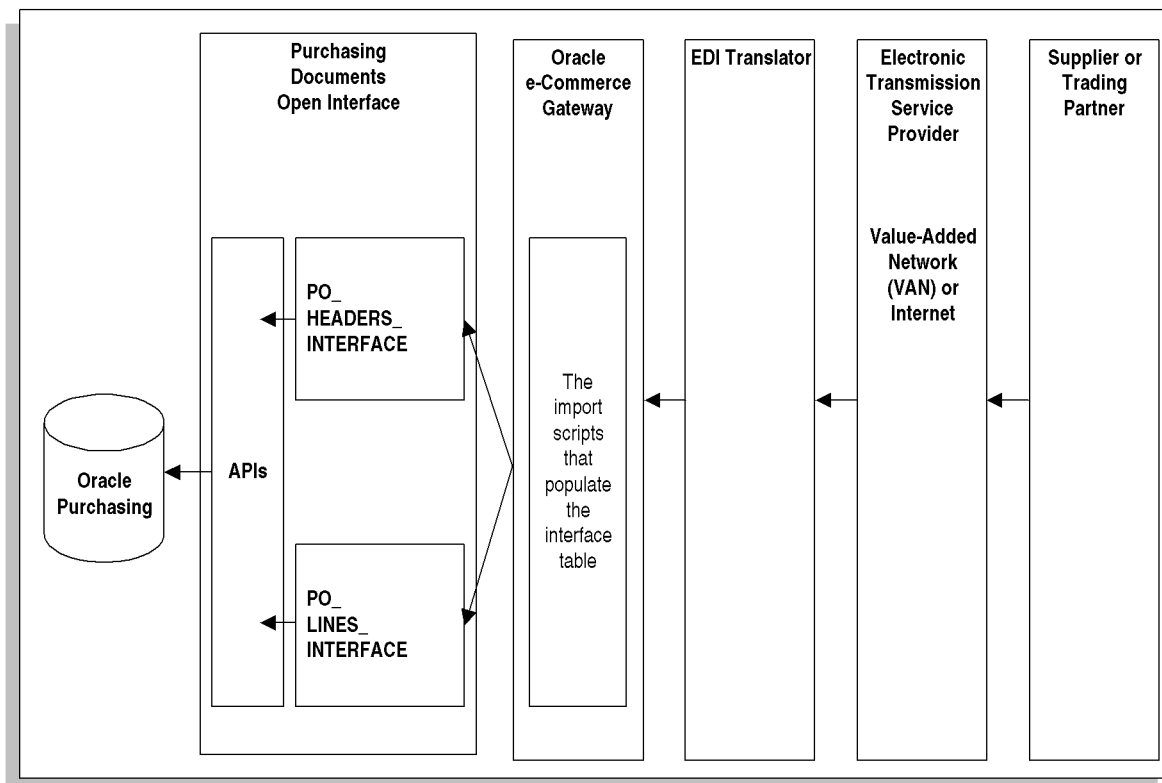
The Purchasing Documents Open Interface uses Application Program Interfaces (APIs) to process the data in the Oracle Applications interface tables to ensure that it is valid before importing it into Oracle Purchasing. After validating the price/sales catalog information or RFQ responses, the Purchasing Documents Open Interface program converts the information, including price break information, in the interface tables into blanket purchase agreements, or catalog quotations in Purchasing. For standard purchase orders, the Purchasing Documents Open Interface also validates the header, line, shipment, and distribution information before importing the purchase orders into Purchasing.

You can choose whether to import the data as standard purchase orders, blanket purchase agreements, or catalog quotations. You can also choose to update your item master and, for blanket purchase agreements and quotations, apply sourcing rules and release generation methods to the imported item. Blanket purchase agreements and quotations can also be replaced with the latest price/sales catalog information when your supplier sends a replacement catalog, or updated when the supplier sends an updated catalog. Standard purchase orders can only be imported as new documents.

One way to import the blanket purchase agreements and catalog quotations is through Electronic Data Interchange (EDI). The Purchasing Documents Open Interface supports the EDI transmissions of the price/sales catalogs (ANSI X12 832 or EDIFACT PRICAT) and responses to RFQs (ANSI X12 843 or EDIFACT QUOTES). Standard purchase orders cannot be transmitted through EDI. You can import these into the interface tables using a program that you write.

## Functional Overview

**Figure 10–2 Functional Overview**



The figure above shows the flow of price/sales catalog information from the supplier or trading partner, to Oracle e-Commerce Gateway, to the Purchasing Documents Open Interface, and finally into Purchasing. The **PO\_HEADERS\_INTERFACE**, **PO\_LINES\_INTERFACE**, and **PO\_DISTRIBUTIONS\_INTERFACE** tables can also be loaded manually, through a program you write.

If you load the interface tables through e-Commerce Gateway, then the supplier must provide the price/sales catalog information as a flat file using an EDI translator according to the EDI interface file definitions. Then, the EDI Catalog Inbound program (or the EDI Response to RFQ Inbound program) loads the

information into the PO\_HEADERS\_INTERFACE table and the PO\_LINES\_INTERFACE table, which includes line, shipment, and price break information. Since standard purchase orders are not loaded through EDI, you must write the program that loads standard purchase orders into the PO\_HEADERS\_INTERFACE, PO\_LINES\_INTERFACE, and PO\_DISTRIBUTIONS\_INTERFACE tables. (The PO\_DISTRIBUTIONS\_INTERFACE is used only for standard purchase orders.)

In the Parameters window of the EDI Catalog Inbound program (or EDI Response to RFQ Inbound program), you specify the name of the flat file and designate how the data sent by the supplier is to be used—if blanket purchase agreements or catalog quotations are to be created; if items are created or updated in the item master; if sourcing rules are created or updated. (You also specify the location of the flat file through an e-Commerce Gateway profile option. See: *Oracle e-Commerce Gateway User's Guide*.)

The EDI inbound program and the Import Price Catalogs program are run as a request set when you choose Submit Request in the EDI import programs window. The EDI inbound program loads the interface tables; the Import Price Catalogs program validates the data and loads the validated data into Purchasing. You can also run the Import Price Catalogs program separately in the Submit Request window in Purchasing, after the data is loaded into the interface tables. For standard purchase orders, you must use the Import Standard Purchase Orders program in Purchasing to import the data from the interface tables into Purchasing.

You can view the status of your submission by making note of the Request ID number and selecting View My Requests from the Help menu.

The Purchasing Documents Open Interface programs receive the data, derive and default any missing data, and validate the data. If no errors are found in the submission process, the data in the Purchasing Documents Open Interface tables is loaded into the PO\_HEADERS\_ALL, PO\_LINES\_ALL, PO\_LINE\_LOCATIONS\_ALL, and PO\_DISTRIBUTIONS\_ALL tables in Purchasing to create the standard purchase order, blanket purchase agreement, or catalog quotation, including price breaks if any. The creation of items (if you allow updating of the item master) or sourcing rules also populates the corresponding tables (such as MTL\_SYSTEM\_ITEMS, ASL\_ITEMS, ASL\_SUPPLIERS, and ASL\_DOCUMENTS).

If the Purchasing Documents Open Interface programs find errors in the interface tables, such as incomplete information from the supplier, the record identification number and the details of the error are written to the PO\_INTERFACE\_ERRORS table. You can launch the Purchasing Interface Errors Report in Purchasing to view the rows that were not imported by the Purchasing Documents Open Interface along with the failure reason(s) for each row.

## Record and Error Processing

To detect errors, the Purchasing Documents Open Interface programs first process a record from the PO\_HEADERS\_INTERFACE table. Then, the program processes the child records in the PO\_LINES\_INTERFACE table and, for standard purchase orders, the PO\_DISTRIBUTIONS\_INTERFACE table, before going on to the next PO\_HEADERS\_INTERFACE record.

If the program gets an error while processing a record, the program writes the error details to the PO\_INTERFACE\_ERRORS table and increments the record's error counter. It then flags the record as "Not Processable."

The Purchasing Documents Open Interface saves or errors out on a line-by-line basis. This means that if an error is found in a document line, only that line is rolled back (not submitted to Purchasing), and you can find the error in the PO\_INTERFACE\_ERRORS table. Because the Purchasing Documents Open Interface saves or errors out line by line, it can accept partial documents.

If an error is found in a header, none of its lines are processed. The Purchasing Documents Open Interface rolls back the header, does not process its lines, and does the following:

- Sets the PROCESS\_CODE column value to REJECTED in the PO\_HEADERS\_INTERFACE table.
- Writes out the record identification number and the details of the error to the PO\_INTERFACE\_ERRORS table.
- Begins processing the next header record.

If no processing errors are found during processing, the header record and all successfully submitted child records are loaded into Purchasing, and then flagged as processed by setting the PROCESS\_CODE column to ACCEPTED.

For blanket purchase agreements and standard purchase orders only, when the supplier sends an updated price/sales catalog, the Purchasing Documents Open Interface sets the PROCESS\_CODE column to NOTIFIED for those lines with prices that exceed your price tolerance. For these price updates only, the Purchasing Documents Open Interface waits for you to accept or reject the price increase in the Exceeded Price Tolerances window before completing or rejecting the price change.

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**Attention:** It is important to check the Purchasing Interface Errors report (a report of the errors in the PO\_INTERFACE\_ERRORS table) after you import the documents. Because the Purchasing Documents Open Interface saves or errors out line by line, it can accept partial documents. Therefore, to see which document lines were not submitted because of errors, you must check the Purchasing Interface Errors report.

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## Original, Replace, and Update Submissions

If you are using e-Commerce Gateway to import blanket purchase agreements and catalog quotations (in the form of flat files) into the Purchasing Documents Open Interface, your supplier can send you a flat file with one of three action codes (in the ACTION column of the PO\_HEADERS\_INTERFACE table): Original, Replace, or Update. If you're not using e-Commerce Gateway, your import program needs to specify the action code. If you are importing standard purchase orders, you can use only the Original action code and you must import them using your own program.

For blanket purchase agreements and catalog quotations, your supplier should use the Original action code for a new submission, and Replace or Update action codes for subsequent submissions.

### Original

A file with an action code of Original is one in which all the information is new to your system.

Choose Original when you're submitting documents for the first time. (For standard purchase orders, you can only choose Original.)

For an Original submission, the Purchasing Documents Open Interface first checks if a document in the submission already exists in Purchasing. It checks for a document with the same supplier document number (VENDOR\_DOC\_NUM) and supplier (VENDOR\_ID or VENDOR\_NAME) that is not finally closed or canceled. If an active, matching document already exists, the document in the Original submission is not created and an error is logged in the Purchasing Interface Errors report.

### Replace

A file with an action code of Replace replaces already-created blanket purchase agreements or catalog quotations with new documents containing the new

information. The Purchasing Documents Open Interface replaces these documents by doing the following:

- First, it looks for documents that have the same document type (DOCUMENT\_TYPE\_CODE), supplier (VENDOR\_ID or VENDOR\_NAME), and supplier document number (VENDOR\_DOC\_NUM) as the replacement documents. (A supplier document number is a field that is specified in the flat file that the supplier sends.)
- Next, among the matching documents, it looks for documents with effectivity dates that are the same as, or within the effectivity dates of, the replacement documents.
- Then, it invalidates the old documents by setting their expiration dates to START\_DATE -1 (the start date, minus one day) and creates new documents with the new price/sales catalog information, within the original effectivity dates.

Choose Replace when you want to replace the whole blanket purchase agreement or catalog quotation because most of its fields, header, and line information have changed or are out of date.

As with an Original submission, the Purchasing Documents Open Interface checks that there are no duplicate documents in Purchasing, but it does not consider finally closed or canceled documents as duplicates. That is, if two documents in Purchasing match an incoming document in the Replace submission, Purchasing replaces the one that is not canceled or finally closed. If one document in Purchasing matches an incoming document, but is canceled or finally closed, Purchasing still replaces it with the new document.

## Update

A file with an action code of Update updates the following information on already-submitted blanket purchase agreements or catalog quotations without creating completely new documents:

- Unit Price

If the price update exceeds the price tolerance you set, the price and price breaks are not updated until or unless the buyer accepts the price update in the Exceeded Price Tolerances window. Any other updates, however, are made to the document when the price/sales catalog is imported.

The price is updated on the document only, not in the item master. Only the item description is updated in the item master, if you've enabled item

description updates as described in [Setting Up the Purchasing Documents Open Interface](#) on page 10-43.

- Item Description
- UOM
- Price Breaks (for blanket purchase agreements)
- Expiration Date (for blanket purchase agreements)
- URL descriptive flexfield (if you have one)

A URL descriptive flexfield provides a supplier URL for additional information about an item.

Expired lines in Purchasing (lines whose Expiration Date has been reached) do not get updated. An Update submission for an expired line is treated as a new line to be added to the blanket purchase agreement. Finally closed or canceled documents, or those that are no longer effective, do not get updated.

Choose Update when you want to update the fields listed above on existing blanket purchase agreements and catalog quotations, and you want to preserve the existing documents' sourcing rules. For example, an Update submission can be used for daily, weekly, or even quarterly updates to existing documents, while for annual or bi-annual updates, a Replace submission may be better for your business needs.

When the Purchasing Documents Open Interface updates a line on a blanket purchase agreement, it does not update the open release for that line. Only future releases use the updated information.

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**Note:** The Purchasing Documents Open Interface cannot update the UOM on an agreement line for which an open release exists. In this case, the Purchasing Documents Open Interface uses the Expiration Date field to expire the line on the agreement, and creates a new line with the updated UOM, which will be used on future releases.

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The Purchasing Documents Open Interface updates blanket purchase agreements and catalog quotations by doing the following:

- First, it identifies the catalog quotation or blanket purchase agreement that needs to be updated by comparing the supplier document number (VENDOR\_DOC\_NUM in the PO\_HEADERS\_INTERFACE table) with the existing supplier document number (VENDOR\_ORDER\_NUM for a blanket agreement,

or QUOTE\_VENDOR\_QUOTE\_NUMBER for a catalog quotation in the PO\_HEADERS table). The supplier (VENDOR\_ID or VENDOR\_NAME) and document type (DOCUMENT\_TYPE\_CODE) must also match. The Purchasing Documents Open Interface matches only to currently or future-effective documents that are not canceled or finally closed.

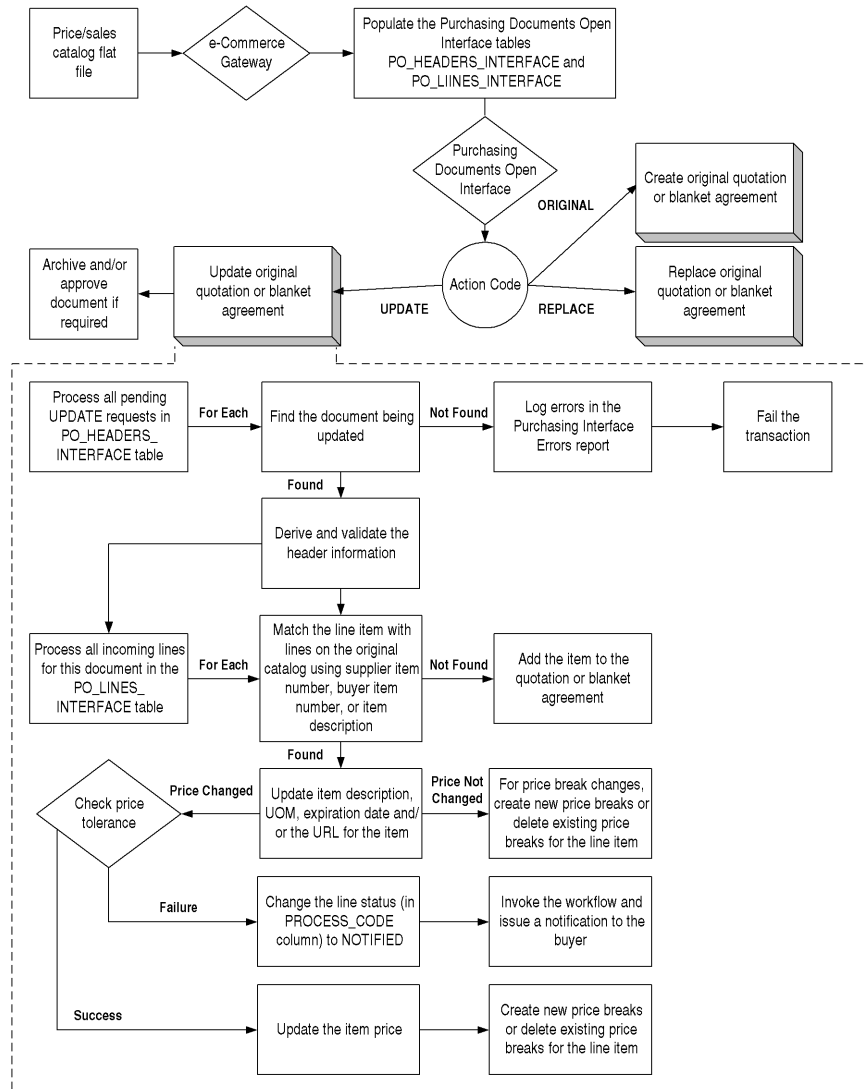
- Next, the Purchasing Documents Open Interface processes all the changed lines in the PO\_LINES\_INTERFACE table. It identifies which lines on the existing documents need to be updated by matching the following, in order:
  - Supplier item number
  - Item number used by your organization, revision number, and item category
  - Item description and item category

If it can't match the supplier item number, it tries to match the item number used by your organization (along with the revision number and item category), and so on.

If more than one line on the existing document matches the incoming line, the Purchasing Documents Open Interface updates the first line on the existing catalog quotation or blanket purchase agreement that matches the incoming line. This first line is also the line that is picked up for sourcing, as long as it has not expired.

For a one-time item, the item description is updated only if a supplier item number (VENDOR\_PRODUCT\_NUM) is provided and can be used to find a matching line on the original document.

The following figure shows the flow of an Update submission to Purchasing:

**Figure 10–3 Update Submission Process**

## Sourcing

When you import blanket purchase agreements or catalog quotations into Purchasing, you have the option of choosing Yes or No in the Create Sourcing Rules field in the Parameters window to enable Purchasing to create sourcing rules out of the supplier, item, and document information that the supplier sends.

If you choose Yes to create sourcing rules in an Original or Replace submission, Purchasing checks if a sourcing rule is assigned to the item at the item level and does the following:

- If no sourcing rules exist for the item, Purchasing generates a sourcing rule automatically, allocating 100 percent to the supplier providing the information.
- If a sourcing rule exists for the item, Purchasing compares the effectivity dates of the incoming document with those of the existing sourcing rule for the item. To ensure that only one sourcing rule is used for the item, Purchasing does the following:
  - If the effectivity dates of the incoming document are the same as the existing sourcing rule's effectivity dates, Purchasing checks if the supplier is in the sourcing rule. If not, Purchasing adds the supplier to the existing sourcing rule with an allocation of 0 percent. Later, you can query the sourcing rule and define your own percentage splits between suppliers.
  - If the effectivity dates of the incoming document are different than the existing sourcing rule's effectivity dates, but are within or overlap the existing effectivity dates, then a new sourcing rule is not created, so as not to conflict with the existing sourcing rule.
  - If the effectivity dates of the incoming document are not within or match the existing sourcing rule's effectivity dates, Purchasing updates the item's sourcing rule with the new effectivity dates, adding the supplier at an allocation of 100 percent.
- Purchasing checks for an Approved Supplier List entry for the item and supplier/site combination. If an entry exists, Purchasing adds the document to the entry. If an entry does not exist, Purchasing creates a new entry with the new source document.

If you choose Yes to create sourcing rules in an Update submission, new sourcing information is created (as described above) only if the Update submission results in a new line being created. See: [Adding or Deleting Lines in an Update Submission](#) on page 10-42.

## Price Breaks

All action codes (Original, Replace, and Update) support the importing of price breaks through the Purchasing Documents Open Interface, when the documents are imported as blanket purchase agreements or catalog quotations.

If one price break is rejected, the whole line to which the price break belongs is rejected.

### For Original or Replace Submissions

The following, additional columns are required in the PO\_LINES\_INTERFACE table if you want to import price break information:

- LINE\_NUM
- SHIPMENT\_NUM
- QUANTITY
- UNIT\_PRICE

If you are importing price break information through catalog quotations, you can also optionally populate the following columns in the PO\_LINES\_INTERFACE table:

- MIN\_ORDER\_QUANTITY
- MAX\_ORDER\_QUANTITY

Recall that the PO\_LINES\_INTERFACE table contains both line and shipment information, and imports data into both the PO\_LINES and PO\_LINE\_LOCATIONS tables in Purchasing. To create two price breaks corresponding to one blanket agreement or quotation line, you would create two records in the PO\_LINES\_INTERFACE table. That is, one header-level record in the PO\_HEADERS\_INTERFACE table would have two records in the PO\_LINES\_INTERFACE table, and both of these line records would have the same INTERFACE\_HEADER\_ID:

- One header-level record (row) in the PO\_HEADERS\_INTERFACE table corresponds to:
  - **Line 1:** one line-level record (row) in the PO\_LINES\_INTERFACE table, with Shipment 1 information included
  - **Line 1:** the same line-level record (another row) in the PO\_LINES\_INTERFACE table, with Shipment 2 information included

When two or more lines with the same line and item number are imported into the PO\_LINES\_INTERFACE table, the Purchasing Document Open Interface treats the subsequent lines as price breaks belonging to the first line.

### **For the Update Submission**

If the supplier updates an item's price, the Purchasing Documents Open Interface deletes the item's price breaks since they are no longer current with the new price. If the supplier sends new price breaks for an existing line, the current price breaks are deleted and the new price breaks sent by the supplier are created.

Just as with an Original or Replace submission, in an Update submission, when two or more lines with the same line and item number are imported into the PO\_LINES\_INTERFACE table, the Purchasing Document Open Interface treats the subsequent lines as price breaks belonging to the first line.

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**Attention:** In an Update submission, the order of the line and its price breaks is important. If you are writing your own program to populate the interface tables, make sure that the price break lines (lines with the same line and item number, but different shipment numbers) follow the line to which they belong in the interface table. Otherwise, the Purchasing Documents Open Interface will treat them as duplicate lines (and update the previous line with the second). Use the INTERFACE\_LINE\_ID numbers to order price break (shipment) lines after their corresponding lines.

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## **Adding or Deleting Lines in an Update Submission**

The Update submission enables the supplier to add or expire lines on existing blanket purchase agreements or catalog quotations.

The Purchasing Documents Open Interface handles this automatically. If it cannot find a match between the incoming line in the Update submission and an existing line in Purchasing, it adds the line. To expire a line, the supplier must send an updated Expiration Date for the line. You can expire lines on blanket purchase agreements only.

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**Note:** Once a line has expired, the supplier cannot send more updates to it. If the supplier does send an update to an expired line, the update is treated as a new line to be added to the blanket purchase agreement.

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## Revision Numbering and Archiving

For the Update action code, the document revision number is increased every time the unit Price, item Description, UOM, or Expiration Date is updated, or when a new line is added (unless Archive on Approval is chosen in the Document Types window and *PO: Archive Catalog on Approval* is set to No).

For all action codes, a blanket purchase agreement is archived upon approval or printing, depending on which option you chose in the Document Types window. When importing price/sales catalog information, you also have the option of choosing Approved or Incomplete in the Approval Status field in the Parameters window. See the table on page 10-47.

The profile option *PO: Archive Catalog on Approval* enables you to choose whether Purchasing archives blanket purchase agreements in a price/sales catalog submission upon approval. (Quotations are not archived in Purchasing.)

If Archive on Approval is chosen in the Document Types window in Purchasing *and* the agreement is imported as Approved, then:

- Setting *PO: Archive Catalog on Approval* to Yes archives the agreements once they are approved—in this case, as soon as you import them.
- Setting *PO: Archive Catalog on Approval* to No does not archive the agreements. This may be helpful if you receive frequent price/sales catalog submissions and do not want Purchasing to take up extra space archiving every change.

If the agreement is imported as Incomplete (see the table on page 10-47), it does not matter how the *PO: Archive Catalog on Approval* profile option is set. Purchasing archives the document later upon approval or later upon printing, depending on the option chosen in the Document Types window.

If Archive on Print is chosen in the Document Types window, Purchasing archives the imported agreements once they are printed.

By default the *PO: Archive Catalog on Approval* profile option is set to No. The user can update this profile option. It can also be updated at the system administrator user, responsibility, application, and site levels.

The blanket purchase agreement is archived and its revision number increased only after all of its lines have been either accepted or rejected in the Exceeded Price Tolerances window.

This profile option does not apply to standard purchase orders, since they can only be imported as Incomplete.

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**Note:** You can monitor changes to blanket purchase agreements by using the PO Change History feature. See: Viewing Purchase Order Changes, *Oracle Purchasing User's Guide, Release 11i*.

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### See Also

Document Revision Numbering, *Oracle Purchasing User's Guide, Release 11i*

## Setting Up the Purchasing Documents Open Interface

If you want to import supplier price/sales catalog information or responses to RFQs information into the Purchasing Documents Open Interface using the 832/PRICAT or 843/QUOTES transaction, you need to install and set up e-Commerce Gateway for your organization, including defining your supplier as a trading partner, enabling EDI Catalog Inbound/EDI Response to RFQ transactions for that partner, and setting up code conversion categories and values. See: *Oracle e-Commerce Gateway Implementation Manual, Release 11i*.

The concurrent manager(s) that manages all processing also must be set up and running.

### Purchasing Setup

**Allow Updating of the Item Master** When you allow updating of the item master, the Purchasing Documents Open Interface updates the item description not just on the documents, but in the item master as well. Only the item description is updated in the item master. If the supplier includes a change to the item description in the price/sales catalog, allowing updating of the item master is required for the transaction to go through.

To allow updating of the item master:

1. Navigate to the Purchasing Options window and, in the Control options region, check Allow Item Description Update. See: Defining Control Options, *Oracle Purchasing User's Guide, Release 11i*.

This allows updating of item descriptions.

2. Navigate to the Personal Profiles window and make sure that *INV: Default Item Status* is set to Active.

This allows updating of item status codes at the site level.

**Set Up Default Category Sets** Make sure default category sets are set up appropriately for both Purchasing and Inventory by performing the following steps:

1. Navigate to the Default Category Sets window by choosing Setup > Items > Categories > Default Category Sets in the Purchasing responsibility.

Make sure that both Purchasing and Inventory are listed in the Functional Area column and each has a default Category Set defined for it.

2. Navigate to the Category Sets window by choosing Setup > Items > Categories > Category Sets in the Purchasing responsibility.

Make sure that you have a default category set each for both Purchasing and Inventory in the Category Sets window.

If you've selected the Enforce List of Valid Categories check box in the Category Sets window, make sure that the Default Category also appears in that List of Valid Categories. If not, enter it in the list.

See: *Defining Category Sets, Oracle Inventory User's Guide, Release 11i.*

**Set the profile option *PO: Archive Catalog on Approval*** If you typically archive documents on approval, setting this profile option to No means that Purchasing will not archive those changes made through the Purchasing Documents Open Interface. See: [Revision Numbering and Archiving](#) on page 10-43. This profile option does not affect standard purchase orders imported through the Purchasing Documents Open Interface. You can skip this step for purchase orders.

**Set the profile option *PO: Write Server Output to File*** Set this profile option when you are debugging the Purchasing Documents Open Interface. When you import documents with a large number of items (about 100 or more), the concurrent manager details log (viewable through the View Log button in the Submit Request window) can overflow and create errors. The profile option *PO: Write Server Output to File* enables you to write these log details to a flat file in the `$APPL_TOP/log` directory to avoid this overflow.

If you set this profile option to Yes, the log details are written to a flat file, which will not overflow. If you set this profile option to No, the log details are written to the concurrent manager log screen as usual, which can cause overflow problems for

large catalogs. If you leave this profile option blank, log details are not written at all, which improves performance. By default, the profile option is left blank.

The user can update this profile option. It can also be updated at the system administrator user, responsibility, application, and site levels.

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**Note:** This profile option applies to the Purchasing Documents Open Interface only.

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To write log details to a file using Oracle Applications setup:

1. Set *PO: Write Server Output to File* to Yes.
2. After you run the Purchasing Documents Open Interface, look for a system-generated log file in the \$APPL\_TOP/log directory.

To debug using SQL\*Plus, do the following before you run the Purchasing Documents Open Interface:

1. Set *PO: Write Server Output to File* to Yes.
2. Make sure the directory for the log file you want to write to in the next step is set in the environment variable APPLPTMP and that it is listed in the UTL\_FILE\_DIR parameter in the init.ora file.
1. Specify the file name using FND\_FILE.put\_names('logfile', 'outfile', 'directory');

For example:

```
fnd_file.put_names('mylog.log', 'myout.out', '/sqlcom/out');
```

This will create a file called mylog.log in the /sqlcom/out directory. It is better to use /sqlcom/out because of write-access issues. If you have problems writing to the file, log into the machine where the database is installed.

**Set the Price Tolerance for the Update Submission** Define your price tolerance for price increases in an Update submission. Optionally use function security to control buyers' access to the Exceeded Price Tolerances window. See: [Monitoring Price Increases](#) on page 10-49. Price tolerances apply to blanket purchase agreements and catalog quotations only. You can skip this step for standard purchase orders.

**Set the Workflow Timeout for the Update Submission** If you import an Update price/sales catalog, decide whether you want to keep the default Timeout of seven days after notifying the buyer of a price update that exceeded the price tolerance. The default Timeout of seven days means if the buyer does not respond after seven days, the buyer will receive the notification again. If want to change this Timeout period, use

the Workflow Builder. See: Price/Sales Catalog Notification Workflow, *Oracle Purchasing User's Guide, Release 11i*.

For the Timeout feature to work, the Workflow Background Process must be running. See: To Schedule Background Engines, *Oracle Workflow Guide, Release 11i*.

Skip this step for standard purchase orders. Price update tolerances apply to blanket purchase agreements and catalog quotations only.

## Importing the Documents

The import programs window in e-Commerce Gateway initiates both the EDI Catalog Inbound program (or EDI Response to RFQ Inbound program) to import the blanket purchase agreements and catalog quotations from the supplier, and the Import Price Catalogs program to import the data into Purchasing.

The Import Price Catalogs program is also available separately in the Requests window in Purchasing; it can be run only after you've successfully loaded the data into the interface tables. For standard purchase orders, you must use the Import Standard Purchase Orders program to import the data into Purchasing.

After you submit the information in the Parameters window, make note of the Request ID number by selecting View My Requests from the Help menu so that you can later view the status of your submission.

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**Attention:** It is important to check the Purchasing Interface Errors report after you import the documents. Because the Purchasing Documents Open Interface saves or errors out line by line, it can accept partial documents. Therefore, to see which document lines were not submitted because of errors, you must check the Purchasing Interface Errors report.

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**Create Sourcing Rules** If you choose Yes in the Create Sourcing Rules field, make sure the Approval Status field for the submitted documents is Approved. Sourcing rules can be created only when the Purchasing documents have a status of Approved. See also: [Sourcing](#) on page 10-40. You cannot create sourcing rules from standard purchase orders. Purchase orders are imported with a status of Incomplete only.

**Approval Status** The following table shows the effects of the import Approval Status on a document's current status, when you import an Update price/sales catalog. For standard purchase orders, you must choose a status of Incomplete. The

following table applies to updated blanket purchase agreements and catalog quotations only.

**Table 10–5 Document Status in Update Submission**

Current Document Status	Import Status - Import as Incomplete	Import as Approved
Incomplete	Document remains Incomplete	Document changes to Approved
Approved	Document remains Approved	Document remains Approved

Note that while a document is Incomplete, you cannot source from it until it is approved. Even in an Update submission, where you are updating only certain lines on a blanket purchase agreement or catalog quotation, if you choose Incomplete, the entire document, including the lines that weren't updated, is considered Incomplete.

**Purging the Open Interface Tables after Importing the Data**

If you want to purge data in the open interface tables after you have imported the data into Purchasing, use the Purge Purchasing Documents Open Interface Processed Data program, available through the Submit Request window in Purchasing. This program removes data that has been accepted or rejected, not data that is still pending.

If you want to purge data from the Purchasing Interface Errors table, set the Purge Data field in the Purchasing Interface Errors report to Yes; the errors will not reappear the next time you run the report.

**See Also**

- Import Price Catalogs, *Oracle Purchasing User's Guide, Release 11i*
- Import Standard Purchase Orders, *Oracle Purchasing User's Guide, Release 11i*
- Purchasing Interface Errors Report, *Oracle Purchasing User's Guide, Release 11i*
- Purge Purchasing Documents Open Interface Processed Data, *Oracle Purchasing User's Guide, Release 11i*
- Inbound Price/Sales Catalog (832/PRICAT), *Oracle e-Commerce Gateway User's Guide, Release 11i*

Inbound Response to Request for Quote (843/QUOTE), *Oracle e-Commerce Gateway User's Guide, Release 11i*

## Monitoring Price Increases

For updated blanket purchase agreements and catalog quotations, you can optionally set a price update tolerance in the Supplier-Item Attributes window, on the blanket purchase agreement, or in the *PO: Price Tolerance (%) for Catalog Updates* profile option.

If a price update in an Update submission exceeds your tolerance, the buyer receives a notification for each affected document in the Notifications Summary window. From there, the buyer can access the Exceeded Price Tolerances window and accept or reject the price increase.

The Purchasing Documents Open Interface Update submission makes all changes to agreements and quotations except price changes that have exceeded your price tolerance. For these lines only, the Purchasing Documents Open Interface waits for the buyer to accept or reject the price increases in the Exceeded Price Tolerances window before completing or rejecting the price change. All other line changes, however, are made.

Purchasing performs the price tolerance check against the price on the current revision of the document. The price tolerance check is performed only on updated blanket purchase agreements or catalog quotations and only on price increases. If the price decreases, Purchasing does not check the decrease against your tolerance or notify you of the decrease.

The Exceeded Price Tolerances window can also be used with function security to control buyers' access to it.

The Purchasing Documents Open Interface uses Oracle Workflow to handle exceeded price tolerance notifications. A default workflow in Purchasing, the PO Catalog Price Tolerance Notifications workflow, automatically sends a notification to the buyer when the price tolerance has been exceeded. The workflow also provides you with function activities that you can modify to enable the workflow to send automatic notifications to your suppliers when you have rejected a price increase. For detailed information about the workflow, see: *Price/Sales Catalog Notification Workflow, Oracle Purchasing User's Guide, Release 11i*.

### **To limit buyers' access to the Exceeded Price Tolerances window:**

- Exclude the Accept/Reject Exceeded Price Tolerances subfunction from the buyer's responsibility.

Buyers can then only view the Exceeded Price Tolerances window.

See: Overview of Function Security, *Oracle Applications System Administrator's Guide, Release 11i*. See: Forms and Subfunctions, *Oracle Applications System Administrator's Guide, Release 11i*.

**To set the price update tolerance:**

- For blanket purchase agreements and quotations only, specify a price update tolerance at any of the following levels:
  - The Price Update Tolerance field on the original blanket purchase agreement, in the agreement's Terms and Conditions window.
  - The Price Update Tolerance field in the Approved Supplier List Supplier-Item Attributes window, at the item-supplier level.
  - The Price Update Tolerance field in the Approved Supplier List Supplier-Item Attributes window, at the commodity-supplier level.
  - The *PO: Price Tolerance (%) for Catalog Updates* profile option if you want the price tolerance to apply to everything, not just to specific documents, or supplier-item or supplier-commodity levels.

For blanket purchase agreements, Purchasing uses the first price tolerance it finds to determine the price tolerance: it looks first at the document, then the item level in the Approved Supplier List, then the category level in the Approved Supplier List, then the profile option. For quotations, since you cannot define a price tolerance at the document level, Purchasing looks first at the item level in the Approved Supplier List, then the category level in the Approved Supplier List, then the profile option. If you set one price update tolerance, it does not default to the other levels. If you set more than one price update tolerance, Purchasing uses the first one it finds in the order described above. If no Price Update Tolerance is set at any of these levels, then Purchasing performs no price tolerance checking.

The Price Update Tolerance fields and profile option apply only to blanket purchase agreements or catalog quotations in a price/sales catalog submission.

The Price Tolerance field in the Purchasing Options window has nothing to do with these Price Update Tolerance fields.

**Example 10–1 Price Tolerance Checking**

If you set the Price Update Tolerance field to 20 at the item-supplier level in the Approved Supplier List Supplier-Item Attributes window (and you haven't set

the price tolerance on the agreement), a price increase of more than 20 percent for that item and supplier will send the buyer a notification. If you set the Price Update Tolerance to 20 on the agreement, a price increase of more than 20 percent on that agreement will issue a notification. If you set the Price Update Tolerance to 0, and you haven't set it to something else at a lower level, then no automatic price updates are allowed. That is, you will receive a notification of every price increase that occurs at that level.

**To accept or reject price increases:**

1. Navigate to the Exceeded Price Tolerances window, accessible under the Purchase Orders menu.

You can also navigate to the Exceeded Price Tolerances window from the notification. Look for a notification titled *Price tolerance exceeded during BLANKET update or Price tolerance exceeded during QUOTATION update*.

2. Choose Accept or Reject.

For more information, see: Monitoring Price Increases in a Price/Sales Catalog Update, *Oracle Purchasing User's Guide, Release 11i*. Or see the online help for the window.

## Importing Account Information

When you import standard purchase orders, account information, if any, is imported through the PO\_DISTRIBUTIONS\_INTERFACE table. If the account numbers on the purchase orders are old—for example, if you are importing the purchase orders from a legacy system—you can leave the ACCOUNT columns in the PO\_DISTRIBUTIONS\_INTERFACE table blank. If you do, the Purchasing Documents Open Interface defaults the account information from the account setup in your current system. If you want to keep the account information on the purchase orders, the Purchasing Documents Open Interface still validates the data.

You can import multiple distributions through the PO\_DISTRIBUTIONS\_INTERFACE table.

## Purchasing Documents Open Interface Table Descriptions

Values for the columns in the PO\_HEADERS\_INTERFACE, PO\_LINES\_INTERFACE, and PO\_DISTRIBUTIONS\_INTERFACE tables can come from multiple sources. Your suppliers can send the data, you can enter data yourself through the Parameters windows in the EDI Catalog Inbound program or EDI Response to RFQ Inbound program for agreements or quotations only, and the Import Price Catalogs program in Purchasing can derive (or default) some of the data into the Purchasing tables. Most of the columns in these tables correspond to columns in the PO\_HEADERS\_ALL, PO\_LINES\_ALL, PO\_LINE\_LOCATIONS\_ALL, or PO\_DISTRIBUTIONS\_ALL tables in Purchasing.

Most of the columns that end with ID refer to internal identifier columns that uniquely identify a row in a table in Purchasing. The INTERFACE\_HEADER\_ID column in the PO\_HEADERS\_INTERFACE table is the primary key (or unique identifier) for this table that other Purchasing tables can reference. Most other ID columns are foreign keys—or identifiers that point—to other tables in Purchasing. For example, VENDOR\_SITE\_ID and VENDOR\_SITE\_CODE point to the PO\_VENDOR\_SITES table.

Some columns described below are not used currently by the Purchasing Documents Open Interface, but are reserved for future functionality.

The table descriptions below are based on what the Purchasing Documents Open Interface itself requires, whether the data is imported through e-Commerce Gateway or a program you write. The following definitions are used:

- *Required:* The Purchasing Documents Open Interface requires these values at a minimum, whether they are imported through a program you write or through e-Commerce Gateway. For example, the Purchasing Documents Open Interface requires a value for the column INTERFACE\_HEADER\_ID, but e-Commerce Gateway provides a value automatically.
- *Derived and/or Defaulted:* The Purchasing Documents Open Interface can derive or default columns in this category, depending on whether other values are provided. For example, the column AGENT\_ID is a Derived and/or Defaulted column if a valid AGENT\_NAME is provided.
- *Optional:* You do not have to enter values for columns in this category.
- *Reserved for Future Use:* As of this release, the Purchasing Documents Open Interface does not validate columns in this category before passing them into Purchasing, but has reserved these columns for future enhancements. Do not enter values in these columns.

**See Also**

*Oracle eTechnical Reference Manuals (eTRM), Release 11i*

**Purchasing Documents Headers Table Description**

The following table describes the PO\_HEADERS\_INTERFACE table.

**Table 10–6 Purchasing Documents Open Interface (Headers)**

<b>PO_HEADERS_INTERFACE Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived and/or Defaulted</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
INTERFACE_HEADER_ID	Number	X			
BATCH_ID	Number			x	
INTERFACE_SOURCE_CODE	Varchar2				x
PROCESS_CODE	Varchar2			x	
ACTION	Varchar2	X			
GROUP_CODE	Varchar2				x
ORG_ID	Number		x	x	
DOCUMENT_TYPE_CODE	Varchar2	X			
DOCUMENT_SUBTYPE	Varchar2			x	
DOCUMENT_NUM	Varchar2		x	x	
PO_HEADER_ID	Number		x	x	
RELEASE_NUM	Number			x	
PO_RELEASE_ID	Number				x
RELEASE_DATE	Date				x
CURRENCY_CODE	Varchar2		x	x	
RATE_TYPE	Varchar2			x	
RATE_TYPE_CODE	Varchar2		x	x	
RATE_DATE	Date		x	x	
RATE	Number		x	x	
AGENT_NAME	Varchar2			x	

**Table 10–6 Purchasing Documents Open Interface (Headers)**

<b>PO_HEADERS_INTERFACE</b>					
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived and/or Defaulted</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
AGENT_ID	Number		x	x	
VENDOR_NAME	Varchar2			x	
VENDOR_ID	Number	X	x		
VENDOR_SITE_CODE	Varchar2	X			
VENDOR_SITE_ID	Number	X	x		
VENDOR_CONTACT	Varchar2			x	
VENDOR_CONTACT_ID	Number		x	x	
SHIP_TO_LOCATION	Varchar2			x	
SHIP_TO_LOCATION_ID	Number		x	x	
BILL_TO_LOCATION	Varchar2			x	
BILL_TO_LOCATION_ID	Number		x	x	
PAYMENT_TERMS	Varchar2			x	
TERMS_ID	Number		x	x	
FREIGHT_CARRIER	Varchar2		x	x	
FOB	Varchar2		x	x	
FREIGHT_TERMS	Varchar2		x	x	
APPROVAL_STATUS	Varchar2			x	
APPROVED_DATE	Date		x		
REVISED_DATE	Date				x
REVISION_NUM	Number			x	
NOTE_TO_VENDOR	Varchar2				x
NOTE_TO_RECEIVER	Varchar2				x
CONFIRMING_ORDER_FLAG	Varchar2			x	
COMMENTS	Varchar2			x	
ACCEPTANCE_REQUIRED_FLAG	Varchar2		x	x	

**Table 10–6 Purchasing Documents Open Interface (Headers)**

<b>PO_HEADERS_INTERFACE</b>					
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived and/or Defaulted</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
ACCEPTANCE_DUE_DATE	Date			x	
AMOUNT_AGREED	Number			x	
AMOUNT_LIMIT	Number				x
MIN_RELEASE_AMOUNT	Number		x	x	
EFFECTIVE_DATE	Date	conditionally			
EXPIRATION_DATE	Date	conditionally			
PRINT_COUNT	Number		x	x	
PRINTED_DATE	Date				x
FIRM_FLAG	Varchar2				x
FROZEN_FLAG	Varchar2		x	x	
CLOSED_CODE	Varchar2		x	x	
CLOSED_DATE	Date				x
REPLY_DATE	Date		x	x	
REPLY_METHOD	Varchar2				x
RFQ_CLOSE_DATE	Date				x
QUOTE_WARNING_DELAY	Number		x	x	
VENDOR_DOC_NUM	Varchar2	X			
APPROVAL_REQUIRED_FLAG	Varchar2		x	x	
VENDOR_LIST	Varchar2				x
VENDOR_LIST_HEADER_ID	Number				x
FROM_HEADER_ID	Number		x	x	
FROM_TYPE_LOOKUP_CODE	Varchar2		x	x	
USSGL_TRANSACTION_CODE	Varchar2			x	
ATTRIBUTE_CATEGORY	Varchar2			x	

**Table 10–6    Purchasing Documents Open Interface (Headers)**

<b>PO_HEADERS_INTERFACE</b>					
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived and/or Defaulted</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
ATTRIBUTE1	Varchar2			x	
ATTRIBUTE2	Varchar2			x	
ATTRIBUTE3	Varchar2			x	
ATTRIBUTE4	Varchar2			x	
ATTRIBUTE5	Varchar2			x	
ATTRIBUTE6	Varchar2			x	
ATTRIBUTE7	Varchar2			x	
ATTRIBUTE8	Varchar2			x	
ATTRIBUTE9	Varchar2			x	
ATTRIBUTE10	Varchar2			x	
ATTRIBUTE11	Varchar2			x	
ATTRIBUTE12	Varchar2			x	
ATTRIBUTE13	Varchar2			x	
ATTRIBUTE14	Varchar2			x	
ATTRIBUTE15	Varchar2			x	
CREATION_DATE	Date		x	x	
CREATED_BY	Number		x	x	
LAST_UPDATE_DATE	Date		x	x	
LAST_UPDATED_BY	Number		x	x	
LAST_UPDATE_LOGIN	Number		x	x	
REQUEST_ID	Number		x	x	
PROGRAM_APPLICATION_ID	Number		x	x	
PROGRAM_ID	Number		x	x	
PROGRAM_UPDATE_DATE	Date		x	x	
REFERENCE_NUM	Varchar2			x	

**Table 10–6 Purchasing Documents Open Interface (Headers)**

<b>PO_HEADERS_INTERFACE</b>		<b>Required</b>	<b>Derived and/or Defaulted</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
<b>Column Name</b>	<b>Type</b>				
LOAD_SOURCING_RULES_FLAG	Varchar2			x	
VENDOR_NUM	Varchar2			x	
FROM_RFQ_NUM	Varchar2			x	
WF_GROUP_ID	Number		x	x	
PCARD_ID	Number			x	
PAY_ON_CODE	Varchar2			x	
GLOBAL_AGREEMENT_FLAG	Varchar2			x	
CONSUME_REQ_DEMAND_FLAG	Varchar2			x	

Following is a description of all of the required and conditionally required columns in the PO\_HEADERS\_INTERFACE table, and some other columns. Remaining column descriptions can be found in the *Oracle eTechnical Reference Manuals (eTRM)*, Release 11i.

#### **INTERFACE\_HEADER\_ID Required**

This column indicates an identifier for the purchase order or catalog header. If you import price/sales catalog information through e-Commerce Gateway, this identifier is provided automatically.

#### **BATCH\_ID Optional**

When you import the price/sales catalog information through e-Commerce Gateway, it provides a concurrent program grouping identifier for the submission.

#### **INTERFACE\_SOURCE\_CODE Reserved for Future Use**

This column identifies the source (for example, e-Commerce Gateway) of the price/sales catalog data.

### **PROCESS\_CODE Optional**

This column indicates the status of a row in the interface table. It accepts values of PENDING, ACCEPTED, REJECTED, or NOTIFIED. A PENDING transaction has not yet been processed. An ACCEPTED transaction has been successfully processed. A REJECTED transaction contains an error which shows up in the Purchasing Interface Errors Report. A NOTIFIED transaction, which includes a price update that exceeded the price tolerance, has been communicated to the buyer through the Notifications Summary window.

When you import price/sales catalog information through e-Commerce Gateway, e-Commerce Gateway defaults a value of PENDING in this column automatically. Then, the Purchasing Documents Open Interface sets the value to ACCEPTED, REJECTED, or NOTIFIED.

### **ACTION Required**

This column indicates whether the price/sales catalog information is an original (new), replacement, or update file. This column accepts values of ORIGINAL, REPLACE, or UPDATE.

### **GROUP\_CODE Reserved for Future Use**

This column indicates an identifier for the batch being imported.

### **DOCUMENT\_TYPE\_CODE Required**

This column accepts values of STANDARD, BLANKET, or QUOTATION. It is required to match incoming documents with existing documents.

### **VENDOR\_NAME or VENDOR\_ID Required**

VENDOR\_NAME indicates the supplier for the document. VENDOR\_ID indicates the supplier identifier number. Make sure the supplier is also set up as a trading partner in the e-Commerce Gateway application, if you're importing data through e-Commerce Gateway. If you provide a value for one of these columns, you do not have to provide a value for the other.

### **VENDOR\_SITE\_CODE or VENDOR\_SITE\_ID Conditionally Required**

This column indicates the supplier site for the document. If the supplier has more than one site, the Purchasing Documents Open Interface cannot default a site. The site also needs to be set up in e-Commerce Gateway, if you're importing data through e-Commerce Gateway. If you provide a value for one of these columns, you do not have to provide a value for the other. One of these columns is required

unless you are loading or updating a Quotation through the Purchasing Documents Open Interface.

**EFFECTIVE\_DATE Conditionally Required**

This column must be populated when replacing an existing purchasing document. The value in this column is used to locate the old price/sales catalog and expire it.

**EXPIRATION\_DATE Conditionally Required**

This column must be populated when replacing an existing purchasing document. The value in this column is used to locate the old price/sales catalog and expire it.

**VENDOR\_DOC\_NUM Required**

This column must be populated when replacing or updating an existing purchasing document. It is also required to make sure that documents in an Original submission don't already exist in Purchasing.

**LOAD\_SOURCING\_RULES\_FLAG Optional**

This column indicates whether to create sourcing rules with the purchasing document. You choose this option in the Parameters window when importing the price/sales catalog.

**GLOBAL\_AGREEMENT\_FLAG Optional**

A global agreement can be imported using PDOI by populating this column with a value of Y. The parameter window also has a new parameter called global agreement with a yes or no value set for this purpose.

Note that when a global agreement is approved and you have specified the creation of sourcing rules, the approval process creates the sourcing rule and the assignment in the owing organization.

## Purchasing Documents Lines Table Description

The following table describes the PO\_LINES\_INTERFACE table.

**Table 10–7 Purchasing Documents Open Interface (Lines)**

<b>PO_LINES_INTERFACE</b>			<b>Derived and/or Defaulted</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
<b>Column Name</b>	<b>Type</b>	<b>Required</b>			
INTERFACE_LINE_ID	Number	x			
INTERFACE_HEADER_ID	Number	x			
ACTION	Varchar2				x
GROUP_CODE	Varchar2				x
LINE_NUM	Number	conditionally			
PO_LINE_ID	Number		x	x	
SHIPMENT_NUM	Number	conditionally			
LINE_LOCATION_ID	Number		x	x	
SHIPMENT_TYPE	Varchar2		x	x	
REQUISITION_LINE_ID	Number				x
DOCUMENT_NUM	Number				x
RELEASE_NUM	Number				x
PO_HEADER_ID	Number		x	x	
PO_RELEASE_ID	Number				x
EXPIRATION_DATE	Date			x	
SOURCE_SHIPMENT_ID	Number				x
CONTRACT_NUM	Varchar2				x
LINE_TYPE	Varchar2			x	
LINE_TYPE_ID	Number		x	x	
ITEM	Varchar2	conditionally			
ITEM_ID	Number		x	x	
ITEM_REVISION	Varchar2			x	
CATEGORY	Varchar2			x	

**Table 10–7 Purchasing Documents Open Interface (Lines)**

<b>PO_LINES_INTERFACE</b>			<b>Derived and/or Defaulted</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
<b>Column Name</b>	<b>Type</b>	<b>Required</b>			
CATEGORY_ID	Number		x	x	
ITEM_DESCRIPTION	Varchar2	conditionally	x		
VENDOR_PRODUCT_NUM	Varchar2		x	x	
UOM_CODE	Varchar2		x	x	
UNIT_OF_MEASURE	Varchar2		x	x	
QUANTITY	Number		x	x	
COMMITTED_AMOUNT	Number			x	
MIN_ORDER_QUANTITY	Number			x	
MAX_ORDER_QUANTITY	Number			x	
UNIT_PRICE	Number		x	x	
LIST_PRICE_PER_UNIT	Number		x	x	
MARKET_PRICE	Number		x	x	
ALLOW_PRICE_OVERRIDE_FLAG	Varchar2		x	x	
NOT_TO_EXCEED_PRICE	Number			x	
NEGOTIATED_BY_PREPARER_FLAG	Varchar2		x	x	
UN_NUMBER	Varchar2			x	
UN_NUMBER_ID	Number		x	x	
HAZARD_CLASS	Varchar2			x	
HAZARD_CLASS_ID	Number		x	x	
NOTE_TO_VENDOR	Varchar2				x
TRANSACTION_REASON_CODE	Varchar2				x
TAXABLE_FLAG	Varchar2		x	x	
TAX_NAME	Varchar2		x	x	

**Table 10–7 Purchasing Documents Open Interface (Lines)**

<b>PO_LINES_INTERFACE</b>			<b>Derived and/or Defaulted</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
<b>Column Name</b>	<b>Type</b>	<b>Required</b>			
TYPE_1099	Varchar2		x		
CAPITAL_EXPENSE_FLAG	Varchar2		x	x	
INSPECTION_REQUIRED_FLAG	Varchar2		x	x	
RECEIPT_REQUIRED_FLAG	Varchar2		x	x	
PAYMENT_TERMS	Varchar2			x	
TERMS_ID	Number		x	x	
PRICE_TYPE	Varchar2		x	x	
MIN_RELEASE_AMOUNT	Number		x	x	
PRICE_BREAK_LOOKUP_CODE	Varchar2		x	x	
USSGL_TRANSACTION_CODE	Varchar2			x	
CLOSED_CODE	Varchar2		x	x	
CLOSED_REASON	Varchar2				x
CLOSED_DATE	Date				x
CLOSED_BY	Number				x
INVOICE_CLOSE_TOLERANCE	Number				x
RECEIVE_CLOSE_TOLERANCE	Number				x
FIRM_FLAG	Varchar2				x
DAYS_EARLY_RECEIPT_ALLOWED	Number			x	
DAYS_LATE_RECEIPT_ALLOWED	Number			x	
ENFORCE_SHIP_TO_LOCATION_CODE	Varchar2			x	

**Table 10–7 Purchasing Documents Open Interface (Lines)**

<b>PO_LINES_INTERFACE</b>		<b>Required</b>	<b>Derived and/or Defaulted</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
<b>Column Name</b>	<b>Type</b>				
ALLOW_SUBSTITUTE_RECEIPTS_FLAG	Varchar2			x	
RECEIVING_ROUTING	Varchar2			x	
RECEIVING_ROUTING_ID	Number			x	
QTY_RCV_TOLERANCE	Number		x	x	
OVER_TOLERANCE_ERROR_FLAG	Varchar2			x	
QTY_RCV_EXCEPTION_CODE	Varchar2		x	x	
RECEIPT_DAYS_EXCEPTION_CODE	Varchar2			x	
SHIP_TO_ORGANIZATION_CODE	Varchar2			x	
SHIP_TO_ORGANIZATION_ID	Number		x	x	
SHIP_TO_LOCATION	Varchar2			x	
SHIP_TO_LOCATION_ID	Number		x	x	
NEED_BY_DATE	Date			x	
PROMISED_DATE	Date			x	
ACCRUE_ON_RECEIPT_FLAG	Varchar2				x
LEAD_TIME	Number			x	
LEAD_TIME_UNIT	Varchar2			x	
PRICE_DISCOUNT	Number			x	
FREIGHT_CARRIER	Varchar2		x	x	
FOB	Varchar2		x	x	
FREIGHT_TERMS	Varchar2		x	x	
EFFECTIVE_DATE	Date	conditionally			

**Table 10–7 Purchasing Documents Open Interface (Lines)**

<b>PO_LINES_INTERFACE</b>			<b>Derived and/or Defaulted</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
<b>Column Name</b>	<b>Type</b>	<b>Required</b>			
EXPIRATION_DATE	Date	conditionally			
FROM_HEADER_ID	Number			x	
FROM_LINE_ID	Number			x	
FROM_LINE_LOCATION_ID	Number			x	
LINE_ATTRIBUTE_CATEGORY_LINES	Varchar2			x	
LINE_ATTRIBUTE1	Varchar2			x	
LINE_ATTRIBUTE2	Varchar2			x	
LINE_ATTRIBUTE3	Varchar2			x	
LINE_ATTRIBUTE4	Varchar2			x	
LINE_ATTRIBUTE5	Varchar2			x	
LINE_ATTRIBUTE6	Varchar2			x	
LINE_ATTRIBUTE7	Varchar2			x	
LINE_ATTRIBUTE8	Varchar2			x	
LINE_ATTRIBUTE9	Varchar2			x	
LINE_ATTRIBUTE10	Varchar2			x	
LINE_ATTRIBUTE11	Varchar2			x	
LINE_ATTRIBUTE12	Varchar2			x	
LINE_ATTRIBUTE13	Varchar2			x	
LINE_ATTRIBUTE14	Varchar2			x	
LINE_ATTRIBUTE15	Varchar2			x	
SHIPMENT_ATTRIBUTE_CATEGORY	Varchar2			x	
SHIPMENT_ATTRIBUTE1	Varchar2			x	
SHIPMENT_ATTRIBUTE2	Varchar2			x	
SHIPMENT_ATTRIBUTE3	Varchar2			x	

**Table 10–7 Purchasing Documents Open Interface (Lines)**

<b>PO_LINES_INTERFACE</b>		<b>Required</b>	<b>Derived and/or Defaulted</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
<b>Column Name</b>	<b>Type</b>				
SHIPMENT_ATTRIBUTE4	Varchar2			x	
SHIPMENT_ATTRIBUTE5	Varchar2			x	
SHIPMENT_ATTRIBUTE6	Varchar2			x	
SHIPMENT_ATTRIBUTE7	Varchar2			x	
SHIPMENT_ATTRIBUTE8	Varchar2			x	
SHIPMENT_ATTRIBUTE9	Varchar2			x	
SHIPMENT_ATTRIBUTE10	Varchar2			x	
SHIPMENT_ATTRIBUTE11	Varchar2			x	
SHIPMENT_ATTRIBUTE12	Varchar2			x	
SHIPMENT_ATTRIBUTE13	Varchar2			x	
SHIPMENT_ATTRIBUTE14	Varchar2			x	
SHIPMENT_ATTRIBUTE15	Varchar2			x	
LAST_UPDATE_DATE	Date			x	
LAST_UPDATED_BY	Number		x	x	
LAST_UPDATE_LOGIN	Number		x	x	
CREATION_DATE	Date		x	x	
CREATED_BY	Number		x	x	
REQUEST_ID	Number		x	x	
PROGRAM_APPLICATION_ID	Number		x	x	
PROGRAM_ID	Number		x	x	
PROGRAM_UPDATE_DATE	Date		x	x	
ORGANIZATION_ID	Number		x	x	
ITEM_ATTRIBUTE_CATEGORY	Varchar2			x	
ITEM_ATTRIBUTE1	Varchar2			x	

**Table 10–7 Purchasing Documents Open Interface (Lines)**

<b>PO_LINES_INTERFACE</b>		<b>Required</b>	<b>Derived and/or Defaulted</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
<b>Column Name</b>	<b>Type</b>				
ITEM_ATTRIBUTE2	Varchar2			x	
ITEM_ATTRIBUTE3	Varchar2			x	
ITEM_ATTRIBUTE4	Varchar2			x	
ITEM_ATTRIBUTE5	Varchar2			x	
ITEM_ATTRIBUTE6	Varchar2			x	
ITEM_ATTRIBUTE7	Varchar2			x	
ITEM_ATTRIBUTE8	Varchar2			x	
ITEM_ATTRIBUTE9	Varchar2			x	
ITEM_ATTRIBUTE10	Varchar2			x	
ITEM_ATTRIBUTE11	Varchar2			x	
ITEM_ATTRIBUTE12	Varchar2			x	
ITEM_ATTRIBUTE13	Varchar2			x	
ITEM_ATTRIBUTE14	Varchar2			x	
ITEM_ATTRIBUTE15	Varchar2			x	
UNIT_WEIGHT	Number			x	
WEIGHT_UOM_CODE	Varchar2			x	
VOLUME_UOM_CODE	Varchar2			x	
UNIT_VOLUME	Number			x	
TEMPLATE_ID	Number		x	x	
TEMPLATE_NAME	Varchar2			x	
LINE_REFERENCE_NUM	Varchar2			x	
SOURCING_RULE_NAME	Varchar2			x	
TAX_STATUS_INDICATOR	Varchar2				x
PROCESS_CODE	Varchar2	for internal use only			
PRICE_CHG_ACCEPT_FLAG	Varchar2	for internal use only			

**Table 10–7 Purchasing Documents Open Interface (Lines)**

<b>PO_LINES_INTERFACE</b>			<b>Derived and/or Defaulted</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
<b>Column Name</b>	<b>Type</b>	<b>Required</b>			
PRICE_BREAK_FLAG	Varchar2	for internal use only			
PRICE_UPDATE_TOLERANCE	Number			x	
TAX_USER_OVERRIDE_FLAG	Varchar2			x	
TAX_CODE_ID	Number			x	
NOTE_TO_RECEIVER	Varchar2			x	
OKE_CONTRACT_HEADER_ID	Number				x
OKE_CONTRACT_HEADER_NUM	Varchar2				x
OKE_CONTRACT_VERSION_ID	Number				x
SECONDARY_UNIT_OF_MEASURE	Varchar2				x
SECONDARY_UOM_CODE	Varchar2				x
SECONDARY_QUANTITY	Number				x
PREFERRED_GRADE	Number				x
VMI_FLAG	Number				x
AUCTION_HEADER_ID	Number				x
AUCTION_LINE_NUMBER	Number				x
AUCTION_DISPLAY_NUMBER	Varchar2				x
BID_NUMBER	Number				x
BID_LINE_NUMBER	Number				x
ORIG_FROM_REQ_FLAG	Varchar2				x
CONSIGNED_FLAG	Varchar2				x

Following is a description of all of the required and conditionally required columns in the PO\_LINES\_INTERFACE table, and some other columns. Remaining column descriptions can be found in the *Oracle eTechnical Reference Manuals (eTRM), Release 11i*.

**INTERFACE\_LINE\_ID Required**

This column indicates the unique identifier of the line record in the PO\_LINES\_INTERFACE table. If you import price/sales catalog information through e-Commerce Gateway, this identifier is provided automatically.

**INTERFACE\_HEADER\_ID Required**

This column indicates the unique identifier of the header record to which this line belongs. If you import price/sales catalog information through e-Commerce Gateway, this identifier is provided automatically.

**LINE\_NUM Conditionally Required**

A line number is required for standard purchase orders only.

**SHIPMENT\_NUM Conditionally Required**

A shipment number is required for standard purchase orders only.

**GROUP\_CODE Reserved for Future Use**

This column indicates an identifier for the batch being imported.

**EFFECTIVE\_DATE Conditionally Required**

If you choose to create sourcing rules with the imported price/sales catalog information, then you need to provide a value in this column.

**EXPIRATION\_DATE Conditionally Required**

*In an Original or Replace submission:* If you choose to create sourcing rules with the imported price/sales catalog information, then you need to provide a value in this column.

*In an Update submission:* When updating an existing line, the value in this column is used to expire the line. When adding a new line, the value in this column is required if you choose to create sourcing rules with the imported price/sales catalog information.

**ITEM or ITEM\_DESCRIPTION**Conditionally Required

If you want to create items in the item master, then you need to supply the item information.

Both an ITEM and an ITEM\_DESCRIPTION are required if an item is being created in the item master. If an item is being updated, the ITEM\_DESCRIPTION is required.

**SOURCING\_RULE\_NAME**Optional

If sourcing rules are being used, this column indicates the name of the sourcing rule.

**PROCESS\_CODE**Internal Use Only

This column indicates the status of a row in the interface table. It is updated internally with values of null (which means PENDING), ACCEPTED, or NOTIFIED. A PENDING transaction has not yet been processed. An ACCEPTED transaction has been successfully processed. A NOTIFIED transaction, which includes a price update that exceeded the price tolerance, has been communicated to the buyer through the Notifications Summary window. The Purchasing Documents Open Interface sets the value of this column to ACCEPTED or NOTIFIED.

This column is for internal use only. Unless you are debugging the open interface, do not use a program or script to update this column yourself.

**PRICE\_CHG\_ACCEPT\_FLAG**Internal Use Only

This column indicates internally whether a price has changed in an Update submission. If the PROCESS\_CODE value is NOTIFIED, NULL means that the item price update is pending—waiting for the buyer to respond with Accept or Reject in the Exceeded Price Tolerances window. Y means that the price update was accepted. N means that it was rejected.

This column is for internal use only. Unless you are debugging the open interface, do not use a program or script to update this column yourself.

**PRICE\_BREAK\_FLAG**Internal Use Only

This column indicates internally whether a record in an Update submission includes price breaks.

This column is for internal use only. Unless you are debugging the open interface, do not use a program or script to update this column yourself.

## Purchasing Documents Distributions Table Description

The following table describes the PO\_DISTRIBUTIONS\_INTERFACE table.

**Table 10–8 Purchasing Documents Open Interface (Distributions)**

<b>PO_DISTRIBUTIONS_INTERFACE</b>			<b>Derived and/or Defaulted</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
<b>Column Name</b>	<b>Type</b>	<b>Required</b>			
INTERFACE_HEADER_ID	Number	x			
INTERFACE_LINE_ID	Number	x			
INTERFACE_DISTRIBUTION_ID	Number	x			
PO_HEADER_ID	Number			x	
PO_RELEASE_ID	Number				x
PO_LINE_ID	Number			x	
LINE_LOCATION_ID	Number			x	
PO_DISTRIBUTION_ID	Number			x	
DISTRIBUTION_NUM	Number	x			
SOURCE_DISTRIBUTION_ID	Number				x
ORG_ID	Number		x	x	
QUANTITY_ORDERED	Number	x			
QUANTITY_DELIVERED	Number				x
QUANTITY_BILLED	Number				x
QUANTITY_CANCELLED	Number				x
RATE_DATE	Date				x
RATE	Number				x
DELIVER_TO_LOCATION	Varchar2			x	
DELIVER_TO_LOCATION_ID	Number		x	x	
DELIVER_TO_PERSON_FULL_NAME	Varchar2			x	
DELIVER_TO_PERSON_ID	Number		x	x	
DESTINATION_TYPE	Varchar2			x	

**Table 10–8 Purchasing Documents Open Interface (Distributions)**

<b>PO_DISTRIBUTIONS_ INTERFACE</b>			<b>Derived and/or Defaulted</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
<b>Column Name</b>	<b>Type</b>	<b>Required</b>			
DESTINATION_TYPE_CODE	Varchar2		x	x	
DESTINATION_ORGANIZATION	Varchar2			x	
DESTINATION_ORGANIZATION_ID	Number		x	x	
DESTINATION_SUBINVENTORY	Varchar2			x	
DESTINATION_CONTEXT	Varchar2			x	
SET_OF_BOOKS	Varchar2)			x	
SET_OF_BOOKS_ID	Number		x	x	
CHARGE_ACCOUNT	Varchar2			x	
CHARGE_ACCOUNT_ID	Number	x	x		
BUDGET_ACCOUNT	Varchar2			x	
BUDGET_ACCOUNT_ID	Number		x	x	
ACCURAL_ACCOUNT	Varchar2			x	
ACCRUAL_ACCOUNT_ID	Number		x	x	
VARIANCE_ACCOUNT	Varchar2			x	
VARIANCE_ACCOUNT_ID	Number		x	x	
AMOUNT_BILLED	Number				x
ACCRUE_ON_RECEIPT_FLAG	Varchar2		x	x	
ACCRUED_FLAG	Varchar2				x
PREVENT_ENCUMBRANCE_FLAG	Varchar2		x	x	
ENCUMBERED_FLAG	Varchar2				x
ENCUMBERED_AMOUNT	Number				x
UNENCUMBERED_QUANTITY	Number				x
UNENCUMBERED_AMOUNT	Number				x

**Table 10–8 Purchasing Documents Open Interface (Distributions)**

<b>PO_DISTRIBUTIONS_ INTERFACE</b>					
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived and/or Defaulted</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
FAILED_FUNDS	Varchar2				x
FAILED_FUNDS_LOOKUP_CODE	Varchar2				x
GL_ENCUMBERED_DATE	Date				x
GL_ENCUMBERED_PERIOD_NAME	Varchar2				x
GL_CANCELLED_DATE	Date				x
GL_CLOSED_DATE	Date				x
REQ_HEADER_REFERENCE_NUM	Varchar2			x	
REQ_LINE_REFERENCE_NUM	Varchar2			x	
REQ_DISTRIBUTION_ID	Number				
WIP_ENTITY	Varhcar2			x	
WIP_ENTITY_ID	Number		x	x	
WIP_OPERATION_SEQ_NUM	Number			x	
WIP_RESOURCE_SEQ_NUM	Number			x	
WIP_REPETITIVE_SCHEDULE	Varchar2)			x	
WIP_REPETITIVE_SCHEDULE_ID	Number		x	x	
WIP_LINE_CODE	Varchar2			x	
WIP_LINE_ID	Number		x	x	
BOM_RESOURCE_CODE	Varchar2			x	
BOM_RESOURCE_ID	Number		x	x	
USSGL_TRANSACTION_CODE	Varchar2			x	
GOVERNMENT_CONTEXT	Varchar2)			x	
PROJECT	Varchar2			x	
PROJECT_ID	Number		x	x	

**Table 10–8 Purchasing Documents Open Interface (Distributions)**

<b>PO_DISTRIBUTIONS_ INTERFACE</b>				<b>Derived and/or Defaulted</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
<b>Column Name</b>	<b>Type</b>	<b>Required</b>				
TASK	Varchar2				x	
TASK_ID	Number		x		x	
EXPENDITURE	Varchar2				x	
EXPENDITURE_TYPE	Varchar2		x		x	
PROJECT_ACCOUNTING_ CONTEXT	Varchar2				x	
EXPENDITURE_ ORGANIZATION	Varchar2				x	
EXPENDITURE_ ORGANIZATION_ID	Number		x		x	
PROJECT_RELATED_FLAG	Varchar2				x	
EXPENDITURE_ITEM_DATE	DATE				x	
ATTRIBUTE_CATEGORY	Varchar2				x	
ATTRIBUTE1	Varchar2				x	
ATTRIBUTE2	Varchar2				x	
ATTRIBUTE3	Varchar2				x	
ATTRIBUTE4	Varchar2				x	
ATTRIBUTE5	Varchar2)				x	
ATTRIBUTE6	Varchar2				x	
ATTRIBUTE7	Varchar2				x	
ATTRIBUTE8	Varchar2				x	
ATTRIBUTE9	Varchar2				x	
ATTRIBUTE10	Varchar2				x	
ATTRIBUTE11	Varchar2				x	
ATTRIBUTE12	Varchar2				x	
ATTRIBUTE13	Varchar2				x	

**Table 10–8 Purchasing Documents Open Interface (Distributions)**

<b>PO_DISTRIBUTIONS_ INTERFACE</b>					
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived and/or Defaulted</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
ATTRIBUTE14	Varchar2			x	
ATTRIBUTE15	Varchar2			x	
LAST_UPDATE_DATE	Date			x	
LAST_UPDATED_BY	Number			x	
LAST_UPDATE_LOGIN	Number			x	
CREATION_DATE	Date			x	
CREATED_BY	Number			x	
REQUEST_ID	Number			x	
PROGRAM_APPLICATION_ID	Number			x	
PROGRAM_ID	Number			x	
PROGRAM_UPDATE_DATE	Date			x	
END_ITEM_UNIT_NUMBER	Varchar2			x	
RECOVERABLE_TAX	Number			x	
NONRECOVERABLE_TAX	Number			x	
RECOVERY_RATE	Number		x	x	
TAX_RECOVERY_OVERRIDE_FLAG	Varchar2			x	
AWARD_ID	Number				x
CHARGE_ACCOUNT_SEGMENT1	Varchar2)			x	
CHARGE_ACCOUNT_SEGMENT2	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT3	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT4	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT5	Varchar2			x	

**Table 10–8 Purchasing Documents Open Interface (Distributions)**

<b>PO_DISTRIBUTIONS_ INTERFACE</b>			<b>Derived and/or Defaulted</b>	<b>Option- al</b>	<b>Reserv ed for Future Use</b>
<b>Column Name</b>	<b>Type</b>	<b>Required</b>			
CHARGE_ACCOUNT_SEGMENT6	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT7	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT8	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT9	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT10	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT11	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT12	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT13	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT14	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT15	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT16	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT17	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT18	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT19	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT20	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT21	Varchar2			x	

**Table 10–8 Purchasing Documents Open Interface (Distributions)**

<b>PO_DISTRIBUTIONS_ INTERFACE</b>			<b>Derived and/or Defaulted</b>	<b>Option- al</b>	<b>Reserv ed for Future Use</b>
<b>Column Name</b>	<b>Type</b>	<b>Required</b>			
CHARGE_ACCOUNT_SEGMENT22	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT23	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT24	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT25	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT26	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT27	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT28	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT29	Varchar2			x	
CHARGE_ACCOUNT_SEGMENT30	Varchar2			x	
OKE_CONTRACT_LINE_ID	Number				x
OKE_CONTRACT_LINE_NUM	Varchar2				x
OKE_CONTRACT_DELIVERABLE_ID	Number				x
OKE_CONTRACT_DELIVERABLE_NUM	Varchar2				x

## Derivation

In general, the same derivation and defaulting rules apply to the interface tables as apply when you enter information in the Purchase Orders or Quotations windows. For example, the column `ITEM_DESCRIPTION` is derived or defaulted only if a valid `ITEM` or `ITEM_ID` is provided.

The Purchasing Documents Open Interface supports column value passing by user value; for example, if you provide a `VENDOR_NAME` or `VENDOR_NUM`, the `VENDOR_ID` is derived. Purchasing uses the derivation source according to the following rules:

- Key (ID) columns always override value columns. If you populate both the key column and the corresponding value column, then the key column is always used for processing. For example, if `VENDOR_NAME` and `VENDOR_ID` contradict each other, `VENDOR_ID` is used.
- Derivation is performed before defaulting, and generally overrides defaulting. (Derivation refers to deriving a full value from a partial value given; defaulting refers to using a default value in Purchasing when no value is given.) For example, if you load the `SHIP_TO_LOCATION` value in the interface tables, Purchasing derives the `SHIP_TO_LOCATION_ID` from it instead of from the default ship-to information associated with your supplier.

## Defaulting

The Purchasing Documents Open Interface supports the same defaulting mechanisms as the Purchasing document entry windows. Defaults can come from many sources, such as the Purchasing Options, Financial Options, Suppliers, and Master Item (or Organization Items) windows.

Defaulting rules are applied as follows:

- Defaults do not override values that you specify.
- Default values that are no longer active or valid are not used.

## Validation

The Purchasing Documents Open Interface does not validate those columns described as "Reserved for Future Use" on the previous pages.

### Standard Validation

Purchasing validates all required columns in the interface table. For specific information on the data implied by these columns, see the *Oracle eTechnical Reference Manuals (eTRM), Release 11i* for details.

### Other Validation

The Purchasing Documents Open Interface performs the same validation as the Purchasing document entry windows before allowing the data to be committed to the base tables.

If multiple errors are detected, each error is written to the PO\_INTERFACE\_ERRORS table and displayed in the Purchasing Interface Errors Report.

Not only are all required columns validated so that they are populated with acceptable values, but also errors are signaled for those columns that have values but should not. For example, if a RATE\_TYPE does not need to be defined (because exchange rate information is not needed) but contains a value, an error will be signaled.

# Resolving Failed Purchasing Interface Rows

## Error Messages

Purchasing may display specific error messages during interface processing. For more details on these messages, please see the *Oracle Applications Message Reference Manual*, in HTML format on the documentation CD-ROM for Release 11i.

## A Note about Debugging

If you receive an error in a document, you can fix the error and resubmit the document again by reusing a header record in the PO\_HEADERS\_INTERFACE table using SQL\*Plus, if you're using a test environment. If you do this, set the PROCESS\_CODE column in the PO\_HEADERS\_INTERFACE table to PENDING and be sure to reset the following columns to NULL for all lines belonging to that header in the PO\_LINES\_INTERFACE table:

- PROCESS\_CODE
- PRICE\_CHG\_ACCEPT\_FLAG
- PRICE\_BREAK\_FLAG

## Viewing Failed Transactions

You can report on all rows that failed validation by using the Purchasing Interface Errors Report. For each row in the Purchasing Documents Open Interface tables that fails validation, the Purchasing Documents Open Interface creates one or more rows with error information in the PO\_INTERFACE\_ERRORS table. The Purchasing Interface Errors Report lists all the columns in the PO\_INTERFACE\_ERRORS table that failed validation along with the reason for the failure. This report is generated through the Submit Request window and processed as other standard reports in Purchasing.

The following table shows the error messages and their meaning:

**Table 10–9 Purchasing Documents Open Interface Error Messages**

Error Message	Meaning
PO_PDOI_AMT_LIMIT_LT_AGREED	Amount Limit (VALUE= &AMOUNT_LIMIT) is less than Amount Agreed (VALUE=&VALUE).
PO_PDOI_AMT_LIMIT_LT_RELEASE	Amount Limit (VALUE= &AMOUNT_LIMIT) is less than Minimum Release Amount (VALUE=&VALUE).

**Table 10–9 Purchasing Documents Open Interface Error Messages**

Error Message	Meaning
PO_PDOI_AMT_LIMIT_LT_TOTREL	Amount Limit (VALUE= &AMOUNT_LIMIT) is less than Total Amount Released (VALUE=&VALUE).
PO_PDOI_CATG_ALREADY_EXISTS	Catalog being created with supplier document number [DOC_NUMBER] already exists.
PO_PDOI_COLUMN_NOT_NULL	Column &COLUMN_NAME should not be NULL.
PO_PDOI_COLUMN_NOT_ZERO	Column &COLUMN_NAME should be 0.
PO_PDOI_COLUMN_NULL	Column &COLUMN_NAME (VALUE=&VALUE) must be NULL.
PO_PDOI_DERV_ERROR	Derivation Error: &COLUMN_NAME (VALUE= &VALUE) specified is invalid.
PO_PDOI_DERV_PART_NUM_ERROR	Cannot derive ITEM_ID for the specified buyer item_number or VENDOR_PRODUCT_NUM.
PO_PDOI_DIFF_ITEM_DESC	Pre-defined item description cannot be changed for this item.
PO_PDOI_DOC_NUM_UNIQUE	Document Num must have a unique value. &VALUE already exists.
PO_PDOI_EFF_DATE_GT_HEADER	Effective Date (VALUE =&VALUE) specified should not be less than the effective date specified.
PO_PDOI_EXCEED_PRICE_NULL NOT TO EXCEED PRICE (VALUE= &VALUE)	Must be NULL if ALLOW_PRICE_OVERRIDE_FLAG is N.
PO_PDOI_INVALID_ACTION	Action (VALUE= &VALUE) is invalid.
PO_PDOI_INVALID_BILL_LOC_ID	Bill-To Location ID (VALUE=&VALUE) is not valid.
PO_PDOI_INVALID_BUYER	Buyer (VALUE=&VALUE) specified is not a valid buyer.
PO_PDOI_INVALID_CATEGORY_ID	CATEGORY ID (VALUE =&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_CURRENCY	Currency Code (VALUE =&VALUE) specified is inactive or invalid.

**Table 10–9 Purchasing Documents Open Interface Error Messages**

Error Message	Meaning
PO_PDOI_INVALID_DISCOUNT	DISCOUNT (VALUE =&VALUE) specified is invalid.
PO_PDOI_INVALID_DOC_NUM	Document Number (VALUE= &VALUE) specified is invalid.
PO_PDOI_INVALID_DOC_STATUS	Sourcing rule can be created only if document is loaded as an approved document.
PO_PDOI_INVALID_FLAG_VALUE	&COLUMN_NAME (VALUE =&VALUE) is invalid. It can either be Y or N.
PO_PDOI_INVALID_FOB	FOB (VALUE=&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_FREIGHT_CARR	FREIGHT CARRIER (VALUE =&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_FREIGHT_TERMS	FREIGHT TERMS (VALUE =&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_HAZ_ID	HAZARD CLASS ID (VALUE =&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_INTER_LINE_REC	Record specified in PO_LINES_INTERFACE is invalid. It is neither a new record in PO_LINES nor PO_LINE_LOCATIONS.
PO_PDOI_INVALID_ITEM_FLAG	Item Flag (VALUE= &VALUE) is invalid.
PO_PDOI_INVALID_ITEM_ID	ITEM ID (VALUE =&VALUE) is not a valid purchasable item.
PO_PDOI_INVALID_ITEM_REVISION	REVISION NUM (VALUE =&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_ITEM_UOM_CODE	ITEM UOM CODE (VALUE =&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_LEAD_TIME	Lead Time Unit (VALUE=&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_LINE_TYPE_ID	LINE TYPE ID (VALUE =&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_LINE_TYPE_INFO	&COLUMN_NAME (VALUE=&VALUE) must match the value from the PO_LINE_TYPES table (VALUE=&LINE_TYPE).

**Table 10–9 Purchasing Documents Open Interface Error Messages**

Error Message	Meaning
PO_PDOI_INVALID_LOCATION_REC	Information specified in PO_LINES_INTERFACE table does not match the parent record in PO_LINES table.
PO_PDOI_INVALID_NUM_OF_LINES	&COLUMN_NAME There should be at least one line per document.
PO_PDOI_INVALID_OP_ITEM_ID	ITEM ID (VALUE =&VALUE) is not a valid purchasable and outside operational item.
PO_PDOI_INVALID_ORIG_CATALOG	&DOC_NUMBER specified is not a valid original catalog.
PO_PDOI_INVALID_PAY_TERMS	PAYMENT TERMS (VALUE =&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_PRICE	NOT TO EXCEED PRICE. (VALUE= &VALUE) has to be greater or equal to UNIT PRICE (VALUE=&UNIT_PRICE).
PO_PDOI_INVALID_PRICE_BREAK	PRICE BREAK LOOKUP CODE (VALUE=&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_PRICE_TYPE	PRICE TYPE (VALUE =&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_QUOTE_TYPE_CD	Document Subtype (VALUE= &VALUE) specified is invalid.
PO_PDOI_INVALID_RATE	The rate value (VALUE=&VALUE) specified is invalid.
PO_PDOI_INVALID_RATE_TYPE	Rate Type (VALUE =&VALUE) specified is invalid.
PO_PDOI_INVALID_RCV_EXCEP_CD	RCV EXCEPTION CODE (VALUE =&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_REPLY_METHOD	REPLY METHOD (VALUE =&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_SHIPMENT_TYPE	SHIPMENT TYPE (VALUE= &TYPE) specified is not valid for TYPE LOOKUP CODE (VALUE=&VALUE)
PO_PDOI_INVALID_SHIP_LOC_ID	SHIP_TO_LOCATION_ID (VALUE=&VALUE) is not valid.

**Table 10–9 Purchasing Documents Open Interface Error Messages**

Error Message	Meaning
PO_PDOI_INVALID_SHIP_TO_LOC_ID	SHIP_TO_LOCATION_ID (VALUE=&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_SHIP_TO_ORG_ID	SHIP_TO_ORGANIZATION_ID (VALUE=&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_START_DATE	Effective Date (VALUE =&VALUE) specified should be less than the end date specified.
PO_PDOI_INVALID_STATUS	Approval Status specified is invalid.
PO_PDOI_INVALID_TAX_NAME	TAX NAME (VALUE =&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_TEMPLATE_ID	TEMPLATE ID (VALUE =&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_TYPE_LKUP_CD	Document Type Code (VALUE =&VALUE) specified is invalid.
PO_PDOI_INVALID_UN_NUMBER_ID	UN NUMBER ID (VALUE =&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_UOM_CODE	UNIT OF MEASURE (VALUE =&VALUE) specified is inactive or invalid.
PO_PDOI_INVALID_USSGL_TXN_CODE	USSGL Transaction Code (VALUE =&VALUE) specified is invalid.
PO_PDOI_INVALID_VALUE	&COLUMN_NAME must have a value of &VALUE.
PO_PDOI_INVALID_VDR_CNTCT	Supplier Contact (VALUE=&VALUE) is not an active and valid contact for the specified supplier site.
PO_PDOI_INVALID_VENDOR	Supplier (VALUE=&VALUE) specified is invalid or inactive.
PO_PDOI_INVALID_VENDOR_SITE	Supplier Site (VALUE=&VALUE) is not an active and valid purchasing supplier site.
PO_PDOI_INVAL_MULT_ORIG_CATG	Multiple catalogs can be found with the same document number (&DOC_NUMBER).
PO_PDOI_ITEM_NOT_NULL	ITEM_ID should not be null for outside operation LINE_TYPE.

**Table 10–9 Purchasing Documents Open Interface Error Messages**

Error Message	Meaning
PO_PDOI_ITEM_RELATED_INFO	&COLUMN_NAME (VALUE=&VALUE) specified is inactive or invalid for ITEM_ID (VALUE=&ITEM).
PO_PDOI_ITEM_UPDATE_NOT_ALLOW	Item attribute(s) required update. However, this execution does not allow item update/creation.
PO_PDOI_LINE_ID_UNIQUE	LINE_ID must have a unique value. &VALUE already exists.
PO_PDOI_LINE_LOC_ID_UNIQUE	LINE_LOCATION_ID must be unique. &VALUE already exists.
PO_PDOI_LINE_NUM_UNIQUE	LINE_NUM must have a unique value. &VALUE already exists.
PO_PDOI_LT_ZERO	&COLUMN_NAME (VALUE =&VALUE) specified is less than zero.
PO_PDOI_MULT_BUYER_PART	Multiple buyer parts are found which match the specified Item Num (VALUE=&VALUE).
PO_PDOI_NO_DATA_FOUND	No rate found for currency_code (VALUE=&CURRENCY) and RATE_TYPE_CODE (VALUE=&RATE_TYPE).
PO_PDOI_OVERLAP_AUTO_RULE	Sourcing rule (VALUE=&START_DATE) and (VALUE=&END_DATE) overlaps with an existing sourcing rule.
PO_PDOI_PO_HDR_ID_UNIQUE	PO_HEADER_ID must be unique. (VALUE = &VALUE) already exists.
PO_PDOI_PRICE_BRK_AMT_BASED_LN	Cannot create price breaks for amount-based lines in a BLANKET order agreement.
PO_PDOI_QT_MIN_GT_MAX	Minimum Quantity (VALUE =&MIN) specified is greater than maximum Quantity (VALUE =&MAX).
PO_PDOI_RATE_INFO_NULL	The RATE TYPE, RATE_DATE and RATE must be null because the purchasing document's currency is the same as your base (functional) currency. Therefore, exchange rate information is not needed.
PO_PDOI_RULE_NAME_UNIQ	Rule Name (VALUE= &VALUE) and Item Id (ID =&VALUE) should be unique.

**Table 10–9 Purchasing Documents Open Interface Error Messages**

Error Message	Meaning
PO_PDOI_SHIPMENT_NUM_UNIQUE	Shipment Num must have a unique value. &VALUE already exists.
PO_PDOI_SPECIF_DIFF_IN_LINES	&COLUMN_NAME (VALUE= &PO_HEADER_ID) specified in line is different from (VALUE=&VALUE) in header.
PO_PDOI_VALUE_NUMERIC	&COLUMN_NAME (VALUE= &VALUE) needs to be a numeric value.
ORIGINAL_RFQ_NUM is invalid	The original RFQ number that is transmitted already exists. Select another RFQ number.
Category ID is invalid for Item ID.	The category ID transmitted with the Item ID does not match the category ID already set up in the system for that item. If it is null, make sure that Purchasing is defaulting a category ID and that the category ID is enabled. Default item categories are specified in Setup > Items > Category > Category Set. Make sure that the default item category is one of the values in the rows.

### Fixing Failed Transactions

Some examples of errors could be that the supplier's information does not conform with Purchasing data requirements (for example, date fields are in an incorrect format), cross-reference rules set up between you and your supplier are inaccurate, or your own Purchasing or Oracle Applications data is not up to date. If errors exist in the supplier's data, ask the supplier to correct and resend the data.

Other errors could be the result of the following:

- If you create sourcing rules along with the imported data, make sure the documents in the data are submitted as approved. Sourcing rules can be created only when the Purchasing documents have a status of Approved.
- Flexfields may need to be frozen and recompiled. Navigate to the Descriptive Flexfield Segments window by choosing Setup > Flexfields > Descriptive > Segments. See: *Defining Descriptive Flexfield Structures, Oracle Applications Flexfields Guide, Release 11i*.

### See Also

Purchasing Interface Errors Report, *Oracle Purchasing User's Guide, Release 11i*

## Receiving Open Interface

The Receiving Open Interface is used for processing and validating receipt data that comes from sources other than the Receipts window in Purchasing. These sources include the following:

- Receipt information from other Oracle Applications or your existing non-Oracle systems.
- Barcoded and other receiving information from scanners and radio frequency devices.
- Advance Shipment Notices (ASNs) sent from suppliers.

The Receiving Open Interface maintains the integrity of the new data as well as the receipt data already in Purchasing.

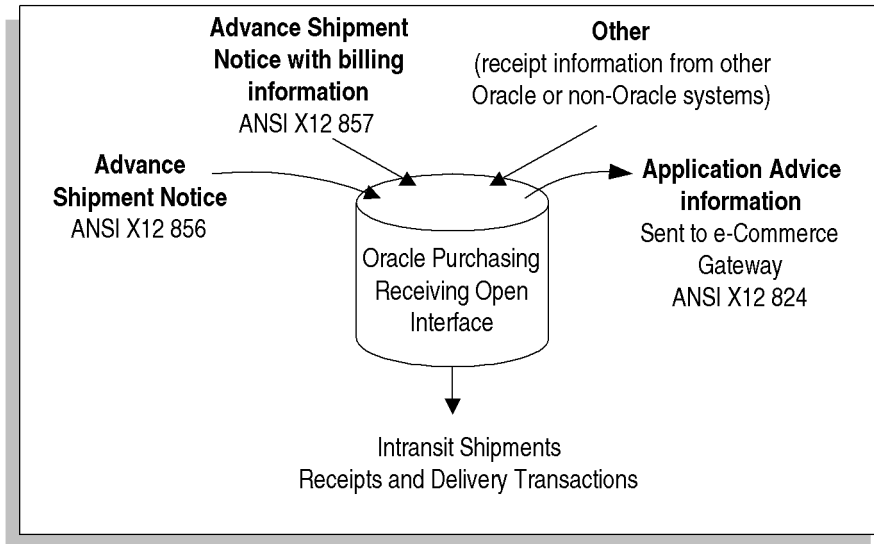
The Receiving Open Interface **does not** support:

- Serial numbering
- Separate receive and deliver transactions (it supports receive transactions and direct receipts)
- Corrections
- Returns
- Movement statistics
- Dynamic locators
- Receiving against Internal Orders
- Receiving against Inter-Organization transfers
- Receiving against Drop Ship Orders
- Receiving against RMAs

The purpose of this essay is to explain how to use the Receiving Open Interface so that you can integrate other applications with Purchasing.

## Functional Overview

**Figure 10–4 Functional Overview**



The diagram above shows the inputs and outputs that comprise the interface process.

Within the Receiving Open Interface, receipt data is validated for compatibility with Purchasing. There are two Receiving Open Interface tables:

- RCV\_HEADERS\_INTERFACE
- RCV\_TRANSACTIONS\_INTERFACE

## EDI Transaction Types

The Electronic Data Interchange (EDI) transaction types supported by the Receiving Open Interface are as follows:

- Inbound Advance Shipment Notices (ANSI X12 856 or EDIFACT DESADV). These include Original (New), Cancellation, and Test ASNs.
- Inbound ASNs with billing information (ANSI X12 857). These also include Original (New), Cancellation, and Test ASNs.

- Outbound Application Advices (ANSI X12 824 or EDIFACT APERAK).

An ASN is transmitted through EDI from a supplier to let the receiving organization know that a shipment is coming. For a detailed description of the ASN process, ASN types, Application Advices, and the effects of ASNs on Purchasing supply, see: Advance Shipment Notices (ASNs), *Oracle Purchasing User's Guide, Release 11i*.

## Validation and Overview

Receipt data that is entered through the Receipts window in Purchasing is derived, defaulted, and validated by the Receipts window. Most receipt data that is imported through the Receiving Open Interface is derived, defaulted, and validated by the receiving transaction pre-processor. The pre-processor is a program that the Receiving Transaction Processor initiates for data entered in the Receiving Open Interface. The pre-processor simulates, in Batch mode, what the receiving windows do when you save a transaction.

The following steps provide an overview of what the Receiving Open Interface does for each receipt:

### Pre-processor Header-Level Validation

- You load the receipt data into the RCV\_HEADERS\_INTERFACE and RCV\_TRANSACTIONS\_INTERFACE tables, using EDI or your own program.
- The pre-processor selects unprocessed rows in the RCV\_HEADERS\_INTERFACE table for preprocessing. It preprocesses rows with a PROCESSING\_STATUS\_CODE of 'PENDING' and a VALIDATION\_FLAG of 'Y'.
- The pre-processor derives or defaults any missing receipt header information in the RCV\_HEADERS\_INTERFACE table. For example, if you provide a TO\_ORGANIZATION\_CODE, the pre-processor defaults the correct TO\_ORGANIZATION\_ID.
- The pre-processor validates the receipt header information in the RCV\_HEADERS\_INTERFACE table to ensure the integrity of the information. For example, the SHIPPED\_DATE should not be later than today. Only successfully validated header information is imported into the Purchasing tables.
- If no fatal errors are detected at the header level, the Receiving Transaction Processor selects all the lines in the RCV\_TRANSACTIONS\_INTERFACE table associated with each header and calls the pre-processor to perform line-level pre-processing.

### Pre-processor Line-Level Validation

- The pre-processor derives and defaults any missing receipt line information in the RCV\_TRANSACTIONS\_INTERFACE table.
- The pre-processor validates the receipt line information to ensure the integrity of the information.
- For successfully validated lines, the pre-processor deletes the original RCV\_TRANSACTIONS\_INTERFACE line and creates the new, validated lines. Sometimes two or more validated rows are created in the RCV\_TRANSACTIONS\_INTERFACE table to correctly represent the original imported row.

### Errors

If errors are detected in any of the above steps, the Receiving Open Interface populates the PO\_INTERFACE\_ERRORS table and the outbound Application Advice e-Commerce Gateway interface tables. A separate process in e-Commerce Gateway downloads the contents of the outbound Application Advice interface tables to the outbound Application Advice flat file. For ASNs with billing information (also called ASBNs), if any lines are rejected, the Receiving Open Interface sets the INVOICE\_STATUS\_CODE to RCV\_ASBN\_NO\_AUTO\_INVOICE so that an invoice will not be created automatically from the rejected ASBN lines. You can view errors through the Receiving Interface Errors Report in Purchasing. To view errors specifically for ASBNs, use the Purchasing Interface Errors Report.

Rows that fail validation in the Receiving Open Interface tables, producing errors, do not get imported into Purchasing (into the RCV\_SHIPMENT\_HEADERS, RCV\_SHIPMENTS\_LINES, and other applicable Purchasing tables). For example, an ASN can contain shipments from multiple purchase orders. If the purchase order number for one of the shipments is wrong, the shipment or the entire ASN will fail, depending on how the profile option *RCV: Fail All ASN Lines if One Line Fails* is set.

### Receiving Transaction Processor Activities

After performing header- and line-level validation, the pre-processor checks the profile option *RCV: Fail All ASN Lines if One Line Fails*. If the profile option is set to 'Yes' and any line failed validation, the pre-processor fails the entire transaction. If the profile option is set to 'No' (and TEST\_FLAG is not 'Y'), the Receiving Transaction Processor takes over and, for all successfully processed records, performs the same steps that occur when you normally save receipt information in Purchasing:

- Populates the RCV\_SHIPMENT\_HEADERS table in Purchasing with the receipt header information.
- Populates the RCV\_SHIPMENT\_LINES table in Purchasing for each receipt header entry in the RCV\_SHIPMENT\_HEADERS table in Purchasing.
- Populates the RCV\_TRANSACTIONS table in Purchasing for each row in the RCV\_SHIPMENT\_HEADERS and RCV\_SHIPMENT\_LINES table if the column AUTO\_TRANSACTIONS\_INTERFACE in the RCV\_TRANSACTIONS\_INTERFACE table contains a value of 'RECEIVE' or 'DELIVER'.
- Updates supply for accepted line items in the tables MTL\_SUPPLY and RCV\_SUPPLY.
- Calls the Oracle Inventory module for processing 'DELIVER' transactions.
- Calls the Oracle General Ledger module for processing financial transactions, such as receipt-based accruals.
- Updates the corresponding purchase orders with the final received and delivered quantities.

## Quantity Updates

While updating purchasing document quantities received, the Receiving Open Interface verifies that the quantity shipped was actually received for each item indicated on the ASN. If not, it populates the Application Advice history tables and the Application Advice e-Commerce Gateway interface tables with an error.

While updating the CUM quantity for Approved Supplier List items, the Receiving Open Interface also verifies that the new CUM quantity matches the supplier's specified CUM quantity. If not, it populates the Application Advice history tables and the Application Advice e-Commerce Gateway interface tables with an error. (CUM management is performed only if Oracle Supplier Scheduling is installed and CUM Management is enabled for the ship-to organization, the ASN item or items are defined in the Approved Supplier List, and the items are sourced from the supplier using a supply agreement blanket purchase order.)

## Cascading Transaction Quantities

A purchase order sent to a supplier can include multiple lines and shipments. If the supplier does not provide a specific purchase order line number, release line number, or shipment number on the ASN but references simply (for example) a purchase order number, the Receiving Open Interface allocates the quantity on a first-in/first-out basis over all applicable purchase order and release shipments (if

an item number is provided). The Receiving Open Interface references all PO\_LINE\_LOCATIONS associated with the specified purchase order or blanket that have the same ship-to organization specified on the ASN to determine which shipment lines to consume. The order-by clause, NVL (PROMISED\_DATE, NEED\_BY\_DATE, CREATION\_DATE), determines the order in which quantities are consumed in a first-in/first-out basis. Therefore, multiple shipment lines matching the various purchase order shipment lines are created based on the allocation to the PO\_LINE\_LOCATIONS table, which stores lines corresponding to purchase order shipments.

The cascade works on a line-by-line basis, applying the remaining quantity to the last shipment line. *At the last line*, the Receiving Open Interface cascades up to the over-receipt tolerance. For example:

- There are 10 purchase order shipment lines of 100 units each, all with the same Need-By Date.
- In the Receiving Controls window in Purchasing, the Over Receipt Quantity Tolerance is 10%, meaning the Receiving Open Interface can consume 10 more units for the last shipment line if necessary.
- The actual ASN total quantity is 1,111, which exceeds your tolerance.

If the Over Receipt Quantity Action code is set to Reject (and *RCV: Fail All ASN Lines if One Line Fails* is set to No), then Purchasing rejects the last ASN line (or the whole ASN if the ASN has just one line) and creates an error in the PO\_INTERFACE\_ERRORS table. Purchasing receives none of the units for those ASN lines that were rejected.

Purchasing does not require a Promised or Need-By date for an item that is unplanned; for unplanned items, Purchasing uses the CREATION\_DATE in the order-by clause, NVL (PROMISED\_DATE, NEED\_BY\_DATE, CREATION\_DATE). If the cascade tries to allocate to an open shipment where the Receipt Date tolerance (the date after which a shipment cannot be received) is exceeded and the Receipt Date Action in the Receiving Controls window is set to Reject, Purchasing skips that shipment and goes to the next.

## Setting Up the Receiving Open Interface

You must complete the following setup steps in Purchasing to use the Receiving Open Interface:

- Provide a Yes or No value for the profile option *RCV: Fail All ASN Lines if One Line Fails*. See: Purchasing Profile Options, *Oracle Purchasing User's Guide*, Release 11i.

- In the Receiving Options window in Purchasing, select Warning, Reject, or None in the ASN Control field to determine how Purchasing handles the receipt against a purchase order shipment for which an ASN exists. See: *Defining Receiving Options, Oracle Purchasing User's Guide, Release 11i*.
- If you're receiving ASNs in the Receiving Open Interface, install and set up e-Commerce Gateway. See: *Oracle e-Commerce Gateway User's Guide, Release 11i*.

All processing is initiated through standard report submission using the Submit Request window and choosing the Receiving Transaction Processor program. The concurrent manager manages all processing, and as such it must be set up and running.

See also: [Debugging](#) on page 10-120.

## Inserting into the Receiving Open Interface Table

You load receipt data from your source system or e-Commerce Gateway into the receiving headers and receiving transactions interface tables. For each row you insert into the RCV\_HEADERS\_INTERFACE table, the Receiving Open Interface creates a shipment header; for each row you insert into the RCV\_TRANSACTIONS\_INTERFACE table, the Receiving Open Interface creates one or more shipment lines. You must provide values for all columns that are required. You may also have to provide values for columns that are conditionally required.

When describing the table columns in the following graphics, the following definitions are used:

### Required

You must specify values for columns in this category. The Receiving Open Interface requires values in these columns to process a receiving transaction whether the data is imported through e-Commerce Gateway or a program you write. For example, HEADER\_INTERFACE\_ID is a required column; however, when receiving ASNs from suppliers through e-Commerce Gateway, e-Commerce Gateway provides the HEADER\_INTERFACE\_ID automatically. If a required value is not entered, the Receiving Open Interface inserts an error record in the PO\_INTERFACE\_ERRORS table.

### Derived

The Receiving Open Interface is capable of deriving or defaulting columns in this category. If you provide your own value, the Receiving Open Interface uses it, if it is valid. If you leave the column blank, the Receiving Open Interface can derive it,

based on other column values, if they're provided. For example, the column `VENDOR_ID` is defaulted in the `RCV_HEADERS_INTERFACE` table only if a value is provided in the `VENDOR_NUM` or `VENDOR_NAME` column. In general, the default values are defaulted in the same way that they are defaulted when you manually enter receipts in the Receipts, Receiving Transactions, or Manage Shipments windows in Purchasing.

Columns like those in the following example indicate that one of the pair can be derived if the other is provided:

**Table 10–10** *Type, Required, and Derived*

Example Column Name	Type	Required	Derived	Optional
EXAMPLE_CODE	Varchar2		<i>conditionally</i>	
EXAMPLE_ID	Number			

**Optional**

You do not have to enter values for columns in this category.

**Reserved for Future Use**

The Receiving Open Interface does not support (validate) columns in this category as of this initial release. You should not populate values in these columns.

**Receiving Headers Interface Table Description**

The following graphic describes the receiving headers interface table.

**Attention:** A Derived column marked with an asterisk (x\*) indicates that the Receiving Transaction Processor inserts values into these columns automatically, so you should not insert your own values.

**Table 10–11** *Receiving Open Interface Headers Table*

RCV_HEADERS_INTERFACE Column Name	Type	Required	Derived	Optional	Reserved for Future Use
HEADER_INTERFACE_ID	Number	x			

**Table 10–11 Receiving Open Interface Headers Table**

<b>RCV_HEADERS_ INTERFACE</b>	<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>	<b>Reserve d for Future Use</b>
	GROUP_ID	Number	x			
	EDI_CONTROL_NUM	Varchar2			x	
	PROCESSING_STATUS_ CODE	Varchar2	x			
	RECEIPT_SOURCE_CODE	Varchar2	x			
	ASN_TYPE	Varchar2	<i>conditional ly</i>			
	TRANSACTION_TYPE	Varchar2	x			
	AUTO_TRANSACT_CODE	Varchar2	<i>conditional ly</i>			
	TEST_FLAG	Varchar2			x	
	LAST_UPDATE_DATE	Date	x			
	LAST_UPDATED_BY	Number	x			
	LAST_UPDATE_LOGIN	Number			x	
	CREATION_DATE	Date	x			
	CREATED_BY	Number	x			
	NOTICE_CREATION_DATE	Date			x	
	SHIPMENT_NUM	Varchar2	<i>conditional ly</i>			
	RECEIPT_NUM	Varchar2	<i>conditional ly</i>			
	RECEIPT_HEADER_ID	Number		<i>condition ally</i>		
	VENDOR_NAME	Varchar2	x	<i>condition ally</i>		
	VENDOR_NUM	Varchar2				
	VENDOR_ID	Number				
	VENDOR_SITE_CODE	Varchar2		<i>condition ally</i>	x	

**Table 10–11 Receiving Open Interface Headers Table**

<b>RCV_HEADERS_ INTERFACE</b>	<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>	<b>Reserve d for Future Use</b>
	VENDOR_SITE_ID	Number				
	FROM_ORGANIZATION_ CODE	Varchar2				x
	FROM_ORGANIZATION_ ID	Number				
	SHIP_TO_ ORGANIZATION_CODE	Varchar2	<i>conditional ly</i>	<i>condition ally</i>		
	SHIP_TO_ ORGANIZATION_ID	Number				
	LOCATION_CODE	Varchar2		<i>condition ally</i>	x	
	LOCATION_ID	Number				
	BILL_OF_LADING	Varchar2			x	
	PACKING_SLIP	Varchar2			x	
	SHIPPED_DATE	Date	<i>conditional ly</i>			
	FREIGHT_CARRIER_CODE	Varchar2			x	
	EXPECTED_RECEIPT_DATE	Date			x	
	RECEIVER_ID	Number				x
	NUM_OF_CONTAINERS	Number			x	
	WAYBILL_AIRBILL_NUM	Varchar2			x	
	COMMENTS	Varchar2			x	
	GROSS_WEIGHT	Number			x	
	GROSS_WEIGHT_UOM_ CODE	Varchar2			x	
	NET_WEIGHT	Number			x	
	NET_WEIGHT_UOM_CODE	Varchar2			x	
	TAR_WEIGHT	Number			x	

**Table 10–11 Receiving Open Interface Headers Table**

<b>RCV_HEADERS_ INTERFACE</b>	<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>	<b>Reserve d for Future Use</b>
	TAR_WEIGHT_UOM_CODE	Varchar2			x	
	PACKAGING_CODE	Varchar2			x	
	CARRIER_METHOD	Varchar2			x	
	CARRIER_EQUIPMENT	Varchar2			x	
	SPECIAL_HANDLING_CODE	Varchar2			x	
	HAZARD_CODE	Varchar2			x	
	HAZARD_CLASS	Varchar2			x	
	HAZARD_DESCRIPTION	Varchar2			x	
	FREIGHT_TERMS	Varchar2			x	
	FREIGHT_BILL_NUMBER	Varchar2			x	
	INVOICE_NUM	Varchar2	<i>conditional ly</i>			
	INVOICE_DATE	Date	<i>conditional ly</i>			
	TOTAL_INVOICE_AMOUNT	Number	<i>conditional ly</i>			
	TAX_NAME	Varchar2			x	
	TAX_AMOUNT	Number			x	
	FREIGHT_AMOUNT	Number			x	
	CURRENCY_CODE	Varchar2			x	
	CONVERSION_RATE	Number			x	
	CONVERSION_RATE_TYPE	Varchar2			x	
	CONVERSION_RATE_DATE	Date			x	
	PAYMENT_TERMS_NAME	Varchar2		<i>condition ally</i>	x	
	PAYMENT_TERMS_ID	Number				

**Table 10–11 Receiving Open Interface Headers Table**

<b>RCV_HEADERS_ INTERFACE</b>	<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
	ATTRIBUTE_CATEGORY	Varchar2			x	
	ATTRIBUTE1	Varchar2			x	
	ATTRIBUTE2	Varchar2			x	
	ATTRIBUTE3	Varchar2			x	
	ATTRIBUTE4	Varchar2			x	
	ATTRIBUTE5	Varchar2			x	
	ATTRIBUTE6	Varchar2			x	
	ATTRIBUTE7	Varchar2			x	
	ATTRIBUTE8	Varchar2			x	
	ATTRIBUTE9	Varchar2			x	
	ATTRIBUTE10	Varchar2			x	
	ATTRIBUTE11	Varchar2			x	
	ATTRIBUTE12	Varchar2			x	
	ATTRIBUTE13	Varchar2			x	
	ATTRIBUTE14	Varchar2			x	
	ATTRIBUTE15	Varchar2			x	
	USSGL_TRANSACTION_CODE	Varchar2			x	
	EMPLOYEE_NAME	Varchar2	<i>conditionally</i>	<i>conditionally</i>		
	EMPLOYEE_ID	Number				
	INVOICE_STATUS_CODE	Varchar2			x	
	VALIDATION_FLAG	Varchar2	x			
	REQUEST_ID	Number		x *		
	PROCESSING_REQUEST_ID	Number		x *		

## Receiving Transactions Interface Table Description

The following graphic describes the receiving transactions interface table.

**Attention:** A Derived column marked with an asterisk (x\*) indicates that the Receiving Transaction Processor inserts values into these columns automatically, so you should not insert your own values.

**Table 10–12 Receiving Open Interface Transactions Table**

RCV_TRANSACTIONS_ INTERFACE Column Name	Type	Required	Derived	Optional	Reserve d for Future Use
INTERFACE_TRANSACTION_ID	Number	x			
GROUP_ID	Number	x			
LAST_UPDATE_DATE	Date	x			
LAST_UPDATED_BY	Number	x			
CREATION_DATE	Date	x			
CREATED_BY	Number	x			
LAST_UPDATE_LOGIN	Number			x	
REQUEST_ID	Number				x
PROGRAM_APPLICATION_ID	Number				x
PROGRAM_ID	Number				x
PROGRAM_UPDATE_DATE	Date				x
TRANSACTION_TYPE	Varchar2	x			
TRANSACTION_DATE	Date	x			
PROCESSING_STATUS_CODE	Varchar2	x			
PROCESSING_MODE_CODE	Varchar2	x			
PROCESSING_REQUEST_ID	Number		x *		

**Table 10–12 Receiving Open Interface Transactions Table**

<b>RCV_TRANSACTIONS_ INTERFACE Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
TRANSACTION_STATUS_ CODE	Varchar2	x			
CATEGORY_ID	Number	<i>conditionally</i>	<i>conditionally</i>		
ITEM_CATEGORY	Varchar2				
QUANTITY	Number	x			
UNIT_OF_MEASURE	Varchar2	x			
INTERFACE_SOURCE_CODE	Varchar2			x	
INTERFACE_SOURCE_LINE_ ID	Number				x
INV_TRANSACTION_ID	Number				x
ITEM_ID	Number	<i>conditionally</i>	<i>conditionally</i>		
ITEM_NUM	Varchar2				
ITEM_DESCRIPTION	Varchar2	x			
ITEM_REVISION	Varchar2	<i>conditionally</i>	<i>conditionally</i>		
UOM_CODE	Varchar2				x
EMPLOYEE_ID	Number	<i>conditionally</i>	<i>conditionally</i>		
AUTO_TRANSACT_CODE	Varchar2	x			
SHIPMENT_HEADER_ID	Number				x
SHIPMENT_LINE_ID	Number				x
SHIP_TO_LOCATION_ID	Number	<i>conditionally</i>	<i>conditionally</i>		
SHIP_TO_LOCATION_CODE	Varchar2				
PRIMARY_QUANTITY	Number				x
PRIMARY_UNIT_OF_ MEASURE	Varchar2				x

**Table 10–12 Receiving Open Interface Transactions Table**

<b>RCV_TRANSACTIONS_ INTERFACE Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>	<b>Reserve d for Future Use</b>
RECEIPT_SOURCE_CODE	Varchar2	x			
VENDOR_ID	Number	x	<i>condition ally</i>		
VENDOR_NUM	Varchar2				
VENDOR_NAME	Varchar2				
VENDOR_SITE_ID	Number		x	x	
VENDOR_SITE_CODE	Varchar2				
FROM_ORGANIZATION_ID	Number				x
TO_ORGANIZATION_CODE	Varchar2	<i>condition ally</i>	<i>condition ally</i>		
TO_ORGANIZATION_ID	Number				
ROUTING_HEADER_ID	Number				x
ROUTING_STEP_ID	Number				x
SOURCE_DOCUMENT_ CODE	Varchar2	x			
PARENT_TRANSACTION_ID	Number				x
PO_HEADER_ID	Number	x	<i>condition ally</i>		
DOCUMENT_NUM	Varchar2				
PO_REVISION_NUM	Number			x	
PO_RELEASE_ID	Number		<i>condition ally</i>	x	
RELEASE_NUM	Number				
PO_LINE_ID	Number	<i>condition ally</i>	<i>condition ally</i>		
DOCUMENT_LINE_NUM	Number				
PO_LINE_LOCATION_ID	Number		<i>condition ally</i>	x	

**Table 10–12 Receiving Open Interface Transactions Table**

<b>RCV_TRANSACTIONS_ INTERFACE Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>	<b>Reserve d for Future Use</b>
DOCUMENT_SHIPMENT_ LINE_NUM	Number				
PO_UNIT_PRICE	Number			x	
CURRENCY_CODE	Varchar2			x	
CURRENCY_CONVERSION_ TYPE	Varchar2			x	
CURRENCY_CONVERSION_ RATE	Number			x	
CURRENCY_CONVERSION_ DATE	Date			x	
PO_DISTRIBUTION_ID	Number		<i>condition ally</i>	x	
DOCUMENT_ DISTRIBUTION_NUM	Number				
REQUISITION_LINE_ID	Number				x
REQ_DISTRIBUTION_ID	Number				x
CHARGE_ACCOUNT_ID	Number				x
SUBSTITUTE_UNORDERED_ CODE	Varchar2				x
RECEIPT_EXCEPTION_FLAG	Varchar2				x
ACCRUAL_STATUS_CODE	Varchar2				x
INSPECTION_STATUS_CODE	Varchar2				x
INSPECTION_QUALITY_ CODE	Varchar2				x
DESTINATION_TYPE_CODE	Varchar2		<i>condition ally</i>	x	
SUBINVENTORY	Varchar2	<i>condition ally</i>	<i>condition ally</i>		
WIP_ENTITY_ID	Number				x

**Table 10–12 Receiving Open Interface Transactions Table**

<b>RCV_TRANSACTIONS_ INTERFACE Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>	<b>Reserve d for Future Use</b>
WIP_LINE_ID	Number				x
DEPARTMENT_CODE	Varchar2				x
WIP_REPETITIVE_ SCHEDULE_ID	Number				x
WIP_OPERATION_SEQ_ NUM	Number				x
WIP_RESOURCE_SEQ_NUM	Number				x
BOM_RESOURCE_ID	Number				x
SHIPMENT_NUM	Varchar2				x
FREIGHT_CARRIER_CODE	Varchar2		<i>condition ally</i>		
BILL_OF_LADING	Varchar2		<i>condition ally</i>		
PACKING_SLIP	Varchar2			x	
SHIPPED_DATE	Date				x
EXPECTED_RECEIPT_DATE	Date	<i>condition ally</i>	<i>condition ally</i>		
ACTUAL_COST	Number			x	
TRANSFER_COST	Number			x	
TRANSPORTATION_COST	Number			x	
TRANSPORTATION_ ACCOUNT_ID	Number			x	
NUM_OF_CONTAINERS	Number			x	
WAYBILL_AIRBILL_NUM	Varchar2			x	
VENDOR_ITEM_NUM	Varchar2	<i>condition ally</i>	<i>condition ally</i>		
VENDOR_LOT_NUM	Varchar2			x	
RMA_REFERENCE	Varchar2			x	

**Table 10–12 Receiving Open Interface Transactions Table**

<b>RCV_TRANSACTIONS_ INTERFACE Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
COMMENTS	Varchar2			x	
ATTRIBUTE_CATEGORY	Varchar2			x	
ATTRIBUTE1	Varchar2			x	
ATTRIBUTE2	Varchar2			x	
ATTRIBUTE3	Varchar2			x	
ATTRIBUTE4	Varchar2			x	
ATTRIBUTE5	Varchar2			x	
ATTRIBUTE6	Varchar2			x	
ATTRIBUTE7	Varchar2			x	
ATTRIBUTE8	Varchar2			x	
ATTRIBUTE9	Varchar2			x	
ATTRIBUTE10	Varchar2			x	
ATTRIBUTE11	Varchar2			x	
ATTRIBUTE12	Varchar2			x	
ATTRIBUTE13	Varchar2			x	
ATTRIBUTE14	Varchar2			x	
ATTRIBUTE15	Varchar2			x	
SHIP_HEAD_ATTRIBUTE_ CATEGORY	Varchar2				x
SHIP_HEAD_ATTRIBUTE1	Varchar2				x
SHIP_HEAD_ATTRIBUTE2	Varchar2				x
SHIP_HEAD_ATTRIBUTE3	Varchar2				x
SHIP_HEAD_ATTRIBUTE4	Varchar2				x
SHIP_HEAD_ATTRIBUTE5	Varchar2				x
SHIP_HEAD_ATTRIBUTE6	Varchar2				x
SHIP_HEAD_ATTRIBUTE7	Varchar2				x

**Table 10–12 Receiving Open Interface Transactions Table**

<b>RCV_TRANSACTIONS_ INTERFACE Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>	<b>Reserve d for Future Use</b>
SHIP_HEAD_ATTRIBUTE8	Varchar2				x
SHIP_HEAD_ATTRIBUTE9	Varchar2				x
SHIP_HEAD_ATTRIBUTE10	Varchar2				x
SHIP_HEAD_ATTRIBUTE11	Varchar2				x
SHIP_HEAD_ATTRIBUTE12	Varchar2				x
SHIP_HEAD_ATTRIBUTE13	Varchar2				x
SHIP_HEAD_ATTRIBUTE14	Varchar2				x
SHIP_HEAD_ATTRIBUTE15	Varchar2				x
SHIP_LINE_ATTRIBUTE_ CATEGORY	Varchar2				x
SHIP_LINE_ATTRIBUTE1	Varchar2				x
SHIP_LINE_ATTRIBUTE2	Varchar2				x
SHIP_LINE_ATTRIBUTE3	Varchar2				x
SHIP_LINE_ATTRIBUTE4	Varchar2				x
SHIP_LINE_ATTRIBUTE5	Varchar2				x
SHIP_LINE_ATTRIBUTE6	Varchar2				x
SHIP_LINE_ATTRIBUTE7	Varchar2				x
SHIP_LINE_ATTRIBUTE8	Varchar2				x
SHIP_LINE_ATTRIBUTE9	Varchar2				x
SHIP_LINE_ATTRIBUTE10	Varchar2				x
SHIP_LINE_ATTRIBUTE11	Varchar2				x
SHIP_LINE_ATTRIBUTE12	Varchar2				x
SHIP_LINE_ATTRIBUTE13	Varchar2				x
SHIP_LINE_ATTRIBUTE14	Varchar2				x
SHIP_LINE_ATTRIBUTE15	Varchar2				x

**Table 10–12 Receiving Open Interface Transactions Table**

<b>RCV_TRANSACTIONS_ INTERFACE Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
USSGL_TRANSACTION_ CODE	Varchar2				x
GOVERNMENT_CONTEXT	Varchar2				x
REASON_ID	Number			x	
DESTINATION_CONTEXT	Varchar2				x
SOURCE_DOC_QUANTITY	Number				x
SOURCE_DOC_UNIT_OF_ MEASURE	Varchar2				x
FROM_SUBINVENTORY	Varchar2				x
INTRANSIT_OWNING_ ORG_ID	Number				x
MOVEMENT_ID	Number				x
USE_MTL_LOT	Number				x
USE_MTL_SERIAL	Number				x
TAX_NAME	Varchar2			x	
TAX_AMOUNT	Number			x	
NOTICE_UNIT_PRICE	Number			x	
HEADER_INTERFACE_ID	Number	x			
VENDOR_CUM_SHIPPED_ QUANTITY	Number			x	
TRUCK_NUM	Varchar2			x	
CONTAINER_NUM	Varchar2			x	
LOCATION_CODE	Varchar2		<i>conditionally</i>	x	
LOCATION_ID	Number				
FROM_ORGANIZATION_ CODE	Varchar2				x

**Table 10–12 Receiving Open Interface Transactions Table**

<b>RCV_TRANSACTIONS_ INTERFACE Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>	<b>Reserve d for Future Use</b>
INTRANSIT_OWNING_ ORG_CODE	Varchar2				x
ROUTING_CODE	Varchar2				x
ROUTING_STEP	Varchar2				x
DELIVER_TO_PERSON_ NAME	Varchar2	<i>condition ally</i>	<i>condition ally</i>		
DELIVER_TO_PERSON_ID	Number				
DELIVER_TO_LOCATION_ CODE	Varchar2	<i>condition ally</i>	<i>condition ally</i>		
DELIVER_TO_LOCATION_ID	Number				
LOCATOR	Varchar2	<i>condition ally</i>	<i>condition ally</i>		
LOCATOR_ID	Number				
REASON_NAME	Varchar2			x	
VALIDATION_FLAG	Varchar2	x			
SUBSTITUTE_ITEM_ID	Number		<i>condition ally</i>	x	
SUBSTITUTE_ITEM_NUM	Varchar2				
QUANTITY_SHIPPED	Number				x
QUANTITY_INVOICED	Number				x
REQ_NUM	Varchar2				x
REQ_LINE_NUM	Number				x
REQ_DISTRIBUTION_NUM	Number				x
WIP_ENTITY_NAME	Varchar2				x
WIP_LINE_CODE	Varchar2				x
RESOURCE_CODE	Varchar2				x
SHIPMENT_LINE_STATUS_ CODE	Varchar2		x *		

**Table 10–12 Receiving Open Interface Transactions Table**

<b>RCV_TRANSACTIONS_ INTERFACE Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>	<b>Reserved for Future Use</b>
BARCODE_LABEL	Varchar2			x	
TRANSFER_PERCENTAGE	Number				x
QA_COLLECTION_ID	Number				x
COUNTRY_OF_ORIGIN_ CODE	Varchar2			x	
OE_ORDER_HEADER_ID	Number				x
OE_ORDER_LINE_ID	Number				x
CUSTOMER_ID	Number				x
CUSTOMER_SITE_ID	Number				x
CUSTOMER_ITEM_NUM	Varchar2				x
CREATE_DEBIT_MEMO_ FLAG	Varchar2			x	
PUT_AWAY_RULE_ID	Number				x
PUT_AWAY_STRATEGY_ID	Number				x
LPN_ID	Number				x
TRANSFER_LPN_ID	Number				x
COST_GROUP_ID	Number				x
MOBILE_TXN	Varchar2				x
MMTT_TEMP_ID	Number				x
TRANSFER_COST_GROUP_ ID	Number				x
SECONDARY_QUANTITY	Number				x
SECONDARY_UNIT_OF_ MEASURE	Varchar2				x
SECONDARY_UOM_CODE	Varchar2				x
QC_GRADE	Varchar2				x

## Required Data for RCV\_HEADERS\_INTERFACE

You must always enter values for the following required columns when you load rows into the RCV\_HEADERS\_INTERFACE table:

### HEADER\_INTERFACE\_ID

Purchasing provides a unique-sequence generator to generate a unique identifier for this column. If you're importing data through e-Commerce Gateway, a value is provided automatically.

### GROUP\_ID

Purchasing provides a group identifier for a set of transactions that should be processed together.

### PROCESSING\_STATUS\_CODE

This column indicates the status of each row in the RCV\_HEADERS\_INTERFACE table. The Receiving Open Interface selects a row for processing only when the value in this column is 'PENDING'.

### RECEIPT\_SOURCE\_CODE

This column indicates the source of the shipment. It tells the Receiving Open Interface whether the shipment is from an external supplier or an internal organization. Currently, this column can accept a value only of 'VENDOR'.

### TRANSACTION\_TYPE

This column indicates the transaction purpose code for the shipment header. This column accepts a value of 'NEW' or 'CANCEL'.

### LAST\_UPDATE\_DATE, LAST\_UPDATED\_BY, CREATION\_DATE, and CREATED\_BY

LAST\_UPDATE\_DATE indicates the date the header record was last created or updated. LAST\_UPDATED\_BY indicates the loading program or user name identifier (ID) that was used to import the header record. CREATION\_DATE indicates the date the header record was created. CREATED\_BY indicates the loading program or user ID that was used to import the header record. If you're importing data through e-Commerce Gateway, values are provided in these columns automatically.

**VENDOR\_NAME, VENDOR\_NUM, or VENDOR\_ID**

VENDOR\_NAME and VENDOR\_NUM indicate the supplier name and number for the shipment. Both must be a valid name or number in Purchasing. Either one must be specified. (If you specify one, the Receiving Open Interface can derive the other.)

VENDOR\_ID can be derived if either a VENDOR\_NAME or VENDOR\_NUM is provided. If no VENDOR\_NAME or VENDOR\_NUM is provided, you must provide a VENDOR\_ID.

**VALIDATION\_FLAG**

This column indicates whether to validate a row before processing it. It accepts values of 'Y' or 'N'. The Receiving Open Interface provides a default value of 'Y'.

**Conditionally Required Data for RCV\_HEADERS\_INTERFACE**

Additionally, you may have to enter values for the following conditionally required columns in the RCV\_HEADERS\_INTERFACE table:

**ASN\_TYPE**

This column accepts values of 'ASN' or 'ASBN' to indicate whether the transaction is for an ASN or an ASN with billing information. A value is required only when importing ASNs or ASBNs through e-Commerce Gateway. Leaving this column blank means that the transaction is not for an ASN or ASBN, but for a receipt, depending on the values in the AUTO\_TRANSACT\_CODE and TRANSACTION\_TYPE columns.

**AUTO\_TRANSACT\_CODE**

This column accepts values of 'SHIP', 'RECEIVE', or 'DELIVER'. A value is required for ASN (ASN\_TYPE) transactions. The value should be 'RECEIVE' if you want to do a receiving transaction and if you provide an EMPLOYEE\_NAME or EMPLOYEE\_ID at the header level.

**SHIPMENT\_NUM**

This column indicates the shipment number from the supplier. If no value is provided in this column, the Receiving Open Interface tries to default a value from the PACKING\_SLIP or INVOICE\_NUM columns. The value in this column must be unique from the supplier for a period of one year.

**RECEIPT\_NUM**

This column indicates the receipt number from the supplier. You must provide a value in this column if `AUTO_TRANSACT_CODE` is not 'SHIP', the `TRANSACTION_TYPE` or `AUTO_TRANSACT_CODE` in the `RCV_TRANSACTIONS_INTERFACE` table is not 'SHIP', and the Receipt Number Options Entry method (in the Receiving Options window) is Manual. The value in this column must be unique from the supplier for a period of one year.

**SHIP\_TO\_ORGANIZATION\_CODE or SHIP\_TO\_ORGANIZATION\_ID**

These columns indicate the destination organization for the shipment. A valid inventory organization code in Purchasing is required for an ASN. If the supplier does not know the ship-to organization, then it can provide a ship-to location (`SHIP_TO_LOCATION_CODE` or `SHIP_TO_LOCATION_ID`) that is tied to an inventory organization in the Locations window, and the Receiving Open Interface can derive the inventory organization that way. A `SHIP_TO_ORGANIZATION_CODE` or `SHIP_TO_ORGANIZATION_ID` can be specified here in the `RCV_HEADERS_INTERFACE` table, at the header level, or in the `RCV_TRANSACTIONS_INTERFACE` table, at the transaction line level. If it is specified at the header level, then it must apply to all shipments on the ASN. If it is specified at the line level, then it can be different for each line.

A `SHIP_TO_ORGANIZATION_CODE` or `SHIP_TO_ORGANIZATION_ID` enables the Receiving Open Interface to validate information at the line level before cascading quantities at the shipment level. This information helps the Receiving Open Interface determine if the supplier is providing valid item and shipment information.

**SHIPPED\_DATE**

This column indicates the date the shipment was shipped. The value in this column is required for an `ASN_TYPE` of 'ASN' or 'ASBN' (for an ASN with billing information), and must be earlier than or equal to the system date. It must also be earlier than or equal to the `EXPECTED_RECEIPT_DATE`.

**INVOICE\_NUM**

A value for this column is required for ASBN transactions (if the `ASN_TYPE` is 'ASBN', for an ASN with billing information). The value must be unique for the given supplier.

### **INVOICE\_DATE**

An invoice date is required for an ASBN transaction (if the ASN\_TYPE is 'ASBN', for an ASN with billing information).

### **TOTAL\_INVOICE\_AMOUNT**

This column is required for ASBN transactions (ASNs with billing information). For ASBN transactions, you must provide a non-negative value in this column, even if that value is 0.

### **EMPLOYEE\_NAME or EMPLOYEE\_ID**

This column indicates the employee who created the shipment. You must provide a value in one of these columns if no value is provided in the corresponding columns in the RCV\_TRANSACTIONS\_INTERFACE table and if the AUTO\_TRANSACTIONS\_CODE is 'RECEIVE'. The value must be a valid employee name in Purchasing or Oracle Applications.

## **Required Data for RCV\_TRANSACTIONS\_INTERFACE**

You must always enter values for the following required columns when you load rows into the RCV\_TRANSACTIONS\_INTERFACE table:

### **INTERFACE\_TRANSACTION\_ID**

Purchasing provides a unique-sequence generator to generate a unique identifier for the receiving transaction line. If you're importing data through e-Commerce Gateway, a value is provided automatically.

### **GROUP\_ID**

Purchasing provides a group identifier for a set of transactions that should be processed together. The value in this column must match the GROUP\_ID in the RCV\_HEADERS\_INTERFACE table.

### **LAST\_UPDATE\_DATE, LAST\_UPDATED\_BY, CREATION\_DATE, and CREATED\_BY**

LAST\_UPDATE\_DATE indicates the date the line was last created or updated. LAST\_UPDATED\_BY indicates the loading program or user name identifier (ID) that was used to import the line. CREATION\_DATE indicates the date the line was created. CREATED\_BY indicates the loading program or user ID that was used to

import the line. If you're importing data through e-Commerce Gateway, values are provided in these columns automatically.

**TRANSACTION\_TYPE**

This column indicates the transaction purpose code. It accepts values of 'SHIP' for a standard shipment (an ASN or ASBN) or 'RECEIVE' for a standard receipt.

**TRANSACTION\_DATE**

This column indicates the date of the transaction. The date must be in an open Purchasing and General Ledger period and, if Inventory is installed, also be in an open Inventory period.

**PROCESSING\_STATUS\_CODE**

This column indicates the status of each row in the RCV\_TRANSACTIONS\_INTERFACE table. The Receiving Open Interface selects a row for processing only when the value in this column is 'PENDING'.

**PROCESSING\_MODE\_CODE**

This column defines how the Receiving Open Interface is to be called. It accepts a value of 'BATCH' only. You initiate one of these values when you submit the Receiving Transaction Processor program through the Submit Request window.

**TRANSACTION\_STATUS\_CODE**

This column indicates the status of the transaction record. The Receiving Open Interface provides a value of 'ERROR' or 'COMPLETED'.

**QUANTITY**

This column indicates the shipment quantity. The value in this column must be a positive number.

During the cascade process this quantity is allocated across all purchase order shipments in a first-in/first-out manner if the DOCUMENT\_SHIPMENT\_LINE\_NUM is not specified. The cascade applies up to the amount ordered. However, if the quantity exceeds the quantity on the purchase order shipments, then the last purchase order shipment consumes the quantity ordered plus the allowable over-receipt tolerance.

All tolerances are checked as the quantity is cascaded. If the expected delivery date is not within the Receipt Date tolerance (the date after which a shipment cannot be

received), and the Receipt Date Action in the Receiving Controls window is set to Reject, Purchasing skips the PO\_LINE\_LOCATIONS row and goes to the next.

### **UNIT\_OF\_MEASURE**

This column indicates the shipment quantity unit of measure (UOM). If the UOM is different from the primary UOM defined in Purchasing and/or the source document UOM, then a conversion must be defined between the two UOMs.

Navigate to the Unit of Measure Conversions window by choosing Setup > Units of Measure > Conversions.

### **ITEM\_DESCRIPTION**

This column indicates the item description. If no item description is provided, the Receiving Open Interface gets the item description from the purchase order line if a PO\_LINE\_ID or similar column is provided. See the next description.

### **DOCUMENT\_LINE\_NUM, ITEM\_NUM, VENDOR\_ITEM\_NUM, ITEM\_ID, or PO\_LINE\_ID**

You must provide a value for at least one of these columns, or for the CATEGORY\_ID (or ITEM\_CATEGORY) and ITEM\_DESCRIPTION columns. If at least one value is provided, the Receiving Open Interface can derive the other values. If a PO\_LINE\_ID is provided, the Receiving Open Interface can derive the ITEM\_NUM and ITEM\_ID.

DOCUMENT\_LINE\_NUM indicates the line number against which you are receiving. The value in this column must be a valid number for the purchase order you are receiving against.

ITEM\_NUM indicates the Purchasing item number of the item you are receiving. The item number must be defined in Purchasing for the DOCUMENT\_NUM provided and the SHIP\_TO\_ORGANIZATION\_CODE.

VENDOR\_ITEM\_NUM indicates the supplier item number of the item you are receiving. The value in this column must be defined in Purchasing as a supplier item number on the specified purchase order.

### **AUTO\_TRANSACT\_CODE**

This column indicates the automatic transaction creation code of the shipment. It accepts values of 'RECEIVE' for a standard receipt, 'DELIVER' for a standard receipt and delivery transaction, and 'SHIP' for a shipment (ASN or ASBN) transaction.

Whether or not you can perform a standard receipt ('RECEIVE') or direct receipt ('DELIVER') depends on the ROUTING\_HEADER\_ID in the PO\_LINE\_LOCATIONS table and the Purchasing profile option *RCV: Allow routing override*.

The AUTO\_TRANSACT\_CODE in the RCV\_TRANSACTIONS\_INTERFACE table overrides that in the RCV\_HEADERS\_INTERFACE table, if the two values differ.

The table below shows the combinations of TRANSACTION\_TYPE and AUTO\_TRANSACT\_CODE values you can choose in the RCV\_TRANSACTIONS\_INTERFACE table to create an ASN or ASBN shipment header and shipment line(s), a receiving transaction, or a receiving and delivery transaction.

**Table 10–13 AUTO\_TRANSACT\_CODE**

TRANSACTION_TYPE	NULL	RECEIVE	DELIVER
SHIP	Shipment header and shipment line(s) created	Receiving transaction created	Receiving and delivery transaction created
RECEIVE	Receiving transaction created	Receiving transaction created	Receiving and delivery transaction created

## RECEIPT\_SOURCE\_CODE

This column indicates the source of the shipment. It accepts a value of 'VENDOR' only. The Receiving Open Interface can derive the value here if one is provided in the RCV\_HEADERS\_INTERFACE table.

## VENDOR\_NAME, VENDOR\_NUM, or VENDOR\_ID

At least one of these columns is required if they are not already provided in the RCV\_HEADERS\_INTERFACE table.

## SOURCE\_DOCUMENT\_CODE

This column indicates the document type for the shipment. It accepts a value of 'PO' only.

## DOCUMENT\_NUM or PO\_HEADER\_ID

The column DOCUMENT\_NUM indicates the purchase order document number against which to receive. The value in this column must be a valid purchasing

document in Purchasing. If you provide a value in either the DOCUMENT\_NUM or PO\_HEADER\_ID column, the other can be derived.

### **HEADER\_INTERFACE\_ID**

Purchasing provides a unique identifier for the corresponding header. The value in this column must match the HEADER\_INTERFACE\_ID in the RCV\_HEADERS\_INTERFACE table. If you're importing data through e-Commerce Gateway, a value is provided automatically.

### **VALIDATION\_FLAG**

This column tells the Receiving Open Interface whether to validate the row before processing it. It accepts values of 'Y' or 'N'. The Receiving Open Interface enters a default value of 'Y'.

## **Conditionally Required Data for RCV\_TRANSACTIONS\_INTERFACE**

Additionally, you may have to enter values for the following conditionally required columns in the RCV\_TRANSACTIONS\_INTERFACE table:

### **ITEM\_CATEGORY or CATEGORY\_ID, or DOCUMENT\_LINE\_NUM or PO\_LINE\_ID**

If you receive a shipment for an item that is not defined in Inventory (a one-time item), you must provide an ITEM\_CATEGORY or CATEGORY\_ID, or the DOCUMENT\_LINE\_NUM that the supplier is shipping against. This way, the Receiving Open Interface can match the line and allocate the quantity shipped. If you don't provide a value for ITEM\_CATEGORY or CATEGORY\_ID for a one-time item, you must provide a value for DOCUMENT\_LINE\_NUM or PO\_LINE\_ID.

### **ITEM\_REVISION**

You must provide a value if the item is under revision control and you have distributions with a destination type of Inventory. The value must be valid (defined in Purchasing) for the item you're receiving and the organization that you are receiving in. If no value is provided and one is required, the Receiving Open Interface defaults the latest implemented revision.

### **EMPLOYEE\_ID**

A value in this column is required if the TRANSACTION\_TYPE is 'DELIVER'. The value can be derived if an EMPLOYEE\_NUM is provided in the RCV\_HEADERS\_INTERFACE table.

**SHIP\_TO\_LOCATION\_CODE or SHIP\_TO\_LOCATION\_ID**

If a SHIP\_TO\_LOCATION\_CODE or SHIP\_TO\_LOCATION\_ID, or SHIP\_TO\_ORGANIZATION\_CODE or SHIP\_TO\_ORGANIZATION\_ID is provided at the header level, in the RCV\_HEADERS\_INTERFACE table, the Receiving Open Interface can derive the SHIP\_TO\_LOCATION\_CODE or SHIP\_TO\_LOCATION\_ID at the line level, in the RCV\_TRANSACTIONS\_INTERFACE table.

A value is always required in the SHIP\_TO\_LOCATION\_CODE or SHIP\_TO\_LOCATION\_ID column for shipment (ASN or ASBN) transactions.

If the supplier does not provide ship-to organization information, then you need to tie your ship-to locations to a single Inventory organization in the Locations window. This way, the Receiving Open Interface can derive an organization based on the ship-to location.

**TO\_ORGANIZATION\_CODE or TO\_ORGANIZATION\_ID**

You must provide a value for at least one of these columns. (The Receiving Open Interface can derive the other.) However, if you provide a SHIP\_TO\_LOCATION\_CODE or SHIP\_TO\_LOCATION\_ID, and that location is tied to an Inventory organization in the Locations window, then the Receiving Open Interface can derive the TO\_ORGANIZATION\_CODE and TO\_ORGANIZATION\_ID.

The TO\_ORGANIZATION\_CODE indicates the destination ship-to organization code. You can have different ship-to organizations specified for different lines, if no SHIP\_TO\_ORGANIZATION\_CODE is provided in the RCV\_HEADERS\_INTERFACE table.

**DESTINATION\_TYPE\_CODE**

You must provide a value for this column if the AUTO\_TRANSACT\_CODE is 'DELIVER.' If you do not provide a value, the Receiving Open Interface uses the Destination Type on the purchase order shipment.

**EXPECTED\_RECEIPT\_DATE**

A value in this column is required if none is provided in the RCV\_HEADERS\_INTERFACE table. The date must fall within the receipt date tolerance for the shipments with which the receipt is being matched.

**DELIVER\_TO\_PERSON\_ID or DELIVER\_TO\_PERSON\_NAME, SUBINVENTORY, and LOCATOR or LOCATOR\_ID**

Values are required in these columns if the `AUTO_TRANSACT_CODE` is 'DELIVER' and if the Receiving Open Interface can't find the values in the purchase order itself. Additionally, `LOCATOR` or `LOCATOR_ID` is required if a Locator Control option is selected for the delivery transaction at the item level (in the Master Items or Organization Items windows), subinventory level (in the Subinventories window in Inventory), or organization level (in the Organization window).

**DELIVER\_TO\_LOCATION\_CODE or DELIVER\_TO\_LOCATION\_ID**

A value is required in one of these columns if the `AUTO_TRANSACT_CODE` is 'DELIVER.' If you do not provide a value, the Receiving Open Interface uses the Deliver-to location on the purchase order shipment.

## Derived Data

In general, the Receiving Open Interface derives or defaults derived columns using logic similar to that used by the Receipts, Receiving Transactions, or Manage Shipments windows. Purchasing never overrides information that you provide in derived columns.

In general, when a column exists in both the `RCV_HEADERS_INTERFACE` and `RCV_TRANSACTIONS_INTERFACE` tables, if you provide a value for the column in the `RCV_HEADERS_INTERFACE` table, the Receiving Open Interface can derive a value for the same column in the `RCV_TRANSACTIONS_INTERFACE` table. The `LOCATION_CODE` in the headers table and `SHIP_TO_LOCATION_CODE` in the transactions table are examples of this. In general, the Receiving Open Interface tries first to derive values in the `RCV_TRANSACTIONS_INTERFACE` table based on values in the `RCV_HEADERS_INTERFACE` table; then, if no corresponding values are there, it tries to derive them from the purchase order.

Some examples of derivation are, in the `RCV_HEADERS_INTERFACE` table, the `RECEIPT_NUM` is derived if the `AUTO_TRANSACT_CODE` is 'DELIVER' or 'RECEIVE' and, in the `RCV_TRANSACTIONS_INTERFACE` table, the `DESTINATION_TYPE_CODE` is derived if the `TRANSACTION_TYPE` is 'DELIVER.'

## Optional Data

Optional columns in the interface tables use the same rules as their corresponding fields in the Receipts, Receiving Transactions, and Manage Shipments windows in Purchasing. For example:

- **RELEASE\_NUM** must be a valid release number for the purchasing document number provided and, if a release number is not provided, the Receiving Open Interface allocates the quantity across all open shipments for all releases.
- **DOCUMENT\_SHIPMENT\_LINE\_NUM** must be a valid number for the line you are receiving against if the line number (**DOCUMENT\_LINE\_NUM**) is provided. If a **DOCUMENT\_SHIPMENT\_LINE\_NUM** is not provided, the Receiving Open Interface allocates the shipment quantity against the shipments in a first-in, first-out order based on the **PROMISED\_DATE** or the **NEED\_BY\_DATE** in the Purchasing tables.
- **SUBSTITUTE\_ITEM\_NUM** - The value in this column must be defined in Purchasing as a related item for an item on the provided **DOCUMENT\_NUM**. The original item must allow substitute receipts and the supplier must be enabled to send substitute items. The substitute item also must be enabled as a Purchasing item.
- **REASON\_NAME** indicates the transaction reason, as defined in the Transaction Reasons window in Inventory.

Some other example information about optional data is, in the **RCV\_HEADERS\_INTERFACE** table, the **EXPECTED\_RECEIPT\_DATE** must be later than or equal to the **SHIPPED\_DATE**, if a **SHIPPED\_DATE** is given. Also, if Oracle Supplier Scheduling is installed and set up, and the value in the column **VENDOR\_CUM\_SHIPPED\_QUANTITY** does not match what you have received, then your supplier is notified through an Application Advice (if you're receiving ASNs through e-Commerce Gateway).

## Validation

The Receiving Open Interface does not perform any validations for columns that are indicated as Reserved for Future Use on the previous pages.

## Standard Validation

Oracle Purchasing validates all required columns in the interface tables. For specific information on the data implied by these columns, see the *Oracle eTechnical Reference Manuals* for details.

## Other Validation

If a row in the interface tables fails validation for any reason, the program sets the `PROCESSING_STATUS_CODE` to 'ERROR' and enters details about errors on that row into the `PO_INTERFACE_ERRORS` table.

In general, the same validations are performed in the Receiving Open Interface tables as are performed in the Receipts, Receiving Transactions, and Manage Shipments windows.

## Debugging

Debugging enables you to do a test run of the Receiving Open Interface, see and fix the errors, and run the program again.

### To debug the receiving transaction pre-processor:

1. Set the profile option *PO: Enable Sql Trace for Receiving Processor* to Yes.

Setting this profile option to Yes provides more detailed error information in the View Log screen of the Submit Request window when you run the Receiving Transaction Processor in step 3. ('Yes' also places in the database a trace file, which can be used by Oracle Support Services if needed.)

2. Load your receiving data into the Receiving Open Interface tables using e-Commerce Gateway or other means.
3. Navigate to the Submit Request window by choosing Reports > Run and submit the Receiving Transaction Processor.
4. When the Receiving Transaction Processor completes, choose the View Log button to see what errors occurred, if any.

Because the profile option in step 1 was set to Yes, the View Log screen shows the pre-processor's actions as it processed the data, from start to finish. If an error occurs during this process, you see not just the error, but where in the process the error occurred.

5. Check that derived and defaulted data was derived and defaulted correctly.

You can use SQL\*Plus to do this if you're on a test environment, or use the Transaction Statuses window and the Help > Diagnostics > Examine menu to check the values.

For example, if you provided a `DOCUMENT_NUM` in the `RCV_TRANSACTIONS_INTERFACE` table but no `PO_HEADER_ID`, the Receiving Open Interface should derive the correct `PO_HEADER_ID` for you. Derived and

defaulted data is shown in the Receiving Open Interface table descriptions on the previous pages.

6. Run the Receiving Interface Errors Report if you want to see a list only of the errors that occurred.

The View Log screen displays errors in the context in which they occurred. The Receiving Interface Errors Report shows you just the errors.

7. Make the necessary fixes for the errors or incorrectly defaulted data, if any.
8. Repeat steps 2 through 7 until you have successfully processed the data with no errors.

### See Also

Receiving Transaction Processor, *Oracle Purchasing User's Guide, Release 11i*

## Resolving Failed Receiving Open Interface Rows

### Error Messages

Oracle Purchasing may display specific error messages during interface processing. For more details on these messages, please see the *Oracle Applications Messages Manual*, in HTML format on the documentation CD-ROM for Release 11i.

### Viewing Failed Transactions

For each row in the RCV\_HEADERS\_INTERFACE and RCV\_TRANSACTIONS\_INTERFACE tables that fails validation, the Receiving Open Interface creates one or more rows with error information in the PO\_INTERFACE\_ERRORS table.

You can report on all rows that failed validation by using the Receiving Interface Errors report and, for ASBNs, the Purchasing Interface Errors Report. For every transaction in the interface table that fails validation, these reports list all the columns that failed validation along with the reason for the failure.

You can identify failed transactions in the interface tables by selecting rows with a PROCESS\_FLAG of 'ERROR' or 'PRINT'. For any previously processed set of rows identified by the HEADER\_INTERFACE\_ID and INTERFACE\_TRANSACTION\_ID, only rows that failed validation remain in the interface table, as all the successfully imported rows are deleted from the RCV\_TRANSACTIONS\_INTERFACE table. (Successfully imported rows in the RCV\_HEADERS\_INTERFACE table are not deleted.)

**See Also**

Receiving Interface Errors Report, *Oracle Purchasing User's Guide, Release 11i*

Purchasing Interface Errors Report, *Oracle Purchasing User's Guide, Release 11i*

## Purchase Order Change APIs

The Purchase Order Change APIs are public APIs that enable you to apply changes to standard purchase orders that exist in Oracle Purchasing. They perform all the necessary validation before updating the changes.

The purchase order communicates to a supplier the items needed, the quantity of those items, at what price and when are the items required. It also indicates if supplier acceptance is required and if that acceptance has been received. These APIs are able to update that information programmatically.

This section will cover in detail the business rules and validations performed by each API before the update to the purchase order. It will also cover the steps performed by each API after the updates have taken place. These APIs have been designed so that they can be called from a pl/sql package, workflow or through a jdbc call.

The APIs enable you to do the following:

- Record Acceptance/Rejection in Oracle Purchasing
- Update quantity, price, and promise date on standard purchase orders or releases in Oracle Purchasing

### Functional Overview

The Change Purchase Orders APIs provides the following public procedures that allow you to accomplish the tasks listed above:

- `record_acceptance`  
Record the acceptance or rejection of a purchase order by a supplier.
- `update_po`  
Update a standard purchase order or release changes of quantity, price, and promise date.

### Setting Up the Record Acceptance/Rejection API

#### Parameter Descriptions

The following chart lists all parameters used by the procedures listed above. Additional information on these parameters follows the chart.

RECORD\_ACCEPTANCE

Table 10–14 ACCEPTANCE\_LOOKUP\_CODE

Parameter	Usage	Type	Required	Derived	Optional
PO_NUM	IN	Varchar2	x		
RELEASE_NUM	IN	Number	*		
REVISION_NUM	IN	Number	x		
ACTION	IN	Varchar2	x		
ACTION_DATE	IN	Date			x
EMPLOYEE_ID	IN	Number	x		
ACCEPTED_FLAG	IN	Varchar2	x		
ACCEPTANCE_LOOKUP_CODE	IN	Varchar2	x		
NOTE	IN	Varchar2			x
VERSION	IN	Varchar2	x		

\*The PO\_NUM, RELEASE\_NUM (if a release), REVISION\_NUM parameters will have to be provided by the user for each API call.

PO\_NUM

Purchase order number.

RELEASE\_NUM

Required if the purchase order is a release. The pass-in value must be a number.

REVISION\_NUM

Which revision of the purchase order/release is being acted upon.

ACTION

Indicates the action to take. The value must be NEW.

ACTION\_DATE

Indicates the date of follow-up action. Provide a value in the format of 'MM/DD/YY' or 'MM-DD-YY', its default value is TRUNC(SYSDATE).

**EMPLOYEE\_ID**

The `fnf_global.user_id` of the buyer.

**ACCEPTED\_FLAG**

Indicate if purchase is accepted. Must be 'Y' or 'N'.

**ACCEPTANCE\_LOOKUP\_CODE**

Type of acceptance, its value must be corresponding to the LOOKUP\_CODE in PO\_LOOKUP\_CODES table with LOOKUP\_TYPE of "CCEPTANCE TYPE. The possible values are: Accepted Terms, Accepted All Terms, On Schedule, Unacceptable Changes, and REJECTED.

**VERSION**

Version of the current API (currently 1.0).

**UPDATE\_PO**

**Table 10–15 ACCEPTANCE\_LOOKUP\_CODE**

Parameter	Usage	Type	Required	Derived	Optional
PO_NUM	IN	Varchar2	x		
RELEASE_NUM	IN	Number	*		
REVISION_NUM	IN	Number	x		
LINE_NUM	IN	Number	x		
SHIPMENT_NUM	IN	Number			x
NEW_QUANTITY	IN	Number	**		
NEW_PRICE	IN	Number	**		
NEW_PROMISED_DATE	IN	Date	**		
LAUNCH_APPROVALS_FLAG	IN	Varchar2	x		
SOURCE_OF_UPDATE	IN	Varchar2			x
TRANSACTION_ID	IN	Varchar2			x
VERSION	IN	Varchar2	x		

\*The PO\_NUM, RELEASE\_NUM (if a release), REVISION\_NUM parameters will have to be provided by the user for each API call.

\*\*One of the three values NEW\_QUANTITY, NEW\_PRICE, or NEW\_PROMISED\_DATE must be not null.

**PO\_NUM**

Purchase order number.

**RELEASE\_NUM**

Required if the purchase order is a release. The pass-in value must be a number.

**REVISION\_NUM**

Which revision of the purchase order/release is being acted upon.

**LINE\_NUM**

Purchase order line number to update.

**SHIPMENT\_NUM**

If provided, indicates the update occurs at shipment level, otherwise it's at line level.

**NEW\_QUANTITY**

Indicates the new value of quantity ordered that the order should be updated to.

**NEW\_PRICE**

Indicates the new value of unit price that the order should be updated to.

**NEW\_PROMISED\_DATE**

Indicates the new value of promised date that the order should be updated to. Must be in the format of 'MM/DD/YY' or 'MM-DD-YY'.

**LAUNCH\_APPROVALS\_FLAG**

Indicates if you want to launch APPROVAL workflow after the update. Its value could be either 'Y' or 'N'. If not provided, the default value is 'N'.

**SOURCE\_OF\_UPDATE**

Reserved for future use to record the source of the update.

**TRANSACTION\_ID**

Used to fetch any error messages recorded in PO\_INTERFACE\_ERRORS table if the update process fails. If not provided, a default value will be used.

**VERSION**

Version of the current API (currently 1.0).

## Validation of Purchase Order Change APIs

**Record Acceptance Validation**

The API will first validate if the value of revision\_num is the same as the current revision\_num for the purchase order, and then insert the new record into the PO\_ACCEPTANCES table.

**Update Purchase Order (PO) Validation****Header Level Validation:**

1. Check the authorization status. Order must be APPROVED or REQUIRES REAPPROVAL
2. Check the cancel flag. No updates will occur if the order is cancelled.
3. The document type of the PO must be one of the following: STANDARD, PLANNED, BLANKET RELEASE, SCHEDULED RELEASE, or PLANNED RELEASE.
4. No update if the revision number doesn't match the current revision.

**Line Level Validation and Update:** This logic occurs when LINE\_NUM is not null and SHIPMENT\_NUM is null.

1. No update occurs if the line status is FINALLY CLOSED or CANCELLED.
2. The new quantity or price value must be positive.
3. If updating quantity, the new quantity must be greater than or equal to the greater of total quantity\_received of all shipments and total quantity\_billed of all shipments for this line. After the update takes place, the new quantity will be prorated at the shipment level and for each shipment the quantity is prorated at the distribution level if applicable.

4. If updating price, no update occurs if a receipt has been created against one of the line's shipments and it's been accrued upon receipt. No update occurs if an invoice has been created against one of the line's shipments. After a price update takes place, price changes are rolled down to the shipment level for standard POs. No price update occurs for a release if the Price Override flag on the blanket purchase agreement Line is "No".
  - Note: The shipment price is not displayed.
5. If updating the promised date, NEW\_PROMISED\_DATE must be in the future. No update occurs if it's a past date. After the update takes place, promised dates are rolled down to the shipment levels for standard POs.

**Shipment Level Validation and Update** This logic occurs when both LINE\_NUM and SHIPMENT\_NUM are not null.

1. No update occurs if the line status is FINALLY CLOSED or CANCELLED.
2. The new quantity or price value must be positive.
3. If updating quantity, the new quantity must be greater than or equal to the greater of either the quantity\_received or the quantity\_billed. After updating takes place, the new quantity is prorated at the distribution level if applicable.
4. If updating price, no update occurs if a receipt has been created and it's been accrued upon receipt. No update occurs if an invoice has been created against the shipment. After updating takes place, if this is the only shipment that the line has, the price change is rolled up to the line level for standard POs.
5. If updating promised date, NEW\_PROMISED\_DATE must be in the future. No update occurs if it's a past date. After the update takes place, the promised date change is rolled up to the line level for standard POs. If there are multiple shipments, no price update can occur for a single shipment.

**Post Update PO Validation:**

1. Set the PO status to REQUIRES REAPPROVAL.
2. Increment revision number if the PO was in APPROVED status before the update.
3. Launch the PO Approval workflow if LAUNCH\_APPROVALS\_FLAG = 'Y'.

4. If the quantity was adjusted down to be equal to the total quantity received or billed, then set the appropriate closed code and roll up the closed code to line and header levels.

## Error Handling

Purchasing may display specific error messages during API processing. For more details on these messages, please see the *Oracle Applications Message Reference Manual*, in HTML format on the documentation CD-ROM for Release 11i.

These APIs will use the standard error handling procedures followed in Oracle Purchasing. The API will return a numeric zero if the update was successful and a numeric one if some error was encountered. When an error is encountered the APIs will update the PO\_INTERFACE\_ERRORS table with the detailed error messages. You can view transactions that failed validation by running the Purchasing Interface Errors Report.

## Usage Example

```
declare
    result number := null;

begin

    -- Do not forget to commit after the result returns 1
    -- and rollback if result returns 0.

    -- This needs to change as per your application.
    fnd_global.apps_initialize(1318, 50578, 201);

    result := PO_CHANGE_API1_S.record_acceptance(
1261, --po num
null, -- release num
0, -- revision num
'NEW', -- action
null, -- action date
588, -- employee_id
'N', -- accepted flag
'On Schedule', -- acceptance lookup code
'All valid', -- note
'APITEST', --- interfacetype
null, -- transaction_id
'1.0'); -- api version
*/
```

```
        result := PO_CHANGE_API1_S.update_po(
1263, -- po num
1, -- release num
1,-- revision
1,-- line num
1, -- shipment num
5,-- qty
null, -- price
null, -- date
'Y', -- launch approvals
null, -- update source
'APITEST', -- interface type
null, -- txn id
'1.0'); -- version

/*

dbms_output.put_line('result:' || result);

        EXCEPTION
        WHEN OTHERS THEN
            raise;

end;
```

### **See Also**

Purchasing Interface Errors Report, *Oracle Purchasing User's Guide, Release 11i*  
Oracle Applications Message Reference Manual.

## Cancel PO API

This PL/SQL procedure provides the ability to cancel Oracle Purchasing documents directly through an API. This section will cover in detail the business rules and validations performed by the Cancel PO API, the usage of the API, and the parameters required.

### Functional Overview

The PO\_Document\_Control\_PUB.control\_document () PL/SQL procedure provides the ability to cancel Purchasing documents directly through an API. The API performs all of the same processing that would be done if a cancellation was requested through the PO Summary Form Control window.

### Setting Context

Prior to calling the API you should set your global context to reflect the application, user and responsibility used to perform the cancel action. If you do not set this context, the API will not be able to identify or update your data. If you are calling the API from an environment that already has the context set you do not need to set it again.

The call that may be used to set the global context is: fnd\_global.apps\_initialize(user\_id, resp\_id, resp\_application\_id); user\_id is an FND\_USER who would be allowed to perform the cancellation action. Resp\_id is the id of the responsibility that is being used to cancel the document. This id will also set the context for the operating unit for the document being cancelled.

### Retrieve Messages

After returning from the call to the API you may check for any messages returned by the API by using the FND\_MSG\_PUB package. The following code will display all of the messages returned by the API:

```
FOR i IN 1..FND_MSG_PUB.count_msg
LOOP
    DBMS_OUTPUT.put_line(FND_MSG_PUB.Get(p_msg_index => i,
                                          p_encoded   => 'F'));
END LOOP;
```

**API Parameters:**

All Parameters must be provided, even if provided as NULL. Nulls are allowed unless otherwise indicated.

**Table 10–16 Cancel PO API Parameters**

Parameter Name	In/Out	Type	Explanation
p_api_version	IN	NUMBER	Null not allowed. Value should match the current version of the API (currently 1.0). Used by the API to determine compatibility of API and calling program.
p_init_msg_list	IN	VARCHAR2	Must be FND_API.G_TRUE. Used by API callers to ask the API to initialize the message list (for returning messages).
p_commit	IN	VARCHAR2	Must be FND_API.G_TRUE. Used by API callers to ask the API to commit on their behalf after performing its function. For cancellation API this must be used to prevent data inconsistencies.
x_return_status	OUT	VARCHAR2(1)	Possible Values are: 'S' = SUCCESS - Cancellation completed without errors. 'E' = ERROR - Cancellation resulted in an error. 'U' = UNEXPECTED ERROR - Unexpected error.
p_doc_type	IN	PO_DOCUMENT_TYPES document_type_codeTYPE	Null not allowed. Possible Values are: 'PO', 'PA', or 'RELEASE'
p_doc_subtype	IN	PO_DOCUMENT_TYPES document_subtype TYPE	Null not allowed. Possible Values are STANDARD, PLANNED, BLANKET, CONTRACT, or SCHEDULED.:
p_doc_id	IN	NUMBER	Internal ID for Purchase Order. Either p_doc_id or p_doc_num required. (i.e. PO_HEADERS_ALL.po_header_id)
p_doc_num	IN	NUMBER	Document Num for Purchase Order. Either p_doc_id or p_doc_num required.(i.e. PO_HEADERS_ALL.segment1)

**Table 10–16 Cancel PO API Parameters**

Parameter Name	In/ Out	Type	Explanation
p_release_id	IN	NUMBER	Internal ID for Release. If Doc Type is Release either p_release_id or p_release_num required (i.e. PO_RELEASES_ALL.po_release_id)
p_release_num	IN	NUMBER	Release Number. If Doc Type is Release either p_release_id or p_release_num required (i.e. PO_RELEASES_ALL.release_num)
P_doc_line_id	IN	NUMBER	May be used to cancel a single Line (and all its shipments). If canceling a line or shipment, either p_doc_line_id or p_doc_line_num is required. (i.e. PO_LINES_ALL.po_line_id)
p_doc_line_num	IN	NUMBER	Used to Cancel a single Line (and all its shipments).If canceling a line or shipment, either p_doc_line_id or p_doc_line_num is required (i.e. PO_LINES_ALL.line_num)
p_doc_line_loc_id	IN	NUMBER	Used to Cancel a single Shipment. If canceling shipment either p_doc_line_loc_id or p_doc_shipment is required (i.e. PO_LINE_LOCATIONS_ALL.line_location_id)
p_doc_shipment_num	IN	NUMBER	Used to Cancel a single Shipment. If canceling shipment either p_doc_line_loc_id or p_doc_shipment is required (i.e. PO_LINE_LOCATIONS_ALL.shipment_num)
p_action	IN	VARCHAR2	Null not allowed. Value should be 'CANCEL'
p_action_date	IN	DATE	Null defaults to Sysdate. Date to be used for Cancel Date. Also use for encumbrance reversal if encumbrance accounting is used.
p_cancel_reason	IN	PO_LINES cancel_reason TYPE.	Reason to be recorded in cancel_reason.
p_cancel_reqs_flag	IN	VARCHAR2	Value should be 'Y' or 'N'. Used to perform cancellation of backing requisition, if one exists.
p_print_flag	IN	VARCHAR2	Default 'N'. Used to print purchase order after cancellation.
p_note_to_vendor	IN	PO_HEADERS. note_to_vendor TYPE	Not Required. Used to create a note to supplier to store on document and print.

**p\_api\_version**

This parameter corresponds to the version number on the API and is used to determine if the calling program is still compatible with the current version of the API. A version number consists of a major and a minor component. For example, the version 3.1 has a major component of 3 and a minor component of 1. All future revisions of the API will increase the version number. A revision of only the minor component will not require an update to the calling program. A revision that includes a change of the major component will be incompatible with the calling program. Examples of minor component revisions are local variable name changes, internal logic changes. Examples of major component revisions are addition of new required parameters, change of a parameter type, new output parameters.

**p\_init\_msg\_list**

The `p_init_msg_list` parameter allows API callers to request that the API does the initialization of the message list on their behalf, thus reducing the number of calls required by a caller in order to execute an API. API callers have another choice; they can make a call to the message list utility function `FND_MSG_PUB.Initialize` to initialize the message list. Either way, it is the responsibility of the API caller to initialize the API message list.

The `p_init_msg_list` parameter defaults to `FND_API.G_FALSE`, which means that APIs will not initialize the message list unless asked by their callers. If the calling program does not want to initialize the list, it should pass in `FND_API.G_TRUE`.

**p\_commit**

Canceling documents through the API is similar to canceling through Forms, so once a document is cancelled it cannot be undone. Therefore, you cannot rollback a successful cancel action, so `p_commit` should always be `FND_API.G_TRUE`.

**x\_return\_status**

The return status parameter should be a local variable that you declare in your code before calling the API. This is so that the message list gets cleared and initialized before each procedure call. After the API call the `x_return_status` may be used to determine whether or not the API call was successful.

**Number/ID parameters**

The parameters that identify which document and what level of document to cancel may be entered as either an ID or a number (i.e. Internal ID of `po_header_id` or visible data of PO Number). You must provide one or the other. If both are provided, an internal id will be preferred over a number.

Line and shipment information are only required if you are canceling at that level. For example, to cancel the entire document you should not provide any line or shipment information. To cancel a single line you must provide either a line id or a line num and either a document id or a document num. To cancel a single shipment you must provide either a line location id or a shipment num AND either a line id or a line num AND either a document id or a document num. If you want to cancel multiple lines or shipments on the same document, but do not want to cancel the entire document, you will need to call the API multiple times.

### Usage Example:

```

DECLARE
l_return_status VARCHAR2(1);
BEGIN
fnd_global.apps_initialize(user_id, resp_id, resp_application_id);
--call the Cancel API
PO_Document_Control_PUB.control_document (
    1.0,                -- p_api_version
    FND_API.G_TRUE, -- p_init_msg_list
    FND_API.G_TRUE, -- p_commit
    l_return_status,-- x_return_status
    'PO',                -- p_doc_type
    'STANDARD',          -- p_doc_subtype
    null,                -- p_doc_id
    'PO123',            -- p_doc_num
    null,                -- p_release_id
    null,                -- p_release_num
    null,                -- p_doc_line_id
    null,                -- p_doc_line_num
    null,                -- p_doc_line_loc_id
    null,                -- p_doc_shipment_num
    'CANCEL',            -- p_action
    SYSDATE,             -- p_action_date
    null,                -- p_cancel_reason
    'N',                -- p_cancel_reqs_flag
    null,                -- p_print_flag
    null );              -- p_note_to_vendor
-- Get any messages returned by the Cancel API
FOR i IN 1..FND_MSG_PUB.count_msg
LOOP
    DEMS_OUTPUT.put_line(FND_MSG_PUB.Get(p_msg_index => i,
                                         p_encoded   => 'F'));
END LOOP;
END;
```

**See Also**

Oracle Applications Message Reference Manual.

---

# Oracle Quality Open Interfaces

This chapter contains information about the following Oracle Quality open interfaces:

- [Collection Import Interface](#) on page 11-2
- [Collection Plan Views](#) on page 11-16

## Collection Import Interface

You can use the Collection Import Interface to add new quality results data or to update existing quality results data in the Quality data repository. For example, you can load data from sources such as test equipment and gauges into the Collection Import Interface Table, then import them into the Quality data repository. Since Collection Import works as a background process, the flow of your work is not interrupted.

### Functional Overview

The Collection Import process consists of the following three major steps:

#### Loading the Collection Import Interface Table

Before you can import quality results data, you must load it into the Collection Import Interface Table. The programming languages and tools that you use to load this data are highly dependent on your data source.

#### Launching the Collection Import Manager

After you load data into the Collection Import Interface table, you launch the Collection Import Manager. The Collection Import Manager is a background process that searches the interface for new rows. If any are found, it launches one or more Import Workers, which validate the data. It then inserts valid records, or updates existing records in the Quality results data repository (QA\_RESULTS), and invokes any actions associated with these records.

The Collection Import Interface Table can contain multiple rows. Each row specifies either that a new record is to be added or an existing record is to be updated in the Quality data repository. When the Collection Import Manager completes a transaction, it either updates records in the Quality data repository, or inserts all records specified as Insert into it. The Collection Import Manager can only perform one *type* of transaction (updating or inserting records) each time that it completes a transaction, although it can perform that transaction on multiple records (rows).

You specify the type of transaction to be performed in the Transaction Type field, which appears when you launch the Collection Import Manager. This field can take one of two values: Insert Transaction or Update Transaction.

---

---

**ATTENTION:** The Collection Import Manager executes all types of actions, except the Display a message to the operator action, which must be processed online. Records that are associated with the Reject the input action are not imported into the Quality results data repository.

---

---

Rows that fail validation are marked and remain in the Collection Import Interface Table. Error messages explaining why records failed validation or processing are inserted into the Errors table.

### Updating Collection Import

The final step in the Collection Import process is viewing, updating, and resubmitting failed rows. You use the Update Collection Import form to optionally delete any records that you do not want to resubmit.

---

---

**Attention:** Do not confuse this step with running the Collection Import Manager in the “Update Transaction” mode.

---

---

### See Also

[Collection Import Interface Table](#) on page 11-3

[Example: Collection Import SQL Script](#) on page 11-11

[Collection Import Manager](#) on page 11-14

Updating Collection Import, *Oracle Quality User’s Guide*

## Collection Import Interface Table

The Collection Import Interface Table (QA\_RESULTS\_INTERFACE) is similar in structure to the Quality results database table (QA\_RESULTS), however, it contains a number of additional columns.

The following table describes the columns in the Collection Import Interface table.

**Table 11–1 Collection Import Interface**

Column Name	Data Type	Required	Derived (Leave Null)	Derived or User Optional	Optional	Plan Specific
CHARACTER1 through CHARACTER100	Varchar(150)					x
COLLECTION_ID	Number(38)			x		
COMP_GEN_LOC_CTRL_CODE	Number		x <sup>1</sup>			
COMP_ITEM	Varchar2(2000)					x
COMP_ITEM_ID	Number		x			x
COMP_LOCATION_CONTROL_CODE	Number		x <sup>1</sup>			
COMP_LOCATOR	Varchar2(2000)					x
COMP_LOCATOR_ID	Number		x			x
COMP_LOT_NUMBER	Varchar2(30)					x
COMP_RESTRICT_LOCATORS_CODE	Number		x <sup>1</sup>			
COMP_RESTRICT_SUBINV_CODE	Number		x <sup>1</sup>			
COMP_REVISION	Varchar2(3)					x
COMP_REVISION_QTY_CONTROL_CODE	Number		x <sup>1</sup>			
COMP_SERIAL_NUMBER	Varchar2(30)					x
COMP_SUB_LOCATOR_TYPE	Number		x <sup>1</sup>			
COMP_SUBINVENTORY	Varchar2(10)					x
COMP_UOM	Varchar2(3)					x
CREATED_BY	Number		x <sup>1</sup>			
CREATION_DATE	Date		x <sup>1</sup>			
CUSTOMER_ID	Number		x			x
CUSTOMER_NAME	Varchar2(50)					x
DEPARTMENT	Varchar2(10)					x
DEPARTMENT_ID	Number		x			x
FROM_OP_SEQ_NUM	Number					x
GEN_LOC_CTRL_CODE	Number		x <sup>1</sup>			x
GROUP_ID	Number		x <sup>1</sup>			
INSERT_TYPE	Number				x	

**Table 11–1    Collection Import Interface**

Column Name	Data Type	Required	Derived (Leave Null)	Derived or User Optional	Optional	Plan Specific
ITEM	Varchar2(2000)					x
ITEM_ID	Number		x			x
JOB_NAME	Varchar2(240)					x
LAST_UPDATE_DATE	Date		x			
LAST_UPDATE_LOGIN	Number		x <sup>1</sup>			
LAST_UPDATED_BY	Number		x <sup>1</sup>			
LINE_ID	Number		x			x
LOCATION_CONTROL_CODE	Number		x <sup>1</sup>			x
LOCATOR	Varchar2(2000)					x
LOCATOR_ID	Number		x			x
LOT_NUMBER	Varchar2(30)					x
MARKER	Number		x <sup>1</sup>			
MATCHING ELEMENTS	Varchar2(1000)				x	
ORGANIZATION_CODE	Varchar2(3)	x				
ORGANIZATION_ID	Number		x			
PLAN_ID	Number		x			
PLAN_NAME	Varchar2(30)	x				
PO_AGENT_ID	Number		x			
PO_HEADER_ID	Number		x			x
PO_LINE_NUM	Number					x
PO_NUMBER	Varchar2(20)					x
PO_RELEASE_ID	Number			x		x
PO_RELEASE_NUM	Number		x			x
PO_SHIPMENT_NUM	Number					x
PO_TYPE_LOOKUP	Varchar2(25)		x			x
PROCESS_STATUS	Number	x				
PRODUCTION_LINE	Varchar2(10)					x

**Table 11–1 Collection Import Interface**

Column Name	Data Type	Required	Derived (Leave Null)	Derived or User Optional	Optional	Plan Specific
PROGRAM_APPLICATION_ID	Number		x <sup>1</sup>			
PROGRAM_ID	Number		x <sup>1</sup>			
PROGRAM_UPDATE_DATE	Date		x <sup>1</sup>			
PROJECT_ID	Number		x			x
PROJECT_NUMBER	Varchar2(25)		x			x
QA_CREATED_BY	Number		x			
QA_CREATED_BY_NAME	Varchar2(100)			x		
QA_LAST_UPDATED_BY	Number		x			
QA_LAST_UPDATED_BY_NAME	Varchar2(100)			x		
QUANTITY	Number					x
RECEIPT_NUM	Varchar2(30)					x
REQUEST_ID	Number		x <sup>1</sup>			
RESOURCE_CODE	Varchar2(10)					x
RESOURCE_ID	Number		x			x
RESTRICT_LOCATORS_CODE	Number		x <sup>1</sup>			x
RESTRICT_SUBINV_CODE	Number		x <sup>1</sup>			x
REVISION	Varchar2(3)					x
REVISION_QTY_CONTROL_CODE	Number		x <sup>1</sup>			x
RMA_HEADER_ID	Number		x			x
RMA_NUMBER	Number					x
SALES_ORDER	Number					x
SERIAL_NUMBER	Varchar2(30)					x
SO_HEADER_ID	Number		x			x
SOURCE_CODE	Varchar2(30)				x	
SOURCE_LINE_ID	Number				x	
SPEC_ID	Number		x			
SPEC_NAME	Varchar2(30)				x	

**Table 11–1    Collection Import Interface**

Column Name	Data Type	Required	Derived (Leave Null)	Derived or User Optional	Optional	Plan Specific
STATUS	Varchar2(25)		x			x
SUB_LOCATOR_TYPE	Number		x <sup>1</sup>			x
SUBINVENTORY	Varchar2(10)					x
TASK_ID	Number		x			x
TASK_NUMBER	Varchar2(25)		x			x
TO_DEPARTMENT	Number					x
TO_DEPARTMENT_ID	Varchar2(10)		x			x
TO_OP_SEQ_NUM	Number					x
TRANSACTION_DATE	Date		x			
TRANSACTION_INTERFACE_ID	Number			x		
UOM	Varchar2(3)					x
VALIDATE_FLAG	Number				x	
VENDOR_ID	Number		x			x
VENDOR_NAME	Varchar2(80)					x
WIP_ENTITY_ID	Number		x			x
<sup>1</sup> These columns must be left null in all circumstances.						

## Derived Data

The Collection Import Manager derives data for some columns in the Collection Import Interface Table using foreign key relationships within Oracle Manufacturing. You can, however, insert user-defined data into some derived columns.

### Control Columns

Control columns store information specific to the import process. These columns include:

**TRANSACTION\_INTERFACE\_ID:** Each row added to the Collection Import Interface Table receives a unique Transaction Interface ID.

---

---

**ATTENTION:** You should leave this field empty.

---

---

PROCESS\_STATUS: The Process Status identifies the state of the transaction and has four possible values:

- 1 Pending
- 2 Running
- 3 Error
- 4 Completed

When loading records into the Collection Import Interface Table, you must assign them an initial process status of 1 (Pending). During validation, the Collection Import Manager updates the status to 2 (Running). Rows that fail validation are assigned a status of 3 (Error). Successfully validated rows are assigned a status of 4 (Completed) and are immediately deleted from the interface table.

---

---

**ATTENTION:** You can prevent status 4 (Completed) rows from being deleted from the Collection Import Interface table by setting the Oracle Master Scheduling/MRP and Supply Chain Planning *MRP:Debug Mode* profile option to Yes (see the *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide* for more information).

---

---

VALIDATE\_FLAG: The Validate Flag determines whether the Collection Import Manager validates records in the Collection Import Interface table before importing them into the Quality results database table. The Validate Flag is present in the QA\_RESULTS\_INTERFACE table; however, it is not present in the import view. There are two values for this field:

- 1 Yes
- 2 No

Normally this flag is assigned a value of 1. When set to 1, or left blank, records are validated. When set to 2, records are not validated.

---

**Attention:** It is potentially dangerous to turn the Validate Flag off during Collection Import. Without validation, inconsistent data is not rejected.

---

*INSERT\_TYPE*: This field determines whether the Collection Import Manager will insert new records or update existing records in the Quality data repository. There are two values for this field:

- 1 Insert
- 2 Update

The default for the field is 1 Insert. When set to 1, or left blank, Collection Import inserts new records into the Quality data repository. When set to 2, it updates existing records in the repository.

*MATCHING\_ELEMENTS*: This is a comma-separated list of column names. Collection Import uses these column names as search keys when it updates existing records in the Quality data repository. If an existing record has the same data in the columns listed by Matching Elements, the record is updated so that it is identical to the corresponding row in the Collection Import Interface table. If any of the record's columns in the table is set to NULL, they will not be updated in the Quality data repository. Also, an import row in the table can match one and only one record in the repository; if the row in question has no match or has more than one match, Collection Import will reject it.

*SPEC\_NAME*: This field determines what specification will be used to validate the record. The value in this field should be set to the name of a specification. If no specification is required, you should set this field to NULL. If the field is *null*, the specification is enforced at the collection element level. If the field is *not null*, the named specification is used.

*PLAN\_NAME*: This field should contain the name of the collection plan. The name must be written in capital letters.

## Who Columns

Collection Import uses the name of the current user to derive values for standard Who columns:

- QA\_LAST\_UPDATE\_BY\_NAME
- QA\_CREATED\_BY\_NAME

You have the option to insert data into these derived Who columns. If you do so, the Collection Import Manager validates but does not override your data.

### Self Service Columns

The Collection Import Interface imports data entered by suppliers through Oracle Supplier Management Portal's Outside Processing Workbench and Quality Plans for Shipments web pages. If any records fail validation during the import process, a workflow notifies the Buyer. The following column is used to derive the name of the Buyer who will receive the workflow notification:

- PO\_AGENT\_ID

## Optional Data

All columns that contain user-defined, reference information, and predefined collection elements are optional.

---

---

**NOTE:** When you load data into the interface table, you must enter the default values for the collection plan manually.

---

---

### Name Columns

For every column in the Quality results database table (QA\_RESULTS) that stores a foreign-key ID, like CUSTOMER\_ID, the Collection Import Interface table contains two columns; one for the ID and one for the name. For example, customer data is associated with the CUSTOMER\_ID and CUSTOMER\_NAME columns in the interface table. You should always enter data into the name fields. The ID fields are used by the Collection Import Worker during processing, and any values entered in these fields are ignored. There is, however, one exception. If you have set the VALIDATE\_FLAG field to No (see below), you must enter the underlying IDs, since they are transferred directly into the results table without undergoing validation.

### Source Columns

SOURCE\_CODE, SOURCE\_LINE\_ID. These optional columns identify the sources of your Quality data. For example, if you are importing data that has been downloaded into an ASCII file as well as data from a data collection device, you can use a different source code to indicate the origin of each data record. To record more detailed information about the source, you can also fill in the source line ID. Keeping track of sources is often useful in tracking down validation problems.

## Collection Import Results Database Views

Collection Import Results Database Views are created and updated when you create and update collection plans. Collection Import Results Database Views facilitate the insertion of data into the Collection Import Interface table. Instead of inserting data directly into the import table, insert data into views of the table.

The Collection Import Results Database View remaps the generic CHARACTERx columns to columns with meaningful names. If define the collection elements Defect Code and Inspector ID for a collection plan, the names of these collection elements are mapped to the CHARACTERx columns. The import view eliminates import table columns that represent collection elements not added to a collection plan. If you create a collection plan, but do not add the PO Number and PO Line Number collection elements, the corresponding PO\_NUMBER and PO\_LINE\_NUM columns are not included in the import view.

### See Also

[Collection Import Manager](#) on page 11-14

Creating Collection Plans, *Oracle Quality User's Guide*

Collection Plan and Import Results Database Views, *Oracle Quality User's Guide*

## Example: Collection Import SQL Script

Oracle Quality uses the naming convention for collection import results database views: Q\_<collection-plan-name>\_IV. Consider the collection plan IMPORT's collection elements:

- Defects
- Department
- From Ops Seq Number
- Item
- Job Number
- Lot Number
- Off Location
- Operator
- Revision
- Thickness

- To Ops Seq Number

When you create this collection plan, Oracle Quality automatically creates a collection import results database view called Q\_IMPORT\_IV. This is a view to the Collection Import Interface table QA\_RESULTS\_INTERFACE. This view contains the following columns:

**Table 11–2 QA\_RESULTS\_INTERFACE**

<b>SQL&gt; DESCRIBE Q_IMPORT_IV;</b>	<b>Data Type</b>
COLLECTION_ID	Number
DEFECTS	Varchar(150)
DEPARTMENT	Varchar2(10)
FROM_OP_SEQ_NUM	Number
INSERT_TYPE	Number
ITEM	Varchar2 (2000)
JOB_NAME	Varchar2(240)
LOT_NUMBER	Varchar2(30)
MATCHING_ELEMENTS	Varchar2(1000)
OFF_LOCATION	Varchar(150)
OPERATOR	Varchar(150)
ORGANIZATION_CODE	Varchar2(3)
PLAN_NAME	Varchar2(30)
PROCESS_STATUS	Number
QA_CREATED_BY_NAME	Varchar2(100)
QA_LAST_UPDATED_BY_NAME	Varchar2(100)
REVISION	Varchar2(3)
SOURCE_CODE	Varchar2(30)
SOURCE_LINE_ID	Number
SPEC_NAME	Varchar2(30)
THICKNESS	Varchar(150)
TO_OP_SEQ_NUM	Number
TRANSACTION_INTERFACE_ID	Number

The following PL/SQL code demonstrates how you can insert collection import results directly into this view:

```
SQL> INSERT INTO Q_IMPORT_IV (
    PROCESS_STATUS,
    ORGANIZATION_CODE,
    PLAN_NAME,
    ITEM,
    REVISION,
    LOT_NUMBER,
    JOB_NAME,
    FROM_OP_SEQ_NUM,
    TO_OP_SEQ_NUM,
    DEPARTMENT,
    OPERATOR,
    DEFECTS,
    THICKNESS,
    OFF_LOCATION
)
VALUES (
    1,
    'MAS',
    'IMPORT',
    'ITEM8',
    '0',
    'A',
    'DJ1',
    10,
    20,
    'D1',
    'jus',
    'br',
    '40',
    '0'
);
```

The following PL/SQL code demonstrates how you can insert rows into the QA\_RESULTS\_INTERFACE table to update information in the Quality data repository. (Note that, in this example, the search keys 'ITEM = ITEM8', 'REVISION = '0', and 'LOT\_NUMBER = 'A' are used to search for a matching record in the Quality data repository; then, this example modifies that matching record's DEFECTS column to equal 'bent' and THICKNESS to equal '45'. Because other columns are left to

NULL, this update transaction leaves the record's corresponding fields unchanged in the repository.):

```
SQL>INSERT INTO Q_IMPORT_IV (
    PROCESS_STATUS,
    INSERT_TYPE,
    MATCHING_ELEMENTS,
    ORGANIZATION_CODE,
    PLAN_NAME,
    ITEM,
    REVISION,
    LOT_NUMBER,
    DEFECTS,
    THICKNESS,
)
VALUES (
    1,
    2,
    'ITEM, REVISION, LOT_NUMBER',
    'MAS'
    'IMPORT',
    'ITEM8',
    '0'
    'A',
    'bent',
    '45'
);
```

## Collection Import Manager

The Collection Import Manager is a background concurrent process that checks the Collection Import Interface table for new records (rows). If there are new rows, it launches one or more Collection Import Worker processes. Worker processes carry out the three main phases of the import process:

- Validation
- Transfer
- Error handling

You can specify the maximum number of rows that you would like each worker process to handle when you launch the Collection Import Manager.

The Collection Import Manager can handle an unlimited number of rows, even though you set a maximum for each worker process. If additional rows are needed, the Collection Import Manager automatically launches new workers to handle more rows. For example, if you specify that you would like each worker process to handle a maximum of ten rows, but you submit 53 new records, the Collection Import Manager automatically launches six concurrent workers, the first five handle ten rows each, and the sixth handles the last three rows.

## Validation

During the validation phase, each row in the Collection Import Interface is examined to verify that the data is valid and that required data is not missing. For example, rows are evaluated for context element dependencies, and rows that contain, for instance, serial numbers but not items, fail validation. See: *Dependencies Between Context Elements and Actions, Oracle Quality User's Guide*.

Successfully validated records are transferred to the Quality results database table (QA\_RESULTS).

## Transfer

During the transfer phase, Collection Import Workers insert successfully validated rows into the Quality results database table and delete them from the interface table.

## Error Handling

Rows that fail validation remain in the Collection Import Interface table, and records detailing the errors are inserted into the Errors table (QA\_INTERFACE\_ERRORS).

Records can fail validation for several reasons:

- A mandatory collection element is left null
- A value cannot be converted to the correct data type (e.g. a value of 'abc' for pH, when pH is a number data type)
- A value is not in the set of lookup values defined for a collection element (e.g. a value of 40 for defect code, when defect code only has the values 10, 20, and 30 as lookups)
- A value is not in the set of values contained in a foreign table (e.g. the value given for supplier ID is not found in the suppliers table)
- A value causes a Reject the Input action to be fired

- A value falls outside the reasonable limit range for the given specification (see: SPEC\_NAME, on page 11-9).
- A value in a dependent field is not in the subset of values defined for the master value (e.g. revision is 'C' when the master item only has 'A' and 'B' as possible revisions)
- A value is given for a collection element that is disabled on the collection plan

### See Also

[Collection Import Interface Table](#) on page 11-3

Importing Quality Results Data, *Oracle Quality User's Guide*

Updating Collection Import, *Oracle Quality User's Guide*

## Collection Plan Views

Collection Plan Views are created and updated when you create and update collection plans. Collection plan views allow you to query and inspect data for a particular collection plan in the Quality data repository.

The Collection Plan View remaps the generic CHARACTERx columns to columns with meaningful names. For example, if you have defined the collection elements Defect Code and Inspector ID for a collection plan, the names of these collection elements are automatically mapped to the CHARACTERx columns. The plan view also eliminates table columns that represent collection elements that have not been added to a collection plan. For example, if you create a collection plan, but do not add to it the PO Number and PO Line Number collection elements, the corresponding PO\_NUMBER and PO\_LINE\_NUM columns are not included in the plan view.

### Example

Oracle Quality uses the following naming convention for collection plan views: Q\_<collection-plan-name>\_V. For example, consider the following collection plan called WIP DEMO with the following collection elements:

- Defects
- Department
- From Ops Seq Number
- Item

- Job Number
- Lot Number
- Off Location
- Operator
- Revision
- Thickness
- To Ops Seq Number

When you create this collection plan, Oracle Quality automatically creates a collection plan view called Q\_WIP\_DEMO\_V. This is a view to the Collection Results table QA\_RESULTS. This view contains the following columns:

**Table 11-3 QA\_RESULTS**

<b>SQL&gt; DESCRIBE Q_WIP_DEMO_V;</b>	<b>Data Type</b>
COLLECTION_ID	Number
CREATED_BY	Varchar2 (100)
CREATED_BY_ID	Number
CREATION_DATE	Date
DEFECTS	Varchar (150)
DEPARTMENT	Varchar2 (10)
FROM_OP_SEQ_NUM	Number
ITEM	Varchar2 (2000)
JOB_NAME	Varchar2 (240)
LAST_UPDATE_DATE	Date
LAST_UPDATE_LOGIN	Number
LAST_UPDATED_BY	Varchar2 (100)
LAST_UPDATED_BY_ID	Number
LOT_NUMBER	Varchar2 (30)
OCCURRENCE	Number
OFF_LOCATION	Varchar (150)
OPERATOR	Varchar (150)

**Table 11–3   QA\_RESULTS**

<b>SQL&gt; DESCRIBE Q_WIP_DEMO_V;</b>	<b>Data Type</b>
ORGANIZATION_ID	Number
ORGANIZATION_NAME	Varchar2 (60)
PLAN_ID	Number
PLAN_NAME	Varchar2 (30)
REVISION	Varchar2 (3)
ROW_ID	Undefined
THICKNESS	Varchar (150)
TO_OP_SEQ_NUM	Number

---

## Oracle Work in Process Open Interfaces

This chapter contains information about the following Oracle Work in Process open interfaces:

- [Open Move Transaction Interface](#) on page 12-2
- [Open Resource Transaction Interface](#) on page 12-17
- [Work Order Interface](#) on page 12-25

## Open Move Transaction Interface

You can load Move transaction information into the Open Move Transaction Interface from a variety of sources, including external data collection devices such as bar code readers, automated test equipment, cell controllers, and other manufacturing execution systems. You then use the interface to load these transactions into Oracle Work in Process. All transactions are validated and invalid transactions are marked, so that you can correct and resubmit them.

The Open Move Transaction Interface enables you to perform many of the functions possible from the Move Transactions window. For example, you can:

- Move assemblies between operations and intraoperation steps
- Scrap assemblies
- Move assemblies from an operation and complete them into inventory with a single transaction
- Over-complete a quantity greater than the job or schedule quantity if over-completions are enabled
- Return assemblies from inventory and move to an operation with a single transaction

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---

**ATTENTION:** You cannot add ad hoc operations through this interface even if the *WIP Allow Creation of New Operations* parameter is set.

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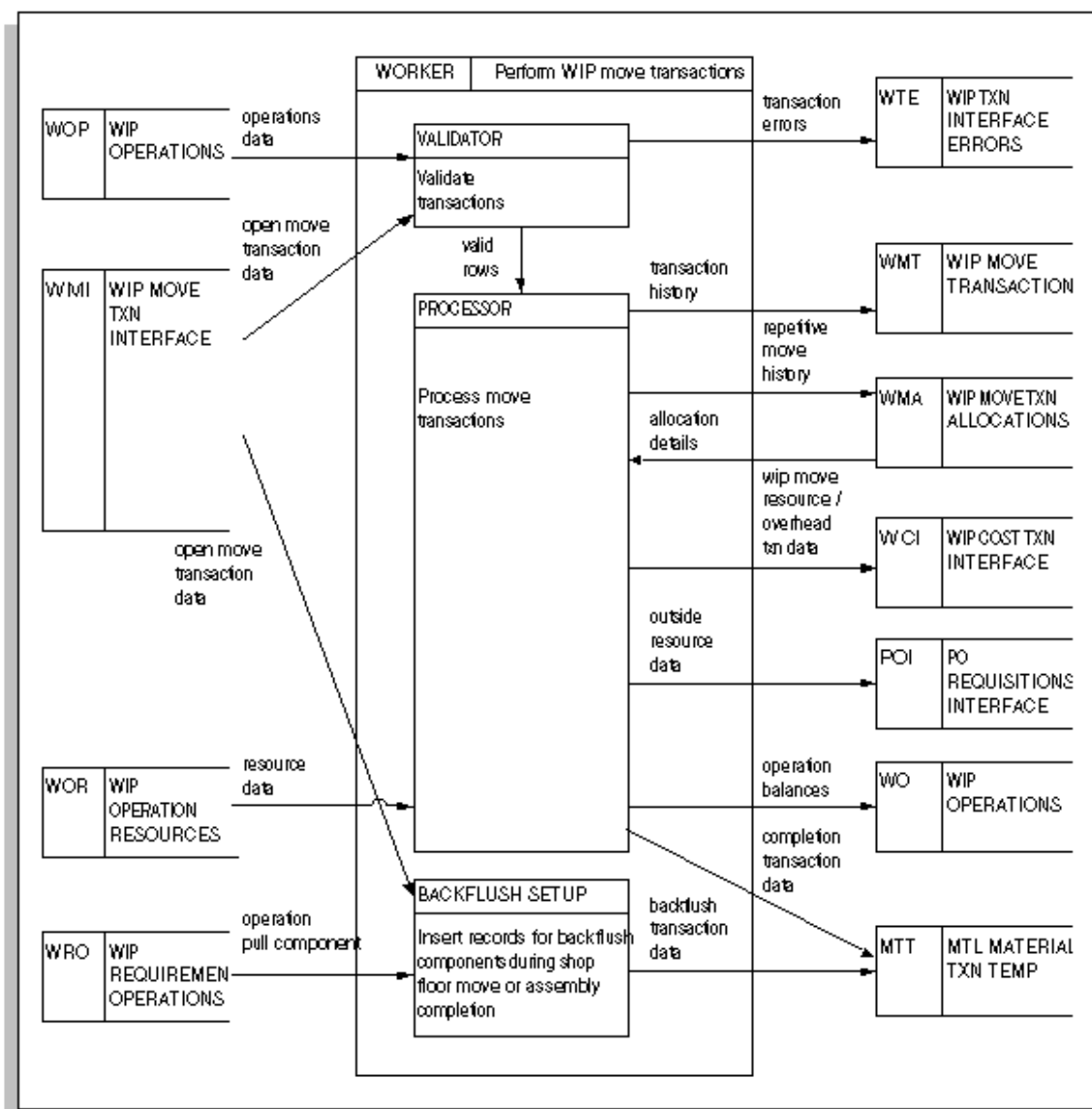
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The following information describes how you can use the Move Transaction Interface to integrate other applications with Oracle Work in Process.

## Functional Overview

The following data flow diagram shows the key tables and programs that comprise the Move Transaction Interface:

Figure 12-1 Move Transaction Interface



You must write the load program that inserts a single row for each Move transaction into the WIP\_MOVE\_TXN\_INTERFACE table. You must also insert records into the CST\_COMP\_SNAP\_INTERFACE table, if you insert Move transactions that also complete or return job assemblies, and if the referenced organization uses average costing. The system uses this information to calculate Completion cost. The Move Transaction Manager (WICTMS) then groups these transaction rows and launches a Move Transaction Worker to process each group.

The Move Transaction Worker calls the WIP Transaction Validation Engine program, which validates the row, derives or defaults any additional columns, and inserts errors into the WIP\_TXN\_INTERFACE\_ERRORS table.

Next, the Move Transaction Processor performs the actual Move transaction. It writes it to history, allocates it to the correct Repetitive schedule (for Repetitive manufacturing only), initiates related resource and overhead transactions and requisitions for outside resources (for outside processing only), updates operation balances, initiates Completion transactions (for combination Move and Completion/Return transactions), and deletes successfully processed transaction rows from the WIP\_MOVE\_TXN\_INTERFACE table. The Backflush Setup program then determines and initiates related operation pull backflushes.

If any transactions failed processing due to validation or other errors, you use the Pending Move Transactions window (WIPTSUPD) to review pending Move transactions and to update or delete failed transactions.

### **Completion Cost Detail Relationships**

If the Move transaction also completes or returns job assemblies in an average costing organization, you need to link the Completion cost detail rows to their parent rows. You accomplish this by populating the WIP\_MOVE\_TXN\_INTERFACE.TRANSACTION\_ID with a unique value to be used as the primary key that links the child Completion cost rows. You must also populate the foreign key CST\_COMP\_SNAP\_INTERFACE.TRANSACTION\_INTERFACE\_ID with the same value for all child Completion cost rows.

## **Setting Up the Move Transaction Interface**

You must perform all the Oracle Bills of Material and Oracle Work in Process setup activities required for Move transactions. In addition, you must launch the Move Transaction Manager to process Move and combination Move and Completion/Return transactions that you import from external sources. See: *Setting Up Shop Floor Control, Oracle Work in Process User's Guide*

## Launching the Move Transaction Manager

You launch the Move Transaction Manager in the Interface Managers window in Oracle Inventory. When you launch the Move Transaction Manager, you can specify the resubmit interval and number of transactions processed by each worker during each interval. After polling the WIP\_MOVE\_TXN\_INTERFACE table for eligible rows, the Move Transaction Manager creates the necessary number of Move Transaction Workers to process the load.

The use of multiple transaction workers enables parallel processing of transactions that can be especially helpful when importing a large batch of transactions through the Move Transaction Interface. For more information, see: Transaction Managers, *Oracle Inventory User's Guide*

## Inserting Records into the WIP\_MOVE\_TXN\_INTERFACE Table

You must insert your Move, Move Complete and Move Return transactions into the WIP\_MOVE\_TXN\_INTERFACE table. The system validates each transaction row, derives any additional data as necessary, then processes each transaction.

### WIP\_MOVE\_TXN\_INTERFACE Table Description

The following describes the WIP\_MOVE\_TXN\_INTERFACE table:

Note: in the following table, the numbers under the Required, Derived if Null, and Optional columns indicate that the referenced column is used for the following:

**Table 12–1 Legend**

Type Number	Transaction Type Description
1	Move transaction
2	Move Completion (defined by TRANSACTION_TYPE = 2 and valid FM_OPERATION_SEQ_NUM)
3	Move Return (defined by TRANSACTION_TYPE = 2 and valid T0_OPERATION_SEQ_NUM)

**Table 12–2 Move Transaction Interface**

<b>WIP_MOVE_TXN_INTERFACE</b>					
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>	<b>Derived if Null</b>
ACCT_PERIOD_ID	Number		1,2,3		
ATTRIBUTE1 - ATTRIBUTE15	Varchar2(150)			1,2,3	
ATTRIBUTE_CATEGORY	Varchar2(30)			1,2,3	
CREATED_BY	Number		1,2,3		
CREATED_BY_NAME	VarChar2(100)	1,2,3			
CREATION_DATE	Date	1,2,3			
ENTITY_TYPE	Number		1,2,3		
FM_DEPARTMENT_CODE	VarChar2(10)		1,2		
FM_DEPARTMENT_ID	Number		1,2		
FM_INTRAOPERATION_STEP_TYPE	Number	1,2			
FM_OPERATION_CODE	VarChar2(4)		1,2		
FM_OPERATION_SEQ_NUM	Number	1,2			
GROUP_ID	Number		1,2,3		
LAST_UPDATE_DATE	Date	1,2,3			
LAST_UPDATE_LOGIN	Number		1,2,3		
LAST_UPDATED_BY	Number		1,2,3		
LAST_UPDATED_BY_NAME	VarChar2(100)	1,2,3			
LINE_CODE	VarChar2(10)	1,2,3			
LINE_ID	Number				1,2,3
ORGANIZATION_CODE	VarChar2(3)	1,2,3			
ORGANIZATION_ID	Number				1,2,3
OVERCOMPLETION_PRIMARY_QTY	Number		1,2,3		
OVERCOMPLETION_TRANSACTION_ID	Number		1,2,3		
OVERCOMPLETION_TRANSACTION_QTY	Number		1,2,3		
PRIMARY_ITEM_ID	Number		1,2,3		

**Table 12–2 Move Transaction Interface**

<b>WIP_MOVE_TXN_INTERFACE</b>					
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>	<b>Derived if Null</b>
PRIMARY_QUANTITY	Number		1,2,3		
PRIMARY_UOM	VarChar2(3)		1,2,3		
PROCESS_PHASE	Number	1,2,3			
PROCESS_STATUS	Number	1,2,3			
PROGRAM_APPLICATION_ID	Number		1,2,3		
PROGRAM_ID	Number		1,2,3		
PROGRAM_UPDATE_DATE	Date		1,2,3		
QA_COLLECTION_ID	Number			1,2,3	
REASON_ID	Number				1,2,3
REASON_NAME	VarChar2(30)			1,2,3	
REFERENCE	VarChar2(240)			1,2,3	
REPETITIVE_SCHEDULE_ID	Number		1,2,3		
REQUEST_ID	Number		1,2,3		
SCRAP_ACCOUNT_ID	Number			1,2,3	
SOURCE_CODE	Varchar2(30)			1,2,3	
SOURCE_LINE_ID	Number			1,2,3	
TO_DEPARTMENT_CODE	VarChar2(10)		1,3		
TO_DEPARTMENT_ID	Number		1,3		
TO_INTRAOPERATION_STEP_TYPE	Number	1,3			
TO_OPERATION_CODE	VarChar2(4)		1,3		
TO_OPERATION_SEQ_NUM	Number	1,3			
TRANSACTION_DATE	Date	1,2,3			
TRANSACTION_ID	Number		1,2,3		
TRANSACTION_QUANTITY	Number	1,2,3			
TRANSACTION_TYPE	Number			1,2,3	

Table 12–2 Move Transaction Interface

WIP_MOVE_TXN_INTERFACE					
Column Name	Type	Required	Derived	Optional	Derived if Null
TRANSACTION_UOM	VarChar2(3)	1,2,3			
WIP_ENTITY_ID	Number				1,2,3
WIP_ENTITY_NAME	VarChar2(240)	1,2,3			

You must include data in each of the required columns. Overall, very few columns are required because the system derives or defaults many column values and/or allows these column values to be optional.

Columns are derived using foreign key relationships within Oracle Manufacturing. The following derived columns are control columns that the Move Transaction Worker uses to provide closed loop transaction processing control and relational integrity throughout the interface process:

Control Columns

- ATTRIBUTE1 through ATTRIBUTE15 (Optional): the descriptive flexfield attributes in the columns ATTRIBUTE1 through ATTRIBUTE15 map to ATTRIBUTE1 through ATTRIBUTE15 in WIP\_MOVE\_TRANSACTIONS.
- FM\_INTRAOPERATION\_STEP\_TYPE (Required): this column is only required when performing Move and Move Completion transactions. It must be an enabled intraoperation step.
- FM\_OPERATION\_SEQUENCE (Required): in *Move transactions*, this column represents the operation from which you are moving the assemblies.

In *Move and Completion transactions*, this column represents the operation from which you are moving the assemblies before they are completed into inventory.

In *Move and Return transactions*, you may leave this column and the FM\_INTRAOPERATION\_STEP\_TYPE column blank. If you do not wish to leave these columns blank when performing a Move and Return transaction, however, you must set the values of this column and the FM\_OPERATION\_SEQ\_NUM must be set to the last operation sequence on the routing, and FM\_INTRAOPERATION\_STEP\_TYPE must be set to To Move.

- **LINE\_CODE** (Derived): this column is only required for Repetitive manufacturing transactions. If the **WIP\_ENTITY** specified is a Repetitive assembly, the column is derived.
- **ORGANIZATION\_CODE** (Derived): this column is used to derive the Organization ID. The Organization ID identifies the organization to which the transaction belongs.
- **OVERCOMPLETION\_PRIMARY\_QTY** (Derived): the **OVERCOMPLETION\_PRIMARY\_QUANTITY** is derived from the **OVERCOMPLETION\_TRANSACTION\_QTY** and **OVERCOMPLETION\_TRANSACTION\_UOM**.
- **OVERCOMPLETION\_TRANSACTION\_QTY** (Conditionally Required): if you intend to move and eventually complete more assemblies than exist at a routing operation, the **OVERCOMPLETION\_TRANSACTION\_QTY** is required. It cannot be derived.
- **PRIMARY\_QUANTITY** (Derived): this column is the transaction quantity in the assembly's primary unit of measure, calculated using **TRANSACTION\_QUANTITY** and **TRANSACTION\_UOM**.
- **PROCESS\_PHASE** (Required): the column **PROCESS\_PHASE** describes the current processing phase of the transaction. The Move Transaction Worker processes each transaction row through the following three phases:
  1. Move Validation
  2. Move Processing
  3. Operation Backflush SetupYou should always load 1 (Move Validation)
- **PROCESS\_STATUS** (Required): this column control describes the transaction state of the row and controls whether rows in the interface table are processed. You should insert a row that you intend to be processed with a value of 1 (Yes).
  1. Pending
  2. Running
  3. ErrorYou should always load 1 (Pending)
- **SCRAP\_ACCOUNT\_ID** (Optional): if the **TO\_INTRAOPERATION\_STEP\_TYPE** is scrap and a scrap account is required, you must insert a **SCRAP\_ACCOUNT\_ID**.

- **SOURCE\_CODE** and **SOURCE\_LINE\_ID** (Optional): the **SOURCE\_CODE** and **SOURCE\_LINE\_ID** columns can be used to identify the source of your Move transactions. For example, if you collect Move transaction information from a bar code reader and a radio frequency device, you could use a different source code to identify each collection method.
- **TO\_INTRAOPERATION\_STEP\_TYPE** (Required): if you leave **TO\_INTRAOPERATION\_STEP\_TYPE** blank, it is derived the same way as the **TO\_OPERATION\_SEQ\_NUM** column. If you are moving and returning assemblies, you cannot specify the To Move intraoperation step of the last operation. If you specify the Scrap intraoperation step, you must insert a **SCRAP\_ACCOUNT\_ID** if the *WIP Require Scrap Account* parameter is set.
- **TO\_OPERATION\_SEQ\_NUM** (Required): in *Move transactions*, this column represents the operation step into which you are moving the assemblies. If you are moving assemblies and leave this column and the **TO\_INTRAOPERATION\_STEP\_TYPE** columns blank, both columns are derived. The **TO\_OPERATION\_SEQ\_NUM** is set to the next count point operation and the **TO\_INTRAOPERATION\_STEP\_TYPE** is set to Queue.

In *Move and Return transactions*, this column represents the operation that the assemblies are being returned to from inventory. If you are moving and returning assemblies and leave this column and the **TO\_INTRAOPERATION\_STEP\_TYPE** columns blank, both columns are also derived; however, the **TO\_OPERATION\_SEQ\_NUM** is set to the last count point operation. If the last count point operation is the last operation sequence, the **TO\_OPERATION\_SEQ\_NUM** column is set to the value of the operation prior to the last count point operation. Regardless, if there is no count point operation, and the **TO\_OPERATION\_SEQ\_NUM** is blank, the transaction will fail validation.

In *Move and Completion transactions*, you may leave this column and the **TO\_INTRAOPERATION\_STEP\_TYPE** column blank. If you do not wish to leave them blank when performing a move and completion transaction, however, you must set the values of this column and the **TO\_INTRAOPERATION\_STEP\_TYPE** column to their derived values: **TO\_OPERATION\_SEQ\_NUM** must be set to the last operation sequence on the routing, and **TO\_INTRAOPERATION\_STEP\_TYPE** must be set to To Move.

- **TRANSACTION\_QUANTITY** (Required): enter the transaction quantity in the same unit of measure used in the transaction. The quantity should be positive for receipts into inventory, and negative both for issues out of inventory and for transfers. Enter a quantity of zero for Average Cost Update transactions.

- TRANSACTION\_TYPE (Optional): This column indicates the type of Move transaction. The options are:

1. Move
2. Move Completion
3. Move Return

If you leave this column blank (NULL) the transaction is processed like a Move transaction. When TRANSACTION\_TYPE is 2, the Move transaction processor moves the assemblies to the last operation in the routing and completes the units into the Completion subinventory/locator. When TRANSACTION\_TYPE is 3, the Move transaction processor returns the units from the Completion subinventory/locator, and moves the assemblies to the last operation.

- TRANSACTION\_UOM (Required): you can enter the TRANSACTION\_QUANTITY in any unit of measure that has conversion rates defined for the item's primary unit of measure. Use this column to specify the transacted unit of measure, even if it is the same as the primary unit of measure.
- WIP\_ENTITY\_NAME (Required): this column represents the job name or line/assembly association used to derive the WIP Entity ID.

### Required Columns

- For normal *Move transactions*, set TRANSACTION\_TYPE to 1 or NULL. If you leave TO\_OPERATION\_SEQ\_NUM and TO\_INTRAOPERATION\_STEP\_TYPE blank, the data are defaulted. The TO\_OPERATION\_SEQ\_NUM is defaulted to the next count point operation in the routing, and the TO\_INTRAOPERATION\_STEP\_TYPE is defaulted to Queue. If there is no count point operation and the TO\_OPERATION\_SEQ\_NUM is blank, then the transaction fails validation.
- For combination *Move and Completion transactions*, set TRANSACTION\_TYPE to 2. When TRANSACTION\_TYPE is 2, the Move transaction processor moves the assemblies to the last operation in the routing and completes the units into the Completion subinventory/locator.
- For combination *Move and Return transactions*, set TRANSACTION\_TYPE to 3. When TRANSACTION\_TYPE is 3, the Move transaction processor returns the assemblies from the Completion subinventory/locator.
- The column LINE\_CODE is required for Repetitive manufacturing transactions only.

- The column `PROCESS_PHASE` describes the current processing phase of the transaction. The Move Transaction Worker processes each transaction row through the following three phases. You should always load 1 (Move Validation). The options are:
  1. Move Validation
  2. Move Processing
  3. Operation Backflush Setup
- The column `PROCESS_STATUS` contains the state of the transaction. You should always load 1 (Pending):
  1. Pending
  2. Running
  3. Error

### **Derived Data**

The WIP Transaction Validation Engine program derives columns using foreign key relationships within Oracle Manufacturing. The following derived columns are control columns that the Move Transaction Worker uses to provide closed loop transaction processing control and relational integrity throughout the interface process:

- `CREATED_BY`
- `GROUP_ID`
- `LAST_UPDATE_LOGIN`
- `LAST_UPDATED_BY`
- `PROGRAM_APPLICATION_ID`
- `PROGRAM_ID`
- `PROGRAM_UPDATE_DATE`
- `REQUEST_ID`
- `TRANSACTION_ID`

You can insert data into certain derived columns. The WIP Transaction Validation Engine will validate your data, but not override it. You can insert data into the following derived columns:

- `LINE_ID`

- ORGANIZATION\_ID
- REASON\_ID
- WIP\_ENTITY\_ID

**Optional Columns**

- The columns SOURCE\_CODE and SOURCE\_LINE\_ID can be used to identify the source of Move transactions. For example, if you collect Move transaction information from a bar code reader and a radio frequency device, you could use a different source code to identify each collection method.
- The descriptive flexfield attributes in the columns ATTRIBUTE1 through ATTRIBUTE15 map to ATTRIBUTE1 through ATTRIBUTE15 in WIP\_MOVE\_TRANSACTIONS.

**CST\_COMP\_SNAP\_INTERFACE Table**

The following table describes the CST\_COMP\_SNAP\_INTERFACE Interface:

**Table 12–3 Completion Cost Calculation Interface**

Column Name	Type	Required	Derived	Optional
CREATED_BY	Number	x		
CREATION_DATE	Date	x		
LAST_UPDATE_DATE	Date	x		
LAST_UPDATE_LOGIN	Number			x
LAST_UPDATED_BY	Number	x		
NEW_OPERATION_FLAG	Number		x	
OPERATION_SEQ_NUMBER	Number	x		
PRIMARY_QUANTITY	Number		x	
PRIOR_COMPLETION_QUANTITY	Number		x	
PRIOR_SCRAP_QUANTITY	Number		x	
PROGRAM_APPLICATION_ID	Number			x
PROGRAM_ID	Number			x
PROGRAM_UPDATE_DATE	Date			x
QUANTITY_COMPLETED	Number	x		
REQUEST_ID	Number			x
TRANSACTION_INTERFACE_ID	Number	x		
WIP_ENTITY_ID	Number	x		

- NEW\_OPERATION\_FLAG: indicates whether or not the operation was added to the job after it was released.
- OPERATION\_SEQ\_NUMBER: you can use this column to enter operation sequence information. The operation sequence number is stored in the WIP\_OPERATIONS table. The value that you enter here must agree with the value in the WIP\_OPERATIONS table for this job.
- PRIMARY\_QUANTITY: you can use this column to indicate the number of assemblies being completed or returned during a Move transaction.
- QUANTITY\_COMPLETED: indicates the number of assemblies completed at or returned to the specified operation.
- WIP\_ENTITY\_ID: the WIP\_ENTITY\_ID is the job number.

## Validating Move Transactions

The Move Transaction Manager program groups the Move transaction rows in the WIP\_MOVE\_TXN\_INTERFACE and launches Move Transaction Workers to process each group. The Move Transaction Worker program calls the WIP Transaction Validation Engine program to validate and derive data for each of the required columns. If data are entered in certain derived and optional columns, the WIP Transaction Validation Engine program also validates these columns.

Before information is copied into CST\_COMP\_SNAP\_TEMP, the information in the CST\_COMP\_SNAP\_INTERFACE table is validated. The TRANSACTION\_INTERFACE\_ID is validated against the TRANSACTION\_INTERFACE\_ID in the Move Transaction Interface. The WIP\_ENTITY\_ID must exist in WIP\_OPERATIONS, and the OPERATION\_SEQ\_NUM must match the OPERATION\_SEQ\_NUM in WIP\_OPERATIONS for the specified WIP\_ENTITY\_ID (job).

The system considers the dependencies among the columns in the interface table and only processes columns once they are dependent upon pass validation or are successfully derived. For example, the Move validator only validates WIP\_ENTITY\_NAME after ORGANIZATION\_ID has been derived. In turn, ORGANIZATION\_ID is only derived after ORGANIZATION\_CODE has been successfully validated.

The system creates rows in the WIP\_TXN\_INTERFACE\_ERRORS table for each failed validation. Each row in the WIP\_TXN\_INTERFACE\_ERRORS table contains the TRANSACTION\_ID of the failed Move transaction, the name of the column that failed validation, and a brief error message stating the cause of the validation failure. Because of the dependencies between columns, the Move validator does not try to validate a column when a column it is dependent upon fails validation. So WIP\_ENTITY\_NAME is not validated if ORGANIZATION\_CODE is invalid.

Columns that are independent of each other, however, can be validated regardless of the status of other columns. For example, WIP\_ENTITY\_NAME is validated even if REASON\_NAME is invalid because WIP\_ENTITY\_NAME is not dependent on REASON\_NAME. Thus, the system can create multiple error records for each Move transaction. You can then resolve multiple problems at the same time, thereby increasing the speed and efficiency of your error resolution process.

## Resolving Failed Rows

### Viewing Failed Rows

You view both pending and failed Move transaction rows in the WIP\_MOVE\_TXN\_INTERFACE table, using the Pending Move Transactions window. You also can view errors associated with failed transactions by navigating to the Pending Move Transaction Errors window. See: *Processing Pending Move Transactions, Oracle Work in Process User's Guide*.

### Fixing Failed Rows

You update failed Move transaction rows in the WIP\_MOVE\_TXN\_INTERFACE table using the Pending Move Transactions window. Once you have made the necessary changes, you place a check mark in the Resubmit check box and save your work. The transaction row is then eligible to be picked up by the Move Transaction Manager for revalidation and processing. You also can have the system check the Resubmit check box for all queried rows, by selecting 'Select All for Resubmit' from the window's *Tools Menu*. When you save your work, all of these rows become eligible for revalidation and processing. You also can use the Pending Move Transactions window to delete problem rows from the WIP\_MOVE\_TXN\_INTERFACE table. Deleting problem rows ensures that you do not have duplicate data when you reload the corrected data from the source application.

You can re-query transactions that fail an initial validation, then resubmit them after correcting the cause of the failure. For example, if the Move transaction failed because the job status was Unreleased, you can use the Discrete Jobs window to release the job then resubmit the pending Move transaction.

The Move processor creates resource cost transactions that are processed in the background by the Cost Manager. You can also update or resubmit these transactions using the Pending Move Transactions window. See: *Processing Pending Move Transactions, Oracle Work in Process User's Guide*

## Open Resource Transaction Interface

You can use external data collection devices such as bar code readers, payroll systems, and time card entry forms to collect resource and overhead transaction data, then load the data into the Open Resource Transaction Interface for Oracle Work in Process to process. The interface validates the data and marks any that are invalid so that you can correct and resubmit them.

You can use this interface to perform many of the same functions that you can perform from the Resource Transactions window. For example, you can:

- Charge labor resources
- Charge overhead resources
- Charge outside processing resources
- Add ad hoc resources

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**ATTENTION:** Non-person resources cannot be charged at an actual usage rate or amount through the Resource Transactions window. This feature is unique to the Resource Transaction Interface.

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The following information describes how you can use the Resource Transaction Interface to integrate other applications with Oracle Work in Process.

## Functional Overview

You must write the load program that inserts a single row for each resource transaction into the WIP\_COST\_TXN\_INTERFACE table. The Cost Manager (CMCCTM) then groups these transaction rows and launches a Cost Worker to process each group.

The Cost Worker calls the WIP Transaction Validation Engine program which validates the row, derives or defaults any additional columns, and inserts errors into the WIP\_TXN\_INTERFACE\_ERRORS table. The Cost Worker then performs the actual resource transaction, writing the transaction to history. It allocates Repetitive resource transactions to the correct Repetitive schedules, updates operation resource balances, and deletes the successfully processed transaction row from the WIP\_COST\_TXN\_INTERFACE table.

You then use the Pending Resource Transactions window to review any pending transactions and to update or delete transactions that failed processing due to validation or other errors.

## Setting Up the Resource Transaction Interface

You must perform all of the Oracle Bills of Materials, Costing, and Work in Process setup activities required for resource and overhead transactions. In addition, you must launch the Cost Manager to process resource transactions that you import from external sources. See: *Setting Up Resource Management, Oracle Work in Process User's Guide*

## Launching the Cost Manager

You launch the Cost Manager in Oracle Inventory's Interface Managers window. When you launch the Cost Manager, you specify the resubmit interval and the number of transactions processed by each worker during each interval. After polling the WIP\_COST\_TXN\_INTERFACE table for eligible rows, the Cost Manager creates the necessary number of Cost Workers to process the load. The use of multiple transaction workers enables parallel transaction processing, which is especially helpful when processing a large batch of transactions imported through the Resource Transaction Interface. See: *Transaction Managers, Oracle Inventory User's Guide*.

## Inserting Records into the WIP\_COST\_TXN\_INTERFACE Table

You must insert your resource transactions into the WIP\_COST\_TXN\_INTERFACE table. The system validates each transaction row, derives any additional data as necessary, then processes each transaction.

### WIP\_COST\_TXN\_INTERFACE Table Description

The following table describes the WIP\_COST\_TXN\_INTERFACE:

**Table 12–4    WIP Cost Transaction Interface**

[WIP_COST_TXN_INTERFACE]				
Column Name	Type	Required	Derived	Optional
ACCT_PERIOD_ID	Number		x	
ACTIVITY_ID	Number		x	x
ACTIVITY_NAME	VarChar2(10)			x

**Table 12–4 WIP Cost Transaction Interface**

<b>[WIP_COST_TXN_INTERFACE]</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
ACTUAL_RESOURCE_RATE	Number		x	
ATTRIBUTE1 - ATTRIBUTE15	Varchar2(150)			x
ATTRIBUTE_CATEGORY	Varchar2(30)			x
AUTOCHARGE_TYPE	Number		x	
BASIS_TYPE	Number		x	
CREATED_BY	Number		x	
CREATED_BY_NAME	VarChar2(100)	x		
CREATION_DATE	Date	x		
CURRENCY_ACTUAL_RESOURCE_RATE	Number			x
CURRENCY_CODE	VarChar2(15)			x
CURRENCY_CONVERSION_DATE	Date		x	x
CURRENCY_CONVERSION_RATE	Number			x
CURRENCY_CONVERSION_TYPE	VarChar2(10)			x
DEPARTMENT_CODE	VarChar2(10)		x	
DEPARTMENT_ID	Number		x	
DISTRIBUTION_ACCOUNT_ID	Number			x
EMPLOYEE_ID	Number		x	x
EMPLOYEE_NUM	VarChar2(30)			x
ENTITY_TYPE	Number		x	
GROUP_ID	Number		x	
LAST_UPDATE_DATE	Date	x		
LAST_UPDATE_LOGIN	Number		x	
LAST_UPDATED_BY	Number		x	
LAST_UPDATED_BY_NAME	VarChar2(100)	x		
LINE_ID	Number		x	

**Table 12–4 WIP Cost Transaction Interface**

<b>[WIP_COST_TXN_INTERFACE]</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
LINE_CODE	VarChar2(10)			x
MOVE_TRANSACTION_ID	Number			x
OPERATION_SEQ_NUM	Number	x		
ORGANIZATION_CODE	VarChar2(3)	x		
ORGANIZATION_ID	Number	x		
PO_HEADER_ID	Number			x
PO_LINE_ID	Number			x
PRIMARY_ITEM_ID	Number		x	
PRIMARY_QUANTITY	Number		x	
PRIMARY_UOM	VarChar2(3)		x	
PRIMARY_UOM_CLASS	VarChar2(10)		x	
PROCESS_PHASE	Number	x		
PROCESS_STATUS	Number	x		
PROGRAM_APPLICATION_ID	Number		x	
PROGRAM_ID	Number		x	
PROGRAM_UPDATE_DATE	Date		x	
RCV_TRANSACTION_ID	Number			x
REASON_ID	Number		x	x
REASON_NAME	VarChar2(30)			x
RECEIVING_ACCOUNT_ID	Number			x
REFERENCE	VarChar2(240)			x
REPETITIVE_SCHEDULE_ID	Number		x	
REQUEST_ID	Number		x	
RESOURCE_CODE	VarChar2(10)		x	x
RESOURCE_ID	Number		x	
RESOURCE_SEQ_NUM	Number	x		

**Table 12–4 WIP Cost Transaction Interface**

<b>[WIP_COST_TXN_INTERFACE]</b>				
<b>Column Name</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
RESOURCE_TYPE	Number		x	
SOURCE_CODE	Varchar2(30)			x
SOURCE_LINE_ID	Number			x
STANDARD_RATE_FLAG	Number		x	
TRANSACTION_DATE	Date	x		
TRANSACTION_ID	Number		x	
TRANSACTION_QUANTITY	Number	x		
TRANSACTION_TYPE	Number	x		
TRANSACTION_UOM	VarChar2(3)	x		
USAGE_RATE_OR_AMOUNT	Number		x	
WIP_ENTITY_ID	Number		x	x
WIP_ENTITY_NAME	VarChar2(240)	x		

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**ATTENTION:** You cannot load resource and overhead cost transactions for Flow schedules.

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You must include data in each of the required columns. Overall, very few columns are required because the system derives or defaults many column values and/or allows these column values to be optional.

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**NOTE:** Do not put a value in the COMPLETION\_TXN\_ID column.

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### Required Columns

- The column LINE\_CODE is required for Repetitive manufacturing transactions only.

- The column `PROCESS_PHASE` describes the current processing phase of the transaction. The Cost Worker processes each transaction row through the following two phases (you should always load 1 Resource Validation).
  1. Resource Validation
  2. Resource Processing
- The column `PROCESS_STATUS` contains the state of the transaction. You should always load 1 (Pending):
  1. Pending
  2. Running
  3. Error
- The column `RESOURCE_ID` column must be left NULL.
- You set `TRANSACTION_TYPE` to:
  1. for normal resource transactions
  2. for overhead transactions
  3. for outside processing transactions

### **Derived Data**

The WIP Transaction Validation Engine program uses foreign key relationships within Oracle Manufacturing to obtain the values for the Derived columns in the above table.

The following Derived columns are control columns that the Cost Worker uses to provide closed loop transaction processing control and relational integrity throughout the interface process:

- `CREATED_BY`
- `GROUP_ID`
- `LAST_UPDATE_LOGIN`
- `LAST_UPDATED_BY`
- `PROGRAM_APPLICATION_ID`
- `PROGRAM_ID`
- `PROGRAM_UPDATE_DATE`
- `REQUEST_ID`

- TRANSACTION\_ID

You have the option to insert data into certain derived columns. The WIP Transaction Validation Engine validates the data, but does not override them. You can insert data into the following derived columns:

- ACTIVITY\_ID
- EMPLOYEE\_ID
- LINE\_ID
- REASON\_ID
- WIP\_ENTITY\_ID

### Optional Columns

- The descriptive flexfield attributes in the columns ATTRIBUTE1 through ATTRIBUTE15 map to ATTRIBUTE1 through ATTRIBUTE15 in WIP\_TRANSACTIONS.
- You can use the columns SOURCE\_CODE and SOURCE\_LINE\_ID to identify the source of your resource and overhead transactions. For example, if you collect resource data from a bar code reader and a labor data entry form, you can use a different source code to identify each collection method.

### Costing Option

You can charge non-person resources (resources for which an EMPLOYEE\_NUMBER is not specified) at their actual rate by specifying the rate in the USAGE\_RATE\_OR\_AMOUNT column. If you do not specify an actual usage rate or amount, the resource rate or amount is derived from the WIP\_OPERATION\_RESOURCES table.

Similarly, you can charge person-type resources at an actual usage rate or amount. If you do not specify a value in the USAGE\_RATE\_OR\_AMOUNT column and the STANDARD\_RATE\_FLAG is set to Yes (1), the resource rate or amount is derived from the WIP\_OPERATION\_RESOURCES table. If no usage rate or amount is specified for person type resources, and the STANDARD\_RATE\_FLAG is set to No (2), the system uses the employee's hourly labor rate from the WIP\_EMPLOYEE\_LABOR\_RATES table to derive the usage rate or amount. If an invalid employee ID is specific, the record is not processed.

### Outside Processing Currency Option

For outside processing resource transactions (PO Move and PO Receipt charge type resources), you can specify both the currency and the resource to which your transaction is charged. You specify the currency of the outside processing resource transaction in the CURRENCY\_CODE column. If this currency code is different from the base currency of the organization that you are transacting the resource in, then you must specify the currency conversion rate between the transaction currency and your organization's base currency. You can also specify the resource rate for the transaction in the CURRENCY\_ACTUAL\_RESOURCE\_RATE column. This rate should be in the same currency entered in the CURRENCY\_CODE column. If you enter a value for the CURRENCY\_ACTUAL\_RESOURCE\_RATE, the resource is charged using this value rather than the standard rate of the resource.

## Validating Resource Transactions

The Cost Manager program groups your resource transaction rows in WIP\_COST\_TXN\_INTERFACE and launches Cost Workers to process each group. The Cost Worker program calls the WIP Transaction Validation Engine program to validate and derive data for each of the derived columns. If data have been entered in certain derived and optional columns, the WIP Transaction Validation Engine program also validates these columns.

The system considers the dependencies among the columns in the interface table and only processes columns once they are dependent upon pass validation or are successfully derived. For example, the resource validator only validates WIP\_ENTITY\_NAME after ORGANIZATION\_ID has been validated against ORGANIZATION\_CODE.

The system creates rows in the WIP\_TXN\_INTERFACE\_ERRORS table for each failed validation. Each row in the WIP\_TXN\_INTERFACE\_ERRORS table contains the TRANSACTION\_ID of the failed resource transaction, the name of the column that failed validation, and a brief error message stating the cause of the validation failure. Because of the dependencies between columns, the resource validator does not try to validate a column if the column that it depends on fails validation. Thus, WIP\_ENTITY\_NAME is not validated if ORGANIZATION\_CODE is invalid.

Columns that are independent of each other can be validated regardless of the status of the other columns. For example, WIP\_ENTITY\_NAME is validated even if REASON\_NAME is invalid because WIP\_ENTITY\_NAME is not dependent on REASON\_NAME. Thus, the system can create multiple error records for each resource or overhead transaction. You can then resolve multiple problems at the

same time, thereby increasing the speed and efficiency of your error resolution process.

## Resolving Failed Rows

### Viewing Failed Rows

You can view both pending and failed resource and overhead transaction rows in the WIP\_COST\_TXN\_INTERFACE table using the Pending Resource Transactions window. You also can view the errors associated with failed transactions by navigating to the Pending Resource Transaction Errors window.

### Fixing Failed Rows

You use the Pending Resource Transactions window to update failed resource and overhead transaction rows in the WIP\_COST\_TXN\_INTERFACE table. After you make any necessary changes, you enter a check mark in the Resubmit check box and save your work. The transaction row is then eligible to be picked up by the Cost Manager for revalidation and processing. If you choose Select All for Resubmit from the Tools Menu, the system checks the Resubmit check box for all queried rows. When you save your work, all of these rows become eligible for revalidation and processing.

You also use the Pending Resource Transactions window to delete problem rows from the WIP\_COST\_TXN\_INTERFACE table. Deleting these rows ensures that you do not have duplicate data when you reload the corrected data from the source application.

You can query again transactions that fail initial validation, then resubmit them after you correct the cause of the failure. For example, if the resource transaction fails because the status of the job is Unreleased, you can use the Discrete Jobs window to release the job, then resubmit the pending resource transaction. See: *Processing Pending Resource Transactions, Oracle Work in Process User's Guide*.

## Work Order Interface

The Work Order Interface enables you to import Discrete job and Repetitive schedule header information, and Discrete job operations, material, resource, and scheduling information from any source, using a single process.

You can import:

- planned orders for new Discrete jobs,

- Discrete job operations, components, resources, resource usage, and scheduling details
- update and reschedule recommendations for existing Discrete jobs
- suggested Repetitive schedules

Work in Process then uses this information to automatically create new Discrete jobs and pending Repetitive Schedules, or to update existing Discrete jobs.

The Work Order Interface consists of two tables: the WIP\_JOB\_SCHEDULE\_INTERFACE table (Open Job and Schedule Interface table), and the WIP\_JOB\_DTLS\_INTERFACE table (WIP Job Details Interface table). You load header information into the WIP\_JOB\_SCHEDULE\_INTERFACE table, and operations, components, resources, and scheduling information into the WIP\_JOB\_DTLS\_INTERFACE table.

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**NOTE:** The WIP\_SCHEDULING\_INTERFACE table is now merged with the WIP\_JOB\_DTLS\_INTERFACE table and thus no longer exists.

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### Major features of the Work Order Interface are:

- **Record insertion from any source:** you can insert records into the Work Order Interface from any source including bar code readers, automated test equipment, cell controllers, and other manufacturing execution systems, planning systems, order entry systems, finite scheduling packages, production line sequencing programs, spreadsheets, and even custom entry forms. If, for example, your plant directly feeds to your customer's plant, you can take demands directly from your customer rather than waiting for the next MRP run, thus reducing response time and eliminating unnecessary overhead.
- **Automatic Discrete job creation from Oracle Advanced Planning and Scheduling:** if you have installed Oracle Advanced Planning and Scheduling (APS), you can use its High Level Scheduling Engine to schedule Work in Process job resources for planned work orders, then import the work orders into Work in Process to create new Discrete jobs or Repetitive schedules, or to update existing Discrete jobs. APS passes the job, its bill of material, routing, components, resources, and resource usage, start and end times to the appropriate Work Order Interface table.
- **Explosion option for bills of material and routings:** you can turn on or off the bill of material (BOM) and the routing explosion feature when you load Discrete jobs or Repetitive schedules. If you turn the option on, the system uses

the standard system-generated BOM and routing; if you turn the option off, you must provide a custom BOM and routing and enter them manually.

- **Job schedule at creation time:** you can schedule a Discrete job or Repetitive schedule at the time that you create it. If you choose not to schedule it at that time, then the schedule dates are imported from the Job Details Interface table.
- **Single process import of sets of material or resource requirements:** you can change specific sets of operations, components, and resources in a single process.
- **Import of operation, material, resource, and resource usage details:** you can add or change operations, components, operation resources, and update (replaces existing resource usage with the resource usage in the table) operation resource usage on Discrete jobs, as indicated on the following table:

**Table 12–5 Features of the Work Order Interface**

-	NEW DISCRETE JOB	EXISTING DISCRETE JOB
Add Header	Currently supported	Not applicable
Add Operations	New Feature	New Feature
Change Operations	New Feature	New Feature
Delete Operations	Not supported	Not supported
Add Components	New Feature	Currently supported
Change Components	New Feature	Currently supported
Delete Components	Not supported if explosion flag is No	Currently supported
Add Operation Resources	New Feature	Currently supported
Change Operation Resources	New Feature	Currently supported
Delete Operation Resources	Not supported if explosion flag is No	Currently supported
Update* Operation Resource Usage	New Feature	New Feature

\*Replaces existing operation resource usage with the resource usage entered in the interface table

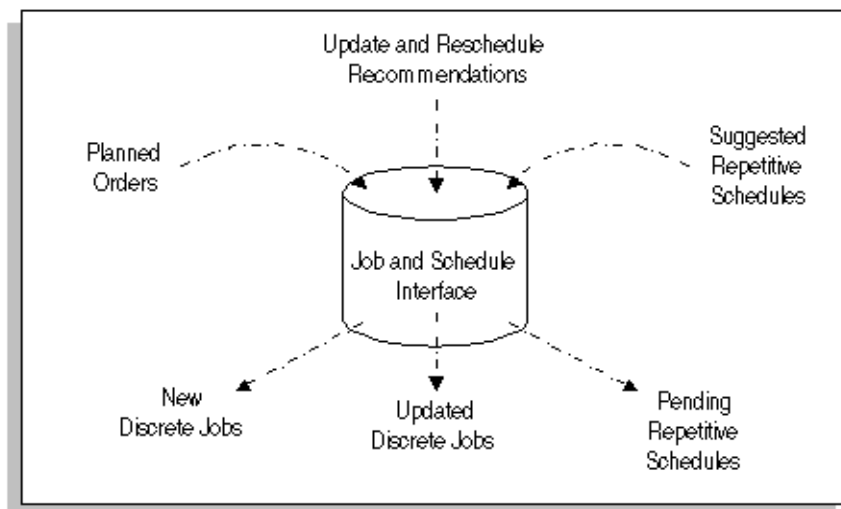
## See Also

Overview of Reports and Programs, *Oracle Applications User's Guide*

## Functional Overview

Figure 12–2 depicts the types of inputs that the Work Order Interface supports as well as their corresponding Work in Process Discrete job or Repetitive schedule output.

**Figure 12–2 Work Order Interface Input and Output**



You insert records from third party sources into the Work Order Interface tables by:

- Writing a PL/SQL program or SQL script that maps your source files to the columns in the Work Order Interface tables
- Using a third party program that can map your source files to the interface tables
- Using Oracle Advanced Planning and Scheduling's High Level Scheduling Engine to schedule planned and unreleased work orders and import them into Work in Process.

- Using Oracle Master Scheduling/MRP's Planner Workbench to automatically import planned work orders into Work in Process (see: Overview of the Planner Workbench, Implementing Planning Recommendations, and Netting Supply and Demand, *Oracle Master Scheduling/MRP User's Guide, R11i*).

When you insert records into the Work Order Interface, you load header information into the `WIP_JOB_SCHEDULE_INTERFACE` table, and operations, components, resources, resource usage, and scheduling information into the `WIP_JOB_DTLS_INTERFACE` table. You then use the Import Jobs and Schedules window to launch the WIP Mass Load (WICMLX) concurrent program, which validates records in the Work Order Interface table and imports them into Work in Process.

The records are processed in batches identified by a group identifier (`GROUP_ID`) that you assign them when you launch the WIP Mass Load program. The imported records are then automatically implemented as new or updated Discrete jobs, or pending Repetitive schedules. Jobs are automatically scheduled, unless you set the flag for the scheduling method (`SCHEDULING_METHOD`) to manual or the flag that determines whether the bill of material and routing are exploded (`ALLOW_EXPLOSION`) to No before importing the records.

The WIP Mass Load program does all of the following:

- Validates the data in the interface tables
- Derives values for additional columns
- Creates new Discrete jobs, updates existing jobs, and creates pending Repetitive schedules
- Optionally launches the Job and Schedule Interface Report (WIPMLINT), which lists both successfully processed and failed records.
- Deletes successfully processed records from the interface table

### See Also

Work Order Interface Report, *Oracle Work in Process User's Guide*

Importing Jobs and Schedules, *Oracle Work in Process User's Guide*

Processing Pending Jobs and Schedules, *Oracle Work in Process User's Guide*

## Setting Up the Work Order Interface

The Work Order Interface requires no additional setup steps beyond those already required to set up Discrete and Repetitive manufacturing. All processing is initiated through the Import Jobs and Schedules window. The concurrent Import Jobs and

Schedules Request that you submit through this window is managed by the Standard Manager, which thus must be set up and running.

### **See Also**

Discrete Manufacturing Parameter, *Oracle Work in Process User's Guide*

Repetitive Manufacturing Parameters, *Oracle Work in Process User's Guide*

## **Inserting Records Into the Work Order Interface**

In order to insert records (rows) from your source system into the Work Order Interface tables, you must write a PL/SQL program, a SQL script, or use a third party program. The following sections provide you with the information that you need to map your source files to the columns in the Work Order Interface tables:

### **Creating New Work Orders**

When you insert records into the Work Order Interface to create new or update existing Discrete jobs, you have the option to insert header information only, detail information only, or both header and detail information. You also can insert header information to create pending Repetitive schedules.

You insert header information into the WIP\_JOB\_SCHEDULE\_INTERFACE table, and operation, material, resource, and scheduling information into the WIP\_JOB\_DTLS\_INTERFACE table. Once you load the job header, the WIP Mass Load program loads detail records from the WIP\_JOB\_DTLS\_INTERFACE table that match the header record.

You can create a new work order with or without exploding the bill of material (BOM) and routing. If you choose NOT to explode the BOM and routing, you must manually enter the job's components, operations, resources, and scheduling information in the WIP\_JOB\_DTLS\_INTERFACE table. (Note: if you want to change the scheduled start or completion date without the explosion feature, then you must provide both the FIRST\_UNIT\_START\_DATE and the LAST\_UNIT\_COMPLETION\_DATE.) If you choose to explode the BOM and routing, Work in Process uses the standard system BOM and routing.

**Inserting header information:** When you insert header information into the WIP\_JOB\_SCHEDULE\_INTERFACE table, you set the appropriate LOAD\_TYPE to either 1 for standard Discrete jobs, 2 for Repetitive schedules, or 4 for non-standard Discrete jobs.

**Inserting job or schedule details:** When you insert operation, component, resource, and scheduling details into the WIP\_JOB\_DTLS\_INTERFACE table, you set the LOAD\_TYPE to either 1 (load/update resources), 2 (load/update components), 3 (load/update operations), or 4 (load resource usage). The WIP\_JOB\_DTLS\_INTERFACE table must contain a job header row if you are loading job schedule details.

## Updating Existing Work Orders

You can insert header information only, detail information only, or both header and detail information into the Work Order Interface tables, as follows:

- **Updating header information only:** To update work orders, you load the data into the WIP\_JOB\_SCHEDULE\_INTERFACE table, and set the LOAD\_TYPE of the table to 3 (update Discrete job). The work order is identified by its name if it is a Discrete job, and by its assembly or start date if it is a Repetitive schedule.
- **Updating detail information only:** To update detail records, you load the data into the WIP\_JOB\_DTLS\_INTERFACE table. The PARENT\_HEADER\_ID must be null, and you must provide the WIP\_ENTITY\_ID and ORGANIZATION\_ID. You can add or change operations, and add, change, or delete components and operation resources on Discrete jobs. Deleting a resource also deletes all of its resource usage information. You also can update Discrete job resource usage sets, which deletes the existing resource usage and replaces it with the resource usage in the table.
- **Updating both header and detail information:** load the data into both the WIP\_JOB\_SCHEDULE\_INTERFACE and WIP\_JOB\_DTLS\_INTERFACE tables.

The following sections describe the columns in each of the two Work Order Interface tables:

## WIP\_JOB\_SCHEDULE\_INTERFACE Table

The following table lists the columns in the WIP\_JOB\_SCHEDULE\_INTERFACE table and provides their load/update type and validation information

Note: The numbers under the Required, Optional/Derived if Null, Optional, and Derived or Ignored columns indicate that the column is used to do the following:

**Table 12–6 Work Order Interface: WIP\_JOB\_SCHEDULE\_INTERFACETable**

Number	Load/Update Type Description
1	Create Standard Discrete Job
2	Create Pending Repetitive Schedule
3	Update Standard or Non-Standard Discrete Job
4	Create Non-Standard Discrete Job

**Table 12–7 Work Order Interface: WIP\_JOB\_SCHEDULE\_INTERFACE Table**

Column	Type	Required	Optional/ Derived if Null	Optional	Derived or Ignored	Additional Information
ALLOW_ EXPLOSION	Varchar 2 (1)		1,3,4			If set to N, must provide requirements manually; any values other than N or n are assumed to be Y.
ALTERNATE_BOM_ DESIGNATOR	Varchar 2 (10)			1,4	2,3	Copied to WIP_DISCRETE_JOBS on creation. Ignored for Repetitive schedules and during reschedule. Used by scheduler and exploder. If Alternate Routing is not defined for this assembly or reference; it will error if Assembly Type or Routing Type is 2, and profile option WIP: See Enginerring Items is set to No.
ALTERNATE_ ROUTING_ DESIGNATOR	Varchar 2 (10)			1,4	2,3	See ALTERNATE_BOM_ DESIGNATOR.
ATTRIBUTE1 - ATTRIBUTE15	Varchar 2 (150)			1,2,3,4		Copied to WIP_DISCRETE_JOBS and WIP_REPETITIVE_SCHEDULES on creation. Updates any NOT NULL segments from interface table.
ATTRIBUTE_ CATEGORY	Varchar 2 (30)			1,2,3,4		Descriptive flexfield structure defining column. See ATTRIBUTE1 - ATTRIBUTE15.

**Table 12–7 Work Order Interface: WIP\_JOB\_SCHEDULE\_INTERFACE Table**

Column	Type	Required	Optional/ Derived if Null	Optional	Derived or Ignored	Additional Information
BOM_REFERENCE_ID	Number			4	1,2,3	If LOAD_TYPE = 1, values ignored and warning issued. Must exist in MTL_SYSTEM_ITEMS for your organization, and must have MTL_SYSTEM_ITEMS flags set correctly for WIP.
BOM_REVISION	Number		1,2,4		3	If NULL, derived from REVISION_DATE. If NOT NULL, revision must be valid for Assembly or Reference. If both REVISION and REVISION_DATE entered, must match. Ignored on reschedule; issues warning.
BOM_REVISION_DATE	Date		1,2,4		3	Dates must correspond to valid revisions if entered. If NULL and REVISION NULL, defaulted to greater: start_date, or SYSDATE. If NULL and REVISION NOT NULL, defaults to high revision date for REVISION. If both REVISION and REVISION_DATE entered, must match. Ignored on reschedule; issues warning.
BUILD_SEQUENCE	Number			1,3,4	2	Schedule group ID and build sequence combination must be unique across all jobs. Cannot have build sequence unless have schedule group ID. Ignored for Repetitive. If NOT NULL, issues warning. Defers errors on records that fail validation.
CLASS_CODE	Varchar 2 (10)	4	1		2,3	If NULL on standard job creation, uses default class from WIP parameters. Ignored on reschedule and derived for Repetitive schedules. If NOT NULL, issues warning. Defers errors on records that fail validation.
COMPLETION_LOCATOR_ID	Number		1,4		2,3	Default completion locator for Discrete job.

**Table 12–7 Work Order Interface: WIP\_JOB\_SCHEDULE\_INTERFACE Table**

Column	Type	Required	Optional/ Derived if Null	Optional	Derived or Ignored	Additional Information
COMPLETION_ LOCATOR_ SEGMENTS	Varchar 2 (10)		1,4		2,3	
COMPLETION_ SUBINVENTORY	Varchar 2 (10)		1,4		2,3	Default Completion Subinventory for the Discrete job.
CREATED_BY	Number	1,2,3,4				Standard Who column. See Required Columns.
CREATED_BY_ NAME	Varchar 2 (100)	1,2,3,4				Standard Who column. See Required Columns.
CREATION_DATE	Date	1,2,3,4				Has a NOT NULL restriction; not loaded into the table; default is SYSDATE.
DAILY_ PRODUCTION_ RATE	Number	2			1,3,4	Ignored for Discrete jobs; warning given if NOT NULL.
DEMAND_CLASS	Varchar 2 (30)			1,2,4	3	Copied to WIP_DISCRETE_JOBS and WIP_REPETITIVE_SCHEDULES on creation. Ignored on job reschedule.
DESCRIPTION	Varchar 2 (240)		1,2,4	3		Copied to WIP_DISCRETE_JOBS, WIP_REPETITIVE_SCHEDULES, and WIP_ENTITIES on creation. If NULL, defaulted to generic description including date mass loaded. Derived for Repetitive schedules. Warning given if NOT NULL.
DUE_DATE	Date			1,3,4		Date job to be completed (could be different from the scheduled completion date); also date used when rescheduling jobs. Default is scheduled completion date. Copied to WIP_DISCRETE_JOBS on creation and update. Ignored by Repetitive schedules.
DUE_DATE_ PENALTY	Number			1,3,4		The penalty (in days) incurred if job completes later than the requested completion date.

**Table 12–7 Work Order Interface: WIP\_JOB\_SCHEDULE\_INTERFACE Table**

Column	Type	Required	Optional/ Derived if Null	Optional	Derived or Ignored	Additional Information
DUE_DATE_ TOLERANCE	Number			1,3,4		The number of days late a job can be schedule from the requested due date.
FIRM_PLANNED_ FLAG	Number		1,2,4	3		Copied to WIP_DISCRETE_JOBS or WIP_REPETITIVE_SCHEDULES on creation. If column NULL, value defaulted. Value must be 1, 2 (Y or N); error occurs if value is 1 and creating nonstandard job. Must be NOT NULL on reschedule. Errors on records that fail validation are deferred.
FIRST_UNIT_ COMPLETION_ DATE	Date	1,2,4		3		See FIRST_UNIT_START_DATE.
FIRST_UNIT_ START_DATE	Date	1,2,4		3		If SCHEDULING_METHOD is manual, first unit start date (FUSD) must be less than or equal to last unit completion date (LUCD). If SCHEDULING_METHOD is routing-based, then you must enter FUSD or LUCD. Dates entered must exist in BOM_CALENDAR_DATES.
GROUP_ID	Number	1,2,3,4				Identifies a batch of records for processing; when loading detail records, this column cannot be NULL (see Control Columns).
HEADER_ID	Number	1,2,3,4				Identifies individual jobs in a given group and ties a header record to a set of detail records. Cannot be NULL when loading detail records. Ignored by Repetitive schedules.

**Table 12–7 Work Order Interface: WIP\_JOB\_SCHEDULE\_INTERFACE Table**

Column	Type	Required	Optional/ Derived if Null	Optional	Derived or Ignored	Additional Information
INTERFACE_ID	Number				1,2,3,4	Number generated by Work in Process to uniquely identify each record in the table; also links interface records with error records. Must be NULL (values are entered when record picked up by WIP Mass Load program).
JOB_NAME	Varchar 2 (240)		1,4		2,3	Copied to WIP_DISCRETE_JOBS on creation. If NULL on job creation, defaulted using prefix and sequence. Either ID or Name must be entered on reschedule; if both, must match. Job Name must be unique within organization. Ignored by Repetitive schedules.
KANBAN_CARD_ID	Number				1,2,3,4	Only used if Oracle Inventory inserts replenishment kanban signals into the table; otherwise ignored, thus do not include.
LAST_UNIT_COMPLETION_DATE	Date	1,2,4		3		If SCHEDULING_METHOD is manual, first unit start date (FUSD) must be less than or equal to last unit completion date (LUCD). If SCHEDULING_METHOD is routing-based, then you must enter FUSD or LUCD. Dates entered must exist in BOM_CALENDAR_DATES.
LAST_UNIT_START_DATE	Date	1,2,4		3		See LAST_UNIT_COMPLETION_DATE.
LAST_UPDATE_DATE	Date	1,2,3,4				Has a NOT NULL restriction; is not loaded into interface table; SYSDATE is used.
LAST_UPDATE_LOGIN	Number			1,2,3,4		Standard Who column. Load the value for this column in WIP_DISCRETE_JOBS.
LAST_UPDATED_BY	Number	1,2,3,4				Standard Who column. See Required Columns.

**Table 12–7 Work Order Interface: WIP\_JOB\_SCHEDULE\_INTERFACE Table**

Column	Type	Required	Optional/ Derived if Null	Optional	Derived or Ignored	Additional Information
LAST_UPDATED_BY_NAME	Varchar 2 (100)	1,2,3,4				Standard Who column. See Required Columns.
LINE_CODE	Varchar 2 (10)	2		1,3,4		If both LINE_ID and LINE_CODE entered, name is ignored and warning given. If only name entered, ID is derived from WIP_LINES. ID must exist and be active in WIP_LINES in correct organization. If entered or derived ID is NULL, error occurs. Defers errors on records that fail validation.
LINE_ID	Number	2		1,3,4		See LINE_CODE.
LOAD_TYPE	Number	1,2,3,4				Indicates whether current interface record is planned order, job update recommendation, or suggested Repetitive schedule. Must assign one of these values or error occurs.  1 Create standard Discrete job 2 Create Pending Repetitive schedule 3 Update standard or non-standard Discrete job 4 Create non-standard Discrete Job  See Control Columns for more information.
LOT_NUMBER	Varchar 2 (30)		1,4	3	2	If assembly under lot control, copied to WIP_DISCRETE_JOBS on creation. If NULL on job creation and parameter = Based on Job, defaults from job name; if parameter = Inventory, defaults from Inventory. Interface value ignored for Repetitive schedules during reschedule and when assembly not under lot control.

**Table 12–7 Work Order Interface: WIP\_JOB\_SCHEDULE\_INTERFACE Table**

Column	Type	Required	Optional/ Derived if Null	Optional	Derived or Ignored	Additional Information
NET_QUANTITY	Number			1,3,4	2	Copied to WIP_DISCRETE_JOBS on creation or reschedule. Rounded to six places. Must be greater than or equal to zero; must be less than or equal to START_QUANTITY. Must be zero for nonstandard jobs without an assembly. If NULL on job reschedule, assumes quantity unchanged. Ignored for Repetitive schedules; warning given if NOT NULL. Defers errors on records that fail validation.
ORGANIZATION_ CODE						See Required Columns. When rescheduling Discrete jobs, ORGANIZATION_CODE, ORGANIZATION_ID, and WIP_ENTITY_ID, WIP_ENTITY_NAME must match record in WIP_DISCRETE_JOBS table or error message issued.
ORGANIZATION_ID						Identifier for the organization. See ORGANIZATION_CODE and Required Columns.
OVERCOMPLETION_ TOLERANCE_TYPE	Number			1,2,3,4		
OVERCOMPLETION_ TOLERANCE_ VALUE	Number			1,2,3,4		
PRIMARY_ITEM_ID	Number	1, 2		4	3	Required for standard jobs and repetitive schedules. Ignored on reschedule (warning issued). BUILD_IN_WIP_FLAG must be Y, PICK_COMPONENTS_FLAG and ENG_ITEM_FLAG must be N.

**Table 12–7 Work Order Interface: WIP\_JOB\_SCHEDULE\_INTERFACE Table**

Column	Type	Required	Optional/ Derived if Null	Optional	Derived or Ignored	Additional Information
PRIORITY	Number			1,3,4		Processing order of the work order being imported; cannot be less than zero. Copied to WIP_DISCRETE_JOBS on creation and update. Ignored by Repetitive schedules.
PROCESS_PHASE	Number	1,2,3,4				See Control Columns.
PROCESS_STATUS	Number	1,2,3,4				See Control Columns.
PROCESSING_ WORK_DAYS	Number	2			1,3,4	Ignored for Discrete jobs; warning given if NOT NULL.
PROGRAM_ APPLICATION_ID	Number				1,2,3,4	Extended Who column. See Derived or Ignored Columns.
PROGRAM_ID	Number				1,2,3,4	Extended Who column. See Derived or Ignored Columns.
PROGRAM_ UPDATE_DATE	Date				1,2,3,4	Extended Who column.
PROJECT_ID	Number		3	1, 4	2	Project reference for the Discrete job.
PROJECT_NUMBER	Varchar 2 (25)		3	1, 4	2	Project reference for the Discrete job.
REQUEST_ID	Number				1,2,3,4	Extended Who column. See Derived or Ignored Columns.
REPETITIVE_ SCHEDULE_ID	Number				1,2,3,4	Identifier for a Repetitive schedule. Must be unique across all organizations. Use sequence to generate if NULL. Warning issued if NOT NULL. Ignored for Discrete jobs.
ROUTING_ REFERENCE_ID	Number			4	1,2,3	If LOAD_TYPE = 1, values ignored and warning issued. Must exist in MTL_SYSTEM_ITEMS for your organization, and must have MTL_SYSTEM_ITEMS flag set correctly for WIP.

**Table 12–7 Work Order Interface: WIP\_JOB\_SCHEDULE\_INTERFACE Table**

Column	Type	Required	Optional/ Derived if Null	Optional	Derived or Ignored	Additional Information
ROUTING_ REVISION	Number		1,2,4		3	Derived from REVISION_DATE if NULL. If NOT NULL, revision must be valid for Assembly or Reference. If both REVISION and REVISION_DATE entered, must match. Ignored on reschedule; warning issued.
ROUTING_ REVISION_DATE	Date		1,2,4		3	Dates must correspond to valid revisions if entered. If NULL and REVISION NULL, defaulted to greater: start_date, or SYSDATE. If NULL and REVISION NOT NULL, default to high revision date for REVISION. If both REVISION and REVISION_DATE entered, must match. Ignored on reschedule; warning issued.
SCHEDULE_ GROUP_ID	Number			1,3,4	2	If both SCHEDULE_GROUP_NAME and SCHEDULE_GROUP_ID are entered, name ignored and warning issued. If only name entered, ID derived from WIP_SCHEDULE_GROUPS. If entered or derived ID is NULL, error occurs. ID must exist and be active in WIP_SCHEDULE_GROUPS in correct organization. Ignored for Repetitive schedules. If NOT NULL, warning issued. Defers errors on records that fail validation.
SCHEDULE_ GROUP_NAME	Varchar 2 (240)			1,3,4	2	See SCHEDULE_GROUP_ID.
SCHEDULING_ METHOD	Number		1,3,4		2	Valid values are: Routing-Based, Item Lead Time, Manual. If NULL, default is Routing-Based; if Repetitive, must be Routing-Based; if Routing-Based, all operation and resource dates set to start date.

**Table 12–7 Work Order Interface: WIP\_JOB\_SCHEDULE\_INTERFACE Table**

Column	Type	Required	Optional/ Derived if Null	Optional	Derived or Ignored	Additional Information
SOURCE_CODE	Varchar 2 (30)			1,2,3,4		Values copied into WIP_DISCRETE_JOBS during Discrete mass load. If NOT NULL, enter the value for this column when rescheduling Discrete jobs and Repetitive schedules.
SOURCE_LINE_ID	Number			1,2,3,4		See SOURCE_CODE.
START_QUANTITY	Number			1,3,4	2	Copied to WIP_DISCRETE_JOBS on creation or reschedule; rounded to six places. Error issued if NULL on job creation. Must be greater than zero when creating standard Discrete jobs or greater than or equal to zero when creating nonstandard jobs. If NULL when rescheduling, assumes quantity unchanged. Ignored for Repetitive schedules. Warns if NOT NULL. Defers errors on records that fail validation.
STATUS_TYPE	Number		1,4	3	2	Must be one of the following: 1 Unreleased 3 Released 6 On Hold
TASK_ID	Number		3	1, 4	2	See Optional/Derived if Null Columns.
TASK_NUMBER	Varchar 2 (25)		3	1, 4	2	See Optional/Derived if Null Columns.

**Table 12–7 Work Order Interface: WIP\_JOB\_SCHEDULE\_INTERFACE Table**

Column	Type	Required	Optional/ Derived if Null	Optional	Derived or Ignored	Additional Information
WIP_ENTITY_ID	Number	3			1,2,4	WIP Discrete job or Repetitive assembly identifier. Copied to WIP_DISCRETE_JOBS on job creation. Must be unique across all organizations. Ignored by Repetitive schedules. Either ID or Name must be entered on reschedule. If both entered, must match. If NULL on creation, generated using a sequence. When rescheduling Discrete jobs, WIP_ENTITY_ID, WIP_ENTITY_NAME, and ORGANIZATION_ID, ORGANIZATION_CODE must match record in WIP_DISCRETE_JOBS table or you receive an error message.
WIP_ENTITY_NAME	VarChar 2 (100)	3			1,2,4	See WIP_ENTITY_ID.
WIP_SUPPLY_TYPE	Number		1, 4		2,3	Method of material consumption within WIP. Used to explode BOM on job creation; copied to WIP_DISCRETE_JOBS. Must be valid supply type (1-5, 7; cannot choose 2 or 3 for non-standard jobs without an assembly). If NULL, value defaults to Based on Bill. Ignored for Repetitive schedules and during reschedule.
SERIALIZATION_ START_OP	Number					This should be populated if the user wants to use serialized transactions.

### Control Columns

The following columns are control columns for the WIP Mass Load program. Other columns in the interface represent the actual data that are inserted into or modified in the WIP\_DISCRETE\_JOBS and WIP\_REPETITIVE\_SCHEDULES tables when records are successfully imported from the Work Order Interface table. You can find more information about the WIP\_DISCRETE\_JOBS and WIP\_REPETITIVE\_

SCHEDULES tables in the Oracle Work in Process Technical Reference Manual, R11*i*.

- **ALLOW\_EXPLOSION:** determines whether the system uses the standard bill of material (BOM) and routing or a custom BOM and routing that you supply. If this flag is set to N or n, you must manually provide a custom BOM and routing; otherwise the system uses the standard BOM and routing.
- **GROUP\_ID:** identifies the batch of detail records loaded. It is used to group records (rows) in the interface table for processing. Since Work in Process only processes records with a GROUP\_ID, you must assign the records a GROUP\_ID when you launch the WIP Mass Load program. You use the WIP\_JOB\_SCHEDULE\_INTERFACE\_S sequence to generate a new, unique GROUP\_ID for each batch of rows that you insert into the WIP\_JOB\_SCHEDULE\_INTERFACE table. Work in Process does NOT process records that have a NULL GROUP\_ID. If GROUP\_ID is NULL, the record stays in the interface table as a reference.
- **HEADER\_ID:** identifies individual jobs in a given group, and ties a header record to a set of detail records.
- **INTERFACE\_ID:** identifies each work order that is loaded
- **LOAD\_TYPE:** determines whether the current interface record is a planned order, update recommendation, or suggested Repetitive schedule. It also controls whether interface table columns are Required, Optional, Optional/Derived if Null, or Derived or Ignored, and has a NOT NULL restriction. You must assign one of the following possible values or an error occurs:
  - 1 Create Standard Discrete Job
  - 2 Create Pending Repetitive Schedule
  - 3 Update Standard or Non-Standard Discrete Job
  - 4 Create Non-Standard Discrete Job
- **PROCESS\_PHASE:** together with PROCESS\_STATUS, the PROCESS\_PHASE column indicates the current status of each record. Possible PROCESS\_PHASE values include:
  - 2 Validation
  - 3 Explosion
  - 4 Completion

- 5 Creation
- **PROCESS\_STATUS**: together with **PROCESS\_PHASE**, the **PROCESS\_STATUS** column indicates the current status of each record. Possible **PROCESS\_STATUS** values include:
  - 1 Pending
  - 2 Running
  - 3 Error
  - 4 Complete
  - 5 Warning

Records should be inserted into the **WIP\_JOB\_SCHEDULE\_INTERFACE** table with a **PROCESS\_PHASE** = 2 (Validation) and a **PROCESS\_STATUS** = 1 (Pending). These values indicate that the record is ready to be processed by the WIP Mass Load program. If the program fails at any stage when processing a record, the **PROCESS\_STATUS** of that record is set to 3 (Error). Records that load successfully have their **PROCESS\_STATUS** set to 4 (Complete). If a record fails to load because, for example, the WIP Mass Load program is abnormally terminated, the **PROCESS\_STATUS** of the record is set to 5 (Warning). To resubmit these records, you set the **PROCESS\_STATUS** of status 5 (Warning) records to 1 (Pending), and set the **PROCESS\_PHASE** to 2 (Validation), then resubmit them.

### Required Columns

You must specify values for columns in this category. If you do not enter a required value, the WIP Mass Load program does not process the record and inserts an error record in the **WIP\_INTERFACE\_ERRORS** table. If you specify values for both the name and the ID, the value for the ID is used and the value for the name is ignored during validation. If the entered or derived ID is NULL, you receive an error. Errors on records that fail validation are deferred.

- **CREATED\_BY**, **CREATED\_BY\_NAME**, and **LAST\_UPDATED\_BY**, **LAST\_UPDATED\_BY\_NAME**: If you enter only the name, the ID is derived from **FND\_USER** and therefore must exist and be active in **FND\_USER**.
- **LINE\_CODE**, **LINE\_ID**: If you only enter the code, the ID is derived from **WIP\_LINES**. The ID must exist and be active in **WIP\_LINES** in the correct organization.

- **ORGANIZATION\_CODE, ORGANIZATION\_ID:** If you only enter the code, the ID is derived from `ORG_ORGANIZATION_DEFINITIONS`, thus, the ID must exist and be active in `ORG_ORGANIZATION_DEFINITIONS`.

Both Work in Process and Oracle Inventory parameters must be defined for the organization. When rescheduling Discrete jobs, the `ORGANIZATION_CODE`, `ORGANIZATION_ID`, `WIP_ENTITY_ID`, and `WIP_ENTITY_NAME` must match the record in the `WIP_DISCRETE_JOBS` table or you will receive an error message.

### Optional/Derived if Null Columns

You have the option to specify values for columns that the WIP Mass Load program will use. If you leave Optional/Derived if Null columns blank (NULL), the program uses an internal default value instead. For example, for records with a `LOAD_TYPE` of 1 (Create Discrete Jobs), the `STATUS_TYPE` field is Optional/Derived if Null. If you specify a value, that value is used when the job is created. If you do not specify a value, the value defaults to 1 (Unreleased). In general, default values are derived in the same way that they are derived when you manually enter Discrete jobs and Repetitive schedules in the Discrete Jobs and Repetitive Schedules windows. (See: *Defining Discrete Jobs Manually* and *Defining Repetitive Schedules Manually*, Oracle Work in Process User's Guide.)

For some optional columns (`SCHEDULE_GROUP_ID`, `SCHEDULE_GROUP_NAME`, `PROJECT_ID`, `PROJECT_NUMBER`, and `TASK_ID`, `TASK_NUMBER`), you can use either the name or the underlying ID. If you specify values for both the name and the ID, the value for the ID is used and the value for the name is ignored.

- **PROJECT\_ID, PROJECT\_NUMBER and TASK\_ID, TASK\_NUMBER:** these columns are interdependent. When loading records that update existing jobs (Load/Update Type #3), the following rules are applied.

### Task = Null and Project = Null

If the job has a project and task reference, the values in these fields are not overwritten, and thus remain unchanged

### Project < > Null and Task = Null

If the job has a project and task reference, the project number is overwritten and the task is overwritten with the NULL task

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**Attention:** If the Project Level Reference parameter in the Organization Parameters window in Oracle Inventory is set to task and a task is required, then records with only a project will fail to load

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### **Project = Null and Task < > Null**

If the job has a project, the project field is not overwritten with the NULL project. If the job has a task, however, the task is overwritten.

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**Attention:** Records with new tasks will only successfully load if those tasks have been associated with the job's project in Oracle Projects.

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Completion locators for standard project jobs (Load/Update Type #3) are automatically recreated when a project or task changes.

- **STATUS\_TYPE:** you can only create Discrete jobs with a status of 1 Unreleased, 3 Released, or 6 On Hold. If the column is NULL when a job is created, Unreleased is the default. Repetitive schedules are created with a status of Pending.

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**NOTE:** If you have installed Oracle Manufacturing Scheduling, and have its Constraint-Based Scheduling engine turned on, Unreleased is only option available.

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Only valid status changes can occur when you are rescheduling jobs. If the column is NULL when a job is rescheduled, there is no status change. A job must have a released status or be rescheduled to a released state to be released. If it is rescheduled to an unreleased status from a released status, it is not released.

### **Optional Columns**

You do not have to enter values for columns in this category. Unlike Optional/Derived if Null columns, however, Optional columns are not defaulted if left blank. The same validation logic that is applied when you manually enter values for these fields in the Discrete Jobs and Repetitive Schedules windows is applied to the values that you enter in these columns.

For some optional columns (SCHEDULE\_GROUP\_ID, SCHEDULE\_GROUP\_NAME, PROJECT\_ID, PROJECT\_NUMBER, and TASK\_ID, TASK\_NUMBER), you can use either the name or the underlying ID. If you specify values for both the name and the ID, the value for the ID is used and the value for the name is ignored.

### Derived or Ignored Columns

These columns are for internal processing only. You should leave all columns in this category blank (NULL), since values entered in these columns are ignored or overwritten.

- PROGRAM\_APPLICATION\_ID, PROGRAM\_ID, REQUEST\_ID: unlike other Derived or Ignored columns, the Mass Load Program does not set any values for these columns, nor does it copy them when it creates or reschedules Discrete jobs or Repetitive schedules. Thus, you must enter the values for these columns in the interface table both when creating and rescheduling Discrete jobs and Repetitive schedules.

## WIP\_JOB\_DTLS\_INTERFACE Table

When you load operations and detailed component, resource, and scheduling information for Discrete jobs from your source files into Work in Process, it loads the data in batches, based on their GROUP\_ID. The table's PARENT\_HEADER\_ID column connects the work order details back to the header information in the Open Job and Schedule Interface. You must set the LOAD\_TYPE to one of the following:

1. for loading a resource
2. for loading a component
3. for loading an operation
4. for loading multiple resource usage

You can add or change Discrete job operations, components, and resources. You also can delete operation resources and components on existing Discrete jobs, however, you can only delete them on *new* Discrete jobs if the ALLOW\_EXPLOSION Flag is set to Yes (indicates that you are using the standard system BOM and routing). If you delete operation resources, you need to provide the value for OPERATION\_SEQ\_NUM, RESOURCE\_SEQ\_NUM, and WIP\_ENTITY\_ID. If you delete components, you must provide the COMPONENT\_SEQ\_ID and the WIP\_ENTITY\_ID (you must provide the OPERATION\_SEQ\_ID only if you attach the component to an operation).

The following table lists the columns in the WIP\_JOB\_DTLS\_INTERFACE table, and indicates whether they are Required (Reqd), Optional (Opt), or Null when you add or change operations, components, and resources for existing Discrete jobs, or when you schedule new Discrete jobs and pending Repetitive schedules. When adding operations, components, or resources, use Substitution Type 2; when changing them, use Substitution Type 3. Do not provide columns marked Null.

**Table 12–8 Work Order Interface: WIP\_JOB\_DTLS\_INTERFACE Table**

Column Name	Type	Op Add	Op Chg	Cmp Add	Cmp Chg	Res Add	Res Chg	Sched	Additional Information
ACTIVITY_ID	Number	Null	Null	Null	Null	Opt	Opt	Null	Identifier for the activity
APPLIED_RESOURCE_UNITS	Number	Null	Null	Null	Null	Opt	Opt	Null	Number of resource units charged.
APPLIED_RESOURCE_VALUE	Number	Null	Null	Null	Null	Opt	Opt	Null	Value of the resource units charged.
ASSIGNED_UNITS	Number	Null	Null	Null	Null	Reqd	Opt	Null	Number of resource units assigned to do work.
ATTRIBUTE1 through ATTRIBUTE15	VarChar 2 (150)	Opt	Opt	Opt	Opt	Opt	Opt	Null	Descriptive flexfield segments
ATTRIBUTE_CATEGORY	VarChar 2 (30)	Opt	Opt	Opt	Opt	Opt	Opt	Null	Descriptive flexfield structure defining column.
AUTOCHARGE_TYPE	Number	Null	Null	Null	Null	Reqd	Opt	Null	Method of charging the resource.
BACKFLUSH_FLAG	VarChar 2 (1)	Reqd	Opt	Null	Null	Null	Null	Null	Required for loading operations; optional when updating.
BASIS_TYPE	Number	Null	Null	Null	Null	Reqd	Opt	Null	Basis for scheduling and charging the resource.

**Table 12–8 Work Order Interface: WIP\_JOB\_DTLS\_INTERFACE Table**

Column Name	Type	Op Add	Op Chg	Cmp Add	Cmp Chg	Res Add	Res Chg	Sched	Additional Information
COMPLETION_DATE	Date	Null	Null	Null	Null	Reqd	Opt	Null	Resource's scheduled finished production date. Required for loading and updating resource usage. If USAGE_BLOCK is specified, then completion date pertains to it. To change scheduled completion date without explosion, must also provide first unit start date and last unit completion date.
COUNT_POINT_TYPE	Number	Reqd	Opt	Null	Null	Null	Null	Null	Required for loading operations; optional when updating.
CREATED_BY	Number								Standard Who column.
CREATION_DATE	Date								Standard Who column.
DATE_REQUIRED	Date	Null	Null	Reqd	Opt	Null	Null	Null	
DEPARTMENT_ID	Number	Reqd	Opt	Opt	Opt	Null	Null	Null	Department identifier.
DESCRIPTION	VarChar 2 (240)	Opt	Opt	Opt	Opt	Opt	Opt	Opt	
FIRST_UNIT_COMPLETION_DATE	Date	Reqd	Opt	Null	Null	Null	Null	Null	Required for loading operations; optional when updating.

**Table 12–8 Work Order Interface: WIP\_JOB\_ DTLS\_INTERFACE Table**

Column Name	Type	Op Add	Op Chg	Cmp Add	Cmp Chg	Res Add	Res Chg	Sched	Additional Information
FIRST_UNIT_START_DATE	Date	Reqd	Opt	Null	Null	Null	Null	Null	Required for loading operations; optional for updating. To change schedule start or completion date without explosion, must also provide first unit start date and last unit completion date.
GROUP_ID	Number	Reqd	Reqd	Reqd	Reqd	Reqd	Reqd	Reqd	If details pertain to header record loaded at same time, value must be same as GROUP_ID in WIP_JOB_SCHEDULE_INTERFACE table.
INTERFACE_ID	Number	Null	Null	Null	Null	Null	Null	Null	Number generated by Work in Process to uniquely identify each record in the table. Links interface records with error records. Must be NULL (values are entered when record picked up by WIP Mass Load program).
INVENTORY_ITEM_ID_NEW	Number	Null	Null	Reqd	Opt	Null	Null	Null	
INVENTORY_ITEM_ID_OLD	Number	Null	Null	Null	Reqd	Null	Null	Null	
ITEM_SEGMENTS	VarChar (2000)	Opt	Opt	Opt	Opt	Opt	Opt	Opt	

**Table 12–8 Work Order Interface: WIP\_JOB\_DTLS\_INTERFACE Table**

Column Name	Type	Op Add	Op Chg	Cmp Add	Cmp Chg	Res Add	Res Chg	Sched	Additional Information
LAST_UNIT_COMPLETION_DATE	Date	Reqd	Opt	Null	Null	Null	Null	Null	Required for loading operations; optional for updating. To change schedule start or completion date without explosion, must also provide first unit start date and last unit completion date.
LAST_UNIT_START_DATE	Date	Reqd	Opt	Null	Null	Null	Null	Null	Required for loading operations; optional when updating.
LAST_UPDATE_DATE	Date	Reqd							Standard Who column.
LAST_UPDATE_LOGIN	Number	Reqd							Standard Who column.
LAST_UPDATED_BY	Number	Reqd							Standard Who column.
LOAD_TYPE	Number	3	3	2	2	1	1	4	Cannot be NULL. 1 for loading a resource 2 for loading a component 3 for loading an operation 4 for loading multiple resource usage 7 for associating serial numbers
MINIMUM_TRANSFER_QUANTITY	Number	Reqd	Opt	Null	Null	Null	Null	Null	Required for loading operations optional when updating.
MPS_DATE_REQUIRED	Date	Null	Null	Opt	Opt	Null	Null	Null	Date used by MPS relief process.
MPS_REQUIRED_QUANTITY	Number	Null	Null	Opt	Opt	Null	Null	Null	Quantity used by MPS relief process.

**Table 12–8    Work Order Interface: WIP\_JOB\_ DTLS\_INTERFACE Table**

Column Name	Type	Op Add	Op Chg	Cmp Add	Cmp Chg	Res Add	Res Chg	Sched	Additional Information
MRP_NET_FLAG	Number	Null	Null	Reqd	Opt	Null	Null	Null	Determines whether or not MRP should consider the component requirement in its netting process.
OPERATION_SEQ_NUM	Number	Reqd	Reqd	Reqd	Reqd	Reqd	Reqd	Reqd	Number of operation sequence within a routing. When adding a component, the operation sequence defaults to the first operation of the job if this value is set to 1.
ORGANIZATION_ID	Number	Null	Null	Null	Null	Null	Null	Null	Identifier for the organization.

**Table 12–8 Work Order Interface: WIP\_JOB\_DTLS\_INTERFACE Table**

Column Name	Type	Op Add	Op Chg	Cmp Add	Cmp Chg	Res Add	Res Chg	Sched	Additional Information
PARENT_HEADER_ID	Number	Reqd	Reqd	Reqd	Reqd	Reqd	Reqd	Reqd	Contains HEADER_ID of work order record (GROUP_ID, HEADER_ID columns from WIP_JOB_SCHEDULE_INTERFACE table identify header record uniquely). Must be NULL if only detail records are loaded or updated. Must provide WIP_ENTITY_ID and ORGANIZATION_ID.
PROCESS_PHASE	Number	Reqd	Reqd	Reqd	Reqd	Reqd	Reqd	Reqd	See Control Columns.
PROCESS_STATUS	Number	Reqd	Reqd	Reqd	Reqd	Reqd	Reqd	Reqd	See Control Columns.
PROGRAM_APPLICATION_ID	Number								Extended Who column.
PROGRAM_ID	Number								Extended Who column.
PROGRAM_UPDATE_DATE	Date								Extended Who column.
QUANTITY_ISSUED	Number	Null	Null	Reqd	Opt	Null	Null	Null	Part quantity issued.
QUANTITY_PER_ASSEMBLY	Number	Null	Null	Reqd	Opt	Null	Null	Null	Part usage quantity.
REQUEST_ID	Number								Extended Who column.

**Table 12–8 Work Order Interface: WIP\_JOB\_ DTLs\_INTERFACE Table**

Column Name	Type	Op Add	Op Chg	Cmp Add	Cmp Chg	Res Add	Res Chg	Sched	Additional Information
REQUIRED_QUANTITY	Number	Null	Null	Reqd	Opt	Null	Null	Null	Part quantity required.
RESOURCE_ID_NEW	Number	Null	Null	Null	Null	Reqd	Opt	Null	
RESOURCE_ID_OLD	Number	Null	Null	Null	Null	Null	Reqd	Null	
RESOURCE_SEQ_NUM	Number	Null	Null	Null	Null	Reqd	Reqd	Reqd	Number of the resource sequence.
SCHEDULED_FLAG	Number	Null	Null	Null	Null	Reqd	Opt	Null	Method of scheduling the resource.
STANDARD_RATE_FLAG	Number	Null	Null	Null	Null	Reqd	Opt	Null	Determines whether or not resource is charged at standard rate.
STANDARD_OPERATION_ID	Number	Opt	Opt	Null	Null	Null	Null	Null	Optional.
START_DATE	Date	Null	Null	Null	Null	Reqd	Opt	Null	Required for loading and updating resource usage. If USAGE_BLOCK is specified, then start date pertains to it. To change schedule start date without explosion, must also provide first unit start date and last unit completion date.
SUBSTITUTION_TYPE	Number								Must be one of these: 1 Delete 2 Add 3 Change Any other values will cause an error.
SUPPLY_LOCATOR_ID	Number	Null	Null	Opt	Opt	Null	Null	Null	Locator used to supply component to WIP.
SUPPLY_SUBINVENTORY	VarChar2(10)	Null	Null	Opt	Opt	Null	Null	Null	Subinventory used to supply component to WIP

**Table 12–8 Work Order Interface: WIP\_JOB\_DTLS\_INTERFACE Table**

Column Name	Type	Op Add	Op Chg	Cmp Add	Cmp Chg	Res Add	Res Chg	Sched	Additional Information
USAGE_BLOCK		Null	Null	Null	Null	Null	Null	Reqd	Required for loading and updating resource usage.
USAGE_RATE_OR_AMOUNT	Number	Null	Null	Null	Null	Reqd	Opt	Null	Rate per assembly or amount per Discrete job or Repetitive schedule.
UOM_CODE	VarChar 2(3)	Null	Null	Null	Null	Reqd	Opt	Null	Code for the unit of measure.
WIP_ENTITY_ID	Number	Null	Null	Null	Null	Null	Null	Null	Value generated when job loaded, thus must be NULL in this table.
WIP_SUPPLY_TYPE	Number	Null	Null	Reqd	Opt	Null	Null	Null	Method of material consumption within WIP.
SERIAL_NUMBER_NEW	VarChar 2(30)	Null	Null	Null	Null	Null	Null	Null	This column is used to associate serial numbers to a job. Note that on job creation, the user can select the Auto Associate Serial Numbers On Job Creation From Interface in the Wip Parameters form to automatically generate and associate serials to the job (enough serials for the job quantity). If you are using this column, use load type 7.

**Table 12–8 Work Order Interface: WIP\_JOB\_ DTLS\_INTERFACE Table**

Column Name	Type	Op Add	Op Chg	Cmp Add	Cmp Chg	Res Add	Res Chg	Sched	Additional Information
SERIAL_NUMBER_ OLD	VarChar 2(30)	Null	Null	Null	Null	Null	Null	Null	This column is used to de-associate serial numbers to a job. Note that on job creation, the user can select the Auto Associate Serial Numbers On Job Creation From Interface in the Wip Parameters form to automatically generate and associate serials to the job (enough serials for the job quantity). If you are using this column, use load type 7.

**Control Columns**

- GROUP\_ID: used to group (batch) rows in the interface table. Only records with a GROUP\_ID are processed by LOAD\_WIP.
- PROCESS\_PHASE: must be 2 (validation) for Work in Process to pick up the record and process it. (Records loaded into the table by LOAD\_INTERFACE are assigned a process phase of 1. Only records with a process phase of 2 are picked up by LOAD\_WIP. Therefore, either your third party scheduling program or your custom program must change the process phase to a 2.)
- PROCESS\_STATUS: must be 1 (pending) for Work in Process to pick up the record and process it. It will be updated to 2 (running) when the record is being processed, and to 6 (complete) when the record is loaded to Work in Process successfully, or 3 (error) if it fails.
- SUBSTITUTION\_TYPE: must be either 1 (delete) or 2 (add) or 3 (change). It will error out for all other values.

**Validating Work Order Interface Records**

The WIP Mass Load program validates all required and optional data. If the required or optional data that you enter are invalid, or if required data are missing, the program updates the PROCESS\_STATUS for the record to 3 (Error), and an error

message tied to the row's interface ID is inserted into the WIP\_INTERFACE\_ERRORS table. Unsuccessfully processed rows that have a PROCESS\_STATUS of 3 (Error) can be viewed, updated, deleted, or resubmitted using the Pending Jobs and Schedules window.

Data in the WIP\_JOB\_DTLS\_INTERFACE table that must be added, deleted, or changed are first validated against WIP constraints. If any records in the WIP\_JOB\_DTLS\_INTERFACE table fail, all records for that Discrete job fail. All records for a failed Discrete job are checked to ensure that there is a specific error message for each failed row. Other SQL fatal errors are passed to the calling program.

### Viewing Failed Rows

You can view information on both pending and failed rows in the *Pending Jobs and Schedules window* and view errors associated with the failed rows by navigating to the *Pending Job and Schedule Errors window*.

You also can obtain information on failed rows by printing the *Work Order Interface Report*. If you print the Work Order Interface Report as part of the import process, both successfully and unsuccessfully processed rows are listed. Successfully processed rows are deleted from the WIP\_JOB\_SCHEDULE\_INTERFACE table after the Work Order Interface Status Report is submitted for printing.

## Resolving Failed Rows

Use the Pending Jobs and Schedules window to update failed rows in the WIP\_JOB\_SCHEDULE\_INTERFACE table. After you make the changes, enter a check mark in the Resubmit check box and save your work. If you Select All for Resubmit from the *Tools Menu*, the system checks the Resubmit check box for all queried rows. After saving, all of these rows become eligible for revalidation and processing.

You use the Pending Jobs and Schedules window to delete problem rows from the WIP\_JOB\_SCHEDULE\_INTERFACE table. Deleting these rows ensures you do not have duplicate data when you reload the corrected data from the source.

### See Also

*Oracle Work in Process Technical Reference Manual:*

Processing Pending Jobs and Schedules, *Oracle Work in Process User's Guide*



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## Oracle Warehouse Management Open Interfaces and APIs

This chapter contains information about the following Oracle Warehouse Management open interfaces and application program interfaces:

- [Compliance Label Application Program Interface](#) on page 13-2
- [Device Integration Application Program Interface](#) on page 13-10
- [Locator Maintenance Application Program Interface](#) on page 13-15
- [Container Application Program Interface](#) on page 13-27
- [WMS Installation Application Program Interface](#) on page 13-70

# Compliance Label Application Program Interface

This API can be used to print labels within Oracle WMS. It is the same API that is used to create a manual print request from the WMS mobile user interface. The package that includes this API is INV\_LABEL.

## Functional Overview

The procedure that should be used to print labels using this package is the PRINT\_LABEL\_MANUAL\_WRAP procedure. Using this procedure, the user can pass the API that Label Type to be printed as well as the information as to the particular data to include on the label. In order for the label printing to be successful, the label printing setup must be complete within WMS, with the exception of the Business Flow assignment. Because the label type is being passed as a parameter of this API, there is no need to derive the label type from a Business Flow assignment using this API.

For instance, if the requirement is to print an LPN Contents label type from somewhere other than where WMS supports such printing, this API can be called by passing the label type parameter to refer to LPN Contents, and passing the identifier of the LPN for which the label should be printed.

This API will invoke the WMS Rules Engine to determine the proper label format to be printed for the label type that has been selected. The printer to be used will also be determined using the printer selection as defined within the WMS setup.

**Table 13–1   PRINT\_LABEL\_MANUAL\_WRAP**

Parameter	Usage	Type	Required	Derived	Optional
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
x_label_status	OUT	Varchar2			
p_business_flow_code	IN	Number			
p_label_type	IN	Number			
p_organization_id	IN	Number			
p_inventory_item_id	IN	Number			
p_lot_number	IN	Varchar2			

**Table 13–1 PRINT\_LABEL\_MANUAL\_WRAP**

Parameter	Usage	Type	Required	Derived	Optional
p_fm_serial_number	IN	Varchar2			
p_to_serial_number	IN	Varchar2			
p_lpn_id	IN	Number			
p_subinventory_code	IN	Varchar2			
p_locator_id	IN	Number			
p_delivery_id	IN	Number			
p_quantity	IN	Number			
p_uom	IN	Varchar2			
p_no_of_copies	IN	Number			

**x\_return\_status**

Returns the status of the API request.

**x\_msg\_count**

Returns the count of error messages included in x\_msg\_data.

**x\_msg\_data**

Returns the content of error messages.

**x\_label\_status**

Returns the status of the print request. Currently always success. With later integration to synchronous print request, will return status from synchronous print call.

**p\_business\_flow\_code**

This field is used to indicate the business flow that this label is being printed from. For a manual print request this field is not used.

**p\_label\_type**

Indicates the label type that should be printed. This should be a numeric lookup value from the list that is seeded in the table MFG\_LOOKUPS with a LOOKUP\_TYPE of WMS\_LABEL\_TYPE. The acceptable values are:

**Table 13–2 MFG\_LOOKUPS**

Lookup Code	Label Type
1	Material
2	Serial
3	LPN
4	LPN Content
5	LPN Summary
6	Location
7	Shipping
8	Shipping Contents

**p\_organization\_id**

Indicates the organization ID for the label information being printed. This field is used when printing all label types.

**p\_inventory\_item\_id**

Indicates the inventory item ID for the material being printed. This field is only used when printing a label of type Material or Serial.

**p\_lot\_number**

Indicates the lot for the material being printed. This field is only used when printing the lot for a label of type Material or Serial.

**p\_fm\_serial\_number**

Indicates the starting serial number for the material being printed. This field is only used to print the serial numbers for a label of type Serial.

**p\_to\_serial\_number**

Indicates the ending serial number for the material being printed. This field is only used to print the serial numbers for a label of type Serial.

**p\_lpn\_id**

Indicates the License Plate Number ID for the license plate number being printed. This field is used for the label types LPN, LPN Contents, LPN Summary, and Shipping Contents.

**p\_subinventory\_code**

Indicates the Sub inventory Code being printed. This field is only used for the label type Location.

**p\_locator\_id**

Indicates the identifier of the locator being printed. This field is only used for the label type Location.

**p\_delivery\_id**

Indicates the identifier of the delivery being printed. This field is only used for the label types Shipping and Shipping Contents.

**p\_quantity**

Indicates the quantity of the material being printed. This field is only used for the label type Material.

**p\_uom**

Indicates the Unit of Measure of the material being printed. This field is only used for the label type Material.

**p\_no\_of\_copies**

Indicates the number of copies of the label being printed. This field is used for all label types.

## Print Label Application Program Interface

The Device\_Request API will be invoked either directly by the Mobile Application Client code in response to an end user pressing a Hot Key (CTRL-D) or by some other business logic like the Pick Release module.

**Table 13–3 PRINT\_LABEL**

Parameter	Usage	Type	Required	Derived	Optional
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
x_label_status	OUT	Varchar2			
p_api_version	IN	Number			

**Table 13–3   PRINT\_LABEL**

Parameter	Usage	Type	Required	Derived	Optional
p_init_msg_list	IN	Varchar2			
p_commit	IN	Varchar2			
p_print_mode	IN	Number			
p_business_flow_code	IN	Number			
p_transaction_id	In	Transaction_id_ rec_type			
p_input_param_rec	IN	input_ parameter_rec_ type			
p_label_type	IN	Number			
p_no_of_copies	IN	Number			

**x\_return\_status**

Returns the status of the API request.

**x\_msg\_count**

Returns the count of error messages included in x\_msg\_data.

**x\_msg\_data**

Returns the content of error messages.

**x\_label\_status**

Returns the status of the print request. Currently always success. With later integration to synchronous print request, will return status from synchronous print call.

**p\_api\_version**

API version number

**p\_init\_msg\_list**

Valid values: FND\_API.G\_FALSE or FND\_API.G\_TRUE. If set to FND\_API.G\_TRUE initialize error message list. If set to FND\_API.G\_FALSE - not initialize error message list.

**p\_commit**

Whether or not to commit the changes to database.

**p\_print\_mode**

Whether the API will use the transaction IDs(p\_print\_mode=1) or the input parameter records(p\_print\_mode=2).

**p\_business\_flow\_code**

The value for business flow code.

**p\_transaction\_id**

Table of records, each record is a transaction ID.

**p\_input\_prame\_rec**

Table of records, each record is of row type of MMTT.

**p\_lable\_type**

The label type ID, if specified.

**p\_no\_of\_copies**

Number of copies that the label will be printed.

## Print Label Application Program Interface

The Device\_Request API will be invoked either directly by the Mobile Application Client code in response to an end user pressing a Hot Key (CTRL-D) or by some other business logic like the Pick Release module.

**Table 13–4 PRINT\_LABEL\_WRAP**

Parameter	Usage	Type	Required	Derived	Optional
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
x_label_status	OUT	Varchar2			
p_business_flow_code	IN	Number			
p_transaction_id	IN	Number			

**x\_return\_status**

Returns the status of the API request.

**x\_msg\_count**

Returns the count of error messages included in x\_msg\_data.

**x\_msg\_data**

Returns the content of error messages.

**x\_label\_status**

Returns the status of the print request. Currently always success. With later integration to synchronous print request, will return status from synchronous print call.

**p\_business\_flow\_code**

The value for business flow code.

**p\_transaction\_id**

The value of one transaction ID.

## Detailed Discussion of Parameters Required for Each Label Type

This section gives a description of the parameters that are used for each label type.

### Material Label Type

This label type requires the parameters p\_organization\_id, p\_inventory\_item\_id, p\_quantity, and p\_uom. The parameter p\_lot\_number can be supplied if the item being printed is under lot control.

### Serial Label Type

This label type requires the parameters p\_organization\_id, p\_inventory\_item\_id, p\_quantity, p\_uom, and p\_fm\_serial\_number. The parameter p\_lot\_number can be supplied if the item being printed is under lot control. The parameter p\_to\_serial\_number can be supplied if a range of serials needs to be printed.

### LPN Label Type

This label type requires the parameter p\_lpn\_id.

**LPN Contents Label Type**

This label type requires the parameter `p_lpn_id`.

**LPN Summary Label Type**

This label type requires the parameter `p_lpn_id`.

**Location Label Type**

This label requires the parameter `p_organization_id`. The parameter `p_subinventory_code` may be passed if Location labels for a particular sub inventory should be printed. If `p_subinventory_code` is passed as NULL, then labels for ALL sub inventories within that organization will be printed. If `p_subinventory_code` is passed as -1, then sub inventory information will not be included on the label. The parameter `p_locator_id` may be passed if Location labels for a particular locator should be printed. If `p_locator_id` is passed as NULL, then labels for ALL locators within the sub inventories being printed will be printed. If `p_locator_id` is passed as -1, then locator information will not be included on the label.

**Shipping Label Type**

This label type requires the parameter `p_deliver_id`.

**Shipping Contents Label Type**

This label type requires either the parameter `p_delivery_id` or `p_lpn_id` to be passed. If `p_delivery_id` is passed, labels will be printed for each delivery detail associated with that delivery. If `p_lpn_id` is passed, labels will be printed for each delivery detail associated with only that LPN.

## Device Integration Application Program Interface

Oracle WMS needs to support integration with various types of devices like Carousels, Conveyers and Scales typically used in a Warehouse. This requires a flexible architecture that facilitates integration with different types of devices over a variety of interface modes, without being tied to any specific vendor or method.

Integration Requirements:

- Ability to integrate with a variety of device types including Carousels, Conveyers, Pick to Light systems, Voice Picking systems, and Scales.
- Ability to initiate a request to a device from an RF device or from an Oracle WMS Business-Operation module
- Ability to interface with devices or device-integration 3rd party software through a variety of configurable methods like XML/DTD, PL/SQL API or database Tables.
- Ability to allow association of specific device classes to Business Events. (Ex: Map Carousels and Conveyers for the Pick Confirm Business Event)
- Ability to select device based on attributes of the Business Event instance in which the request is being initiated. (Ex: Select Carousel A when zone is RECV)
- Ability to receive and process responses from a device.

## WMS Device Integration PVT Application Program Interface

The Device\_Request API will be invoked either directly by the Mobile Application Client code in response to an end user pressing a Hot Key (CTRL-D) or by some other business logic like the Pick Release module.

**Table 13–5    WMS\_DEVICE\_INTEGRATION\_PVT.DEVICE\_REQUEST**

Parameter	Usage	Type	Required	Derived	Optional
p_bus_event	IN	Varchar2			
p_call_ctx	IN	Number			
p_org_id	IN	Number			
p_item_id	IN	Number			
p_subinv	IN	Varchar2			
p_locator_id	IN	Number			

**Table 13–5 WMS\_DEVICE\_INTEGRATION\_PVT.DEVICE\_REQUEST**

Parameter	Usage	Type	Required	Derived	Optional
p_lpn_id	IN	Number			
p_xfr_org_id	IN	Number			
p_xfr_subinv	IN	Varchar2			
p_xfr_locator_id	IN	Number			
p_trx_qty	IN	Number			
p_trx_uom	IN	Varchar2			
p_rev	IN	Varchar2			
x_request_msg	OUT	Varchar2			
x_return_status	OUT	Varchar2			

**p\_bus\_event**

A Business Event is a standard business operation supported through Oracle WMS during which it may be necessary to communicate with a device. The request to initiate communication with a device is submitted either in the context of a mobile page (ex: Drop Task) or in the context of a business flow (Ex: Pick Release) Required value. Business events for DEVICES are defined as lookup in the mfg\_lookups table with lookup\_type of 'WMS\_BUS\_EVENT\_DEVICE'. Types of business events supported are below:

**Table 13–6 MFG\_LOOKUPS Table**

Lookup_type	Lookup_code	Meaning
WMS_BUS_EVENT_TYPES	1	Direct Receipt
WMS_BUS_EVENT_TYPES	2	Inspection
WMS_BUS_EVENT_TYPES	3	Put Away Drop
WMS_BUS_EVENT_TYPES	4	Cycle Count
WMS_BUS_EVENT_TYPES	5	Misc/Acct Receipt
WMS_BUS_EVENT_TYPES	6	Misc/Acct Issue
WMS_BUS_EVENT_TYPES	7	Subinventory Transfer
WMS_BUS_EVENT_TYPES	8	Organization Transfer
WMS_BUS_EVENT_TYPES	9	Pick Drop

**Table 13–6 MFG\_LOOKUPS Table**

Lookup_type	Lookup_code	Meaning
WMS_BUS_EVENT_TYPES	10	Pick Load
WMS_BUS_EVENT_TYPES	11	Pick Release
WMS_BUS_EVENT_TYPES	13	Ship Confirm
WMS_BUS_EVENT_TYPES	51	Task complete
WMS_BUS_EVENT_TYPES	52	Task skip
WMS_BUS_EVENT_TYPES	53	Task cancel
WMS_BUS_EVENT_TYPES	54	Task confirm

**p\_call\_ctx**

Whether the device will be invoked manually or automatically through another device, etc. Optional is manual invocation.

**p\_subinv**

From which subinventory is the device being invoked.

**p\_locator\_id**

From which locator is the device being invoked.

**p\_xfr\_org\_id**

To organization where the material will be transferred.

**p\_xfr\_subinv**

To Subinventory where the material will be transferred.

**p\_xfr\_locator\_id**

To Locator where the material will be transferred.

**p\_trx\_qty**

Transaction quantity.

**p\_trx\_uom**

Unit of measure of the material being transferred.

**p\_rev**

Is the item Revision controlled.

**x\_request\_msg**

Request message from invoking the device request API.

**x\_return\_status**

Request status from invoking the device request API

## WMS Device Integration Application Program Interface

This API would be provided as a stub to be extended by device integration vendors. This API will have visibility to the temporary table WMS\_DEVICE\_REQUESTS. The OUT parameters could be used to send back a status or message from the device to Oracle WMS. To get details of the request, WMS\_DEVICE\_REQUESTS has to be joined with other tables.

**Table 13–7 WMS\_DEVICE\_INTEGRATION\_PUB.SYNC\_DEVICE\_REQUEST**

Parameter	Usage	Type	Required	Derived	Optional
p_request_id	IN	Number			
p_device_id	IN	Number			
p_resubmit_flag	IN	Varchar2			
x_status_code	OUT	Varchar2			
x_status_msg	OUT	Varchar2			
x_device_status	OUT	Varchar2			

**p\_request\_id**

This request id in wms\_device\_requests is generated from the sequence WMS\_DEVICE\_REQUESTS\_S.

**p\_device\_id**

Device ID if the device to be invoked from wms\_devices\_tl.

**p\_resubmit\_flag**

Flag to indicate if invoked as part of resubmitting a request.

**x\_status\_code**

Status of request: Error or Success.

**x\_status\_msg**

Status message about request.

**x\_device\_status**

Any information message about device.

**Package Name:** WMS\_DEVICE\_CONFIRMATION

**Procedure Name:** DEVICE\_CONFIRMATION

The DEVICE\_CONFIRMATION API is used for device confirmation. It takes all records from Wms\_Device\_Requests (WDR) temporary table for DEVICE\_CONFIRMATION and transfer them to Wms\_Device\_Requests\_Hist (WDRH) table. The table below provides the specifications for this API:

**Table 13–8    WMS\_DEVICE\_CONFIRMATION\_PUB.DEVICE\_CONFIRMATION**

Parameter	Usage	Type	Required	Derived	Optional
p_request_id	IN	Number			
x_return_status	OUT	Varchar2			
x_msg_data	OUT	Varchar2			
x_successful_row_cnt	OUT	Number			

**p\_request\_id**

Optional parameter to identify a record in WMS\_DEVICE\_REQUESTS\_HIST. Used internally when a failed record is resubmitted from Device History form.

**x\_return\_status**

Standard Oracle API output parameter.

**x\_msg\_data**

Standard Oracle API output parameter.

**x\_successful\_row\_cnt**

Number of successful rows after after processing.

## Locator Maintenance Application Program Interface

In Oracle WMS, available weight capacity, available volume capacity, available units capacity of a locator is maintained real time. This is essential for an efficient put away process. During any material transaction, the available weight capacity, available volume capacity and available units capacity of the transacted locator is updated suitably based on the total weight and total weight of the transacted item and maximum weight, maximum volume and maximum units allowed of the locator. It is hence imperative that all locators used in WMS have weight unit of measure, maximum weight, volume unit of measure, maximum volume and maximum units defined.

X, Y and Z coordinates of a locator indicate its physical position in a warehouse. This information is used in Task Dispatching, a WMS functionality that intelligently and efficiently dispatches tasks to warehouse personnel real time. During the course of dispatching, the system considers among other things where the warehouse personnel is currently. This information is obtained through the physical position of the last locator that was worked on. Hence the physical location of a locator is essential for efficient task dispatching.

For existing Oracle Applications customers who are upgrading to Oracle WMS, it is recommended that a set of check scripts that are provided with the product be run and necessary corrective action taken before using WMS. These scripts identify pre-WMS data that may have to be enhanced to better utilize the capabilities of WMS software. One of the check scripts is Locator check script. It lists locators with either one of the following not defined:

- Weight unit of measure
- Maximum Weight
- Volume unit of measure
- Maximum Volume
- Maximum Units
- X Coordinate
- Y Coordinate
- Z Coordinate
- Dimension unit of measure
- Length
- Width

■ Height

The existing Locators maintenance form could be used for adding the missing attributes to the definition of the listed locators. But data entry would be time consuming and cumbersome if the locators list is large. A faster approach would be to write a script in an appropriate language that would repeatedly call APIs that perform Locator Maintenance passing the required data.

Currently in Oracle Inventory, items can be restricted to certain locators, but with Oracle WMS the same functionality is used to assign items to locators to create a kind of soft assignment that can be used by the Rules Engine. Currently, in Oracle Inventory, locators cannot be deleted. There may be a need to delete locators that are obsolete. This may reduce the volume of data and also improve performance. It is very essential that, before deleting, it is confirmed that the locator to be deleted doesn't exist in any core Inventory table.

Locator Maintenance APIs handle the above said requirements. They constitute the following:

- Create Locator API to create a new locator (CREATE\_LOCATOR)
- Update Locator API to update an existing locator (UPDATE\_LOCATOR)
- Locator Item Tie API to assign an item to a locator (CREATE\_LOC\_ITEM\_TIE)
- Delete Locator API to delete an existing locator (DELETE\_LOCATOR)

The APIs are part of PL/SQL package INV\_LOC\_WMS\_PUB. This is defined in \$INV\_TOP/patch/115/sql/INVLOCPS.pls. Below is a description of each API.

Create Locator Application Program Interface

For given concatenated locator segments and organization, this API will create a new locator in the organization and return the locator identifier. If a locator already exists with the same concatenated segments, the API returns the locator identifier.

Table 13–9 CREATE\_LOCATOR

Parameter	Usage	Type	Required	Derived	Optional
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
x_inventory_location_id	OUT	Number			
x_locator_exists	OUT	Varchar2			

**Table 13–9 CREATE\_LOCATOR**

Parameter	Usage	Type	Required	Derived	Optional
p_organization_id	IN	Number			
p_organization_code	IN	Varchar2			
p_concatenated_segments	IN	Varchar2			
p_description	IN	Varchar2			
p_inventory_location_type	IN	Number			
p_picking_order	IN	Number			
p_location_maximum_units	IN	Number			
p_subinventory_code	IN	Varchar2			
p_location_weight_uom_code	IN	Varchar2			
p_max_weight	IN	Number			
p_volume_uom_code	IN	Varchar2			
p_max_cubic_area	IN	Number			
p_x_coordinate	IN	Number			
p_y_coordinate	IN	Number			
p_z_coordinate	IN	Number			
p_physical_location_id	IN	Number			
p_pick_uom_code	IN	Varchar2			
p_dimension_uom_code	IN	Varchar2			
p_length	IN	Number			
p_width	IN	Number			
p_height	IN	Number			
p_status_id	IN	Number			

**x\_return\_status**

Return status indicating success's'), error('E'), enexpected error ('U').

**x\_msg\_count**

Number of messages in message list.

**x\_msg\_data**

If the number of messages in message list is 1, contains message text.

**x\_inventory\_location\_id**

Identifier of newly created locator or existing locator.

**x\_locator\_exists**

'Y' - locator exists for given input

'N' - locator created for given input

**p\_organization\_id**

Identifier of organization in which locator is to be created

**p\_organization\_code**

Organization code of organization in which locator is to be created. Either p\_organization\_id or p\_organization\_code MUST be passed.

**p\_concatenated\_segments**

Concatenated segment string with separator of the locator to be created. Eg:A.1.1

**p\_description**

Locator description

**p\_inventory\_location\_type**

Type of locator. The valid values are dock door(1) or staging lane(2) or storage locator(3).

**p\_picking\_order**

Number that identifies relative position of locator for travel optimization during task dispatching. It has a higher precedence over x,y,z coordinates.

**p\_location\_maximum\_units**

Maximum units the locator can hold.

**p\_subinventory\_code**

Sub inventory to which locator belongs.

**p\_location\_weight\_uom\_code**

UM of locator's Mx weight capacity.

**p\_max\_weight**

Mx weight locator can hold.

**p\_volume\_uom\_code**

UM of locator's Mx volume capacity

**p\_max\_cubic\_area**

Mx volume capacity of the locator.

**p\_x\_coordinate**

Exposition of the locator in space. Used for travel optimization during task dispatching.

**p\_y\_coordinate**

Position of the locator in space. Used for travel optimization during task dispatching.

**p\_z\_coordinate**

Position of the locator in space. Used for travel optimization during task dispatching.

**p\_physical\_location\_id**

Locators that are the same physically have the same inventory\_location\_id in this column.

**p\_pick\_uom\_code**

UM in which material is picked from locator.

**p\_dimension\_uom\_code**

UM in which locator dimensions are expressed.

**p\_length**  
Length of the locator.

**p\_width**  
Width of the locator.

**p\_height**  
Height of the locator.

## Update Locator Application Program Interface

This API will update an existing locator with the information provided as input parameters. If the default value is passed, the corresponding locator column will retain its original value. This can be achieved by not passing that parameter during the API call.

**Table 13–10    UPDATE\_LOCATOR**

Parameter	Usage	Type	Required	Derived	Optional
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_organization_id	IN	Number			
p_organization_code	IN	Varchar2			
p_inventory_location_id	IN	Number			
p_concatenated_segments	IN	Varchar2			
p_description	IN	Varchar2			
p_disabled_date	IN	Date			
p_inventory_location_type	IN	Number			
p_picking_order	IN	Number			
p_location_maximum_units	IN	Number			
p_location_weight_uom_code	IN	Varchar2			
p_max_weight	IN	Number			

**Table 13–10 UPDATE\_LOCATOR**

Parameter	Usage	Type	Required	Derived	Optional
p_volume_uom_code	IN	Varchar2			
p_max_cubic_area	IN	Number			
p_x_coordinate	IN	Number			
p_y_coordinate	IN	Number			
p_z_coordinate	IN	Number			
p_physical_location_id	IN	Number			
p_pick_uom_code	IN	Varchar2			
p_dimension_uom_code	IN	Varchar2			
p_length	IN	Number			
p_width	IN	Number			
p_height	IN	Number			
p_status_id	IN	Number			

**x\_return\_status**

Return status indicating success('s'), error('E'), unexpected error ('U').

**x\_msg\_count**

Number of messages in message list.

**x\_msg\_data**

If the number of messages in message list is 1, contains message text.

**p\_organization\_id**

Identifier of organization in which locator is to be created

**p\_organization\_code**

Organization code of organization in which locator is to be created. Either p\_organization\_id or p\_organization\_code MUST be passed.

**p\_inventory\_location\_id**

Identifier of locator to be updated.

**p\_concatenated\_segments**

Concatenated segment string with separator of the locator to be created. Eg:A.1.1 either p\_inventory\_location\_id or p\_concatenated\_segments MUST be passed.

**p\_description**

Locator description

**p\_inventory\_location\_type**

Type of locator. The valid values are dock door(1) or staging lane(2) or storage locator(3).

**p\_picking\_order**

Number that identifies relative position of locator for travel optimization during task dispatching. It has a higher precedence over x,y,z coordinates.

**p\_location\_maximum\_units**

Maximum units the locator can hold.

**p\_subinventory\_code**

Sub inventory to which locator belongs.

**p\_location\_weight\_uom\_code**

UM of locator's Mx weight capacity.

**p\_max\_weight**

Mx weight locator can hold.

**p\_volume\_uom\_code**

UM of locator's Mx volume capacity

**p\_max\_cubic\_area**

Mx volume capacity of the locator.

**p\_x\_coordinate**

Exposition of the locator in space. Used for travel optimization during task dispatching.

**p\_y\_coordinate**

Position of the locator in space. Used for travel optimization during task dispatching.

**p\_z\_coordinate**

Position of the locator in space. Used for travel optimization during task dispatching.

**p\_physical\_location\_id**

Locators that are the same physically have the same inventory\_location\_id in this column.

**p\_pick\_uom\_code**

UM in which material is picked from locator.

**p\_dimension\_uom\_code**

UM in which locator dimensions are expressed.

**p\_length**

Length of the locator.

**p\_width**

Width of the locator.

**p\_height**

Height of the locator.

**p\_status\_id**

Material Status that needs to be associated to locator.

## Create Locator Item Tie Application Program Interface

For a given set of organization, sbinventory, item and locator, this API ties the given item to the given locator.

**Table 13–11 CREATE\_LOC\_ITEM\_TIE**

Parameter	Usage	Type	Required	Derived	Optional
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_inventory_item_id	IN	Number			
p_item	IN	Varchar2			
p_organization_id	IN	Number			
p_organization_code	IN	Varchar2			
p_subinventory_code	IN	Varchar2			
p_inventory_location_id	IN	Number			
p_locator	IN	Varchar2			
p_status_id	IN	Number			

**x\_return\_status**

Return status indicating success's'), error('E'), enexpected error ('U').

**x\_msg\_count**

Number of messages in message list.

**x\_msg\_data**

If the number of messages in message list is 1, contains message text.

**p\_inventory\_item\_id**

Identifier of item.

**p\_item**

Concatenated segment string with separator of the item. Either P\_inventory\_item\_id or the p\_item MUST be passed.

**p\_organization\_id**

Identifier of organization.

**p\_organization\_code**

Organization code of organization in which locator is to be updated. Either p\_organization\_id or p\_organization\_code MUST be passed.

**p\_subinventory\_code**

The subinventory to which the tied locator belongs.

**p\_inventory\_location\_id**

Identifier of locator to be attached to the specified subinventory.

**p\_locator**

Concatenated segment string with separator of the locator to be updated. Eg:A.1.1 either p\_inventory\_location\_id or p\_concatenated\_segments MUST be passed.

**p\_status\_id**

Identifier of locator material status.

## Delete Locator Application Program Interface

This API will delete an existing locator. This is done after ensuring that the locator is obsolete and doesn't exist in any core Inventory tables.

**Table 13–12 DELETE\_LOCATOR**

Parameter	Usage	Type	Required	Derived	Optional
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_inventory_location_id	IN	Number			
p_concatenated_segments	IN	Varchar2			
p_organization_id	IN	Number			
p_organization_code	IN	Varchar2			
p_validation_req_flag	IN	Varchar2			

**x\_return\_status**

Return status indicating success('S'), error('E'), unexpected error ('U').

**x\_msg\_count**

Number of messages in message list.

**x\_msg\_data**

If the number of messages in message list is 1, contains message text

**p\_inventory\_location\_id**

Identifier of locator to be deleted.

**p\_concatenated\_segments**

Concatenated segment string with separator of the locator to be deleted. Eg:A.1.1  
Either p\_inventory\_location\_id or p\_concatenated\_segments must be passed.

**p\_organization\_id**

Identifier of organization in which locator is to be deleted.

**p\_organization\_code**

Organization code of organization in which locator is to be deleted. Either p\_organization\_id or p\_organization\_code MUST be passed.

**p\_validation\_req\_flag**

Flag which determines whether validation is required or not. If it is 'N', the locator is deleted without any further validation on its existence in core Inventory tables. If it is 'Y', the locator is deleted only if it does not exist in core Inventory tables.

## Container Application Program Interface

Container APIs are used to generate LPNs, pack containers, pre-pack containers, unpack containers, and are used for validations.

### Generate LPN Concurrent Program Application Program Interface

Generate LPN numbers Concurrent Program.

**Table 13–13** *GENERATE\_LPN\_CP*

Parameter	Usage	Type	Required	Derived	Optional
p_api_version	IN	Number			
p_organization_id	IN	Number			
p_container_item_id	IN	Number			
p_revision	IN	Varchar2			
p_lot_number	IN	Varchar2			
p_from_serial_number	IN	Varchar2			
p_to_serial_number	IN	Varchar2			
p_subinventor	IN	Varchar2			
p_locator_id	IN	Number			
p_lpn_prefix	IN	Varchar2			
p_lpn_suffix	IN	Varchar2			
p_starting_num	IN	Number			
p_quantity	IN	Number			
p_source	IN	Number			
p_cost_group_id	IN	Number			
p_lpn_id_out	OUT	Number			
p_lpn_out	OUT	Varchar2			
p_process_id	OUT	Number			

#### **p\_api\_version\_number**

Indicates the API version number.

**p\_organization\_id**

Organization Id

**p\_container\_item\_id**

Container Item Id

**p\_revision**

Revision

**p\_lot\_number**

Lot number.

**p\_from\_serial\_number**

Starting serial number.

**p\_subinventory**

Subinventory

**p\_locator\_id**

Locator Id

**p\_lpn\_prefix**

Prefix Value of an LPN

**p\_lpn\_suffix**

Suffix Value of an LPN

**p\_starting\_num**

Starting Number of an LPN.

**p\_quantity**

No of LPNs to be generated.

**p\_source**

LPN Context. 1. INV, 2. WIP, or 2. REC, etc.. Indicates the source where the LPN is generated.

- p\_cost\_group\_id**  
Cost Group Id
  
- p\_source\_type\_id**  
Source type ID for the source transaction.
  
- p\_source\_header\_id**  
Source header ID for the source transaction.
  
- p\_source\_name**  
Source name for the source transaction.
  
- p\_source\_line\_id**  
Source line ID for the source transaction.
  
- p\_source\_line\_detail\_id**  
Source line detail ID for the source transaction.
  
- p\_lpn\_id\_out**  
Outputs the generated LPN ID if only one LPN is requested to be generated.
  
- p\_lpn\_out**  
Outputs the generated license plate number if only one LPN is requested to be generated.
  
- p\_process\_id**  
Process ID to identify the LPN's generated in the table WMS\_LPN\_PROCESS\_TEMP.

### Generate LPN Application Program Interface

This API will Generate LPN numbers, either individually or in a sequence.

**Table 13–14   GENERATE\_LPN**

Parameter	Usage	Type	Required	Derived	Optional
p_api_version	IN	Number			
p_init_msg_list	IN	Varchar2			x

**Table 13–14   GENERATE\_LPN**

Parameter	Usage	Type	Required	Derived	Optional
p_commit	IN	Varchar2			x
p_validation_level	IN	Number			x
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_organization_id	IN	Number	x		
p_container_item_id	IN	Number			
p_revision	IN	Varchar2			
p_lot_number	IN	Varchar2			
p_from_serial_number	IN	Varchar2			
p_to_serial_number	IN	Varchar2			
p_subinventory	IN	Varchar2			
p_locator_id	IN	Number			
;lpn_prefix	IN	Varchar2			
p_lpn_suffix	IN	Varchar2			
p_starting_num	IN	Number			
p_quantity	IN	Number			
p_source	IN	Number			
p_cost_group_id	IN	Number			
p_source_type_id	IN	Number			
p_source_header_id	IN	Number			
p_source_name	IN	Varchar2			
p_source_line_id	IN	Number			
p_source_line_detail_id	IN	Number			
p_lpn_id_out	OUT	Number			
p_lpn_out	OUT	Varchar2			

**Table 13–14** *GENERATE\_LPN*

Parameter	Usage	Type	Required	Derived	Optional
p_process_id	OUT	Number			

**p\_api\_version**

API version number

**p\_init\_msg\_list**

Valid values: FND\_API.G\_FALSE or FND\_API.G\_TRUE. If set to FND\_API.G\_TRUE initialize error message list. If set to FND\_API.G\_FALSE - not initialize error message list.

**p\_commit**

Whether or not to commit the changes to database.

**p\_validation\_level**

Determines if full validation or no validation will be performed. It defaults to FND\_API.G\_VALID\_LEVEL\_FULL -- FND\_API.G\_VALID\_LEVEL\_NONE is the other value.

**p\_organization\_id**

Organization ID.

**p\_container\_item\_id**

Container item ID.

**p\_revision**

Revision.

**p\_lot\_number**

Lot Number.

**p\_from\_serial\_number**

Starting serial number.

**p\_to\_serial\_number**

Ending serial number.

**p\_subinventory**

Subinventory.

**p\_locator\_id**

Locator ID.

**p\_lpn\_prefix**

Prefix value of an LPN.

**p\_lpn\_suffix**

Suffix value of an LPN.

**p\_starting\_num**

Starting number of an LPN.

**p\_quantity**

Number of LPNs to be generated.

**p\_source**

LPN Context. 1. INV, 2. WIP, or 2. REC, etc...

**p\_cost\_group\_id**

Cost group ID.

**p\_source\_type\_id**

Source type ID for the source transaction.

**p\_source\_header\_id**

Source header ID for the source transaction.

**p\_source\_name**

Source name for the source transacton.

**p\_source\_line\_id**

Source line ID for the source transaction.

**p\_source\_line\_detail\_id**

Source line detail ID for the source transaction.

**x\_return\_status**

If the Generate\_LPN API succeeds, the value is `fnf_api.g_ret_sts_success`; if there is an expected error, the value is `fnf_api.g_ret_sts_error`; if there is an unexpected error, the value is `fnf_api.g_ret_sts_unexp_error`;

**x\_msg\_count**

If there is one or more errors, the number of error messages in the buffer.

**x\_msg\_data**

If there is one and only one error, the error message (See `fnf_api` package for more details about the above output parameters)

**p\_lpn\_id\_out**

Outputs the generated LPN ID if only one LPN is requested to be generated.

**p\_lpn\_out**

Outputs the generated license plate number if only one LPN is requested to be generated.

**p\_process\_id**

Process ID to identify the LPN's generated in the table `WMS_LPN_PROCESS_TEMP`.

## Associate LPN Application Program Interface

This API will Associate an LPN to a specific instance of a container.

**Table 13–15 ASSOCIATE\_LPN**

Parameter	Usage	Type	Required	Derived	Optional
p_api_version	IN	Number			
p_init_msg_list	IN	Varchar2			
p_commit	IN	Varchar2			
p_validation_level	IN	Number			

**Table 13–15 ASSOCIATE\_LPN**

Parameter	Usage	Type	Required	Derived	Optional
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_lpn_id	IN	Number			
p_container_item_id	IN	Number			
p_lot_number	IN	Varchar2			
p_revision_IN	Varchar2	Varchar2			
p_serial_number	IN	Varchar2			
p_organization_id	IN	Number			
p_subinventory	IN	Varchar2			
p_locator_id	IN	Number			
p_cost_group_id	IN	Number			
p_source_type_id	IN	Number			
p_source_header_id	IN	Number			
p_source_name	IN	Varchar2			
p_source_line_id	IN	Number			
p_source_line_detail_id	IN	Number			

**p\_api\_version**

API version number.

**p\_init\_msg\_list**

Valid values: FND\_API.G\_FALSE or FND\_API.G\_TRUE. If set to FND\_API.G\_TRUE initialize error message list. If set to FND\_API.G\_FALSE - not initialize error message list.

**p\_commit**

Whether or not to commit the changes to database.

**p\_validation\_level**

Determines if full validation or no validation will be performed. It defaults to FND\_API.G\_VALID\_LEVEL\_FULL -- FND\_API.G\_VALID\_LEVEL\_NONE is the other value.

**p\_lpn\_id**

License Plate Number identifier.

**p\_container\_item\_id**

Container item ID

**p\_lot\_number**

Lot Number

**p\_revision**

Revision

**p\_serial\_number**

Serial number.

**p\_organization\_id**

Organization ID.

**p\_subinventory**

Subinventory.

**p\_locator\_id**

Locator ID.

**p\_cost\_group\_id**

Cost group ID.

**p\_source\_type\_id**

Source type ID for the source transaction.

**p\_source\_header\_id**

Source header ID for the source transaction.

**p\_source\_name**

Source name for the source transacton.

**p\_source\_line\_id**

Source line ID for the source transaction.

**p\_source\_line\_detail\_id**

Source line detail ID for the source transaction.

**x\_return\_status**

If the Generate\_LPN API succeeds, the value is fnd\_api.g\_ret\_sts\_success; if there is an expected error, the value is fnd\_api.g\_ret\_sts\_error; if there is an unexpected error, the value is fnd\_api.g\_ret\_sts\_unexp\_error;

**x\_msg\_count**

If there is one or more errors, the number of error messages in the buffer.

**x\_msg\_data**

If there is one and only one error, the error message

Create LPN Application Program Interface

This API will associate an LPN to a specific instance of a container in which the LPN is already existing. It will create an associated LPN ID and store the record in the WMS\_LICENSE\_PLATE\_NUMBERS table.

**Table 13–16   CREATE\_LPN**

Parameter	Usage	Type	Required	Derived	Optional
p_api_version	IN	Number			
p_init_msg_list	IN	Varchar2			
p_commit	IN	Varchar2			
p_validation_level	IN	Number			
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			

**Table 13–16 CREATE\_LPN**

Parameter	Usage	Type	Required	Derived	Optional
p_lpn	IN	Varchar2			
p_organization_id	IN	Number			
p_container_item_id	IN	Number			
p_lot_number	IN	Varchar2			
p_revision	IN	Varchar2			
p_serial_number	IN	Varchar2			
p_subinventory	IN	Varchar2			
p_locator_id	IN	Number			
p_source	IN	Number			
p_cost_group_id	IN	Number			
p_parent_lpn_id	IN	Number			
p_source_type_id	IN	Number			
p_source_header_id	IN	Number			
p_source_name	IN	Varchar2			
p_source_line_id	IN	Number			
p_source_line_detail_id	IN	Number			
x_lpn_id	OUT	Number			

**p\_api\_version**

API version number.

**p\_init\_msg\_list**

Valid values: FND\_API.G\_FALSE or FND\_API.G\_TRUE. If set to FND\_API.G\_TRUE initialize error message list. If set to FND\_API.G\_FALSE - not initialize error message list.

**p\_commit**

Whether or not to commit the changes to database.

**p\_validation\_level**

Determines if full validation or no validation will be performed. It defaults to FND\_API.G\_VALID\_LEVEL\_FULL -- FND\_API.G\_VALID\_LEVEL\_NONE is the other value.

**p\_lpn\_id**

License Plate Number identifier.

**p\_container\_item\_id**

Container item ID

**p\_lot\_number**

Lot Number

**p\_revision**

Revision

**p\_serial\_number**

Serial number.

**p\_organization\_id**

Organization ID.

**p\_subinventory**

Subinventory.

**p\_locator\_id**

Locator ID.

**p\_cost\_group\_id**

Cost group ID.

**p\_source\_type\_id**

Source type ID for the source transaction.

**p\_source\_header\_id**

Source header ID for the source transaction.

**p\_source\_name**

Source name for the source transacton.

**p\_source\_line\_id**

Source line ID for the source transaction.

**p\_source\_line\_detail\_id**

Source line detail ID for the source transaction.

**x\_return\_status**

If the Create\_LPN API succeeds, the value is `fnf_api.g_ret_sts_success`; if there is an expected error, the value is `fnf_api.g_ret_sts_error`; if there is an unexpected error, the value is `fnf_api.g_ret_sts_unexp_error`;

**x\_msg\_count**

If there is one or more errors, the number of error messages in the buffer

**x\_msg\_data**

If there is one and only one error, the error message.

**x\_lpn\_id**

The LPN ID for the new LPN record entry.

## Modify LPN and Modify LPN Wrapper Application Program Interface

This API is used to update the attributes of a specific container instance (LPN). `Modify_LPN_Wrapper` just calls `Modify_LPN` but it doesn't take in a record type as an input. This is used for the java calls to this procedure in the mobile transactions. Fields that can be modified include:

- All the gross weight and content volume related fields
- `Status_id`, `lpn_context`, `sealed_status`
- Org, sub, and loc information
- All of the extra Attribute related columns for future usages

**Table 13–17** *MODIFY\_LPN*

Parameter	Usage	Type	Required	Derived	Optional
p_api_version	IN	Number			
p_init_msg_list	IN	Varchar2			
p_commit	IN	Varchar2			
p_validation_level	IN	Number			
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_lpn	IN	Varchar2			
p_source_type_id	IN	Number			
p_source_header_id	IN	Number			
p_source_name	IN	Varchar2			
p_source_line_id	IN	Number			
p_source_line_detail_id	IN	Number			

**Table 13–18** *MODIFY\_LPN\_WRAPPER*

Parameter	Usage	Type	Required	Derived	Optional
p_api_version	IN	Number			
p_init_msg_list	IN	Varchar2			
p_commit	IN	Varchar2			
p_validation_level	IN	Number			
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_lpn	IN	Varchar2			
p_license_plate_number	IN	Varchar2			
p_inventory_item_id	IN	Number			

**Table 13–18    *MODIFY\_LPN\_WRAPPER***

Parameter	Usage	Type	Required	Derived	Optional
p_weight_uom_code	IN	Varchar2			
p_gross_weight	IN	Number			
p_volume_uom_code	IN	Varchar2			
p_content_volume	IN	Number			
p_status_id	IN	Number			
p_lpn_context	IN	Number			
p_sealed_status	IN	Number			
p_organization_id	IN	Number			
p_subinventory	IN	Varchar			
p_locator_id	IN	Number			
p_source_type_id	IN	Number			
p_source_header_id	IN	Number			
p_source_name	IN	Varchar2			
p_source_line_id	IN	Number			
p_source_line_detail_id	IN	Number			

**p\_api\_version**

API version number.

**p\_init\_msg\_list**

Valid values: FND\_API.G\_FALSE or FND\_API.G\_TRUE. If set to FND\_API.G\_TRUE initialize error message list if set to FND\_API.G\_FALSE - not initialize error message list.

**p\_commit**

Whether or not to commit the changes to database.

**p\_validation\_level**

Determines if full validation or no validation will be performed. It defaults to FND\_API.G\_VALID\_LEVEL\_FULL -- FND\_API.G\_VALID\_LEVEL\_NONE is the other value.

**p\_lpn**

WMS\_LICENSE\_PLATE\_NUMBERS%ROWTYPE Stores the information for the fields of the LPN record that the user desires to modify.

**p\_source\_type\_id**

Source type ID for the source transaction.

**p\_source\_header\_id**

Source header ID for the source transaction.

**p\_source\_name**

Source name for the source transaction.

**p\_source\_line\_id**

Source line ID for the source transaction.

**p\_source\_line\_detail\_id**

Source line detail ID for the source transaction.

**x\_return\_status**

If the Create\_LPN API succeeds, the value is fnd\_api.g\_ret\_sts\_success; if there is an expected error, the value is fnd\_api.g\_ret\_sts\_error; if there is an unexpected error, the value is fnd\_api.g\_ret\_sts\_unexp\_error;

**x\_msg\_count**

If there is one or more errors, the number of error messages in the buffer

**x\_msg\_data**

If there is one and only one error, the error message.

## PackUnpack Container Application Program Interface

This API allows the caller to pack or unpack contents from a container instance or LPN. This API does not update onhand, so should not be used directly for packing items in inventory. For inventory packs the transaction manager should be used.

**Table 13–19** *PACKUNPACK\_CONTAINER*

Parameter	Usage	Type	Required	Derived	Optional
p_api_version	IN	Number			
p_init_msg_list	IN	Varchar2			
p_commit	IN	Varchar2			
p_validation_level	IN	Number			
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_lpn_id	IN	Number			
p_content_lpn_id	IN	Number			
p_content_item_id	IN	Number			
p_content_item_desc	IN	Varchar2			
p_revision	IN	Varchar2			
p_lot_number	IN	Varchar2			
p_from_serial_number	IN	Varchar2			
p_to_serial_number	IN	Varchar2			
p_quantity	IN	Number			
p_uom	IN	Varchar2			
p_organization_id	IN	Number			
p_subinventory	IN	Varchar2			
p_locator_id	IN	Number			
p_enforce_wv_constraints	IN	Number			
p_operation	IN	Number			

**Table 13–19    *PACKUNPACK\_CONTAINER***

Parameter	Usage	Type	Required	Derived	Optional
p_cost_group_id	IN	Number			
p_source_type_id	IN	Number			
p_source_header_id	IN	Number			
p_source_name	IN	Varchar2			
p_source_line_id	IN	Number			
p_source_line_detail_id	IN	Number			
p_homogeneous_container	IN	Number			
p_match_locations	IN	Number			
p_match_lpn_context	IN	Number			
p_match_lot	IN	Number			
p_match_cost_groups	IN	Number			
p_match_mtl_status	IN	Number			
p_unpack_all	IN	Number			
p_trx_action_id	IN	Number			
p_concurrent_pack	IN	Number			

**Table 13–20    *PACK\_PREPACK\_CONTAINER***

Parameter	Usage	Type	Required	Derived	Optional
p_api_version	IN	Number			
p_init_msg_list	IN	Varchar2			
p_commit	IN	Varchar2			
p_validation_level	IN	Number			
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			

**Table 13–20   *PACK\_PREPACK\_CONTAINER***

<b>Parameter</b>	<b>Usage</b>	<b>Type</b>	<b>Required</b>	<b>Derived</b>	<b>Optional</b>
p_lpn_id	IN	Number			
p_content_lpn_id	IN	Number			
p_content_item_id	IN	Number			
p_content_item_desc	IN	Varchar2			
p_revision	IN	Varchar2			
p_lot_number	IN	Varchar2			
p_from_serial_number	IN	Varchar2			
p_to_serial_number	IN	Varchar2			
p_quantity	IN	Number			
p_uom	IN	Varchar2			
p_organization_id	IN	Number			
p_subinventory	IN	Varchar2			
p_locator_id	IN	Number			
p_enforce_wv_constraints	IN	Number			
p_operation	IN	Number			
p_cost_group_id	IN	Number			
p_source_type_id	IN	Number			
p_source_header_id	IN	Number			
p_source_name	IN	Varchar2			
p_source_line_id	IN	Number			
p_source_line_detail_id	IN	Number			
p_homogeneous_container	IN	Number			
p_match_locations	IN	Number			
p_match_lpn_context	IN	Number			

**Table 13-20    *PACK\_PREPACK\_CONTAINER***

Parameter	Usage	Type	Required	Derived	Optional
p_match_lot	IN	Number			
p_match_cost_groups	IN	Number			
p_match_mtl_status	IN	Number			
p_unpack_all	IN	Number			
p_trx_action_id	IN	Number			
p_concurrent_pack	IN	Number			

**p\_api\_version**

API version number.

**p\_init\_msg\_list**

Valid values: FND\_API.G\_FALSE or FND\_API.G\_TRUE. If set to FND\_API.G\_TRUE initialize error message list if set to FND\_API.G\_FALSE - not initialize error message list.

**p\_commit**

Whether or not to commit the changes to database.

**p\_validation\_level**

Determines if full validation or no validation will be performed. It defaults to FND\_API.G\_VALID\_LEVEL\_FULL -- FND\_API.G\_VALID\_LEVEL\_NONE is the other value.

**p\_lpn\_id**

License Plate Number identifier.

**p\_content\_lpn\_id**

Content LPN ID

**p\_content\_item\_id**

Content item ID

**p\_content\_item\_desc**

Content item description.

**p\_revision**

Revision.

**p\_lot\_number**

Lot Number

**p\_from\_serial\_number**

Starting serial number.

**p\_to\_serial\_number**

Ending serial number.

**p\_quantity**

Content Quantity. This value is not required if you are packing or unpacking an LPN or if you are packing or unpacking serialized items.

**p\_uom**

Content Qty UOM.

**p\_organization\_id**

Organization ID.

**p\_subinventory**

Subinventory. Value is the source subinventory if pack, destination subinventory if unpack operation.

**p\_locator\_id**

Locator Id. Value is the source locator if pack, destination locator if unpack operation.

**p\_enforce\_wv\_constraints**

Weight and Volume Enforcement Flag Defaults to 2 (= No), 1 = Yes

**p\_operation**

Type of operation, Pack/Unpack - Required Value 1 = Pack, 2 = Unpack

**p\_cost\_group\_id**

Cost group ID

**p\_source\_type\_id**

Source type ID for the source transaction

**p\_source\_header\_id**

Source header ID for the source transaction

**p\_source\_name**

Source name for the source transaction

**p\_source\_line\_id**

Source line ID for the source transaction

**p\_source\_line\_detail\_id**

Source line detail ID for the source transaction

**p\_homogeneous\_container**

Parameter signifying if different mixed items can be packed in the same container 1 = Yes, 2 = No Defaults to 2 = No.

**p\_match\_locations**

Parameter signifying if all of the items. Should be in the same location when packing 1 = Yes, 2 = No Defaults to 2 = No.

**p\_match\_lpn\_context**

Parameter signifying if all of the LPNs. Should have the same LPN context when packing 1 = Yes, 2 = No Defaults to 2 = No.

**p\_match\_lot**

Parameter signifying if all of the items. Should have the same lot number when packing 1 = Yes, 2 = No Defaults to 2 = No.

**p\_match\_cost\_groups**

Parameter signifying if all of the items. Should have the same cost group when packing 1 = Yes, 2 = No Defaults to 2 = No.

**p\_match\_mtl\_status**

Parameter signifying if all of the items. Should have the same material status when packing 1 = Yes, 2 = No Defaults to 2 = No.

**p\_unpack\_all**

Parameter signifying if all of the contents in the LPN should be unpacked 1 = Yes, 2 = No Defaults to 2 = No.

**p\_trx\_action\_id**

Transaction header ID for the transaction.

**p\_concurrent\_pack**

Flag to indicate if a autonomous commit should be done for updating weight and volume of lpn. This allows for multiple users to pack/unpack the same lpn at the same time 0 = non autonomous (default) 1 = autonomous.

**x\_return\_status**

If the Create\_LPN API succeeds, the value is fnd\_api.g\_ret\_sts\_success; if there is an expected error, the value is fnd\_api.g\_ret\_sts\_error; if there is an unexpected error, the value is fnd\_api.g\_ret\_sts\_unexp\_error;

**x\_msg\_count**

If there is one or more errors, the number of error messages in the buffer

**x\_msg\_data**

If there is one and only one error, the error message.

## **Validate Update Weight Volume Application Program Interface**

This API calculates the gross weight and (occupied) volume of a container, every time content is packed into or unpacked from the container. Also validates that the weight and volume capacity constraints are not violated for a container or any of its parent or nested containers.

**Table 13–21** *VALIDATE\_UPDATE\_WT\_VOLUME*

Parameter	Usage	Type	Required	Derived	Optional
p_api_version	IN	Number			
p_init_msg_list	IN	Varchar2			
p_commit	IN	Varchar2			
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_lpn_id	IN	Number			
p_content_lpn_id	IN	Varchar2			
p_content_item_id	IN	Number			
p_quantity	ION	Number			
p_uom	IN	Varchar2			
p_organization_id	IN	Number			
p_enforce_wv_constraints	IN	Number			
p_operation	IN	Number			
p_action	IN	Number			
x_valid_operation	OUT	Number			
p_concurrent_update	IN	Number			

**p\_api\_version**

API version number

**p\_init\_msg\_list**

Valid values: FND\_API.G\_FALSE or FND\_API.G\_TRUE. If set to FND\_API.G\_TRUE initialize error message list. If set to FND\_API.G\_FALSE - not initialize error message list.

**p\_commit**

Whether or not to commit the changes to database

**p\_lpn\_id**

License Plate Number Identifier

**p\_content\_lpn\_id**

Content LPN Id

**p\_content\_item\_id**

Content Item Id

**p\_quantity**

Content Quantity

**p\_uom**

Content Qty UOM

**p\_organization\_id**

Organization Id

**p\_enforce\_wv\_constraints**

Weight and Volume Enforcement Flag

**p\_operation**

Type of operation. Valid Values are 1. Pack 2.Unpack

**p\_action**

Action Type. Valid values are 1. Validate, 2. Update, 3. Validate and Update

**p\_concurrent\_update**

Works in conjunction with p\_concurrent\_pack in the packunpack api. Allows for autonomous update of lpn weight and volume. 0 = non autonomous (default) 1 = autonomous

**x\_return\_status**

If the Validate\_Update\_Wt\_Volume API succeeds, the value is fnd\_api.g\_ret\_sts\_success; if there is an expected error, the value is fnd\_api.g\_ret\_sts\_error;

**x\_msg\_count**

If there is one or more errors, the number of error messages in the buffer

**x\_msg\_data**

If there is one and only one error, the error message

**x\_valid\_operation**

If the operation to be validated is valid, then this will have a value of 1. Otherwise the operation is invalid and this will have a value of 2.

**Purge LPN Application Program Interface**

This API allows the caller to delete any container instance by specifying the LPN and the container item. If the container instance (LPN) is empty, then it is deleted.

**Table 13–22 PURGE\_LPN**

Parameter	Usage	Type	Required	Derived	Optional
p_api_version	IN	Number			
p_init_msg_list	IN	Varchar2			
p_commit	IN	Varchar2			
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_lpn_id	IN	Number			
p_purge_history	IN	Number			
p_del_history_days_	IN	Number			
old					

**p\_api\_version**

API version number

**p\_init\_msg\_list**

Valid values: FND\_API.G\_FALSE or FND\_API.G\_TRUE. If set to FND\_API.G\_TRUE initialize error message list. If set to FND\_API.G\_FALSE - not initialize error message list.

**p\_commit**

Whether or not to commit the changes to database

**p\_lpn\_id**

License Plate Number Identifier

**p\_purge\_history**

Based on this parameter, will delete all of the LPN history records associated with the given LPN ID. Values: 1. Yes, 2. No

**p\_del\_history\_days\_old**

If the entire purge history is not to be deleted, p\_purge\_history = 2, then delete the LPN history records associated with the given LPN ID which are this amount of days old.

**x\_return\_status**

If the Validate\_Update\_Wt\_Volume API succeeds, the value is fnd\_api.g\_ret\_sts\_success; if there is an expected error, the value is fnd\_api.g\_ret\_sts\_error;

**x\_msg\_count**

If there is one or more errors, the number of error messages in the buffer.

**x\_msg\_data**

If there is one and only one error, the error message.

## Explode LPN Application Program Interface

This API returns a PL/SQL table of a containers contents. User will pass in the LPN of the container to be exploded and the level to explode to.

**Table 13–23 EXPLODE\_LPN**

Parameter	Usage	Type	Required	Derived	Optional
p_api_version	IN	Number			
p_init_msg_list	IN	Varchar2			
p_commit	IN	Varchar2			
x_return_status	OUT	Varchar2			

**Table 13–23 EXPLODE\_LPN**

Parameter	Usage	Type	Required	Derived	Optional
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_lpn_id	IN	Number			
p_explosion_level	IN	Number			
x_content_tbl	OUT	WMS_ Container_ Tbl_Type			

**p\_api\_version**

API version number

**p\_init\_msg\_list**

Valid values: FND\_API.G\_FALSE or FND\_API.G\_TRUE. If set to FND\_API.G\_TRUE initialize error message list. If set to FND\_API.G\_FALSE - not initialize error message list.

**p\_commit**

Whether or not to commit the changes to database

**p\_lpn\_id**

License Plate Number Identifier

**p\_explosion\_level**

Explosion Level. Defaults to 0 (Explode to all levels).

**x\_return\_status**

If the Validate\_Update\_Wt\_Volume API succeeds, the value is fnd\_api.g\_ret\_sts\_success; if there is an expected error, the value is fnd\_api.g\_ret\_sts\_error;

**x\_msg\_count**

If there is one or more errors, the number of error messages in the buffer.

**x\_msg\_data**

If there is one and only one error, the error message.

## Transfer LPN Contents Application Program Interface

This API transfers all of the contents within a source LPN into a destination LPN. The source LPN after this call will be empty and contain no items within it. However it is still existing and it is up to the user/caller to delete/purge that empty LPN if so desired.

**Table 13–24 TRANSFER\_LPN\_CONTENTS**

Parameter	Usage	Type	Required	Derived	Optional
p_api_version	IN	Number			
p_init_msg_list	IN	Varchar2			
p_commit	IN	Varchar2			
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_lpn_id_source	IN	Number			
p_lpn_id_dest	IN	Number			

### **p\_api\_version**

API version number

### **p\_init\_msg\_list**

Valid values: FND\_API.G\_FALSE or FND\_API.G\_TRUE. If set to FND\_API.G\_TRUE initialize error message list. If set to FND\_API.G\_FALSE - not initialize error message list.

### **p\_commit**

Whether or not to commit the changes to database

### **p\_lpn\_id**

License Plate Number Identifier

### **p\_lpn\_id\_dest**

The destination LPN ID for which the contents will be transferred to.

**x\_return\_status**

If the Explode\_LPN API succeeds, the value is fnd\_api.g\_ret\_sts\_success; if there is an expected error, the value is fnd\_api.g\_ret\_sts\_error; if there is an unexpected error, the value is fnd\_api.g\_ret\_sts\_unexp\_error;

**x\_msg\_count**

If there is one or more errors, the number of error messages in the buffer.

**x\_msg\_data**

If there is one and only one error, the error message.

**Container Required Quantity Application Program Interface**

This API calculates the quantity of containers required to store (source) the inventory item or container specified. If the destination container given, it will be calculated for the given container item or it will be calculated as per the item/container relationship definitions.

**Table 13–25 CONTAINER\_REQUIRED\_QTY**

Parameter	Usage	Type	Required	Derived	Optional
p_api_version	IN	Number			
p_init_msg_list	IN	Varchar2			
p_commit	IN	Varchar2			
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_source_item_id	IN	Number			
p_source_qty	IN	Number			
p_source_qty_uom	IN	Varchar2			
p_qty_per_cont	IN	Number			
p_qty_per_cont_uom	IN	Varchar2			
p_organization_id	IN	Number			
p_dest_cont_item_id	IN OUT	Number			
p_qty_required	OUT	Number			

**p\_api\_version**

API version number

**p\_init\_msg\_list**

Valid values: FND\_API.G\_FALSE or FND\_API.G\_TRUE. If set to FND\_API.G\_TRUE initialize error message list. If set to FND\_API.G\_FALSE - not initialize error message list.

**p\_commit**

Whether or not to commit the changes to database

**p\_source\_item\_id**

Source Item id (can also be a container Item)

**p\_source\_qty**

Source Item Qty

**p\_source\_qty\_uom**

UOM of Source Item Qty

**p\_qty\_per\_container**

Qty per each container. Defaults to NULL

**p\_qty\_per\_container\_uom**

UOM of Qty per each container. Defaults to NULL

**p\_organization\_id**

Organization Id. Defaults to NULL

**p\_dest\_cont\_item\_id**

Destination container item id.

**x\_return\_status**

If the Explode\_LPN API succeeds, the value is fnd\_api.g\_ret\_sts\_success; if there is an expected error, the value is fnd\_api.g\_ret\_sts\_error; if there is an unexpected error, the value is fnd\_api.g\_ret\_sts\_unexp\_error;

**x\_msg\_count**

If there is one or more errors, the number of error messages in the buffer.

**x\_msg\_data**

If there is one and only one error, the error message.

**p\_qty\_required**

Required container quantity.

**Get Outermost LPN Application Program Interface**

This API returns a table of LPN records that represent the outermost LPN(s) given either a specific LPN ID or inventory item specifications.

**Table 13–26    GET\_OUTERMOST\_LPN**

Parameter	Usage	Type	Required	Derived	Optional
p_api_version	IN	Number			
p_init_msg_list	IN	Varchar2			
p_commit	IN	Varchar2			
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_lpn_id	IN	Number			
p_inventory_item_id	IN	Number			
p_revision	IN	Varchar2			
p_lot_number	IN	Varchar2			
p_serial_number	IN	Varchar2			
x_lpn_list	OUT	LPN_Table_ Type			

**p\_api\_version**

API version number

**p\_init\_msg\_list**

Valid values: FND\_API.G\_FALSE or FND\_API.G\_TRUE. If set to FND\_API.G\_TRUE initialize error message list. If set to FND\_API.G\_FALSE - not initialize error message list.

**p\_commit**

Whether or not to commit the changes to database.

**p\_lpn\_id**

Single specific LPN ID

**p\_inventory\_item\_id**

Inventory Item ID when an LPN isn't given

**p\_revision**

Revision of the inventory item.

**p\_lot\_number**

Lot number of the inventory item.

**p\_serial\_number**

Serial number of the inventory item.

**x\_return\_status**

If the Explode\_LPN API succeeds, the value is `fnd_api.g_ret_sts_success`; if there is an expected error, the value is `fnd_api.g_ret_sts_error`; if there is an unexpected error, the value is `fnd_api.g_ret_sts_unexp_error`;

**x\_msg\_count**

If there is one or more errors, the number of error messages in the buffer.

**x\_msg\_data**

If there is one and only one error, the error message.

**x\_lpn\_list**

The output LPN\_Table\_Type which is a table of LPN records of the outermost LPN(s).

## Get LPN List Application Program Interface

This API returns a table of LPN records that match the given user parameters. This API only returns LPN's which are homogeneous in content.

**Table 13-27** GET\_LPN\_LIST

Parameter	Usage	Type	Required	Derived	Optional
p_api_version	IN	Number			
p_init_msg_list	IN	Varchar2			
p_commit	IN	Varchar2			
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_lpn_context	IN	Number			
p_content_item_id	IN	Number			
p_max_content_item_qty	IN	Number			
p_organization_id	IN	Number			
p_subinventory	IN	Varchar2			
p_locator_id	IN	Number			
p_revision	IN	Varchar2			
p_lot_number	IN	Varchar2			
p_serial)_number	IN	Varchar2			
p_container_item_id	IN	Number			
x_lpn_list	OUT	LPN_Table_Type			
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			

**p\_api\_version**

API version number

**p\_init\_msg\_list**

Valid values: FND\_API.G\_FALSE or FND\_API.G\_TRUE. If set to FND\_API.G\_TRUE initialize error message list. If set to FND\_API.G\_FALSE - not initialize error message list.

**p\_commit**

Whether or not to commit the changes to database.

**p\_lpn\_context**

Context in which the LPN is defined.

**p\_content\_item\_id**

Inventory content item ID.

**p\_max\_content\_item\_qty**

The maximum amount of the content item that the LPN can hold.

**p\_organization\_id**

Organization of the LPN.

**p\_subinventory**

Subinventory of the LPN.

**p\_locator\_id**

Locator of the LPN.

**p\_revision**

Revision of the content item.

**p\_lot\_number**

Lot number of the content item.

**p\_serial\_number**

Serial number of the content item.

**p\_container\_item\_id**

Inventory item ID for a container of the LPN.

**x\_return\_status**

If the Explode\_LPN API succeeds, the value is fnd\_api.g\_ret\_sts\_success; if there is an expected error, the value is fnd\_api.g\_ret\_sts\_error; if there is an unexpected error, the value is fnd\_api.g\_ret\_sts\_unexp\_error;

**x\_msg\_count**

If there is one or more errors, the number of error messages in the buffer.

**x\_msg\_data**

If there is one and only one error, the error message.

**x\_lpn\_list**

The output LPN\_Table\_Type which is a table of LPN records of the outermost LPN(s).

**Prepack LPN Concurrent Program Application Program Interface**

This API allows the packing of items that are not yet in inventory. LPN's are pre-generated and associated with contents at the release of a WIP job. The LPN's generated will have a state of Resides in WIP so that their contents are not included in on hand inventory.

**Table 13–28   PREPACK\_LPN\_CP**

Parameter	Usage	Type	Required	Derived	Optional
ERRBUF	OUT	Varchar2			
RETCODE	OUT	Number			
p_api_version	IN	Number			
p_organization_id	IN	Number			
p_subinventory	IN	Varchar2			
p_locator_id	IN	Number			
p_inventory_item_id	IN	Number			
p_revision	IN	Varchar2			
p_lot_number	IN	Varchar2			
p_quantity	IN	Number			
p_uom	IN	Varchar2			

**Table 13–28   PREPACK\_LPN\_CP**

Parameter	Usage	Type	Required	Derived	Optional
p_source	IN	Number			
p_serial_number_ from	IN	Varchar2			
p_serial_number_to	IN	Varchar2			
p_container_item_id	IN	Number			
p_cont_revision	IN	Varchar2			
p_cont_lot_number	IN	Varchar2			
p_cont_serial_ number_from	IN	Varchar2			
p_cont_serial_ number_to	IN	Varchar2			
p_lpn_sealed_flag	IN	Number			
p_print_label	IN	Number			
p_print_content_ report	IN	Number			
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			

**p\_api\_version**

API version number

**p\_init\_msg\_list**

Valid values: FND\_API.G\_FALSE or FND\_API.G\_TRUE. If set to FND\_API.G\_TRUE initialize error message list. If set to FND\_API.G\_FALSE - not initialize error message list.

**p\_commit**

Whether or not to commit the changes to database.

**p\_organization\_id**

Organization of the LPN

**p\_subinventory**

Subinventory

**p\_locator\_id**

Locator Id

**p\_inventory\_item\_id**

Inventory ID number

**p\_revision**

Revision of the inventory item.

**p\_lot\_number**

Lot number of the inventory item.

**p\_quantity**

Quantity of item to be prepacked.

**p\_uom**

UOM of the quantity prepacked.

**p\_source**

Source of information (WIP/REC)

**p\_serial\_number\_from**

Starting serial number for inventory item.

**p\_serial\_number\_to**

Ending serial number for inventory item.

**p\_container\_item\_id**

Inventory item ID for a container item.

**p\_cont\_revision**

Revision of the container item.

**p\_cont\_lot\_number**

Lot Number of the container item.

**p\_cont\_serial\_number\_from**

From serial number of the container item.

**p\_cont\_serial\_number\_to**

To serial number of the container item.

**p\_lpn\_sealed\_flag**

Flag to tell if LPN should be sealed or not.

**p\_print\_label**

Should labels be printed afterwards.

**p\_print\_content\_report**

Should content reports be generated afterwards.

**ERRBUF**

Concurrent program error buffer.

**RETCODE**

Concurrent program return code.

**x\_return\_status**

If the Prepack\_LPN API succeeds, the value is `fnf_api.g_ret_sts_success`; if there is an expected error, the value is `fnf_api.g_ret_sts_error`; if there is an unexpected error, the value is `fnf_api.g_ret_sts_unexp_error`;

**x\_msg\_count**

If there is one or more errors, the number of error messages in the buffer.

**x\_msg\_data**

If there is one and only one error, the error message.

## Prepack LPN Application Program Interface

This API allows the packing of items that are not yet in inventory. LPN's are pre-generated and associated with contents at the release of a WIP job. The LPN's generated will have a state of Resides in WIP so that their contents are not included in on hand inventory.

**Table 13-29 PREPACK\_LPN**

Parameter	Usage	Type	Required	Derived	Optional
p_api_version	IN	Number			
p_init_msg_list	IN	Varchar2			
p_commit	IN	Varchar2			
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			
p_organization_id	IN	Number			
p_subinventory	IN	Varchar2			
p_locator_id	IN	Number			
p_inventory_item_id	IN	Number			
p_revision	IN	Varchar2			
p_lot_number	IN	Varchar2			
p_quantity	IN	Number			
p_uom	IN	Varchar2			
p_source	IN	Number			
p_serial_number_ from	IN	Varchar2			
p_serial_number_to	IN	Varchar2			
p_container_item_id	IN	Number			
p_cont_revision	IN	Varchar2			
p_cont_lot_number	IN	Varchar2			
p_cont_serial_ number_from	IN	Varchar2			

**Table 13–29   PREPACK\_LPN**

Parameter	Usage	Type	Required	Derived	Optional
p_cont_serial_ number_to	IN	Varchar2			
p_lpn_sealed_flag	IN	Number			
p_print_label	IN	Number			
p_print_content_ report	IN	Number			

**p\_api\_version**

API version number

**p\_init\_msg\_list**

Valid values: FND\_API.G\_FALSE or FND\_API.G\_TRUE. If set to FND\_API.G\_TRUE initialize error message list. If set to FND\_API.G\_FALSE - not initialize error message list.

**p\_commit**

Whether or not to commit the changes to database.

**p\_organization\_id**

Organization of the LPN

**p\_subinventory**

Subinventory

**p\_locator\_id**

Locator Id

**p\_inventory\_item\_id**

Inventory ID number

**p\_revision**

Revision of the inventory item.

**p\_lot\_number**

Lot number of the inventory item.

**p\_quantity**

Quantity of item to be prepicked.

**p\_uom**

UOM of the quantity prepicked.

**p\_source**

Source of information (WIP/REC)

**p\_serial\_number\_from**

Starting serial number for inventory item.

**p\_serial\_number\_to**

Ending serial number for inventory item.

**p\_container\_item\_id**

Inventory item ID for a container item.

**p\_cont\_revision**

Revision of the container item.

**p\_cont\_lot\_number**

Lot Number of the container item.

**p\_cont\_serial\_number\_from**

From serial number of the container item.

**p\_cont\_serial\_number\_to**

To serial number of the container item.

**p\_lpn\_sealed\_flag**

Flag to tell if LPN should be sealed or not.

**p\_print\_label**

Should labels be printed afterwards.

**p\_print\_content\_report**

Should content reports be generated afterwards.

**x\_return\_status**

If the Prepack\_LPN API succeeds, the value is `fnf_api.g_ret_sts_success`; if there is an expected error, the value is `fnf_api.g_ret_sts_error`; if there is an unexpected error, the value is `fnf_api.g_ret_sts_unexp_error`;

**x\_msg\_count**

If there is one or more errors, the number of error messages in the buffer.

**x\_msg\_data**

If there is one and only one error, the error message.

# Print Content Report Application Program Interface

This API will print content report given a process ID.

**Table 13–30 PRINT\_CONTENT\_REPORT**

Parameter	Usage	Type	Required	Derived	Optional
<code>x_process_id</code>	IN	Number			

**x\_process\_id**

The process ID for the prepack transaction.

# LPN Pack Complete Application Program Interface

This API will commit or revert changes made by autonomous pack/unpack.

**Table 13–31 LPN\_PACK\_COMPLETE**

Parameter	Usage	Type	Required	Derived	Optional
<code>p_revert</code>	IN	Number			

**p\_revert**

The process ID for the prepack transaction 0 = complete 1 = revert changes.

WMS Installation Application Program Interface

Check Install Application Program Interface

This API will check to see if WMS is installed.

Table 13–32 CHECK\_INSTALL

Parameter	Usage	Type	Required	Derived	Optional
p_organization_id	IN	Number			
x_return_status	OUT	Varchar2			
x_msg_count	OUT	Number			
x_msg_data	OUT	Varchar2			

**p\_organization\_id**

Specific organization to be checked if WMS enabled.

If NULL, the check is just made at site level and not for any specific organization. This is more relaxed than passing a specific organization.

Returns: TRUE if WMS installed, else FALSE

Please use return value to determine if WMS is installed or not. Do not use x\_return\_status for this purpose as x\_return\_status could be success and yet WMS not be installed. x\_return\_status is set to error when an error (such as SQL error) occurs.

**x\_return\_status**

Return status indicating success('s'), error('E'), enexpected error ('U')

**x\_msg\_count**

Number of messages in a message list.

**x\_msg\_data**

If the number of messages in message list is 1, contains message list.

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# Oracle Flow Manufacturing Open Interfaces and APIs

This chapter contains information about the following Oracle Flow Manufacturing open interfaces and application program interfaces:

- [Custom Kanban Quantity Calculation API](#) on page 14-2
- [Custom Schedule API](#) on page 14-3
- [Flow Schedule API](#) on page 14-7

# Custom Kanban Quantity Calculation API

This API is used to calculate kanban size and quantity.

## Functional Overview

The Custom Kanban Quantity Calculation API enables the extension of the Kanban Quantity Calculation to suit the need of different business requirements. The Kanban planning engine will use the resulting kanban quantity and size returned by this API. The table below provides the specifications for this API:

**Table 14–1    CALCULATE KANBAN QUANTITY**

Parameter	Usage	Type	Required	Derived	Optional
p_version_number	IN	NUMBER	x		
p_average_demand	IN	NUMBER	x		
p_minimum_order_quantity	IN	NUMBER	x		
p_fixed_lot_multilier	IN	NUMBER	x		
p_safety_stock_days	IN	NUMBER	x		
p_replenishment_lead_time	IN	NUMBER	x		
p_kanban_flag	IN	NUMBER	x		
p_kanban_size	IN/OUT	NUMBER			
p_kanban_number	IN/OUT	NUMBER			
p_return_status	OUT	VARCHAR2			

**p\_version\_number**

API version number.

**p\_average\_demand**

Average daily demand.

**p\_minimum\_order\_quantity**

Minimum order quantity.

**p\_fixed\_lot\_multiplier**

Fixed lot multiplier.

**p\_safety\_stock\_days**

Safety stock days.

**p\_replenishment\_lead\_time**

Replenishment lead time.

**p\_kanban\_flag**

Flag to indicate whether to calculate the size or the number of the kanban.

**p\_kanban\_size**

Size of the Kanban.

**p\_kanban\_number**

Number of kanban.

## Custom Schedule API

The Custom Schedule API is a public API that enables you to extend the line scheduling algorithms that are seeded with the product.

### Functional Overview

Package Name: MRP\_CUSTOM\_LINE\_SCHEDULE

Procedure Name: CUSTOM\_SCHEDULE

The Custom Schedule API enables the extension of the Line Scheduling algorithm to suit the need of different business requirements. The following table provide specifications for this API:

**Table 14–2** CUSTOM\_SCHEDULE

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	NUMBER	x		
p_rule_id	IN	NUMBER	x		
p_line_id	IN	NUMBER	x		

**Table 14-2** *CUSTOM\_SCHEDULE*

Parameter	Usage	Type	Required	Derived	Optional
p_org_id	IN	NUMBER	x		
p_flex_tolerance	IN	NUMBER	x		
p_scheduling_start_date	IN	DATE	x		
p_scheduling_end_date	IN	DATE	x		
x_return_status	OUT	VARCHAR2			
x_msg_count	OUT	NUMBER			
x_msg_data	OUT	VARCHAR2			

**p\_api\_version\_number**

API version number.

**p\_rule\_id**

Scheduling rule identifier. It is passed to indicate the scheduling rule that was chosen by the user during scheduling and sequencing.

**p\_line\_id**

Production line identifier.

**p\_org\_id**

Organization identifier.

**p\_scheduling\_start\_date**

The start date of the scheduling date range.

**p\_scheduling\_end\_date**

The end date of the scheduling date range.

Selected flow schedules are converted to flow schedules before calling the scheduling and sequencing procedure. All rows that are to be sequenced or scheduled in this call are included in the table wip\_flow\_schedules. All of these rows have the column "request\_id" set to USERENV('SESSIONID'). The procedure should operate on these rows, sequence and schedule them based on user defined

algorithms, and update the rows in the flow schedule table. New rows that are created should have the following columns populated.

- wip\_entity\_id
- Scheduled\_flag
- Inventory\_item\_id
- Organization\_id
- Line\_id
- Last\_update\_date
- Last\_update\_by
- Creation\_date
- Created\_by
- Class\_code
- Planned\_quantity
- Quantity\_completed
- Scheduled\_start\_date
- Scheduled\_completion\_date
- Status
- Schedule\_number

The calling functions set a savepoint, before a call to the Custom Schedule. In case of a failure message from this procedure, the program will rollback to the save point and return an error message to the calling routines.

**Package Name:** MRP\_CUSTOM\_LINE\_SCHEDULE

**Procedure Name:** IS\_VALID\_DEMAND

This procedure is being called from the Line Scheduling Workbench before inserting the rows into wip\_flow\_schedule. It enables the user to customize the filtering of the demand to be inserted into wip\_flow\_schedules. This is called before the scheduling engine is invoked.

**Table 14–3 IS\_VALID\_DEMAND**

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	NUMBER	x		
p_rule_id	IN	NUMBER	x		
p_line_id	IN	NUMBER	x		
p_org_id	IN	NUMBER	x		
p_demand_type	IN	NUMBER	x		
p_demand_id	IN	NUMBER	x		
p_valid_demand	OUT	BOOLEAN			
x_return_status	OUT	VARCHAR2			
x_msg_count	OUT	NUMBER			
x_msg_data	OUT	VARCHAR2			

**p\_api\_version\_number**

API version number.

**p\_rule\_id**

Scheduling rule identifier. It is passed to indicate the scheduling rule that was chosen by the user during scheduling and sequencing.

**p\_line\_id**

Production line identifier.

**p\_org\_id**

Organization identifier.

**p\_demand\_type**

To identify the demand type. 2 for sales order, 100 for planned order.

**p\_demand\_id**

The identifier for the demand.

For sales order, p\_demand\_id = sales order line id in oe\_order\_lines\_all.

For planned order, p\_demand\_id = transaction\_id in mrp\_recommendations.

**p\_valid\_demand**

The demand will be inserted into wip\_flow\_schedules, if the p\_valid\_demand is TRUE, otherwise it will be ignored.

## Flow Schedule API

The Flow Schedule API is used to create, update, delete, retrieve, lock, schedule and unlink order lines of flow schedules.

### Functional Overview

The Flow Schedule API provides five procedures for create, update, delete, retrieve, lock schedule and unlink order lines of flow schedules.

- **Process\_Flow\_Schedule:** To create, update, delete a flow schedule.
- **Lock\_Flow\_Schedule:** To lock a flow schedule row.
- **Get\_Flow\_Schedule:** To retrieve a flow schedule from the table.
- **Line\_Schedule:** To Schedule range of flow schedules in a date range using a given scheduling rule.
- **Unlink\_Order\_line:** To remove sales order reference in flow schedule.

**Package Name:** MRP\_FLOW\_SCHEDULE\_PUB

**Procedure Name:** PROCESS\_FLOW\_SCHEDULE

The table below describes all parameters used by PROCESS\_FLOW\_SCHEDULE.

**Table 14–4 PROCESS\_FLOW\_SCHEDULE**

Parameter	Usage	Type	Required	Derived	Optional
p_version_number	IN	NUMBER	x		
p_init_msg_list	IN	VARCHAR2			x
p_return_values	IN	VARCHAR2			x
p_commit	IN	VARCHAR2			x

**Table 14–4    *PROCESS\_FLOW\_SCHEDULE***

Parameter	Usage	Type	Required	Derived	Optional
x_return_status	OUT	VARCHAR2			
x_msg_count	OUT	NUMBER			
x_msg_data	OUT	VARCHAR2			
p_flow_schedule_rec	IN	record			x
p_flow_schedule_val_rec	IN	record			x
x_flow_schedule_rec	OUT	record			
x_flow_schedule_val_rec	OUT	record			

**p\_version\_number**

API version number.

**p\_flow\_schedule\_rec**

Flow schedule record type. Record type: MRP\_FLOW\_SCHEDULE\_PUB.FLOW\_SCHEDULE\_REC\_TYPE. Default value: G\_MISS\_FLOW\_SCHEDULE\_VAL\_REC.

**p\_flow\_scheduleval\_rec**

Flow schedule value record type. Record type: MRP\_FLOW\_SCHEDULE\_PUB.FLOW\_SCHEDULE\_VAL\_REC\_TYPE. Default value: G\_MISS\_FLOW\_SCHEDULE\_VAL\_REC.

**x\_flow\_schedule\_rec**

Flow schedule record type. Record type: MRP\_FLOW\_SCHEDULE\_PUB.FLOW\_SCHEDULE\_REC\_TYPE.

**x\_flow\_schedule\_val\_rec**

Flow schedule value record type. Record type: MRP\_FLOW\_SCHEDULE\_PUB.FLOW\_SCHEDULE\_VAL\_REC\_TYPE.

The table below describes all parameters used by FLOW\_SCHEDULE\_REC\_TYPE.

**Table 14–5 FLOW\_SCHEDULE\_REC\_TYPE**

<b>Parameter</b>	<b>Type</b>	<b>Default</b>
alternate_bom_designator	VARCHAR2(10)	FND_API_G_MISS_CHAR
alternate_routing_desig	VARCHAR2(10)	FND_API_G_MISS_CHAR
attribute1-15	VARCHAR2(150)	FND_API_G_MISS_CHAR
attribute_category	VARCHAR2(30)	FND_API_G_MISS_CHAR
bom_revision	VARCHAR2(3)	FND_API_G_MISS_CHAR
bom_revision_date	DATE	FND_API_G_MISS_DATE
build_sequence	NUMBER	FND_API_G_MISS_NUM
class_code	VARCHAR2(10)	FND_API_G_MISS_CHAR
completion_locator_id	NUMBER	FND_API_G_MISS_NUM
completion_subinventory	VARCHAR2(10)	FND_API_G_MISS_CHAR
date_closed	DATE	FND_API_G_MISS_DATE
demand_class	VARCHAR2(30)	FND_API_G_MISS_CHAR
demand_source_delivery	VARCHAR2(30)	FND_API_G_MISS_CHAR
demand_source_header_id	NUMBER	FND_API_G_MISS_NUM
demand_source_line	VARCHAR2(30)	FND_API_G_MISS_CHAR
demand_source_type	NUMBER	FND_API_G_MISS_NUM
line_id	NUMBER	FND_API_G_MISS_NUM
material_account	NUMBER	FND_API_G_MISS_NUM
material_overhead_account	NUMBER	FND_API_G_MISS_NUM
material_variance_account	NUMBER	FND_API_G_MISS_NUM
mps_net_quantity	NUMBER	FND_API_G_MISS_NUM
mps_scheduled_comp_date	DATE	FND_API_G_MISS_DATE
organization_id	NUMBER	FND_API_G_MISS_NUM
outside_processing_acct	NUMBER	FND_API_G_MISS_NUM
outside_proc_var_acct	NUMBER	FND_API_G_MISS_NUM
overhead_account	NUMBER	FND_API_G_MISS_NUM
overhead_variance_account	NUMBER	FND_API_G_MISS_NUM

**Table 14–5 FLOW\_SCHEDULE\_REC\_TYPE**

<b>Parameter</b>	<b>Type</b>	<b>Default</b>
planned_quantity	NUMBER	FND_API_G_MISS_NUM
primary_item_id	NUMBER	FND_API_G_MISS_NUM
project_id	NUMBER	FND_API_G_MISS_NUM
quantity_completed	NUMBER	FND_API_G_MISS_NUM
request_id	NUMBER	FND_API_G_MISS_NUM
resource_account	NUMBER	FND_API_G_MISS_NUM
resource_variance_account	NUMBER	FND_API_G_MISS_NUM
routing_revision	VARCHAR2(3)	FND_API_G_MISS_CHAR
routing_revision_date	DATE	FND_API_G_MISS_DATE
scheduled_completion_date	DATE	FND_API_G_MISS_DATE
scheduled_flag	NUMBER	FND_API_G_MISS_NUM
scheduled_start_date	DATE	FND_API_G_MISS_DATE
schedule_group_id	NUMBER	FND_API_G_MISS_NUM
schedule_number	VARCHAR2(30)	FND_API_G_MISS_CHAR
status	NUMBER	FND_API_G_MISS_NUM
std_cost_adjustment_acct	NUMBER	FND_API_G_MISS_NUM
task_id	NUMBER	FND_API_G_MISS_NUM
wip_entity_id	NUMBER	FND_API_G_MISS_NUM
scheduled_by	NUMBER	FND_API_G_MISS_NUM
return_status	VARCHAR2(1)	FND_API_G_MISS_CHAR
db_flag	VARCHAR2(1)	FND_API_G_MISS_CHAR
operation	VARCHAR2(30)	FND_API_G_MISS_CHAR
end_item_unit_number	VARCHAR2(30)	FND_API_G_MISS_CHAR
quantity_scrapped	NUMBER	FND_API_G_MISS_NUM
kanban_card_id	NUMBER	FND_API_G_MISS_NUM
created_by	NUMBER	FND_API_G_MISS_NUM
creation_date	DATE	FND_API_G_MISS_DATE

**Table 14–5 FLOW\_SCHEDULE\_REC\_TYPE**

Parameter	Type	Default
last_updated_by	NUMBER	FND_API_G_MISS_NUM
last_update_date	DATE	FND_API_G_MISS_DATE
last_update_login	NUMBER	FND_API_G_MISS_NUM
program_application_id	NUMBER	FND_API_G_MISS_NUM
program_id	NUMBER	FND_API_G_MISS_NUM
program_update_date	DATE	FND_API.G_MISS_DATE

The table below describes all parameters used by FLOW\_SCHEDULE\_VAL\_REC\_TYPE.

**Table 14–6 FLOW\_SCHEDULE\_VAL\_REC\_TYPE**

Parameter	Type	Default
completion_locator	VARCHAR2(240)	FND_API.G_MISS_CHAR
line	VARCHAR2(240)	FND_API.G_MISS_CHAR
organization	VARCHAR2(240)	FND_API.G_MISS_CHAR
primary_item	VARCHAR2(240)	FND_API.G_MISS_CHAR
project	VARCHAR2(240)	FND_API.G_MISS_CHAR
schedule_group	VARCHAR2(240)	FND_API.G_MISS_CHAR
task	VARCHAR2(240)	FND_API.G_MISS_CHAR
wip_entity	VARCHAR2(240)	FND_API.G_MISS_CHAR

**Package Name:** MRP\_FLOW\_SCHEDULE\_PUB

**Procedure Name:** LOCK\_FLOW\_SCHEDULE

The table below describes all parameters used by LOCK\_FLOW\_SCHEDULE.

**Table 14–7 LOCK\_FLOW\_SCHEDULE**

Parameter	Usage	Type	Required	Derived	Optional
p_version_number	IN	NUMBER	x		
p_init_msg_list	IN	VARCHAR2			x
p_return_values	IN	VARCHAR2			x
p_commit	IN	VARCHAR2			x
x_return_status	OUT	VARCHAR2			
x_msg_count	OUT	NUMBER			
x_msg_data	OUT	VARCHAR2			
p_flow_schedule_rec	IN	RECORD			x
p_flow_schedule_val_rec	IN	RECORD			x
x_flow_schedule_rec	OUT	RECORD			
x_flow_schedule_val_rec	OUT	RECORD			

**p\_version\_number**

API version number.

**p\_flow\_schedule\_rec**

Flow schedule record type. Record type: MRP\_FLOW\_SCHEDULE\_PUB. FLOW\_SCHEDULE\_REC\_TYPE. Default value: G\_MISS\_FLOW\_SCHEDULE\_VAL\_REC.

**p\_flow\_scheduleval\_rec**

Flow schedule value record type. Record type: MRP\_FLOW\_SCHEDULE\_PUB. FLOW\_SCHEDULE\_VAL\_REC\_TYPE. Default value: G\_MISS\_FLOW\_SCHEDULE\_VAL\_REC.

**x\_flow\_schedule\_rec**

Flow schedule record type. Record type: MRP\_FLOW\_SCHEDULE\_PUB. FLOW\_SCHEDULE\_REC\_TYPE.

**x\_flow\_schedule\_val\_rec**

Flow schedule value record type. Record type: MRP\_FLOW\_SCHEDULE\_PUB.  
FLOW\_SCHEDULE\_VAL\_REC\_TYPE.

**Package Name:** MRP\_FLOW\_SCHEDULE\_PUB

**Procedure Name:** GET\_FLOW\_SCHEDULE

The table below describes all parameters used by GET\_FLOW\_SCHEDULE.

**Table 14–8** GET\_FLOW\_SCHEDULE

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	NUMBER	x		
p_init_msg_list	IN	VARCHAR2			x
p_return_values	IN	VARCHAR2			x
p_commit	IN	VARCHAR2			x
x_return_status	OUT	VARCHAR2			
x_msg_count	OUT	NUMBER			
x_msg_data	OUT	VARCHAR2			
p_wip_entity_id	IN	NUMBER	x		
p_wip_entity	IN	VARCHAR2	x		
x_flow_schedule_rec	OUT	RECORD			
x_flow_schedule_val_rec	OUT	RECORD			

**p\_api\_version\_number**

API version number.

**p\_init\_msg\_list**

Standard Oracle API parameter.

**p\_return\_values**

Standard Oracle Output parameter.

**p\_commit**

Standard Oracle API parameter.

**x\_return\_status**

Standard Oracle API Output parameter.

**x\_msg\_count**

Standard Oracle API Output parameter.

**x\_msg\_data**

Standard Oracle API Output parameter.

**p\_wip\_entity\_id**

Standard Oracle API Output parameter.

**p\_wip\_entity**

Standard Oracle API Output parameter.

**x\_flow\_schedule\_rec**

Flow schedule record type. Record type: MRP\_FLOW\_SCHEDULE\_PUB. FLOW\_SCHEDULE\_REC\_TYPE.

**x\_flow\_schedule\_val\_rec**

Flow schedule value record type. Record type: MRP\_FLOW\_SCHEDULE\_PUB. FLOW\_SCHEDULE\_VAL\_REC\_TYPE.

**Package Name:** MRP\_FLOW\_SCHEDULE\_PUB

**Procedure Name:** LINE\_SCHEDULE

The line\_schedule API will reschedule the flow schedules in the given line, organization, and completion date range using the scheduling rule. This API only schedules the flow schedules created in the same session as the creation of the original flow schedule, which is created by PROCESS\_FLOW\_SCHEDULE API. The table below provides the specifications for this API:

**Table 14–9** *LINE\_SCHEDULE*

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	NUMBER	x		
x_return_status	OUT	VARCHAR2			x
x_msg_count	OUT	NUMBER			x
x_msg_data	OUT	VARCHAR2			x
p_rule_id	IN	NUMBER	x		
p_line_id	IN	NUMBER	x		
p_org_id	IN	NUMBER	x		
p_sched_start_date	IN	DATE	x		
p_sched_end_date	IN	DATE	x		
p_update	IN	NUMBER	x		

**p\_rule\_id**

Line scheduling rule id. Indicates the scheduling rule to be used to scheduling the flow schedule.

**p\_line\_id**

Sales order Line identifier.

**p\_org\_id**

Organization id.

**p\_sched\_start\_date**

The start date of the flow schedules to be scheduled.

**p\_sched\_end\_date**

The end date of the flow schedules to be scheduled.

**Package Name:** MRP\_FLOW\_SCHEDULE\_PUB

**Procedure Name:** UNLINK\_ORDER\_LINE

The UNLINK\_ORDER\_LINE API will remove a given sales order reference from all flow schedules that make reference to the given sales order. The table below provides the specifications for this API:

**Table 14–10 UNLINK\_ORDER\_LINE**

Parameter	Usage	Type	Required	Derived	Optional
p_api_version_number	IN	NUMBER	x		
x_return_status	OUT	VARCHAR2			x
x_msg_count	OUT	NUMBER			x
x_msg_data	OUT	VARCHAR2			x
p_assembly_item_id	IN	NUMBER	x		
p_line_id	IN	NUMBER	x		

**p\_assembly\_item\_id**

Assembly item identifier.

**p\_line\_id**

Sales order Line identifier.

**p\_sched\_end\_date**

The end date of the flow schedules to be scheduled.

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# Oracle Complex Maintenance, Repair, and Overhaul Open Interfaces

This chapter includes information about the following Oracle Complex Maintenance, Repair, and Overhaul (CMRO) open interfaces and application program interfaces:

- [Complex Maintenance, Repair, and Overhaul API Overview](#) on page 15-2
- [Document Index](#) on page 15-3
- [Master Configuration](#) on page 15-5
- [Outside Processing](#) on page 15-5
- [Product Classification](#) on page 15-7
- [Unit Configuration](#) on page 15-8
- [Unit Maintenance Plan](#) on page 15-8

The Oracle CMRO APIs have been developed according to the Oracle Applications API standards. Provided below are the parameters that are common to all the APIs. In the subsequent sections, the following parameters are not explicitly mentioned for each API because the parameters are common to all the APIs. Brief descriptions of the most important features of the APIs are provided below.

## IN Parameters

Default = FND\_API.G\_FALSE. If set to TRUE, the API will commit before returning to the calling program, otherwise it is the calling program's responsibility to commit.

## OUT Parameters

FND\_API.G\_RET\_STS\_ERROR - Expected Error - validation or missing data.

FND\_API.G\_RET\_STS\_UNEXP\_ERROR - Unexpected Error, not fixable by calling program.

x\_msg\_count OUT NUMBER

x\_msg\_data OUT VARCHAR2(2000)

x\_msg\_count holds the number of messages the message list and x\_msg\_data holds the encoded messages.

## Document Index

**Package Name:** AHL\_DI ASSO\_DOC\_ASO\_PUB

**Procedure Name:** PROCESS\_ASSOCIATION

The PROCESS\_ASSOCIATION API handles document association creation and updates for Master Configuration.

**Table 15–1 PROCESS\_ASSOCIATION**

Parameter	Usage	Type	Default
p_version_number	IN	NUMBER	1
p_init_msg_list	IN	VARCHAR2	FND_API.G_TRUE
p_commit	IN	VARCHAR2	FND_API.G_FALSE
p_validate_only	IN	VARCHAR2	FND_API.G_TRUE
p_validation_level	IN	NUMBER	FND_API.G_VALID_LEVEL_FULL
p_x_association_tblm	IN/OUT	association_tbl	
p_x_association_tblc	IN/OUT	association_tb	
p_module_type	IN	VARCHAR2	
x_return_status	OUT	VARCHAR2	
x_msg_count	OUT	NUMBER	
x_msg_data	OUT	VARCHAR2	

**Package Name:** AHL\_DI\_DOC\_INDEX\_PUB

**Procedure Name:** CREATE\_DOCUMENT

The CREATE\_DOCUMENT API creates any document index record as well suppliers, recipients subscriptions and revisions.

**Table 15–2   CREATE\_DOCUMENT**

Parameter	Usage	Type	Default
p_x_document_tbl	IN/OUT	DOCUMENT_TBL	
p_x_supplier_tbl	IN/OUT	SUPPLIER_TBL	
p_x_recipient_tbl	IN/OUT	RECIPIENT_TBL	

**Package Name:** AHL\_DI\_DOC\_INDEX\_PUB

**Procedure Name:** MODIFY\_DOCUMENT

The MODIFY\_DOCUMENT API updates any document index record as well suppliers, recipients subscriptions and revisions.

**Table 15–3   MODIFY\_DOCUMENT**

Parameter	Usage	Type	Default
p_x_document_tbl	IN/OUT	DOCUMENT_TBL	
p_x_supplier_tbl	IN/OUT	SUPPLIER_TBL	
p_x_recipient_tbl	IN/OUT	RECIPIENT_TBL	

## Master Configuration

**Package Name:** AHL\_MC\_MASTERCONFIG\_PUB

**Procedure Name:** PROCESS\_MASTER\_CONFIG

The PROCESS\_MASTER\_CONFIG API creates and updates Master Configurations.

**Table 15–4 PROCESS\_MASTER\_CONFIG**

Parameter	Usage	Type
p_x_master_config_tbl	IN/OUT	AHL_MC_MASTERCONFIG_PVT.nodes_tbl_type
p_x_counter_rules_tbl	IN/OUT	AHL_MC_MASTERCONFIG_PVT.counter_rules_tbl_type
p_x_events_tbl	IN/OUT	AHL_MC_MASTERCONFIG_PVT.events_tbl_type

## Outside Processing

**Package Name:** AHL\_OSP\_ORDERS\_PUB

**Procedure Name:** PROCESS\_OSP\_ORDER

The PROCESS\_OSP\_ORDER API creates, updates and deletes Outside Processing Orders and Lines.

**Table 15–5 PROCESS\_OSP\_ORDER**

Parameter	Usage	Type
p_x_osp_order_rec	IN/OUT	AHL_OSP_ORDERS_PVT.osp_order_rec_type
p_x_osp_order_lines_tbl	IN/OUT	AHL_OSP_ORDERS_PVT.osp_order_lines_tbl_type

**Package Name:** AHL\_OSP\_SHIPMENT\_PUB

**Procedure Name:** PROCESS\_ORDER

The PROCESS\_ORDER API creates, updates and deletes shipment header and lines associated to an Outside Processing Order and call corresponding CSI sub-transaction API.

**Table 15–6    PROCESS\_ORDER**

Parameter	Usage	Type
p_x_header_rec	IN/OUT	AHL_OSP_SHIPMENT_PUB.ship_header_rec_type
p_x_osp_lines_tbl	IN/OUT	AHL_OSP_SHIPMENT_PUB.ship_lines_tbl_type

**Package Name:** AHL\_OSP\_SHIPMENT\_PUB

**Procedure Name:** BOOK\_ORDER

The BOOK\_ORDER API books a shipment order corresponding to an Outside Processing Order.

**Table 15–7    BOOK\_ORDER**

Parameter	Usage	Type
p_oe_header_tbl	IN	Table of NUMBERS

**Package Name:** AHL\_OSP\_SHIPMENT\_PUB

**Procedure Name:** DELETE\_CANCEL\_ORDER

The DELETE\_CANCEL\_ORDER API checks if the order or line is in pre-booked status. If so, the API deletes the order or line. If the order or line is booked and in pre-shipped status. The API cancels the order or line. In any other case, the API does not change the order or line.

**Table 15–8    DELETE\_CANCEL\_ORDER**

Parameter	Usage	Type
p_oe_header_id	IN	NUMBER

**Table 15–8 DELETE\_CANCEL\_ORDER**

Parameter	Usage	Type
p_oe_lines_tbl	IN	Table of NUMBERS
p_cancel_flag	IN	VARCHAR2(1)

## Product Classification

**Package Name:** AHL\_PC\_HEADER\_PUB

**Procedure Name:** PROCESS\_PC\_HEADER

The PROCESS\_PC\_HEADER API creates, updates, deletes and copy Product Classification nodes.

**Table 15–9 PROCESS\_PC\_HEADER**

Parameter	Usage	Type
p_x_pc_header_rec	IN/OUT	AHL_PC_HEADER_PUB.process_pc_header

**Package Name:** AHL\_PC\_NODE\_PUB

**Procedure Name:** PROCESS\_NODES

The PROCESS\_NODES API creates, updates, deletes and copy Product Classification Nodes.

**Table 15–10 PROCESS\_NODES**

Parameter	Usage	Type
p_x_nodes_tbl	IN/OUT	AHL_PC_NODE_PUB.pc_node_tbl

## Unit Configuration

**Package Name:** AHL\_UC\_UTILIZATION\_PUB

**Procedure Name:** UPDATE\_UTILIZATION

The UPDATE\_UTILIZATION API updates the utilization based on counter rules defined in Master Configuration.

**Table 15–11 UPDATE\_UTILIZATION**

Parameter	Usage	Type
p_utilization_tbl	IN	AHL_UC_UTILIZATION_PVT.utilization_tbl_type

## Unit Maintenance Plan

**Package Name:** AHL\_UMP\_UF\_PUB

**Procedure Name:** PROCESS\_UTILIZATION\_FORECAST

The PROCESS\_UTILIZATION\_FORECAST API creates, updates and deletes utilization forecasts for Oracle Complex Maintenance, Repair, and Overhaul assets and classifications.

**Table 15–12 PROCESS\_UTILIZATION\_FORECAST**

Parameter	Usage	Type
p_x_uf_header_rec	IN/OUT	AHL_UMP_UF_PVT.uf_header_rec_type
p_x_uf_details_tbl	IN/OUT	AHL_UMP_UF_PVT.uf_details_tbl_type

**Package Name:** AHL\_UMP\_UNITMAINT\_PUB

**Procedure Name:** CAPTURE\_MR\_UPDATES

The CAPTURE\_MR\_UPDATES API records statuses with either "accomplishment date" or "deferred next due date" or "MR termination date" with their corresponding counter and counter values.

**Table 15–13 CAPTURE\_MR\_UPDATES**

Parameter	Usage	Type
p_unit_effectivity_tbl	IN	AHL_UMP_UNITMAINT_PVT.unit_effectivity_tbl_type
p_x_unit_threshold_tbl	IN/OUT	AHL_UMP_UNITMAINT_PVT.unit_threshold_tbl_type
p_x_unit_accomplish_tbl	IN/OUT	AHL_UMP_UNITMAINT_PVT.unit_accomplish_tbl_type

**Package Name:** AHL\_UMP\_UNITMAINT\_PUB

**Procedure Name:** TERMINATE\_MR\_INSTANCES

The TERMINATE\_MR\_INSTANCES API will be called whenever a new revision for an MR gets created. All instance effectivities built in Unit Maintenance Plan using the old revision will be terminated and effectivities with MR details of the new revision will be created and due dates calculated.

**Table 15–14 TERMINATE\_MR\_INSTANCES**

Parameter	Usage	Type
p_old_mr_header_id	IN	NUMBER
p_old_mr_title	IN	VARCHAR2
p_old_version_number	IN	NUMBER
p_new_mr_header_id	IN	NUMBER
p_new_mr_title	IN	VARCHAR2

**Table 15–14    *TERMINATE\_MR\_INSTANCES***

Parameter	Usage	Type
p_new_version_number	IN	NUMBER

**Package Name:** AHL\_UMP\_UNITMAINT\_PUB

**Procedure Name:** PROCESS\_UNITEFFECTIVITY

The PROCESS\_UNITEFFECTIVITY API processes all units, a specific unit, or a specific MR to build unit effectivity and calculate their due dates.

**Table 15–15    *PROCESS\_UNITEFFECTIVITY***

Parameter	Usage	Type
p_mr_header_id	IN	NUMBER
p_mr_title	IN	VARCHAR2
p_mr_version_number	IN	NUMBER
p_unit_config_header_id	IN	NUMBER
p_unit_name	IN	VARCHAR2
p_csi_instance_number	IN	VARCHAR2
p_csi_item_instance_id	IN	NUMBER

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