

Oracle® Release Management

Implementation Manual

Release 11*i*

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Oracle Release Management Implementation Manual, Release 11i

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Oracle Release Management Implementation Manual, Release 11*i*

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Oracle Corporation welcomes your comments and suggestions on the quality and usefulness of this document. Your input is an important part of the information used for revision.

- Did you find any errors?
- Is the information clearly presented?
- Do you need more information? If so, where?
- Are the examples correct? Do you need more examples?
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If you have problems with the software, please contact your local Oracle Support Services.

Preface

Audience for This Guide

Welcome to Release 11i of the *Oracle Release Management Implementation Manual*.

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

- The principles and customary practices of your business area.
- Oracle Release Management

If you have never used Oracle Release Management, Oracle suggests you attend one or more of the Oracle Release Management 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

This guide contains the information you need to understand and use Oracle Release Management.

Chapter 1 describes the user procedures for setting up a new installation of Oracle Release Management.

Chapter 2 describes the contains the necessary steps for completing the e-Commerce Gateway implementation of inbound planning, shipping, and production sequence Schedules needed in Oracle Release Management.

Chapter 3 provides you with an overview of using the Oracle e-Commerce Gateway for processing inbound demand schedules from your trading partners into Oracle Release Management.

Appendix A details the two spreadsheets used in the Automotive Upgrade from Release 10.7 and 11 to Release 11i.

Appendix B covers the Release Management Demand Processor.

Appendix C contains information about viewing and managing demand.

Appendix D covers Release Management Exceptions.

Appendix E describes CUM Management.

Documentation Accessibility

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Accessibility of Code Examples in Documentation

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

Accessibility of Links to External Web Sites in Documentation

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Other Information Sources

You can choose from many sources of information, including online documentation, training, and support services, to increase your knowledge and understanding of Oracle Release Management.

If this guide refers you to other Oracle Applications documentation, use only the Release 11*i* versions of those guides.

Online Documentation

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

- **Online Help** - Online help patches are available on MetaLink.
- **11*i* Features Matrix** - This document lists new features available by patch and identifies any associated new documentation. The new features matrix document is available on MetaLink.
- **Readme File** - Refer to the readme file for patches that you have installed to learn about new documentation or documentation patches that you can download.

Related User's Guides

Oracle Release Management shares business and setup information with other Oracle Applications products. Therefore, you may want to refer to other user's guides when you set up and use Oracle Release Management.

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 Release Management (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.

User Guides Related to This Product

Oracle Applications Demonstration User's Guide

This guide documents the functional storyline and product flows for Vision Enterprises, 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.

Oracle Bills of Material User's Guide

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

Oracle e-Commerce Gateway User's Guide

This guide describes how Oracle e-Commerce Gateway provides a means to conduct business with trading partners via Electronic Data Interchange (EDI). Data files are exchanged in a standard format to minimize manual effort, speed data processing and ensure accuracy.

Oracle XML Gateway User's Guide

This guide describes how Oracle XML Gateway provides a means to conduct business with trading partners via XML Interchange and Setup Oracle XML Gateway

Oracle Inventory User's Guide

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

Oracle Advanced Planning and Scheduling User's Guide

This guide describes how to anticipate and manage both supply and demand for your items. Using a variety of tools and techniques, you can create forecasts, load these forecasts into master production schedules, and plan your end-items and their component requirements. You can also execute the plan, releasing and rescheduling planning suggestions for discrete jobs and repetitive schedules.

Oracle Order Management User's Guide

This guide describes how to enter sales orders and returns, copy existing sales orders, blanket sales agreement, schedule orders, release orders, plan departures and deliveries, confirm shipments, create price lists and discounts for orders, and create reports.

Oracle Receivables User's Guide

Use this manual to learn how to implement flexible address formats for different countries. You can use flexible address formats in the suppliers, banks, invoices, and payments windows.

Oracle Work in Process User's Guide

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

Oracle 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.

Installation and System Administration

Oracle Applications Concepts

This guide provides an introduction to the concepts, features, technology stack, architecture, and terminology for Oracle Applications Release 11i. 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 11i. 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 Release Management. This manual details additional steps and setup considerations for implementing Oracle Release Management with this feature.

Multiple Organizations in Oracle Applications

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

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 Release Management 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 11i.

Training and Support

Training

Oracle offers a complete set of training courses to help you and your staff master Oracle Release Management 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 Release Management 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

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Send electronic mail to **mfgdoccomments_us@oracle.com**.

Oracle Release Management Setup

This chapter describes the user procedures for setting up a new installation of Oracle Release Management.

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Overview of Setup Steps

These are all the steps required to setup Oracle Release Management. Each step is described in detail in the following sections:

- Step 1: Install Release 11i Oracle Applications
- Step 2: Define Oracle Release Management Profile Options
- Step 3: Define Customers, Addresses, and Locations
- Step 4: Define Warehouse Shipping Calendars
- Step 5: Define Customer Receiving Calendars
- Step 6: Define Trading Partner Specific Shipment Delivery Pattern Codes
- Step 7: Define Pricing Agreements
- Step 8: Define Inventory Items
- Step 9: Define Customer Items and Cross-References
- Step 10: Define Release Management Processing Rules
- Step 11: Create and Assign CUM Keys to shipments of Ship-From Customer Items under CUM Management
- Step 12: Verify CUM figures of Ship-From Customer Items under CUM Management
- Step 13: If CUM does not match, Enter CUM Adjustment transactions as needed
- Step 14: Define e-Commerce Gateway Code Conversion Values
- Step 15: Enable e-Commerce Gateway SPSI, SSSI, PSQI Transactions
- Step 16: Optionally Define Additional e-Commerce Gateway Column Rules
- Step 17: Optionally Utilize RLM Trading Partner or RLM Descriptive Flexfields
- Step 18: Define Sourcing Rules for Supply Chain Planning
- Step 19: Optionally Define Additional Inventory Transaction Reasons for CUM Adjustments
- Step 20: Optionally Define and/or Assign Message Categories
- Step 21: Define Forecast Set
- Step 22: Define XML Gateway Code Conversion Values
- Step 23: Enable XML Gateway Planning and Shipping Transactions

Step 1: Install Release 11i Oracle Applications

Release 11i Oracle Applications should be installed according to their specific installation procedures, including Release Management and e-Commerce Gateway for SPST, SSSI, PSQI, DSNO, and INO transactions. Once they are successfully installed:

- Release Management Setup steps are defined in this document
- Other applications have their own setup procedures that must be completed before proceeding

Step 2: Define Oracle Release Management Profile Options

During implementation, this document assumes you have gone through the Manufacturing Implementation Manual and have set the profiles to the appropriate values required to make other manufacturing applications work properly.

Release Management Specific Profile Options

Oracle Release Management has some profile options, listed in the following table. See the *Oracle System Administrator User's Guide* and the *Oracle Release Management User's Guide* for more information.

1. Navigate to the Find System Profiles window.
2. Enter RLM% into the Find field and then press Find. This will return all Release Management profiles.

You can set or view the following profile options in Oracle Release Management. A subsequent table also includes profile options from other applications that are used by Oracle Release Management.

The following table indicates whether you (the "User") can view or update the profile option and at which System Administrator level the profile options can be updated. The System Administrator level includes User, Responsibility, Application, and Site levels.

The table also displays if the profile option is Optional or Required:

- **Required:** Requires you to provide a value.
- **Optional:** A default value is provided, so you only need to change it if you do not want to accept the default.

The following terms are used in the table to identify if you can view or update the profile option information:

- *Updatable*: You can update the profile option.
- *View Only*: You can view the profile option value but you cannot change it.
- *No Update or View*: You cannot view or change the profile option value.

Profile Option	User	System Admin. User	System Admin. Resp	System Admin. App	System Admin. Site	Required	Default Value
RLM: Debug Mode	Updatable	Updatable	Updatable	Updatable	Updatable	No	Null
RLM: MRP Forecast Selection List	No Update or View	No Update or View	No Update or View	No Update or View	Updatable	No	No Default
RLM: MSC/MRP Default Assignment Set	No Update or View	No Update or View	No Update or View	No Update or View	Updatable	No	No sourcing to be applied
RLM: Print CUM Data on Shipping Documents	Updatable	Updatable	Updatable	Updatable	Updatable	No	Yes
RLM: Workflow Enabled	Updatable	Updatable	Updatable	Updatable	Updatable	No	No

RLM: Debug Mode

Determines if debug file is written for running the Demand Processor. Available values are:

0 - highest debug level

Null - no debug

The default value is Null.

This profile is updatable at all levels.

RLM: MRP Forecast Selection List

Provides a means to specify the forecast source list that will house all the names of forecasts that are candidates for the inbound Automotive forecast demand items, to be assigned.

The default value is 'none.'

This profile can be set at the Site level.

Note: This profile option is required if you import forecast data into Oracle Advanced Planning and Scheduling using the Demand Time Fence Forecast to Planning. See Processing Rules for more information.

RLM: MSC/MRP Default Assignment Set

Determines if the Supply Chain Sourcing Rules should be used to derive the ship from organizations. If these rules should be used (the profile option is set to something other than 'No sourcing to be applied') the Demand Processor looks for a unique sourcing rule for the item. If a unique rule is found, this is the rule that is used. If more than one rule exists for the item, the Default Assignment Set designated in the profile option is used to determine which rule should be used.

The default is No sourcing to be applied.

This profile is updatable only at site level.

RLM: Print CUM Data on Shipping Documents

Determines whether or not CUM Data should be printed on shipping documents. Available values are:

Yes - CUM Data is printed on shipping documents.

No - CUM Data is excluded from shipping documents.

The default is Yes.

This profile is updatable at all levels.

RLM: Workflow Enabled

Determines whether or not the Demand Processor is enabled to run in workflow mode. Available values are:

Yes - The Demand Processor is enabled to run in workflow mode.

No - The Demand Processor is disabled for workflow mode.

The default is No.

This profile is updatable at all levels.

Other Necessary Profiles

This table includes profile options from other applications that you must set for full Oracle Release Management functionality.

The following table indicates whether you (the “User”) can view or update the profile option and at which System Administrator level the profile options can be updated. The System Administrator level includes User, Responsibility, Application, and Site levels.

The table also displays if the profile option is Optional or Required:

- *Required*: Requires you to provide a value.
- *Optional*: A default value is provided, so you only need to change it if you do not want to accept the default.

The following terms are used in the table to identify if you can view or update the profile option information:

- *Updatable*: You can update the profile option.
- *View Only*: You can view the profile option value but you cannot change it.

No Update or View: You cannot view or change the profile option value.

Profile Option	User	System Admin. User	System Admin. Resp	System Admin. App	System Admin. Site	Required	Default Value
ECE: DSNO-Enabled	No Update or View	No Update or View	Updatable	No Update or View	Updatable	No	No default
ECE: INO-Enabled	View Only	No Update or View	Updatable	No Update or View	Updatable	No	No default
ECE: Input File Path	View Only	View Only	Updatable	View Only	Updatable	Yes	No default
ECE: Output File Path	View Only	View Only	Updatable	View Only	Updatable	Yes	No default
ECE: PSQI-Enabled	No Update or View	No Update or View	Updatable	No Update or View	Updatable	Yes	No default
ECE: SPSI-Enabled	No Update or View	No Update or View	Updatable	No Update or View	Updatable	Yes	No default
ECE: SSSI-Enabled	No Update or View	No Update or View	Updatable	No Update or View	Updatable	Yes	No default

Profile Option	User	System Admin. User	System Admin. Resp	System Admin. App	System Admin. Site	Required	Default Value
OM: Invoice Numbering Method	Updatable	Updatable	Updatable	Updatable	Updatable	Yes	Automatic

ECE: DSNO Enabled

Specifies whether or not the DSNO transaction is enabled.

There is no default value.

This profile can only be set at the site and responsibility levels.

ECE: INO Enabled

Specifies whether or not the INO transaction is enabled at the site level.

There is no default value.

This profile can only be set at the site and responsibility levels.

ECE: Input File Path

Specifies the directory where inbound data files are expected. This value must match the actual directory on disk and that designated in the INIT.ORA file.

There is no default value.

This profile can only be set at the site and responsibility levels.

ECE: Output File Path

Specifies the directory where outbound interface data files are written. This value must match the actual directory on disk and that designated in the INIT.ORA file.

There is no default value.

This profile can only be set at the site and responsibility levels.

Note: For e-Commerce Gateway, you must create inbound and outbound directories on your server, and then specify them in the INIT.ORA file and in the ECE: Inbound File Path and ECE: Outbound File Path profile options, respectively. See: *Defining Data File Directories, Oracle e-Commerce Gateway Implementation Manual, Release 11i.*

ECE: PSQI Enabled

Determines whether or not inbound sequenced shipping schedule transaction is enabled.

There is no default value.

This profile can only be set at the site and responsibility levels.

ECE: SPSI Enabled

Determines whether or not inbound planning schedule transaction is enabled.

There is no default value.

This profile can only be set at the site and responsibility levels.

ECE: SSSI Enabled

Determines whether or not inbound shipping schedule transaction is enabled.

There is no default value.

This profile can only be set at the site and responsibility levels.

OM: Invoice Numbering Method

Determines whether invoice numbers are automatically generated or are, instead, mapped to the delivery name. Available values are:

Delivery Name - The delivery name is used as the invoice number.

Automatic - Autoinvoice, automatically creates the invoice number.

The default is Automatic.

Step 3: Define Customers, Addresses and Locations

Refer to the Accounts Receivable and Order Management Setup Steps in their respective Implementation Manuals.

Step 4: Define Warehouse Shipping Calendars

Using the Oracle Shipping Enter Calendar form, define your Warehouse Shipping Calendar. Then use the Assign Calendar form to associate this calendar to a particular warehouse. These calendars will be used by Release Management to determine an appropriate ship date.

Step 5: Define Customer Receiving Calendars

Using the Oracle Shipping Enter Calendar form, define each Customer Receiving Calendar, then use the Assign Calendar form to associate this calendar to a particular customer or customer site. These calendars will be used by Release Management to determine an appropriate ship date. You may also define a generic Customer Receiving Calendar and assign it to multiple customers.

Step 6: Define Shipment Delivery Pattern Codes

Using the Maintain Ship/Delivery Pattern Codes form, verify that seeded Ship/Delivery Pattern Codes are present, and optionally define your own Trading Partner specific patterns that may vary from the seeded values. Seeded codes cannot be modified.

Verify system defined codes, that include all ASC X12 (element 678) and EDIFACT (code 2015) Shipment Delivery Pattern Codes that represent either a pattern of specific day(s) of a week or no pattern.

Step 7: Define Pricing Agreements

Using the Enter Pricing Agreements form in Order Management, enter one Pricing Agreement for each customer blanket purchase order whose releases arrive as inbound demand transactions processed by Release Management. The Pricing Agreement Signature date will be used as the cumulative starting date if the CUM Management Type is CUM By PO Only.

Step 8: Define Inventory Items

Using the Define Items form, define the Inventory Items that will be processed by Release Management.

Step 9: Define Customer Items and Cross-References

Using the Define Customer Items form, define the Customer Items that will be processed by Release Management, their corresponding Inventory Items, and preference ranking.

Step 10: Define Release Management Processing Rules

Using the Release Management Processing Rules form, define the Release Management attributes associated with each Ship-From/Ship-To business entity for which Release Management will process demand. If terms are not defined at the optional lower levels, they will default from higher levels.

There are four levels where Processing Rules can be defined:

- Ship-From / Customer (mandatory)
- Ship-From / Customer Item (optional)
- Ship-From / Ship-To (optional)
- Ship-From / Ship-To / Customer Item (optional)

There are five categories of Processing Rules attributes:

- Demand Management
- Demand Fences
- Order Management
- CUM Management
- General

Step 11: Create and Assign CUM Keys

Using the CUM Upgrade program, assign the correct CUM Key to each shipment line for each Ship-From Customer Item if:

- the Ship-From/Ship-To business entity is under CUM Management
- the Ship-From Customer Item CUM Management flag is ON
- shipment date falls on or after the start date of the current CUM Period

Step 12: Verify CUM of Ship-From Customer Items

For each Ship-From Customer Item under CUM Management, verify the CUM shipped quantity against internal shipment records and external systems (e.g. CARaS if this is an Automotive Upgrade, or a legacy system if this is a new installation). Manually verify that:

- the CUM shipped quantity was calculated accurately based on the CUM Management Rule defined for the Ship-From/Ship-To business entity;
- the CUM shipped quantity matches the external system CUM shipped quantity after CUM Keys are assigned.
- the CUM key is active (by default for a new CUM key)

Step 13: Enter CUM Adjustment Transactions as Needed

If a CUM Adjustment is needed to synchronize the CUM shipped quantity of a Ship-From Customer Item under CUM Management with that of the external system, use the Customer CUM Workbench form to enter a CUM Adjustment for Starting CUM Value.

This step is needed if:

- the CUM shipped quantity does not match the external system CUM shipped quantity after CUM Keys are assigned (e.g. some shipments pertaining to the CUM Period were not made under Release 11 Oracle Shipping);
- the Customer Item ID was not associated with the Release 11 Oracle Shipping detail, which would prevent a CUM Key from being assigned.

Step 14: Define e-Commerce Gateway Code Conversion Values

Generic Code Conversions

It may be necessary to define additional Code Conversions for UOM (Unit of Measure), a category used in multiple e-Commerce Gateway transactions.

- Existing UOM code conversions should be evaluated to ensure that all internal and external values to be used on inbound demand transactions are defined. Additional values may be required, both generic and Trading Partner-specific.
- Any new internal value must also be set up within the Oracle Inventory application (e.g. UOM Conversions).

RLM Code Conversions: Additional internal values allowed

This code (RLM_SHP_DEL_CODE) specifies the days for routine shipments and deliveries. The seed data for e-Commerce Gateway Code Conversion includes both ANSI X12 (ele. 678) and EDIFACT (code 2015) Shipment Delivery Pattern Codes.

You may define additional generic or Trading Partner-specific Shipment Delivery Pattern Codes. This Code Conversion enables you to define customer-specific internal Shipment Delivery Pattern Codes using the Release Management Maintain Ship/Delivery Pattern Codes form, and map them to external EDI values using customer keys in the e-Commerce Gateway as needed.

RLM Code Conversions: Additional internal values not allowed

It may be necessary to define Trading Partner-specific values of RLM Data Elements requiring Code Conversion that are used for inbound demand.

For example, one customer may consider a Purpose Code of Change to mean a Replacement of a subset of items on a previous schedule; another customer may consider a Purpose Code of Change to mean a Net Change of all data on a previous schedule. To ensure that the Demand Processor would handle the data from the first situation correctly, a Trading Partner-specific Code Conversion for RLM_TRX_PURP must be defined that would link the external Purpose Code of Change to the internal Purpose Code of Replacement.

The following RLM Code Conversions are defined for inbound demand, and are used for SPSI, SSSI, and PSQI transactions. New internal values cannot be added, but new generic and Trading Partner-specific external values may be cross-referenced to existing internal values:

- RLM_SCHED_TYPE
- RLM_DTL_TYPE
- RLM_DTL_SUBTYPRLM_DATE_TYPE
- RLM_QTY_TYPE
- RLM_TRX_PURP
- RLM_SHP_DEL_CODE
- Examine each Trading Partner's EDI Implementation Guide for applicable inbound demand transactions to determine if the seeded values will handle the Trading Partner's EDI demand properly in the Demand Processor.
- For example, Modern Truck uses the EDIFACT DELJIT message for two different schedule types; they assign element 1001 of the BGM segment with a

value of 241 for Shipping Schedules and 242 for Sequenced Production Schedules. If Modern Truck is one of your trading partners, additional code conversions for RLM_SCHEDULE_TYPE could be set up as follows:

Table 1–1 Additional Schedule Type Code Conversions

Internal	External 1	External 2	EDI Standard
Sequenced	DELJIT	242	EDIFACT
Shipping	DELJIT	241	EDIFACT

- However, if another trading partner uses 242 with DELJIT to indicate a Kanban Shipping Schedule, you should set up these code conversions using trading partner keys. If not, define Trading Partner-specific external values for applicable internal values using the Define Code Conversions form.

Step 15: Enable e-Commerce Gateway SPSI, SSSI, PSQI transactions

If you are upgrading from Release 11 to Release 11*i*, enable applicable e-Commerce Gateway inbound demand transactions (SPSI, SSSI, and PSQI) for each trading partner set up in CARaS under Release 11.

Step 16: Optionally Define Additional e-Commerce Gateway Column Rules

If you are utilizing the Release Management Trading Partner Layer, it may be necessary to define additional e-Commerce Gateway Column Rules and corresponding Actions for specific trading partner requirements regarding inbound demand transactions (SPSI, SSSI, and PSQI). Each trading partner implementation guide should be evaluated for gaps between the standard processing and trading partner requirements. For more detailed information, refer to the *Oracle e-Commerce Gateway User's Guide*.

Step 17: Optionally Utilize RLM Trading Partner or Descriptive Flexfields

Evaluate the data storage and processing provided by Release Management for gaps in Trading Partner specific requirements for Demand, Order, Shipping, and CUM Management.

If data storage gaps exist, evaluate where the required data should be stored:

- Use Descriptive Flexfields for data on inbound demand schedules that needs to be carried through Order Management and Shipping.

- Use Trading Partner Flexfields for data on inbound demand schedules that will be referenced in Trading Partner-specific Workflow customizations.

If processing gaps exist, evaluate where customization of the workflow is needed to accommodate the requirement. Refer to the *Oracle Automotive Trading Partner Toolkit User's Guide* for details about trading partner specific processing.

The following tables must have the same definition in AOL for Descriptive Flexfield Attributes for the RLM Demand Processor:

- Headers
 - RLM_INTERFACE_HEADERS
 - RLM_SCHEDULE_HEADERS
 - OE_ORDER_HEADERS
- Lines
 - RLM_INTERFACE_LINES
 - RLM_SCHEDULE_LINES
 - OE_ORDER_LINES

Step 18: Define Sourcing Rules for Advanced Planning and Scheduling

In Oracle Advanced Planning and Scheduling, use the Define Supply Chain Sourcing Rules form to define any sourcing rules required to split demand into multiple Inventory Organizations. The Demand Processor will use the sourcing rules to split the requirements accordingly.

Step 19: Optionally Define Additional CUM Adjustment Reasons

If you would like to use additional CUM Adjustment Reasons that are not in the list below, define additional reasons using the Define Transaction Reasons form in Oracle Inventory.

The seeded CUM adjustment reasons are:

- Starting CUM: Indicates that this adjustment is the initial cumulative shipped quantity for this CUM entity.
- CUM Adjustment: Indicates that the customer has requested a CUM Adjustment because the ship-from organization's cumulative shipped quantity is out of sync with the customer's cumulative shipped/received quantity.

- **Damaged Goods:** Indicates that this adjustment corrects the ship-from organization's cumulative shipped quantity to reflect goods damaged while in transit that must be replaced without reducing the customer's additional demand.
- **Lost Shipment:** Indicates that this adjustment corrects the ship-from organization's cumulative shipped quantity to reflect goods lost while in transit that must be replaced without reducing the customer's additional demand.

Step 20: Optionally Define and/or Assign Message Categories

Release Management Exception Messages can be assigned to message categories that can be used to organize the messages in the Exception Report. There are six predefined Message Categories and new Message Categories that can be defined and assigned to exception messages as needed.

Define Message Categories

Using the Application Developer responsibility, navigate to the Application Object Library Lookups form. Query RLM_MESSAGE_CATEGORY Lookup Type. Enter a new code and message. You may define as many Message Categories as needed.

Setup Message Categories

Navigate to the Message Category form under the Release Management Responsibility. On this form you will see all of the Release Management Exception Messages. Number is the exception number, Text is the text of the exception message, and Message Category is the category currently assigned to the message. The following Message Categories are currently available:

- Action messages
- Default
- Data related issue
- Matching criteria related issue
- Non-matching criteria related issue
- Quantity changes
- Newly defined message categories are also available in the list of values

Step 21: Define Forecast Set

The Demand Processor will utilize customer, ship-to, bill-to, and warehouse data provided on the inbound schedule to derive the appropriate forecast name for interfacing planning data to Oracle Advanced Planning and Scheduling. The profile option RLM: MRP Forecast Selection List is used to identify the source list consisting of forecast names. The Forecast Source List contains the forecast names and their corresponding inventory organizations.

Define Forecast Set and Forecast Name

For each inventory organization that represents a Ship From/Warehouse, create the forecast set and individual forecast name with Customer, Ship-To, and Bill-To attributes. It is not required that all three attributes be specified. It is required, however, that only one Forecast Name representing a unique criteria combination be included in the Forecast Source List. The Demand Processor searches for the Forecast Name in the source list in the following way:

1. For the Ship From specified on the schedule line, look for a Forecast Name that has the same Customer, Ship To and Bill To.
2. If no match is found, find a Forecast Name that has the same Customer and Ship To (Ship To cannot be null on the Forecast Name).
3. If no match is found, find a Forecast Name that has the same Customer.
4. If no match is found, issue an error message.

Define Forecast Source List

Specify the Forecast Source List that contains all the Forecast Names that are candidates to be assigned the inbound forecast demand. It is required that at least one Forecast Name representing a unique combination of criteria be included in the Forecast Source List. For example, if two Forecast names have the same Customer, Ship To, and Bill To and both Forecast Names were included in the Forecast Source List, this is an error. The Demand Processor does not know which Forecast Name to use.

Although both Forecast Sets and Forecast Names can be included on a source list, only Forecast Names should be included in the Forecast Source List. The Demand Process only looks at Forecast Names and does not expand a Forecast Set to the Forecast Names associated with it.

Assign Forecast Source List to Profile

Under the System Administrator Responsibility, navigate to the Profile Options form. Set the site value for RLM: MRP Forecast Selection List to the Forecast Source List defined above.

Step 22: Define Oracle XML Gateway Code Conversion Values

Oracle XML Gateway code conversion provides a method to cross-reference the codes defined in Oracle Applications to codes used by trading partners.

Also see the Oracle XML Gateway documentation.

Step 23: Enable XML Gateway Planning and Shipping Transactions

Enable the applicable XML Gateway inbound planning and shipping transactions for each trading partner.

Additional e-Commerce Gateway Setup Steps

This chapter contains the necessary steps for completing the e-Commerce Gateway implementation of Inbound Planning, Shipping, and Production Sequence Schedules in Oracle Release 11i.

- Overview of Setup Steps on page 2-2
- Setup Steps on page 2-3
- Step 2: Define Code Conversion Values on page 2-3
- Step 3: Enable Inbound transactions for Trading Partners on page 2-5
- Step 4: Optionally Define Additional Column Rules on page 2-5
- Step 5: Validate Interface Data File Map for Each Trading Partner on page 2-5
- Step 6: Validate Interface Data File Business Rules by the EDI Translator on page 2-5

Overview of Setup Steps

These are the steps you must perform in Oracle e-Commerce Gateway to enable Inbound Planning, Shipping, and Production Sequence Schedules. Each of these steps is described in more detail in the following sections.

- Step 1: Setup Oracle Release Management
- Step 2: Define Code Conversion Values
- Step 3: Enable Inbound EDI transactions for each trading partner
- Step 4: Optionally Define Additional Column Rules
- Step 5: Validate Interface Data File Map for each trading partner
- Step 6: Validate Interface Data File Business Rules by the EDI Translator

Setup Steps

Step 1: Setup Oracle Release Management

For details of all required setup procedures, refer to Chapter 1, Oracle Release Management Setup.

Step 2: Define Code Conversion Values

Generic Code Conversions

It may be necessary to define additional Code Conversions for UOM (Unit of Measure), a category used in multiple e-Commerce Gateway transactions.

- Existing UOM code conversions should be evaluated to ensure that you have defined all internal and external values to be used on inbound demand transactions. Additional values may be required, both generic and Trading Partner-specific.
- Any new internal value must also be set up within the Oracle Inventory application (e.g. UOM Conversions).

For details of all the required define procedures, refer to Chapter 1, “Oracle Release Management Setup” Step 14 *Define e-Commerce Gateway Code Conversion Values*.

RLM Code Conversions: Additional internal values allowed

This code (RLM_SHP_DEL_CODE) specifies the days for routine shipments and deliveries. The seed data for e-Commerce Gateway Code Conversion includes both ANSI X12 (ele. 678) and EDIFACT (code 2015) Shipment Delivery Pattern Codes.

You may define additional generic or trading partner specific Shipment Delivery Pattern Codes. This Code Conversion enables you to define customer-specific internal Shipment Delivery Pattern Codes using the Release Management Maintain Ship/Delivery Pattern Codes form. Then, map them to external EDI values using customer keys in the e-Commerce Gateway as needed.

RLM Code Conversions: Additional internal values not allowed

It may be necessary to define Trading Partner-specific values of RLM Data Elements requiring Code Conversion that are used for inbound demand.

For example, one customer may consider a Purpose Code of Change to mean a Replacement of a subset of items on a previous schedule; another customer may

consider a Purpose Code of Change to mean a Net Change of all data on a previous schedule. To ensure that the Demand Processor will handle the data from the first situation correctly, a Trading Partner-specific Code Conversion for RLM_TRX_PURP must be defined to link the external Purpose Code of Change to the internal Purpose Code of Replacement.

- The following RLM Code Conversions are defined for inbound demand, and are used for SPST, SSSI, and PSQI transactions. New internal values cannot be added, but new generic and Trading Partner-specific external values may be cross-referenced to existing internal values:
 - RLM_SCHED_TYPE
 - RLM_DTL_TYPE
 - RLM_DTL_SUBTYP
 - RLM_DATE_TYPE
 - RLM_QTY_TYPE
 - RLM_TRX_PURPOSE
 - RLM_SHP_DEL_CODE

Examine each Trading Partner's EDI Implementation Guide for applicable inbound demand transactions to determine if the seeded values will handle the Trading Partner's EDI demand properly in the Demand Processor.

- For example, Modern Truck uses the EDIFACT DELJIT message for two different schedule types; they assign element 1001 of the BGM segment with a value of 241 for Shipping Schedules and 242 for Sequenced Production Schedules. If Modern Truck is one of your trading partners, additional code conversions for RLM_SCHEDULE_TYPE could be set up as follows:

Table 2–1 Additional Schedule Type Code Conversions

Internal	External 1	External 2	EDI Standard
Sequenced	DELJIT	242	EDIFACT
Shipping	DELJIT	241	EDIFACT

However, if another trading partner uses 242 with DELJIT to indicate a Kanban Shipping Schedule, you should set up these code conversions using trading partner keys. If not, define Trading Partner-specific external values for applicable internal values using the Define Code Conversions form.

Step 3: Enable Inbound transactions for Trading Partners

Once data file directories, trading partner information, code conversions, and optional customizations of interface data file formats have been performed, use Oracle Applications Standard Request Submission to run extract programs for outbound transactions and import programs for inbound transactions.

Enable Inbound Planning (SPSI), Shipping (SSSI) and Production Sequence Schedules (PSQI) for each applicable Trading Partner. Specify which EDI Standard is used for the transaction.

Step 4: Optionally Define Additional Column Rules

For details of all required define procedures, refer to Chapter 1 “Oracle Release Management Setup” Step 16 *Optionally Define Additional e-Commerce Gateway Column Rules*.

If you are utilizing the Release Management Trading Partner Layer, it may be necessary to define additional e-Commerce Gateway Column Rules and corresponding Actions for specific trading partner requirements regarding Inbound Planning, Shipping, and Production Sequence Schedules. Each trading partner implementation guide should be evaluated for gaps between the standard processing and trading partner requirements. For more detailed information, refer to the *Oracle e-Commerce Gateway User’s Guide*.

Step 5: Validate Interface Data File Map for Each Trading Partner

You can adjust the layout of the interface data file or the mapping of data elements in e-Commerce Gateway to meet the needs of your trading partners for Inbound Planning and Shipping Schedules. Refer to the *Oracle e-Commerce Gateway User’s Guide* for details.

Step 6: Validate Interface Data File Business Rules by the EDI Translator

Validate that the EDI Translator is implementing the following rules for populating the interface data file for Inbound Planning, Shipping, and Production Sequence Schedules:

Note: Some of the rules below are specific to Production Sequence Schedules; be sure that these rules are implemented for the appropriate Inbound EDI schedules.

- All mapping from the EDI transaction to the interface data file is done according to the Master Spreadsheet.
- In the Test Indicator attribute of the Common Control Record (0010), a test transaction is identified as 'T' and production by 'P.'
- For Planning Schedule/Material Release, constant value 'SPSI' must be placed in the Document ID attribute of the Common Control Record (0010).
- For Shipping Schedules, constant value 'SSSI' must be placed in the Document ID attribute of the Common Control Record (0010).
- For Production Sequence Schedules, constant value 'PSQI' must be placed in the Document ID attribute of the Common Control Record (0010).
- The standard-specific EDI transaction name identifier must be placed in the Schedule Source 1000 record. For example,

X12 - "830", "862" or "866"

ODETTE - "DELINS"

EDIFACT - "DELJIT" or "DELFOR"

- The Note/Special Instruction segment is a floating segment that may occur anywhere in the transaction, but its placement in the interface data file will depend on the value of the qualifier and whether it applies to the schedule as a whole or to the scheduled item. If this segment is "GEN," "DEL," or "PUR," then it should be loaded into record 1010. If this segment is "LIN," then it should be loaded into record 2140.

Note: For Production Sequence Schedules, if the Note/Special Instruction segment is "LIN", then it should be loaded, instead, into record 4030.

- The date format is CCYYMMDD HHMMSS which is 15 characters. Note the blank between the date and time. If time is irrelevant to the data field, it must be all zeros or blank.
- For Planning and Shipping Schedules, the Quantity Qualifier from the EDI transaction beginning segment (BFR05, BSS11) must be assigned by the EDI Translator application to each demand detail from the FST segment (past due, firm, or forecast requirements) in record 4000, but not with authorizations, shipment/receipt, or other information.
- For Production Sequence Schedules, the Quantity Qualifier from the EDI transaction beginning segment (BSS11) must be associated by the EDI Translator

application with each requirement detail within the DTM segment loop, in the interface data file at 2000 or 4000 level unless specifically overridden by a value in QTY01 element.

- The Purchase Order Number, if specified in a segment in the header level, e.g. the EDI transaction beginning segment (BFR11, BSS10), must be associated by the EDI Translator application with each schedule item detail which does not have a different Purchase Order Number specified in the detail level 2000 record.
- If the JIT segment is used in a Shipping Schedule to indicate multiple requirement quantities/times in a period, each JIT segment must have its own 5000 level record. On the 5000 record, you must populate the Shipment Time and the Quantity, but leave the Ship-To Destination Code, and UOM blank.

For example, a firm demand quantity of 1000 to be delivered on 11/1/97 with order number 1234 has five timed deliveries for that day. This would be indicated in the 862 as:

- FST*1000*C*D*110197**002*ON*1234
- JIT*100*0700
- JIT*150*1000
- JIT*200*1200
- JIT*250*1400
- JIT*300*1700

One 4000 record would be written to the interface data file, with the date, order number, firm demand status, and bucket (day) from the FST segment.

Five 5000 records would be written to the interface data file, with the appropriate time and quantity from the JIT segment. The quantity of all five 5000 records would total 1000.

In the RLM Demand Lines Interface, five item detail rows would be written, containing all 4000 record information combined with the 5000 record. The time from the 5000 record would be concatenated to the date from the 4000 record, yielding a date/time in Oracle standard date format. The quantity of all five item detail rows would total 1000.

- If the SDQ segment is used in a Shipping Schedule to indicate multiple destinations for a single FST requirement, each pair of identification code and quantity elements (e.g. SDQ03/SDQ04 or SDQ05/SDQ06) must have its own

5000 level record. On the 5000 record, populate the Ship-To Destination Code, the Quantity, and UOM, but leave the Shipment Time blank.

For example, a firm demand quantity of 1000 to be delivered on 11/1/97 with order number 1234 is to be specifically split among three different destinations: 200 to 002BDY, 300 to 002ASY, and 500 to 002DAT. This would be indicated in the 862 as:

```
FST*1000*C*D*110197**002*ON*1234
```

```
SDQ*EA*92*002BDY*200*002ASY*300*002DAT*500
```

One 4000 record would be written to the interface data file, with the date, order number, firm demand status, and bucket (day) from the FST segment.

Three 5000 records would be written to the interface data file, each with the appropriate ship-to code and quantity from the SDQ segment. The quantity of all three 4000 records would total 1000.

In the RLM Demand Lines Interface, three item detail rows would be written, containing all 4000 record information combined with the 5000 record. The ship-to code from the 5000 record would replace and override the default ship-to information, including any specified default ship-to address fields. The quantity of all three item detail rows would total 1000.

- For Production Sequence Schedules, each 3000 or 4000 record (LIN or SLN) must be assigned a unique transaction sequence number by the EDI Translator software, representing its actual sequence in the EDI transaction.
- For Production Sequence Schedules, if the DTM/LIN/SLN/PID loop is being utilized, all Subline Product Descriptions must be concatenated into a single occurrence of Notes Record 4030.
- For Production Sequence Schedules, if the DTM/LIN/SLN/PID loop is being utilized, all Subline Item Measurements must be concatenated into a single occurrence of Record 4050.

E-Commerce Gateway for Inbound Demand

The e-Commerce Gateway for Inbound Demand chapter covers the following topics:

- Overview on page 3-2
- Process Flow on page 3-4
- Using e-Commerce Gateway for Inbound Demand on page 3-5
- Process Automation on page 3-14
- Exception Management on page 3-16
- Inbound Demand Customization on page 3-18

Overview

The Oracle e-Commerce Gateway provides a bridge from the EDI translator of your choice to the Oracle Release Management Demand Processor Open Interface.

This essay focuses on using the Oracle e-Commerce Gateway for processing inbound demand schedules from your trading partners into Oracle Release Management, and addresses the following areas:

- Interface Data File Mapping
- Trading Partner Setup
- Code Conversion Setup
- Process Automation
- Exception Management
- Inbound Demand Customization

Inbound Demand Transaction Types

Three types of EDI inbound demand documents are supported by the Oracle Release Management Demand Processor:

- Planning / Material Release Schedules
- Shipping Schedules
- Production Sequence Schedules

Specific EDI documents are identified with a specific e-Commerce Gateway Transaction Type Code and mapped using the corresponding interface data file format. There are several EDI transactions or messages that can be processed as inbound demand, having various functionality and EDI standards.

SPSI for Planning/Release:

The code 'SPSI' is used for Planning Schedules and Material Release Schedules, that can include both forecast and firm requirements. The following inbound EDI transactions are loaded into the interface data file using the SPSI code:

- ASC X12 Planning Schedule With Release Capability (830)
- EDIFACT Delivery Schedule (DELFOR)
- ODETTE Delivery Instruction (DELINS)

SSSI for Shipping:

The code 'SSSI' is used for Shipping Schedules, that contain firm delivery information and are intended by the customer to refine requirements already presented in the Planning Schedule. The following inbound EDI transactions are loaded into the interface data file using the SSSI code:

- ASC X12 Shipping Schedule (862)
- EDIFACT Delivery Just In Time (DELJIT)
- ODETTE Delivery Instruction (DELINS)
- ODETTE Delivery Just In Time (CALDEL)
- ODETTE Kanban Signal (KANBAN)

PSQI for Sequencing:

The code 'PSQI' is used for Production Sequence Schedules, that contain demand with information to facilitate delivery and use at the customer site, such as specifying the customer production line sequence or the conveyance packing sequence. The following inbound EDI transactions are loaded into the interface data file using the PSQI code:

- ASC X12 Production Sequence (866)
- EDIFACT Delivery Just In Time (DELJIT)
- ODETTE Delivery Just In Time with production sequence (SYNCRO)
- ODETTE Delivery Just In Time with packing sequence (SYNPAC)

Process Flow

The EDI translator of your choice creates an interface data file in a specific format for the e-Commerce Gateway as it translates the EDI demand schedule document:

The e-Commerce Gateway Inbound Processor reads the demand schedule data in the interface data file and loads it into the Oracle Release Management Demand Processor interface tables using mapping defined in the transaction spreadsheet, to populate columns.

The Demand Processor can then verify the demand schedules, manage the schedule information based on Release Management processing rules, and reconcile the demand with existing sales orders or blanket sales agreement and forecasts.

Using e-Commerce Gateway for Inbound Demand

Features of the e-Commerce Gateway for Inbound Demand apply to various aspects of processing. This section describes the steps required in each aspect of the process.

Interface Data File Mapping

Trading Partner Interface Data File Mapping Evaluation

Demand Management begins when Oracle e-Commerce Gateway receives an incoming EDI demand document from a trading partner and loads it into the Demand Processor interface tables.

Oracle EDI Translation CAI Partners have developed general EDI translator data maps or templates for the three inbound demand transaction types.

It is important to evaluate the data storage and processing provided by Release Management for gaps to Trading Partner specific requirements for Demand, Order, Shipping, and CUM Management.

The following Interface Data File Mapping evaluation procedure is recommended when implementing Oracle e-Commerce Gateway for inbound demand schedules:

1. Examine each Trading Partner's EDI Implementation Guide for applicable inbound demand transaction in context of the general EDI translator data maps or templates to determine if the default mapping provides a destination column for each element included in Trading Partner's EDI demand.
2. Examine each Trading Partner's EDI Implementation Guide for outbound Ship Notice/Manifest for required turnaround data elements.
3. Identify external data elements that are not represented in the destination columns.
4. Decide whether the external data elements are generic in nature (many or all trading partners use the external data) or Trading Partner specific in nature (the external data element is unique to one or few trading partner locations).
5. Decide which interface level and destination column would be most appropriate for the external data element, such as an appropriately named column if one exists, Descriptive Flexfields, or Trading Partner Flexfields.
6. Decide whether validation logic within Oracle e-Commerce Gateway is desirable for the destination column; if so, define appropriate Column Rules for Rule Based Exception Processing.

7. Decide whether validation or processing logic within the Oracle Release Management Demand Processor is desirable for the destination column; if so, define appropriate trading partner specific customizations. Refer to separate Trading Partner Layer implementation documentation for details about this step.

If external data elements, which are not represented in the destination columns, are identified, refer to the section entitled Inbound Demand Customization in this essay.

Trading Partner Setup

e-Commerce Gateway Trading Partner Setup

Using the Oracle e-Commerce Gateway's Trading Partner form, you can define customers that send or receive different EDI documents. For inbound demand, you must define the customer and the corresponding locations as an Oracle e-Commerce Gateway trading partner location and enable the inbound demand documents they will send.

Release Management Trading Partner Processing Rules

Release Management Processing Rules form enables you to define processing rules for customers, and optionally for their related ship-to locations and customer items when the customer level rules are inappropriate. Processing rules relate to Demand Management, Demand Fences, Order Management, CUM Management, and General Rules.

See also *Oracle Release Management User's Guide*.

Demand Processor Uses Both Setups

The Demand Processor verifies schedule information based on the e-Commerce Gateway Trading Partner setup in conjunction with Oracle Release Management Processing Rules.

Code Conversion Setup

Oracle e-Commerce Gateway utilizes code conversions to determine the corresponding internal value used within the Oracle Release Management Demand Processor for several external data elements occurring on the inbound demand schedule. They are applicable to all inbound demand schedule types: Planning, Shipping, and Production Sequence.

Code Conversion Categories used within the Oracle Release Management Demand Processor include the following: Schedule Type, Purpose Code, Detail Type, Detail Subtype, Date Type, Quantity Type, Unit of Measure, and Shipment Delivery Pattern.

Seeded Code Conversion values are provided to link external codes used in ASC X12 and EDIFACT EDI standards with the corresponding internal value used within the Oracle Release Management Demand Processor.

Code Conversion Search Keys

You can identify unique conversion codes at the customer, customer site, or up to five levels of a search key: for example, a customer with multiple ship-to locations, each having unique carrier codes, all of which must be converted to internal carrier codes.

Trading Partner Code Conversion Evaluation

The following Code Conversion evaluation procedure is recommended when implementing Oracle e-Commerce Gateway for inbound demand schedules:

1. Examine each Trading Partner's EDI Implementation Guide for each applicable inbound demand transactions to determine if the seeded values will handle the Trading Partner's EDI demand properly in the Demand Processor.
2. Note any external values related to the Code Conversion Category which are not represented in the seeded Code Conversion values.
3. Decide which internal value most closely represents the external value.
4. Decide whether the Code Conversion is generic in nature (all trading partners who use this code have the same meaning for it) or Trading Partner specific in nature (trading partner locations who use this code have different meanings for it).
5. Define code conversion values as needed in the Oracle e-Commerce Gateway Code Conversion Values folder window.

Schedule Header Mandatory Code Conversion Categories

There are two Code Conversion Categories that provide internal values which occur at the header level and are mandatory for all inbound demand schedules, Schedule Types, and Purpose Codes.

Schedule Type (RLM_SCHED_TYPE)

Schedule Type is used by the Demand Processor to differentiate which demand details are applicable for matching across and matching within schedule types, and to identify the hierarchical reconciliation with other schedule data.

Additional internal values are not allowed for this Code Conversion Category; however, new generic and Trading Partner-specific external values may be cross-referenced to existing internal values.

The following example illustrates a situation where seed data for Schedule Type is not adequate. Trading partner TP1 uses the EDIFACT DELJIT message for two different schedule types; they assign element 1001 of the BGM segment with a value of 241 for Shipping Schedules and 242 for Sequenced Production Schedules. Trading partner TP2 uses 242 with DELJIT to indicate a Kanban Shipping Schedule. The necessary code conversions for RLM_SCHED_TYPE could be set up using trading partner keys as follows:

Table 3–1 Schedule Type Examples

Internal	External 1	External 2	EDI Standard	Trading Partner
Sequenced	DELJIT	242	EDIFACT	TP1
Shipping	DELJIT	241	EDIFACT	TP1
Shipping	DELJIT	242	EDIFACT	TP2

Schedule Purpose Code (RLM_TRX_PURP)

A Schedule Purpose Code is used by the Demand Processor to determine how new demand is reconciled to old demand of the same schedule type. The Demand Processor interprets demand for each item within the schedule horizon date range based on the value of the Schedule Purpose Code.

Additional internal values are not allowed for this Code Conversion Category; however, new generic and Trading Partner specific external values may be cross-referenced to existing internal values.

The following internal purpose code values are recognized by the Demand Processor:

- **Add:** Schedule demand is added to any previously established requirements that fall within the horizons of this message.
- **Cancellation:** Schedule demand included on the message cancels previously established requirements.

- **Change:** Schedule demand supersedes any previously established requirements for only those parts included on the message.
- **Confirmation:** The issuer's transmission to confirm an emergency requirement is communicated but not transmitted.
- **Delete:** Removing a part or shipment requirement sent on a previous transaction. Data for other part numbers previously transmitted and not included in this transmission must be retained.
- **Original:** Initial transmission related to a given transaction.
- **Replace:** Schedule demand supersedes any previously established requirements that fall within the horizons of this message.

Oracle e-Commerce Gateway also provides the ability to define trading partner specific Code Conversions for the external schedule Purpose Code values. This feature is useful when the trading partner uses a code that does not have a seeded Code Conversion, or there is a difference between the standard meaning of the purpose code in the Demand Processor and the specific use by a trading partner. For example, your trading partner sometimes sends X12 schedules with a purpose code '07' meaning 'Duplicate'. This schedule would generate a fatal error and would not be processed. However, if you define trading partner specific Code Conversion for the external code '07' that maps to Confirmation, one of the seven valid internal Purpose Codes, the schedule would be processed as a Confirmation.

The following illustration shows the rule for each purpose code and how it affects the resulting demand picture for a particular Ship From/Ship To/Customer Item, assuming that all Match Within Attributes are identical and aggregation of like demand occurs:

New Demand received on a Shipping Schedule:

- Date = Today, Quantity = 50
- Date = Tomorrow, Quantity = 0

Existing Order Lines within the schedule horizon from other Shipping Schedules:

- Date = Today, Quantity = 10
- Date = Tomorrow, Quantity = 20

Resulting Order Lines from Shipping Schedules within the schedule horizon for various Schedule Purpose Codes:

Example of Purpose Code Rules

Table 3–2

Replace, Change, Original	Add	Cancellation, Delete	Confirmation
New demand replaces old demand within the schedule horizon	New demand is added to old demand if it exists	New demand is matched to and subtracted from old demand	New demand does not update old demand
Date = Today, Quantity = 50	Date = Today, Quantity = 60	Date = Today, Quantity = 0	Date = Today, Quantity = 10
Date = Tomorrow, Quantity = 0	Date = Tomorrow, Quantity = 20	Date = Tomorrow, Quantity = 20	Date = Tomorrow, Quantity = 20

Schedule Line Mandatory Code Conversion Categories

There are Code Conversion Categories that provide internal values which occur at the line level and are mandatory for all inbound demand schedules.

Date Type (RLM_DATE_TYPE)

Date Type is used by the Demand Processor to determine how the start and end date on each schedule line should be interpreted.

For Demand Detail Types (Past Due, Firm, and Forecast), the Date Type is critical, because it indicates whether the schedule demand is shipment-based or delivery-based. The Demand Processor has a procedure that calculates shipment dates based on the system date (formerly the Schedule Horizon Start Date), date type, lead time, shipping and receiving calendars, and Ship/Delivery Pattern Codes.

For other Detail Types: Authorizations, Shipped/Received Information, and Other the Date Type is simply informational, and not used in processing.

Additional internal values are not allowed for this Code Conversion Category; however, new generic and Trading Partner-specific external values may be cross-referenced to existing internal values.

Detail Type (RLM_DTL_TYPE)

Detail Type is used by the Demand Processor to determine how the schedule line itself should be interpreted. Six Detail Types are supported: Past Due Demand, Firm

Demand, Forecast Demand, Authorizations, Shipped/Received Information, and Other Information.

Additional internal values are not allowed for this Code Conversion Category; however, new generic and Trading Partner-specific external values may be cross-referenced to existing internal values.

Detail Subtype (RLM_DTL_SUBTYP)

Detail Subtype is used by the Demand Processor to determine how the schedule line should be interpreted in context of its corresponding Detail Type.

Additional internal values are not allowed for this Code Conversion Category; however, new generic and Trading Partner-specific external values may be cross-referenced to existing internal values.

Each Detail Type has a corresponding list of valid Detail Subtypes:

- Demand Detail Types: Valid Detail Subtypes represent demand bucketing: Day, Week, Flexible, Month, or Quarter.
- Authorizations: Valid Detail Subtypes represent type of Authorizations: Finished Goods, Raw Materials, Labor & Materials, Labor, or Prior Cumulative Required.
- Shipped/Received Information: Valid Detail Subtypes represent type of information: Shipment, Receipt, or Customer CUM.
- Other Information: Valid Detail Subtypes represent type of information: Ahead/Behind, Inventory Balance, or In Holdout.

Quantity Type (RLM_QTY_TYPE)

Quantity Type is used by the Demand Processor to determine how the quantity on a schedule line should be interpreted in context of its Detail Type and Detail Subtype. There are two valid internal values for Quantity Type: Actual and Cumulative.

If Demand schedule lines have a Cumulative Quantity Type, the Demand Processor calculates actual quantity based on the corresponding Cumulative Shipped/Received Quantity and other Demand schedule lines.

Additional internal values are not allowed for this Code Conversion Category; however, new generic and Trading Partner-specific external values may be cross-referenced to existing internal values.

Unit of Measure (UOM)

Unit of Measure (UOM) is used by the Demand Processor to determine how the quantity on a schedule line should be interpreted.

UOM category is used in several other e-Commerce Gateway transactions. If you have other EDI transactions implemented within the e-Commerce Gateway, you probably already have the necessary UOM code conversions in place.

Since new EDI transactions are being implemented, it may be necessary to define additional Code Conversions for UOM (Unit of Measure).

- Existing UOM code conversions should be evaluated to ensure that all internal and external values to be used on inbound demand transactions are defined. Additional values may be required, both generic and Trading Partner-specific
- When any new Oracle Inventory UOM Conversion is defined, corresponding UOM Code Conversions for each EDI standard must also be defined

Schedule Line Optional Code Conversion Categories

There is one Code Conversion Category that provides an optional line level internal value applicable to demand Detail Types only.

Ship Delivery Pattern (RLM_SHP_DEL_CODE)

This code specifies the days for routine shipments and deliveries. The Demand Processor has a procedure which calculates shipment dates based on the system date (formerly the Schedule Horizon Start Date), date type, lead time, shipping and receiving calendars, and Shipment Delivery Pattern Codes. The internal value of this Code Conversion is the key of the Release Management Shipment Delivery Pattern Codes table. The internal value is used when the Release Management Processing Rules indicate that the EDI pattern should be used rather than the default Shipment Delivery Pattern Codes.

The seed data for e-Commerce Gateway Code Conversion includes both ANSI X12 (ele. 678) and EDIFACT (code 2015) Shipment Delivery Pattern Codes which have a meaning that can be expressed in terms of percentages on specific days of a week. Codes that reflect ambiguous days of the week (such as Monday through Thursday), and specific weeks of the month are not included in seed data.

Additional internal values are allowed for this Code Conversion Category. First, define the Shipment Delivery Pattern Code in the Release Management Shipment Delivery Pattern Codes form. Secondly, define generic or Trading Partner specific

Code Conversions in the e-Commerce Gateway as needed to map them to external EDI values.

Process Automation

Running the e-Commerce Gateway for Inbound Demand

You can use the Oracle Standard Report Submittal form to launch a concurrent program in the e-Commerce Gateway for a specific interface data file containing a single transaction type.

Multiple inbound demand schedules of the same transaction type may be included in a interface data file if they have the same transaction type. For example, you can have three planning schedules (SPSI) in one interface data file, but you cannot have one planning schedule (SPSI) and two shipping schedules (SSSI) in the same interface data file.

It is recommended that you launch the complete group of processes for inbound demand to avoid any delay in visibility of the updated trading partner demand in the Order Management application.

- e-Commerce Gateway
- Demand Processor
- Demand Processor Exception Report

If you run the e-Commerce Gateway and Demand Processor in a group, the concurrent processes execute sequentially, displaying the status of each concurrent request underneath the parent request.

Automating Demand Processing

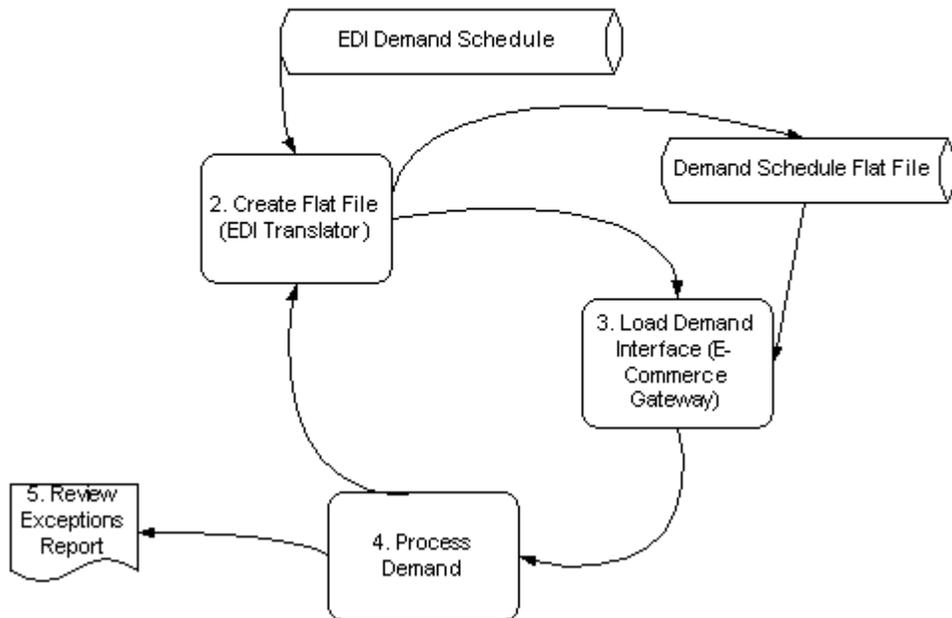
The steps for receiving inbound EDI demand schedule transactions in Oracle e-Commerce Gateway and loading them from Oracle e-Commerce Gateway to Oracle Release Management can be automated.

To automate Oracle Release Management's demand processing, you submit up to three periodic concurrent requests for report sets to process the e-Commerce Gateway inbound demand schedule and subsequently run the Demand Processor. You need one periodic concurrent request for each schedule type which your trading partners communicate to you:

- Inbound EDI Planning Schedules (SPSI)
- Inbound EDI Shipping Schedules (SSSI)
- Inbound EDI Production Sequence Schedules (PSQI)

The following figure details how you can automate the demand management process.

1. Start Periodic Concurrent Processes for SPSI, SSSI, and PSQi



Exception Management

Inbound Demand Exception Messages

Exceptions relating to inbound demand transactions are generated by either the e-Commerce Gateway or the Release Management Demand Processor when exception conditions are detected.

e-Commerce Gateway

Oracle e-Commerce Gateway has Rule Based Exception Processing for inbound transactions. Using Process Rules and Column Rules for inbound demand transactions, e-Commerce Gateway validates schedule data being processed in the staging tables in the interface data file, before loading it into the Demand Processor Interface tables. When these rules are violated, exceptions are logged.

Oracle e-Commerce Gateway performs validation for the following Process Rules, with the corresponding action when violation occurs:

- Trading Partner Not Found - Skip Document
- Test/Production Flag Discrepancy - Log Only
- Invalid Translator & Location Code Combination - Skip Document

Oracle e-Commerce Gateway performs validation for the following Column Rules, with the corresponding action when violation occurs:

- Value is Required - Skip Document
- Simple Table Lookup - Skip Document
- Valueset Lookup - Skip Document
- Null Dependency - Skip Document
- Datatype Checking - Skip Document

Release Management Demand Processor

The Demand Processor generates exceptions that occur while the interface schedule is being validated, processed, archived, and reconciled with existing demand.

For a complete list of Demand Processor exception conditions and subsequent recommended actions, see the Demand Exception Reporting topical essay.

Viewing Exceptions and Correcting Exception Conditions

Exceptions relating to inbound demand transactions may be viewed and corrected within the application that generated them.

e-Commerce Gateway

Two types of data rule exceptions can be found during data validation; processing rules and column rules. After running the inbound transaction process or resubmitting transactions for re-validation, you can see exceptions in the View Staged Document window.

Release Management Demand Processor

Exceptions generated by or the Release Management Demand Processor may be viewed on the Demand Processor Exceptions Report, or online using the Release Management Workbench. Exception conditions can be corrected by following the specific instructions in the message text.

Inbound Demand Customization

You can make changes since the Oracle e-Commerce Gateway Inbound Engine is generic in nature and data driven. The program itself does not require changes.

See also *Oracle e-Commerce Gateway User's Guide*.

Change Seed Data

If you need to populate a new column in the Interface tables, or change the default mapping, or if data storage gaps exist, three options for destination column exist in the Release Management Demand Processor Interface tables:

- Use an appropriately named column if one exists
- Use Descriptive Flexfields for data on inbound demand schedules that simply needs to be carried through Order Entry and Shipping
- Use Trading Partner Flexfields for data on inbound demand schedules that is Trading Partner specific in nature and will be referenced in Trading-Partner-specific Workflow customizations

The following tables must have the same definition in AOL for Descriptive Flexfield Attributes for the RLM Demand Processor:

- Headers
 - RLM_INTERFACE_HEADERS
 - RLM_SCHEDULE_HEADERS
 - OE_ORDER_HEADERS
- Lines
 - RLM_INTERFACE_LINES
 - RLM_SCHEDULE_LINES
 - OE_ORDER_LINES

Implementing Flexfields on Inbound Demand Schedules

This section applies to implementing descriptive and trading partner flexfields on inbound demand schedules.

To comply with trading partner requirements to handle additional data on inbound demand transactions, customize the Oracle e-Commerce Gateway inbound demand interface data file definition and/or the generic inbound processor at predefined

stages. Flexfields (attributes) are user-defined fields in the Oracle Applications. They are found in both inbound and outbound transactions. You have to modify the general EDI translator data maps or templates to use flexfields.

See also *Oracle Application Object Library User's Guide*.

Automotive Upgrade Spreadsheets and Information

This appendix details the two spreadsheets used in the Automotive Upgrade from Release 10.7 and 11.0 to Release 11i. It also contains additional information related to the Upgrade.

- Spreadsheet One on page A-2
- Spreadsheet Two on page A-12
- Additional Information on page A-18

Spreadsheet One

Completing this spreadsheet is optional. If you choose not to load parameter values here, however, you must enter them manually before running the post-upgrade steps. After entering all input data, the Input Data worksheet should be exported as a comma delimited text file, with the name setupdata.txt, and stored in the directory specified in the **ECE: Inbound File Path** profile option

Note: Please refer to the Automotive page on Metalink for sample spreadsheets and for a more detailed structure of the Input Data Worksheet.

This spreadsheet contains three worksheets:

- **Input Data:** You can enter the Processing Rules parameter values on this worksheet. These are mandatory processing rules for Release 11i which cannot be derived from information in the Release 10.7/11 Automotive Extras forms.
- **Help:** This worksheet describes the structure for the Input Data worksheet and indicates which columns to populate for each level.
- **Glossary:** This worksheet lists all the parameter columns, information about the parameter, and a list of valid values when applicable. You can copy the value to the clipboard and paste it into the desired cell of the Input Data worksheet. If the parameter value can be determined using information from the CARaS environment, this worksheet indicates where it is located in CARaS.

CARaS information relevant to Release Management Processing Rules

The CARaS environment contains some information relevant to Release Management not contained in Automotive Extras tables, for Trading Partners corresponding to Oracle Customers and CARaS Companies corresponding to Oracle Inventory Organizations.

You can use the following table as a guide for completing the spreadsheet:

- Some values in CARaS may be case-sensitive, so be sure to verify the accuracy of the data you enter onto the spreadsheet.
- In Release 11i, forecasts may be moved either to Oracle Order Management or Oracle Advanced Planning and Scheduling

Table A-1 CARaS Information Guide

Source in CARaS	Spreadsheet Column	Notes
Trading Partner Profiles field TP Code	B - Trading Partner Code	-
Abbreviation Cross-References field Destination Code	C - Destination Abbreviation	-
Part Master File Maintenance field Customer Part	D - Customer Item	-
Company Options field Current Model Year	E - CUM Management Type	If Y, then CUM_BY_DATE_RECORD_YEAR.
Company Options field PO Significance	E - CUM Management Type	If Y, then CUM_BY_PO.
Part Destination File	F - CUM Org Level Code	Ship_To_Ship_From, unless otherwise mentioned. Check your CUM setup to verify this value.
Use Transfer code CADSTC_MNT, then field CUM Update Type	G - CUM Shipment Rule Code	-
Supplier Profiles field Supplier Id 1	H - Assigned Supplier Code	-
Company Options field Enable Firm/Planning Codes	I - Use EDI Ship/Delivery Code? (Y or N)	-
Daily/JIP Schedule Options Part Destination File	J - Shipment Delivery Rule Name	-
Part Destination File	K - ATS Pre-Horizon Disposition	-
Part Destination File	L - ATS Pre-Horizon Cutoff Days	-
Cross-Reference 1st Time Interval in Days = "S"	M - Firm Fence - Start N - Firm Fence - End	-
Cross-Reference 2nd Time Interval in Days = F	O - Forecast Fence - Start P - Forecast Fence - End	-

Table A-1 CARaS Information Guide

Source in CARaS	Spreadsheet Column	Notes
Part Destination File	Q - Company Code	CARaS Company Code
Abbreviation Cross-Reference Order Number	R - Order Number	-
Abbreviation Cross-Reference Order Type	S - Order Type	-

This spreadsheet should be completed with the following structure as a pre-upgrade step.

- Customer Level Record
- Address Level Record 1
- ...
- Address Level Record n
- Customer Item Level Record 1
- ...
- Customer Item Level Record n

Table A-2 Customer Level Spreadsheet

Record Indicator	Column	Description
1000	A	Record Indicator
2000	-	-
3000	-	-
1000	B	Trading Partner Code
2000	-	-
3000	-	-
1000	C	Destination Abbreviation (leave blank for customer level and for customer item level)
2000	-	-

Table A-2 Customer Level Spreadsheet

Record Indicator	Column	Description
3000	-	-
1000	D	Customer Item (leave blank for customer level)
2000	-	-
3000	-	-
1000	E	CUM Management Type (leave blank for customer item level)
2000	-	-
3000	-	-
1000	F	CUM Org Level Code (leave blank for customer item level)
2000	-	-
3000	-	-
1000	G	CUM Shipment Rule Code (leave blank for customer item level)
2000	-	-
3000	-	-
1000	H	Assigned Supplier Code (leave blank for customer item level)
2000	-	-
3000	-	-
1000	I	Use EDI Ship/Delivery Code? (Y or N)
2000	-	-
3000	-	-
1000	J	Shipment Delivery Rule Name
2000	-	-

Table A-2 Customer Level Spreadsheet

Record Indicator	Column	Description
3000	-	-
1000	K	ATS Pre-Horizon Disposition (leave blank for customer item level)
2000	-	-
3000	-	-
1000	L	ATS Pre-Horizon Cutoff Days (leave blank for customer item level)
2000	-	-
3000	-	-
1000	M	Firm Fence - Start
2000	-	-
3000	-	-
1000	N	Firm Fence - End
2000	-	-
3000	-	-
1000	O	Forecast Fence - Start
2000	-	-
3000	-	-
1000	P	Forecast Fence - End
2000	-	-
3000	-	-
1000	Q	Company Code
2000	-	-
3000	-	-
1000	R	Order Number
2000	-	-
3000	-	-

Table A-2 Customer Level Spreadsheet

Record Indicator	Column	Description
1000	S	Order Type
2000	-	-
3000	-	-

Trading Partner Code

Specifies the two digit Code of Trading Partner to be upgraded.

Destination Abbreviation

Specifies the Location code for the trading partner to be upgraded

Customer Item Number

Specifies the Customer Item Number for the Trading Partner to be upgraded

CUM Management Type

Specifies whether or not CUM Accounting is required; if so, define applicable data elements that control accumulation, such as record keeping year, start date, purchase order, etc. If CUM Management is not enabled, select NO_CUM. Do not enter for Customer Items.

Valid Values:

- NO_CUM
- CUM_BY_PO_ONLY
- CUM_BY_DATE_ONLY
- CUM_BY_DATE_RECORD_YEAR
- CUM_BY_DATE_PO

CUM Org Level Code

Specifies the relationship between the supplier and customer business entity for accumulation if CUM Management is enabled. Do not enter for Customer Items.

Valid Values:

- SHIP_TO_SHIP_FROM
- BILL_TO_SHIP_FROM
- SHIP_TO_ALL_SHIP_FROMS
- INTRMD_SHIP_TO_SHIP_FROM

CUM Shipment Rule Code

Specifies the Rule for when shipments update the cum quantity if CUM Management is enabled. If CUM Management is not enabled, leave this field blank. Do not enter for Customer Items.

Valid Values:

- AS_OF_CURRENT
- AS_OF_PRIOR
- AS_OF_YESTERDAY

Assigned Supplier Code

Specifies the Code by which the Customer identifies you as Supplier in the EDI demand transaction. Do not enter for Customer Items.

Use EDI S/D Code? (should be Y or N)

Specifies whether Ship Delivery Code specified on the EDI demand transaction should be used. If Y, a valid code on the EDI demand transaction will overrule the Shipment Delivery Rule Name.

Valid Values:

- Y
- N

Shipment Delivery Rule Name

Specifies the Shipment Delivery Rule Name to be used to calculate shipment dates in the Demand Processor. This will overrule the Ship Delivery Code specified on the EDI demand transaction if: 1) Use EDI S/D Code? is N, or 2) if the Ship Delivery Code specified on the EDI demand transaction is not in the valid values list.

Table A-3 Shipment Delivery Rules Valid Values

Value	Description
D	Monday
E	Tuesday
F	Wednesday
G	Thursday
H	Friday
J	Saturday
K	Sunday
M	Immediately
N	As Directed
O	Daily Monday through Friday
P	1/2 Monday and 1/2 Thursday
Q	1/2 Tuesday and 1/2 Thursday
R	1/2 Wednesday and 1/2 Friday
S	Once anytime Monday through Friday
T	1/2 Tuesday and 1/2 Friday
U	1/2 Monday and 1/2 Wednesday
V	1/3 Monday, 1/3 Wednesday, 1/3 Friday
X	1/2 by Wednesday, balance by Friday
Y	None
Z	Mutually Defined
SG	Tuesday through Friday
SL	Monday, Tuesday and Thursday
SP	Monday, Tuesday and Friday
SX	Wednesday and Thursday
SY	Monday, Wednesday and Thursday
SZ	Tuesday, Thursday and Friday
ZZ	Mutually Defined/None

Table A-3 Shipment Delivery Rules Valid Values

Value	Description
13	Monday
14	Tuesday
15	Wednesday
16	Thursday
17	Friday
18	Saturday
19	Sunday
21	As Directed
23	Daily Monday through Friday

ATS Pre-Horizon Disposition

Specifies how the Demand Processor handles past due requirements (unshipped Available To Ship Sales Order demand dated before the system date (formerly Schedule Horizon Start Date). Do not enter for Customer Items.

Valid Values:

- REMAIN_ON_FILE
- CANCEL_AFTER_N_DAYS
- CANCEL_ALL

ATS Pre-Horizon Cutoff Days

ATS Pre-Horizon Cutoff Days is related to the ATS Pre-Horizon Disposition option of Cancel after N Days. This specifies how many days to keep the past due demand intact. Leave this field blank if you did not select option of Cancel after N Days. Do not enter for Customer Items.

Order Number

Specifies the Sales Order Number into which schedule demand will be loaded. Use the same value you specified in CARaS Abbreviation Cross-Reference, field Order Number.

Order Type

Specifies the Order Type corresponding to the Sales Order Number into which schedule demand will be loaded. Use the same value you specified in CARaS Abbreviation Cross-Reference field Order Type.

Firm Fence - Start

Specifies the starting day of Firm Fence relative to the system date (formerly Schedule Horizon Start Date). Calculate this value based on the CARaS Abbreviation Cross-Reference 1st Time Interval in Days associated with Demand Policy = S.

Firm Fence - End

Specifies the Ending value of Firm Fence relative to the system date (formerly Schedule Horizon Start Date). Calculate this value based on the CARaS Abbreviation Cross-Reference 1st Time Interval in Days associated with Demand Policy = S.

Forecast Fence - Start

Specifies the Starting value of Forecast Fence relative to the system date (formerly Schedule Horizon Start Date). Calculate this value based on the CARaS Abbreviation Cross-Reference 2nd Time Interval in Days associated with Demand Policy = F.

Forecast Fence - End

Specifies the Ending value of Forecast Fence relative to the system date (formerly Schedule Horizon Start Date). Calculate this value based on the CARaS Abbreviation Cross-Reference 2nd Time Interval in Days associated with Demand Policy = F.

Spreadsheet Two

Completing this spreadsheet is optional, however, if you do not enter data at this time, you will not be able to change this manually later and it will not be available on shipping documents. After entering all input data, the Input Data worksheet should be exported as a comma delimited text file, with the name 'carasdata.txt,' and stored in the directory specified in the **ECE: Inbound File Path** profile option

Note: Please refer to the Automotive page on Metalink for sample spreadsheets and for a more detailed structure of the Input Data Worksheet.

This spreadsheet contains three worksheets:

- **Input Data:** This worksheet is where you will enter the turnaround data.
- **Help:** This worksheet describes the structure for the Input Data worksheet and indicates which columns to populate for each level.
- **Glossary:** This worksheet lists all the parameter columns, information about the parameter, and a list of valid values when applicable. You can copy the value to the clipboard and paste it into the desired cell of the Input Data worksheet. If the parameter value can be determined using information from the CARaS environment, this worksheet indicates where it is located in CARaS.

Much of the data for completing this spreadsheet is available by running Release Reports in CARaS, e.g. Release History or Firm/Planning Requirements Summary

Table A-4 CARaS Information Guide

Source in CARaS	Spreadsheet Column	Notes
-	A - Record Indicator	Record Indicator = 1000
Part Destination File	B - Requirement Ext.	-
Part Destination File	C - Assembly Line Feed Location	-
Part Master File Maintenance field Buyer Code	D - Buyer	-
Part Master File Maintenance field Engineering Change Level	E - Customer Item Engineering Change Number	-

Table A-4 CARaS Information Guide

Source in CARaS	Spreadsheet Column	Notes
Part Master File Maintenance field Customer Part	F - Customer Item Number	-
Part Destination File	G - Customer Item Reference Number	-
-	A - Record Indicator	Record Indicator = 2000
Part Destination File	B - Intermediate Consignee code	-
Part Destination File	C - Manufacturer Code	-
Part Master File Maintenance field Purchase Order Date	D - Purchase Order Date	-
Part Destination File	E - Purchase Order Line Number	-
-	A - Record Indicator	Record Indicator = 3000
Part Destination File	B - Release Number	-
Part Destination File	C - Returnable Container Part Number	-
Part Master File Maintenance field Supplier Id	D - Supplier Code	-
Part Master File Maintenance field Our Part Number	E - Supplier Item Number	-
Abbreviation Cross-Reference Maintenance field Interchange Id or Group Id	F - Supplier Ship-From code	Either of these values may be correct, depending on the trading partner.
Abbreviation Cross-Reference Maintenance field Destination Code	G - Customer Ultimate Destination Code	-
Part Destination File	H - Vehicle ID Number	-

This spreadsheet should be completed with the following structure before running CARaS Turnaround Attributes upgrade.

Record 1

Record Indicator = 1000

Record Indicator = 2000

Record Indicator = 3000

Record 2

...

...

Record N

Table A-5 Turnaround Attributes Spreadsheet

Record Indicator	Column	Description
1000	A	Record Indicator = 1000
2000	-	Record Indicator = 2000
3000	-	Record Indicator = 3000
1000	B	Requirement Ext
2000	-	Intermediate Consignee Code
3000	-	Release Number
1000	C	Assembly Line Feed Location
2000	-	Manufacturer Code
3000	-	Returnable Container Part Number
1000	D	Buyer
2000	-	Purchase Order Date
3000	-	Supplier Code
1000	E	Customer Item Engineering Change Number

Table A-5 Turnaround Attributes Spreadsheet

Record Indicator	Column	Description
2000	-	Purchase Order Line Number
3000	-	Supplier Item Number
1000	F	Customer Item Number
2000	-	
3000	-	Supplier Ship-From Code
1000	G	Customer Item Reference Number
2000	-	
3000	-	Customer Ultimate Destination Code
1000	H	-
2000	-	-
3000	-	Vehicle ID Number

Requirement Ext

Internal value generated for CARaS that is used to link to Oracle demand lines.

Assembly Line Feed Location

The customer's assembly identification, as sent on the LIN segment of the 866 transaction.

Buyer

The buyer that was sent in on the customer's schedule.

Customer Item Engineering Change Number

Customer part revision included on schedule.

Customer Item Number

External Customer part number Cross Reference.

Customer Item Reference Number

Internal references to the item that the customer sent on the schedule

Customer Model Number

Customer's Model Number for this sequenced detail.

Export License Date

European requirements

Export License Number

European requirements

Import License Date

European requirements

Import License Number

European requirements

Intermediate Consignee code

EDI Cross Referencing to Customer Address ID or Supplier ID; where ship-to is different from ultimate destination.

Kanban

Routing information may be specified for inclusion on customer's Kanban ship labels: facility/dock, location build area, part description, first delivery location, empty container location, beginning Kanban serial, ending Kanban serial, and pickup date/time.

Manufacturer Code

EDI Cross Referencing to Supplier Org ID.

Pool Point Location

The specific shipping location (such as pool point or airport) corresponding to the shipping location qualifier, as sent by the customer on the TD5 segment.

Purchase Order Date

Customer-specified effectivity date of Purchase Order number included on schedule.

Purchase Order Line Number

Customer Purchase Order line number included on schedule.

Release Number

Customer Purchase Order Release number included on schedule.

Returnable Container Part Number

Returnable container specified by customer for item shipment.

Supplier code

Supplier code as specified by the customer on the schedule.

Supplier Item Number

Supplier item number specified by customer.

Supplier Ship-From code

Customer specified ship from organization code external value.

Customer Ultimate Destination Code

External ship-to address Cross Reference.

Additional Information

All error, warning, and informational messages are written to a log file and are also inserted into RLM Exceptions table.

A debug file is generated to give additional information. This log file can be used if problems or issues are encountered while running upgrade. Naming conventions for these files are as follows:

Log File: rlmupg_N.log

Debug File: rlmdebug_upg_N

where N is Oracle Session ID (a unique number generated for each Oracle session). These files will be created under the directory specified by the profile ECE_OUT_FILE_PATH. (If this profile is not set correctly, then debug and log files will not be created.)

When the upgrade runs successfully, it will print a message indicating file names and their locations. This message will look as follows:

Debug Information is written to /sqlcom/outbound/rlmdebug_upg_287432. Please check the log file /sqlcom/outbound/rlmupg_287432.log for upgrade messages.

RLM Upgrade completed, see the messages listed above, if any, or check the log file for more information.

This message can be found in log files generated while running adpatch (typically, log files of one of the workers, adwork*.log)

If upgrade terminates with an error, it will end with the following message:

FAILED: file RLMSTUPG.sql on worker 1 for product rlm username RLM.

This message will appear on the screen as well as in the file adpatch.log

If you examine the worker log file (which is adwork01.log, in this example), it will contain a message similar to this:

```
declare
```

```
*
```

```
ERROR at line 1:
```

```
ORA-06501: PL/SQL: program error
```

```
ORA-06512: at line 233
```

Please note that if upgrade fails, a message indicating debug and log file names is not generated, even though the upgrade has generated these files with messages and information pertaining to the upgrade failure. Therefore, users need to go to the directory mentioned in the profile `ECE_OUT_FILE_PATH` and check the latest files generated with the conventions as mentioned above.

Whenever upgrade fails, ADPATCH will halt and can be re-started, after resolving the problem.

If any of the validations on file elements fail, the upgrade is stopped with failure. This gives the user a chance to correct errors and re-start the upgrade from where it stopped.

The Upgrade will try to find all possible errors with any of the file elements before stopping with failure.

Defaulting rule: If any of the file elements are Null, the Upgrade will try to default the values from higher-level terms, if applicable, e.g. if cum management type is not specified for Ship-to level record, it tries to default it from customer-level record.

Lower-level terms are not upgraded/inserted, if higher level terms were not upgraded.

Upgrade is re-runable. It will try to update already upgraded records provided that they have not been changed by end-users.

The Upgrade will generate a summary message indicating

- Number of setup records for which errors were encountered.

- Number of setup records for which warnings were encountered.

- Number of customer level setup records upgraded successfully.

- Number of address level setup records upgraded successfully.

- Number of customer item level setup records upgraded successfully.

There are similar summary messages for Demand Upgrade and CARaS turnaround data upgrade.

Demand upgrade will not upgrade demand lines if the value for any of the mandatory columns (as per R11i data model) are null.

Using Release Management Demand Processor

The Using Release Management Demand Processor chapter covers the following topics.

- Overview on page B-2
- Business Flow on page B-4
- Demand Processing Logic on page B-13
- Responding to Schedule Exceptions on page B-41
- Identify Errors and Causes on page B-42
- Release Management Setup Issues on page B-51
- Troubleshooting Illustrations on page B-56

Overview

This chapter focuses on using the Demand Processor, the starting point of the Oracle Release Management solution for meeting two key industry needs:

First, customers and suppliers must reduce lead time across their supply chain. (Oracle EDI communications address this need.)

Second, suppliers must maintain an accurate and timely picture of customer demand to allow shipment of the correct quantities in the correct shipment sequence at the time a customer specifies.

The Demand Processor is an Oracle Open Interface that provides complete defaulting, derivation, and validation for inbound demand schedules regardless of their source. The Demand Processor can process customer demand schedules from diverse sources including:

EDI planning, shipping, and production sequence schedules processed through the Oracle e-Commerce Gateway

XML planning and shipping schedules processed through the Oracle XML Gateway

Manually entered schedules via Oracle Release Management Workbench

External system schedules loaded into the Demand Processor Interface via a custom process

Once the inbound demand schedule is loaded, the Demand Processor verifies and processes its contents into Oracle sales orders or release orders, and forecasts using predefined Release Management business rules, trading partner processing logic, and comprehensive exception reporting. Oracle Release Management both ensures the quality of demand data and helps decrease the lead time in the order fulfillment process.

Two integrated Oracle products can provide seamless processing for electronic inbound demand: Oracle e-Commerce Gateway and Oracle Release Management. The EDI translator of your choice provides translation for incoming EDI documents and interfaces them to Oracle e-Commerce Gateway in an appropriate flat file format. Oracle Release Management receives demand schedules from Oracle e-Commerce Gateway, verifies them, and imports them into Oracle sales orders or release orders, and forecasts.

Also see the chapter entitled *e-Commerce Gateway for Inbound Demand*.

Using a combination of integrated Oracle products can provide seamless processing for XML inbound demand: Oracle XML Gateway, Oracle Advanced queuing, Oracle

Workflow/Business Event System (BES), Oracle Transportation Agent (OTA), and Oracle Release Management.

Through Oracle XML Gateway, Oracle Release Management receives demand schedules, verifies them, and imports them into Oracle sales orders or release orders, and forecasts.

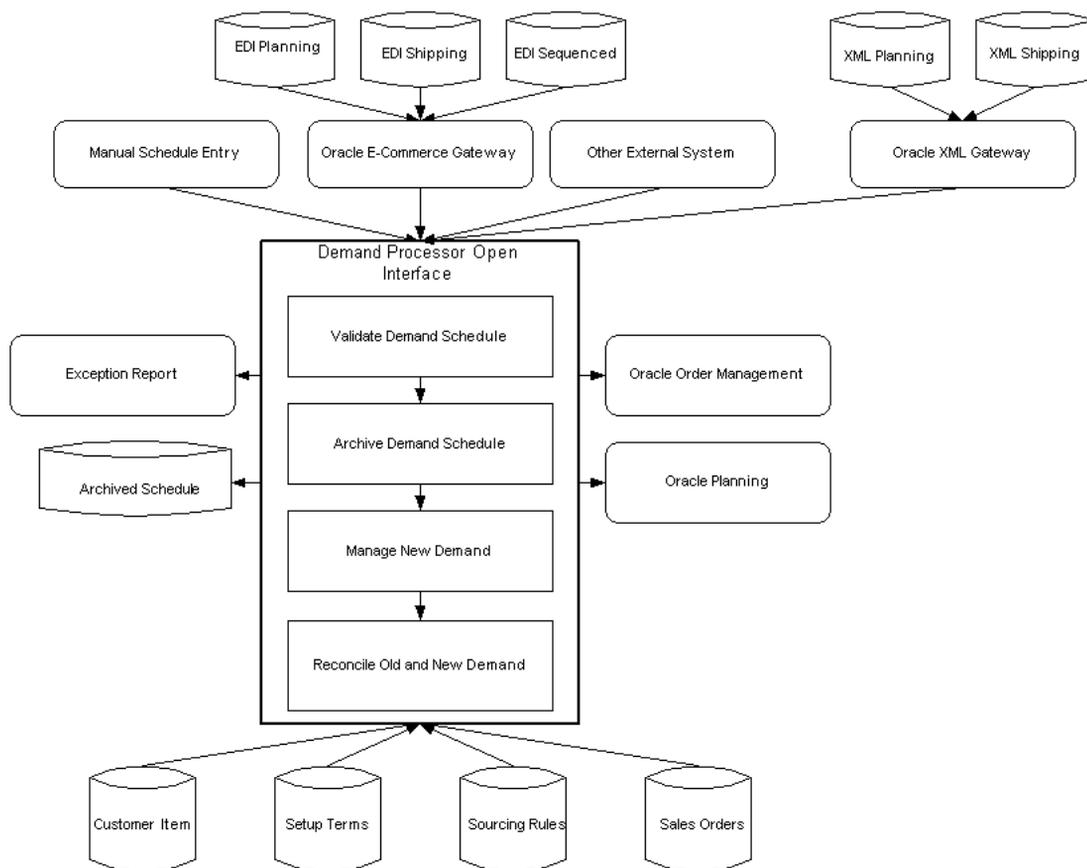
Business Flow

The Demand Management process begins when an inbound demand schedule is loaded into the Oracle Release Management Demand Processor interface tables and the schedule is selected for processing. Oracle Release Management Demand Processor lets the supplier accomplish the following tasks:

- Process customer demand schedules loaded via e-Commerce Gateway for Inbound Demand or manual schedule entry, in the order which they were generated by the customer
- Process schedules manually entered on the Release Management Workbench
- Net customer demand schedules to existing demand according to schedule type, schedule purpose code, and flexible Release Management Processing Rules
- Validate customer demand schedules for data errors and generate exceptions as needed
- Resubmit corrected erroneous schedules for processing
- Archive customer demand schedules for future reference
- Provide timely visibility to current customer firm and planning requirements

The following figure displays the inbound demand processing flow:

Figure B-1 Inbound Demand Processing Flow



Using Demand Management

Demand Management allows for both manual and automated processing of demand files. This section describes the manual process and the steps required to automate the process.

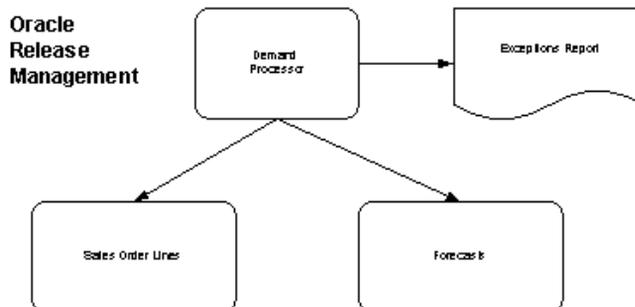
Load Inbound Demand Schedules Demand Management begins either when Oracle e-Commerce Gateway receives an incoming EDI demand document from a trading partner, when Oracle XML Gateway receives an incoming XML demand document

from a trading partner, or when you create a manual schedule using the Release Management Workbench. All are loaded into the Demand Processor interface tables.

The Demand Processor Oracle Release Management's processing engine, the Demand Processor, is split into the following procedures:

- Defaulting, Derivation, and Validation of schedule
- Archive validated schedule
- Manage New Demand: CUM discrepancy check, cumulative to discrete demand quantity conversion, application of Supply Chain Sourcing Rules, application of delivery pattern rule and lead time offset to calculate ship/delivery dates, check customer's receipt or shipment to calculate in-transit, application of frozen, firm and forecast fences, aggregation of demand, and rounding to standard pack quantity
- Reconcile Old/New Demand: cancellation of old demand not-authorized-to-ship before the system date, processing appropriate for schedule purpose code, getting eligible and matching existing demand, performing reconciliation of customer and supplier shipments, reconciliation of past due firm demand, reconciliation of restricted demand, matching of old/new demand, and updating the sales order or the release order, and forecast

The Demand Processor generates appropriate warning and error exceptions and informational messages during each of these procedures.

Figure B-2 Demand Processing

Running the Demand Processor

You can launch the Demand Processor in one of three ways:

1. Use the Submit Demand Processor option under Tools Menu option in the Oracle Release Management Workbench form to launch the Demand Processor for the interface schedule which you are viewing or have entered.
2. Use the Process Inbound Demand Transactions option from the Release Management menu to process the schedule through the e-Commerce Gateway and directly to the Demand Processor.
3. Use the Demand Transactions option from the Release Management menu to submit one or more schedules already in the interface tables to the Demand Processor using flexible parameters for schedule selection and related processing options.

If you run the Demand Processor in a group, the concurrent processes execute sequentially, displaying the status of each concurrent request underneath the parent request.

Viewing Exceptions

Oracle Release Management stores the exceptions encountered during Demand Processing, and provides various means of viewing them:

You can view the exceptions for a schedule online using the Release Management Workbench

You can run the Release Management Exceptions Report as a separate concurrent process by specifying flexible report parameters

Exceptions for a schedule are automatically purged when this schedule is re-processed. If there are still errors and warnings with the schedule, new exception messages are generated.

For more details, see the *Demand Exception Reporting* topical essay.

Viewing Demand Information

Oracle Release Management enables you to view customer demand information on the Release Management Workbench form, Demand Status Inquiry Report, Demand Status Report, and the Schedule / Release Report.

In addition, you can view resulting sales order or release order, and forecast lines using forms and reports provided by Oracle Order Management and Oracle Advanced Planning and Scheduling.

Release Management Workbench

To support analysis of the complete schedule and existing demand situation, the Release Management Workbench provides visibility to all interfaced transaction and archived customer demand schedules, the current Sales Order demand or release order demand, and additional Release Management information. You can:

- Save and Execute Queries
- View Customer Demand Schedules
- View Demand Processor Exceptions
- Correct Errors on Customer Demand Schedules
- View Archived Customer Demand Schedules
- View Horizontal Picture of Customer Demand from Schedule
- View Current Customer Demand
- View Horizontal Picture of Current Customer Demand with Ahead/Behind Status
- View Customer Item Information
- View Shipment History
- View Authorization History

For more details, see the *Oracle Release Management User's Guide*.

Firm and Forecast Demand in Order Management

By passing demand into Oracle Order Management, you can view both firm and forecast demand on the sales order forms. Because open sales orders or release orders may accumulate many lines, you must pay special attention to the method of sorting and querying sales order lines or release orders. Oracle Application's folder technology improves access to the required information.

You also may review Release Management information on the sales order lines or release order lines in Oracle Order Management's Sales Order form that is linked to the Release Management Workbench via the Demand button. These attributes, under the Others tab of the Sales Order form, Lines Items window, include:

Table B-1 Release Management Sales Order Information

Customer Job	Production Line
Model Serial Number	Customer Dock
Intermediate Ship To	Customer Production Sequence
Bucket Type (using Forms folders technology)	Customer Item Revision
Industry Attribute 1: Model Year	Industry Attribute 2: Customer Request Date
Industry Attribute 3: Customer Schedule Reference	Industry Attribute 4: Pull Signal Reference Number
Industry Attribute 5: Pull Signal Start Serial	Industry Attribute 6: Pull Signal End Serial
Industry Attribute 7: Calculated CUM When Shipped	Industry Attribute 8: CUM UOM
Industry Attributes 9 - 14	Industry Attribute 15: Original Ship From Org ID

Forecast Demand in Planning

By passing demand into Oracle Order Management, you can consume internal forecasts with your trading partner's external firm and forecast demand. Forecast consumption replaces internally forecasted demand with actual order demand. Each time you create an order line, you create actual demand which can be firm or forecast. If the actual demand is already forecasted, the Planning Manager decrements forecast demand by the order quantity to avoid counting the same demand twice. Forecast consumption relieves forecast items based on the order line schedule date. When an exact date match is found, consumption decrements

the forecast entry by the order quantity. Other factors that may affect the forecast consumption process are backward and forward consumption days and forecast bucket type. When you create a new forecast — especially from an external source — you can also apply consumption that has already occurred for other forecasts to the new one.

Alternatively, by optionally passing forecast demand into Oracle Advanced Planning and Scheduling, you can view forecast demand on the planning forms.

Demand Status Inquiry Report

To support analysis of the existing demand situation, Oracle Release Management's Demand Status Inquiry Report provides a consolidated view of the current demand picture for both firm and forecast demand. You run this report to show customer, destination, item, date range, and order number.

The report gives the required, shipped, picked, canceled, backordered, and invoiced quantities, pegging demand to the shipping status. The customer's job number and the production sequence number for the customer demand display on the report.

Demand Status Report

To support analysis between quantity in Processed Schedule and quantity put in Order Management, Oracle Release Management's Demand Status Report provides you with a reporting tool to facilitate comparison of Processed and Partially Processed Schedule to the Sales Order demand. This report compares the requested quantity of an item in the Processed Schedule to the quantity that was interfaced into the Sales Order for the given requested date.

The Sales Order lines reflect the demand for an item for a given Schedule processed by the Demand Processor. The discrepancy between the item quantity in the given Processed Schedule and the quantity that was interfaced into the Sales Order may be due to:

- Applicable Schedule Type, Horizon, and Purpose Code
- Applicable Frozen, Firm, and Forecast Time Fences
- Applicable Shipment/Delivery Codes
- In Transit time

Schedule / Release Report

To support the analysis of the schedule's content, Oracle Release Management's Schedule / Release Report provides you with a reporting tool to print raw or processed schedules.

The report should be similar to what is presented on the RLM Workbench. Given the size of some of the schedules, this will facilitate the reconciliation process.

Automating Demand Processing

The steps for receiving inbound EDI demand schedule transactions in Oracle e-Commerce Gateway and loading them from Oracle e-Commerce Gateway to Oracle Release Management can be automated.

To automate Oracle Release Management's demand processing, submit up to three periodic concurrent requests for report sets to process the e-Commerce Gateway inbound demand schedule and subsequently run the Demand Processor. You need one periodic concurrent request for each schedule type that your trading partners communicate to you:

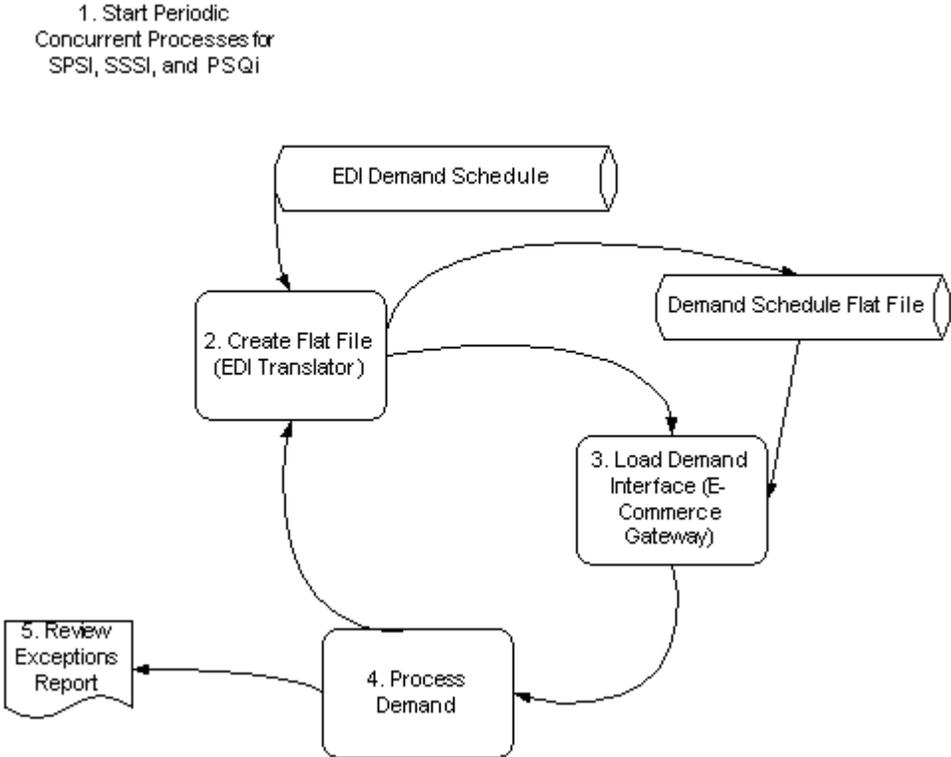
- Inbound EDI Planning Schedules (SPSI)

- Inbound EDI Shipping Schedules (SSSI)

- Inbound EDI Production Sequence Schedules (PSQI)

The following figure details how you can automate the EDI demand management process.

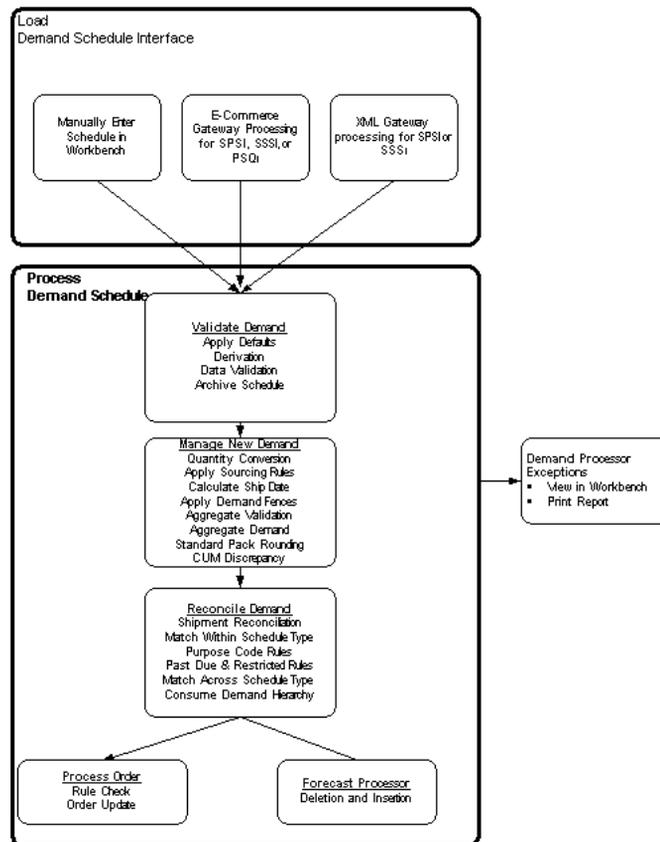
Figure B-3 EDI Demand Processing Automation



Demand Processing Logic

Oracle Release Management's Demand Processor goes through the following steps to bring an inbound demand schedule into the system and update the demand on an order line or forecast.

Figure B-4 Demand Processing Logic



Load Demand Schedule Interface

Open Interface

Oracle Release Management Demand Processor is an open interface, that can accept schedules to be processed from various sources:

- Loaded electronically via Oracle e-Commerce Gateway, which receives inbound demand transactions from the EDI translator software of your choice as SPSI, SSSI, or PSQI flat files
- Loaded electronically via Oracle XML Gateway as XML files
- Loaded manually via schedule entry using Release Management Workbench form
- Loaded programmatically via a custom interface with a legacy system

After the inbound demand schedule is loaded, the Demand Processor concurrent program is launched.

e-Commerce Gateway Trading Partner Setup

Oracle e-Commerce Gateway's Trading Partner form enables you to define customers that send or receive different EDI documents. For inbound demand, you must define the customer as an Oracle e-Commerce Gateway trading partner and enable the inbound demand documents they will send. The Validation procedure checks to ensure that this customer, customer ship-to address, and customer bill-to address can receive the incoming EDI document type.

Also see topical essay entitled *E-Commerce Gateway Inbound Demand*.

e-Commerce Gateway Code Conversions

Oracle e-Commerce Gateway utilizes code conversions to determine the corresponding internal value for several external data elements occurring on the inbound demand schedule before the schedule is loaded into the Demand Processor interface tables. These include Unit of Measure, Schedule Type, Detail Type, Detail Subtype, Date Type, Quantity Type, and Purpose Code.

Also see topical essay entitled *E-Commerce Gateway Inbound Demand*.

XML Gateway Trading Partner Setup

Oracle XML Gateway's Trading Partner form enables you to define customers that send or receive different XML documents. For inbound demand, you must define

the customer as an Oracle XML Gateway trading partner and enable the inbound demand documents they will send. The Validation procedure checks to ensure that this customer, customer ship-to address, and customer bill-to address can receive the incoming XML document type.

XML Gateway Code Conversions

Oracle XML Gateway utilizes code conversions to determine the corresponding internal value for external data elements occurring on the inbound demand schedule before the schedule is loaded into the Demand Processor interface tables. These include Unit of Measure, Schedule Type, Detail Type, Detail Subtype, Date Type, Quantity Type, and Purpose Code.

Demand Processor

Demand Processor Phases

Oracle Release Management's Demand Processor contains several distinct phases:

The Validation procedure validates the schedule in the demand interface table and derives some values and internal identifiers

The Archive procedure places the validated schedule in the permanent historical tables for future reference

The Manage New Demand procedure prepares the new demand for reconciliation by conversion of cumulative quantity, applying sourcing rules, calculating ship dates, applying demand fences, aggregating demand, rounding to standard pack, and identifying CUM discrepancies

The Reconcile Old/New Demand procedure compares the demand lines to the existing order lines in Oracle Order Management, and makes the required changes in the order lines to process the new schedule in context of its purpose code and horizon, and to consume existing demand of less granular schedules accordingly

The Process Order procedure integrates the demand updates with the sales order or the release order and its workflow

The Forecast Processor optionally updates Oracle Advanced Planning and Scheduling's forecasts at the item level. Exceptions generated during any of these phases appear in the Exceptions report.

Schedule Processing Order

The customer can generate multiple demand schedules in a short time. For example:

An original shipping schedule is issued on 1-Oct at 07:45; a cancellation shipping schedule is issued on 1-Oct at 7:48; and another original shipping schedule is issued on 1-Oct at 07:50. To net correctly, they must be processed in order: first original, cancellation, and second original.

A replacement planning schedule issued on 1-Oct at 07:00 is followed by another replacement planning schedule issued on 1-Oct at 09:00. To net correctly, they must be processed in order: first replacement, second replacement.

Oracle Release Management processes multiple EDI and XML customer demand schedules in the chronological order in which they were generated to net the requirements correctly. Many schedules have a generation date without the corresponding generation time.

For EDI If schedules for the same Trading Partner Translator Code and Trading Partner Location Code with a lower schedule processing sort order have not yet been processed, a newer schedule cannot be processed. The sort order depends on whether or not EDI Control Numbers are populated:

- If EDI Control Number columns are populated, unprocessed schedules are sorted in the following order: Trading Partner Translator Code, Trading Partner Location Code, Schedule Generation Date/Time, EDI Control Number 2, and EDI Control Number 3.
- If EDI Control Number columns are not populated, unprocessed schedules are sorted in the following order: Trading Partner Translator Code, Trading Partner Location Code, Schedule Generation Date/Time, Schedule Type, Schedule Reference Number, and Schedule Purpose.

For XML If the EDI Control Number columns are not populated, unprocessed schedules are sorted in the following order:

- Trading partner location code
- Schedule generation date and time
- Schedule type
- Schedule reference number
- Schedule purpose

The following chart indicates the Demand Processor order rules that safeguard the processing order if EDI Control Number columns are not populated and multiple schedules of the same type but with different purpose codes generated on the same day exist for the same EDI or XML Trading Partner Location:

Table B-2 Demand Processing Order Rules

Purpose Code	Do Not Process If These Exist In the Interface Table	Processing Order When Multiple Schedules Exist
Add	No restriction	1
Confirmation	No restriction	2
Original	No restriction	3
Replace	No restriction	4
Cancellation	Add, Original, Replace, Change, Delete	5
Change	Add, Original, Replace, Cancellation, Delete	6
Delete	Add, Original, Replace, Cancellation, Change	7

Validate Demand

Oracle Release Management provides data validation and derivation of the demand schedule against the existing Oracle applications data. The processing engine, the Demand Processor, validates demand data against Oracle Applications such as the customer, customer item number, item unit of measure, and Release Management Processing Rules. The Demand Processor flags any problem records when there are data inconsistencies, and derives internal identifiers such as the customer item ID and values such as the most preferred inventory item number.

Only valid data will be eligible for further processing; erroneous data will remain in the interface tables until errors are corrected or transaction data is deleted.

Apply Defaults

Release Management Processing Rules provide many appropriate default values for missing data. In addition, if the schedule horizon start and end dates are not specified, the Validation procedure will calculate them based on the earliest and latest demand lines on the schedule.

Derivation

All required internal ID's are derived from codes and numbers provided.

Derive Ship From

To derive the Ship From and apply the associated Processing Rules, the Demand Stream Processor uses:

- Ship From derived from the Assigned Supplier Code in processing rules
- Ship From uniquely defined in processing rules
- Default Ship From selected in processing rules (if multiple processing rules are found)

Assigned Supplier Code: In this field enter the code that the customer sends in the electronic schedule to represent you as a supplier (for example, DUNS number). Oracle Release Management searches for a match on the supplier assigned code and thereby determines the Ship From inventory organization.

Default Ship From: Oracle Release Management uses this Ship From to determine the Ship From inventory organization Processing Rules to apply when the customer sends no Supplier Assigned Code on the schedule, or for Global Available to Promise.

Data Validation

Various types of validations are performed on the schedule header and lines:

All mandatory columns must contain a valid value

Relationships between customer and supplier locations must be valid and active

Sales Order number, pricing agreement or price list, assigned must be valid and active

Blanket sales agreement number, release rules associated, assigned must be valid and active

Optional Matching Attributes enabled as Critical Attributes will generate a warning exception if the attribute is not populated

Customer Relationships

The Demand Processor supports Customer Relationships defined in Oracle Receivables. The Demand Processor derive the related bill-to for the ship to being

processed if this relationship is set up in Oracle Receivables, and insert this information on the sales order line or release order line.

Forecast Validation

If the optional Forecast Fence is enabled, the Demand Processor validates that a Forecast Designator is defined for the Customer/Ship To/ Bill To or Customer/Ship To or Customer. Incoming forecasts must have a customer and can have a ship to address, a bill to address, neither, or both. The Validation procedure searches for an exact match of the incoming data against the forecast designators defined in Oracle Advanced Planning and Scheduling's forecast source list. Demand Processor search sequence is as follows:

1. Find a Forecast Name that has the same Customer, Ship-To, and Bill-To.
2. If no match is found, find a Forecast Name that has the same Customer and Ship-To.
3. If no match is found, try to find a Forecast Name that has the same Customer.
4. If no match is found, create an error message.
5. The Demand Processor generates a Fatal Error if no Forecast Designator is found, or if Multiple Designators are found for the same Customer/Ship to Combination.

Schedule Exceptions

The Demand Processor generates three types of exception messages:

Information information messages are not caused by any exception condition, but are useful for schedule interpretation. They do not affect the demand processing.

Warning Warnings are caused by minor exception conditions and are informational only. They do not affect the demand processing. However, if a warning condition arises, you may need to take subsequent action before shipping.

Error Errors halt demand processing for the associated schedule as a whole, or for all details related to the associated schedule item, depending on whether the error is encountered at the schedule header or line level. If an error condition arises, you must resolve the data issues causing the error using the Release Management Workbench or another application form, and rerun the Demand Processor on the corrected schedule.

Information and **Warning** exceptions do not affect the demand processing, but **Error** exceptions halt demand processing.

If **Error** exceptions occurred, you must take corrective action as soon as possible and re-submit the schedule for Demand Processing.

Archive Schedule

Schedule archiving correlates with each schedule item's eligibility for further processing. For a schedule to be fully processed, the schedule header and all corresponding lines must pass validation. If only Information or Warning exceptions are generated on a schedule, it passes validation. However, one or more fatal errors on the header will result in the header failing validation and one or more fatal errors on a line associated with a schedule item will result in the schedule item failing validation.

A schedule can be archived in part or in full. The Validation procedure passes or fails a schedule on an "item by item" basis. For example, a schedule with fifty lines containing ten lines of demand for each of five customer items is processed. During validation, the header and forty-nine lines pass validation but one line fails. As a result, the ten lines of demand for the customer item having the error fail validation together and remain only in the interface table, but the rest of the schedule is archived and continues to be processed.

Depending on the level at which any fatal errors are detected, the schedule is either not archived, partially archived, or fully archived:

If the schedule header and all lines associated with all schedule items passed validation, the schedule is fully archived

If the schedule header passed validation, and some schedule items passed validation, the schedule is partially archived: the header and the lines associated with the schedule items which passed validation are archived, and the lines associated with the schedule items which failed validation remain only in the interface table

If the schedule header has fatal errors, the schedule is not archived

If the schedule header passed validation but all schedule items have one or more fatal errors, the schedule is not archived

In the Release Management Workbench, the entire schedule displays as a unit, even if part of the schedule still remains in the Demand Processor interface tables. The Process Status on the header and each line indicate the current error level and status.

Archived schedules may be selected for the Release Management Net Change Report.

Test Transactions

Test Transactions will be validated and archived, but no further processing is done; this Demand Processor feature facilitates setup and implementation for inbound demand schedules of new trading partners. Test Transactions have the Test field on the Schedule Header checked.

Manage New Demand

If the schedule has at least one schedule item that passed validation, the Demand Processor then moves to the procedure Manage New Demand. This procedure has several steps, which update the interface tables to reflect Release Management business rules applicable to the new schedule lines. Any changes to sales order lines or release order lines in Oracle Order Management and forecasts in Oracle Advanced Planning and Scheduling will be based on these updates.

Flexible Release Management Processing Rules

Oracle Release Management provides a wide variety of attributes that enable you to tailor Demand and Order Management to the needs of your supplier/customer relationship, and also provides flexibility in the levels at which you define these attributes. Release Management Processing Rules can be defined at four levels:

- Ship From/Customer (Mandatory)
- Ship From/Customer Item(Optional)
- Ship From/Address (Optional)
- Ship From/Address/Customer Item (Optional)

Cumulative to Discrete Quantity Conversion

A schedule may be issued with cumulative demand quantities in context of the cumulative received quantity at the time the schedule was generated by the customer. In this case, the Quantity Type on each line specifies Cumulative. The Demand Processor derives discrete quantities for each demand line, by first sorting them in ascending start date order and then backing out the cumulative receipt quantity and prior demand quantities.

Apply Supply Chain Sourcing Rules

Supply Chain Sourcing Rules can be optionally defined to split demand on a schedule between multiple Ship-From locations, or to change the Ship-From location on a schedule when the supplier wishes to override the Ship-From location on the schedule. The Demand Processor supports rules for Make At or Transfer From sourcing.

The profile option RLM: MSC/MRP Default Assignment Set is used to determine if the Supply Chain Sourcing rules should be used to derive the ship from organizations. If these rules should be used (if the profile option is set to something other than No Sourcing To Be Applied), the Demand Processor looks for a unique sourcing rule for the item. If a unique rule is found, this is the rule that is used. If more than one rule exists for the item, the Default Assignment Set designated in the profile option is used to determine which rule should be used.

Once the Assignment Set is determined, the sourcing level and the highest rank sourcing rule for the item is determined. If multiple Ship-From locations are defined with the same rank, the new demand is split between multiple sources accordingly.

To prevent the Sourcing Rules from being applied more than once, when an item is setup as Global Available to Promise, the Demand Processor does not apply the Sourcing Rules. These rules are applied when the ATP Engine is called at the time of scheduling.

Calculate Scheduled Ship Date

The Demand Processor calculates the most accurate Scheduled Ship Date based on information on the schedule and available options defined for the customer/supplier relationship in Release Management Processing Rules.

If delivery dates are specified on the schedule, corresponding scheduled shipment dates must be calculated. The Demand Processor uses several Release Management Processing Rules that can be defined for use when calculating valid shipment dates:

- Ship/Delivery Pattern Codes

- In-Transit Lead Time

- Receiving Calendar by Trading Partner Destination

- Ship From Calendar by Organization/Warehouse

The ship delivery pattern code is applied to the demand.

The transportation lead time is used to offset the due date, and finally the customer destination's receiving calendar and the warehouse's shipping calendar are

interrogated to determine the correct Scheduled Ship date that should be applied to the demand. Now it will arrive at your customer's dock when they requested it.

When the inventory item is set up for Global Available to Promise, the Demand Processor does not apply the Calculate Schedule Ship Date logic to the demand. Rather, the scheduled Ship Date and Ship From are determined when the demand is scheduled in Oracle Order Management and the Global Available to Promise engine is applied to the sales order lines.

When you define your Release Management Processing Rules, you can specify a default ship delivery pattern rule at the customer, address, and customer item levels. This default ship delivery pattern rule will be used if you have indicated not to use the ship delivery pattern transmitted by the customer demand. You can select from the ship delivery pattern rules that were defined using the Maintain Ship Delivery Pattern Rules form.

When a customer transmits buckets other than daily or weekly, Oracle Release Management will divide these buckets into weekly buckets, and apply the specified pattern code to give you a clear picture of your future forecasted demand. This gives your suppliers a clear picture of when material may be required of them. Bucket types that will be converted to weekly buckets are Monthly, Quarterly, and Flexible bucket types.

You set up the calendars in Oracle Shipping Execution. You can set up shipping calendars for your warehouses/inventory organizations, and set up receiving calendars for your ship to addresses.

Apply Frozen, Firm, and Forecast Fences

Demand Fences are used to better manage the demand on Planning, Shipping and Sequenced schedules. Using Release Management Processing Rules, you can define for each schedule type the following four demand fences:

- Frozen Fence
- Firm Fence
- Forecast to OM Fence
- Forecast to PLN Fence

Demand Fences can be optionally defined at four levels:

- Ship From/Customer
- Ship From/Customer Item

- Ship From/Ship To
- Ship From/Ship To/Customer Item

If defined, they override the firm/forecast status of the schedule line and determine which demand is available to be updated, which is authorized to ship, and which is not authorized to ship.

All four types of fences are applied based on system date. Formerly, the fences were applied according to the Schedule Horizon Start Date. In this way the application of the fences is not subject to potentially unpredictable Schedule Horizon Start Dates sent by the customer.

Now, past due demand is determined according to whether it is before the system date, not whether it is before the Schedule Horizon Start Date. Manually entered schedules are not affected by Frozen, Firm, and Forecast Fences.

Frozen Prevents new demand in the Demand Processor from changing the existing Sales Order demand (the new demand is not updated to the Sales Order and a warning is issued if frozen demand has been changed on the schedule).

Firm Overrides the customer demand status by updating to the Sales Order as Firm (Authorized to Ship, ATS), regardless of the customer-specified status on the schedule.

Forecast - OM Overrides the customer demand status by updating to the sales order as Forecast (Not Authorized to Ship, NATS), regardless of the customer-specified status on the schedule. When either OM or PLN forecast fence is specified, requirements dated later are dropped. When a forecast fence is not specified but a firm fence is, requirements dated later than the firm fence are updated to the sales order based on the customer-specified status.

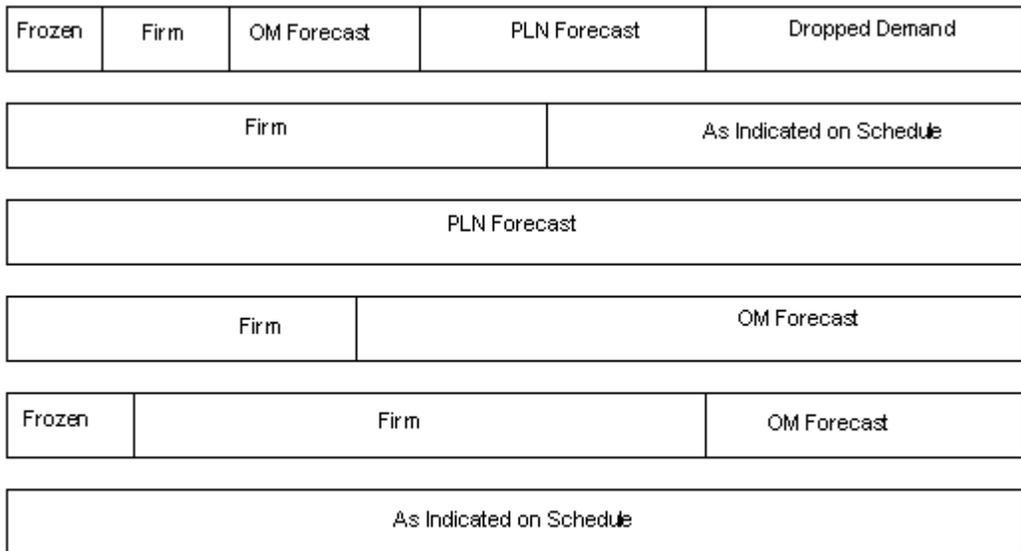
Forecast - PLN Overrides the customer demand status by updating to Oracle Advanced Planning and Scheduling as Forecast, regardless of the customer-specified status on the schedule. When either OM or PLN forecast fence is specified, requirements dated later are dropped. When a forecast fence is not specified but a firm fence is, requirements dated later than the firm fence are updated to the Sales Order based on the customer-specified status.

Roll Forward Frozen Fence Also note that the parameter Roll Forward Frozen Fence can be used to ensure you do not miss a customer's request for an increase in demand. If this parameter is enabled, the increased quantity is added to the

demand on the first day after the Frozen Fence. A decrease in demand within the Frozen Fence results only in a warning on the Exceptions Report.

The following diagram illustrates a few of the many possible demand fence scenarios that can be defined in Release Management Processing Rules. The value of each fence's From/To Fence Days determines the position of applicable fences on the system date (formerly Schedule Horizon Start Date) line governing how demand on the schedule is updated to Order Management or Planning:

Figure B-5 Demand Fence Scenarios



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 ... Last

Firm and Forecast Demand Processing

This identification triggers the placement of demand to sales order lines and optionally planning forecasts.

Firm demand (ATS) is interfaced to sales order lines depending on how demand is categorized on the schedule and how Frozen and Firm Fences are set up

Forecast demand (NATS) is interfaced to either sales order lines or Planning depending on how demand is categorized on the schedule and how Forecast Fences are set up

Aggregate Validation

The Demand Processor checks the new demand lines to see if they might be aggregated by using both the Mandatory and Optional Matching Within Attributes that are enabled and warns users if the new incoming demand contains multiple demand lines that have the same Matching Attributes enabled and the same Item Detail Type (Past Due, Firm, Forecast OM, Forecast MRP). This commonly happens when the Matching Attributes chosen do not uniquely identify the demand lines.

In this example, there are two demand lines for Item IT01 for quantity 10. The two lines have the same original customer request date and different dock codes. If only Original Customer Request Date is enabled as an optional matching attribute, Demand Processor will aggregate the two lines and process a line for quantity 20. This table illustrates that the dock code for the first demand line is overridden because dock code is not set up as a matching attribute.

Table B-3 Demand Lines Example

Item	Original Customer Request Date	Dock Code
Quantity	IT01	2-December
DCK01	10	IT01
2-December	DCK01	10

The Demand Processor will log an exception against item IT01 for duplicate demand and advise the user to check if the matching criteria were appropriately chosen. An example of the warning message is Multiple demand lines have the same Matching Attributes combination with different Customer Dock Codes. Check if the Matching Criteria were appropriately chosen for ship from M2 / ship to 1000 / item IT01.

The user corrects this condition by enabling both original customer request date and dock code as optional matching attributes; then, the data is processed correctly and no detail is lost.

This could happen for any of the Matching Attributes. The Demand Processor recognizes such cases of duplicate demand during the Aggregate Validation and logs the appropriate exceptions.

However, the Demand Processor will raise a warning (rather than an error) to allow the users to decide which matching attribute they really want. If the Demand Processor had raised an error, the users would be forced to enable specific matching attributes to let the Demand Stream Processor continue its process. It is possible that the Customer sent a schedule with incorrect demand and you do not want to change your matching attributes.

Aggregate Demand

The application of Ship/Delivery Pattern Codes may result in multiple demand lines with the same Scheduled Ship Date. The Demand Processor combines like demand using all Mandatory Matching Attributes plus enabled Match Within Attributes associated with the lowest applicable level Processing Rules relationship.

Optional Match Within Attributes can be defined in Release Management Processing Rules at the Ship From/Customer and Ship From/Address levels.

Standard Pack Rounding

The Demand Processor rounds up inbound demand to standard pack quantities if Standard Pack Rounding is enabled in Release Management Processing Rules for the customer, address, or item being processed.

Rounding to Standard Pack Quantity

If the customer item has standard pack rounding enabled, the Demand Processor rounds up all demand quantities to reflect multiples of the standard pack quantity after Ship/Delivery Pattern Codes are applied and demand is aggregated, in case demand quantity no longer reflects standard packaging.

Standard pack rounding can be optionally enabled and the standard pack quantity defined in Release Management Processing Rules. The quantity of future demand is adjusted to maintain demand quantity integrity throughout the schedule horizon, however, as a result of these calculations, the last demand detail may be temporarily overstated until future schedules extend the horizon.

Attention: In the case of a discontinued part with no future demand, this could ultimately result in an over-shipment.

CUM Discrepancy Check

If CUM management is enabled and the CUM key active for the customer destination and the ship from organization, and a non-zero Shipped/Received line with subtype Customer CUM is specified on the inbound demand schedule, the Demand Processor performs a CUM Discrepancy Check. A warning exception is issued if the supplier cum shipped quantity in Oracle Release Management and the customer CUM quantity on the schedule do not match.

Oracle Release Management gives you the ability to inactivate CUM keys on the Cum Workbench. This allows you to inactivate CUM keys that were created in error, and to inactivate CUM keys you no longer need. If shipment or adjustment transactions exist for the CUM key, before inactivating the CUM key, the system will issue a warning, and ask for verification that you still want to inactivate this CUM key.

Inactive CUM keys are not considered for:

- CUM processing by Demand Processor
- CUM key adjustment program
- CUM calculation at Ship Confirm

Reconcile Old and New Demand

Reconciliation by Scheduled Item

In Oracle Release Management, demand reconciliation tasks are performed for each Ship From/Ship To/Customer Item combination on the schedule. For planning and shipping schedules, the Scheduled Item equates to a Ship From/Ship To/Customer Item; for a sequenced schedule, this equates to a single production sequence number.

If any Scheduled Items were not included on the schedule, any existing sales order lines associated with them remain intact. In the case of a Replace schedule, the Demand Processor will compare the new schedule to the previous schedule, and issue a warning for the item that was not included on the new schedule. The Net Change Report can also be used to determine if any items were dropped from or added to a schedule.

Customer/Supplier Shipment Reconciliation

The first step in reconciling the existing sales order lines with the new schedule is to determine if there have been in-transit shipments which are not yet recognized by the customer in the new schedule.

In-transit quantities are supplier shipments that took place after the last customer-recognized shipment on the schedule and must be applied to new customer requirements to avoid overstating the demand. In-transit quantity calculations are used for reconciling schedule demand with orders in Oracle Order Management.

You can choose last receipt information on the schedule, last shipment information on the schedule, or None for the In-transit Calculation Basis parameter in the Processing Rules. The Demand Processor will use this parameter to calculate the intransit shipments, and subtract the intransit quantity from the customer's requirements. The default is None. The Demand Processor will use this parameter to calculate the intransit shipments, and subtract the intransit quantity from the customer's requirements.

The reconciliation takes into account the matching criteria. For better demand management, all the enabled optional matching attributes are considered along with the mandatory matching attributes for shipment reconciliation.

Matching Attributes for Demand Reconciliation

The concept of matching attributes is critical to the demand reconciliation procedure. Matching attributes uniquely identify the customer requirement. There are two types, Mandatory, and Optional.

Mandatory Matching Attributes are always enabled, and Demand Processor errors are generated when they are not populated.

Optional Matching Attributes are defined in Release Management Processing Rules at the Ship-From/Customer and Ship-From/Address level according to the needs of the business relationship:

Match Within Enable if the data element is a Matching Attribute when reconciling demand from the same schedule type, for example, new demand from a shipping schedule being reconciled with existing demand from a shipping schedule.

Note: Always enable as Match Within the attributes which are used by your trading partner in CUM Management (Record Year or Purchase Order if applicable).

Match Across Enable if the data element is a Matching Attribute when reconciling demand from different, less granular schedule types according to the Schedule Consumption Hierarchy defined for the business relationship, for example, new demand from a shipping schedule being reconciled with existing demand from a planning schedule.

Critical Enable if the data element should always have a value for turnaround data or CUM Management. If enabled and the attribute is missing on demand, the Demand Processor will issue a warning exception. Before you can enable the data element as a Critical attribute, you must first enable it as a Match Within attribute.

This table shows Mandatory Matching Attributes and their default settings for Matching Within, Matching Across, and Critical:

Table B-4 Default Settings for Mandatory Matching Attributes

Attribute	Match Within	Match Across	Critical
Bucket Type	Always Enabled	Always Enabled	Always Enabled
Customer	Always Enabled	Always Enabled	Always Enabled
Customer Item	Always Enabled	Always Enabled	Always Enabled
Intermediate Ship To	Always Enabled	Always Enabled	Always Enabled
Inventory Item	Always Enabled	Always Enabled	Always Enabled
Sales Order / Blanket Sales Agreement	Always Enabled	Always Enabled	Always Enabled
Ship From	Always Enabled	Always Enabled	Always Enabled
Ship To	Always Enabled	Always Enabled	Always Enabled

The following table shows Optional Matching Attributes and their default settings for Matching Within, Matching Across, and Critical:

Table B-5 Default Settings for Mandatory Matching Attributes

Attribute	Match Within	Match Across	Critical
Start Date/Time	Enabled by Default	Enabled by Default	Not Enabled by Default
Customer Request Date/Time	Enabled by Default	Enabled by Default	Not Enabled by Default

Table B-5 Default Settings for Mandatory Matching Attributes

Attribute	Match Within	Match Across	Critical
Customer Dock Code	Enabled by Default	Enabled by Default	Not Enabled by Default
Customer Item Revision	Enabled by Default	Enabled by Default	Not Enabled by Default
Customer Job Number	Enabled by Default	Enabled by Default	Not Enabled by Default
Customer Model Serial Number	Enabled by Default	Enabled by Default	Not Enabled by Default
Customer Production Line	Enabled by Default	Enabled by Default	Not Enabled by Default
Customer Production Sequence	Enabled by Default	Enabled by Default	Not Enabled by Default
Pull Signal Reference Number	Enabled by Default	Enabled by Default	Not Enabled by Default
Pull Signal Starting Serial Number	Enabled by Default	Enabled by Default	Not Enabled by Default
Pull Signal Ending Serial Number	Enabled by Default	Enabled by Default	Not Enabled by Default
Purchase Order Number	Enabled by Default	Enabled by Default	Not Enabled by Default
Record Year	Enabled by Default	Enabled by Default	Not Enabled by Default
Industry Attributes 9-15	Not Enabled by Default	Not Enabled by Default	Not Enabled by Default
Industry Attributes 1-15	Not Enabled by Default	Not Enabled by Default	Not Enabled by Default

Matching Within Same Schedule Type

Existing sales order lines associated with the same Schedule Type are matched to the demand from new schedule using all Mandatory Matching Attributes and all enabled Optional Match Within Attributes for reconciliation in context of the schedule Purpose Code and schedule horizon dates.

For example, using Match Within Attributes, the Demand Processor controls matching of existing sales order lines from a Production Sequence schedule when reconciling new demand on a Production Sequence schedule in context of the schedule Purpose Code and schedule horizon dates.

Three results can occur when matching within same schedule type:

An exact match indicates that the new demand line is either identical to a previously transmitted demand line or has modification of non-key attributes

A mismatch indicates that the new demand line occurs in any of the other key attributes, then this is a new requirement record

If everything matches except for the planned shipment date, then this is a roll-forward requirement for a previously transmitted demand line

Matching Across Schedule Types

Existing sales order lines associated with other Schedule Types are matched to the demand from new schedule using all Mandatory Matching Attributes and all enabled Optional Match Across Attributes for reconciliation within the schedule horizon dates according to the Schedule Consumption Hierarchy.

For example, Matching Across logic is used to reconcile existing Sales Order lines from a Planning/Release schedule when the Demand Processor is working with new demand on a Production Sequence schedule. This is assuming that the Planning/Release schedule is less granular than the Production Sequence schedule, according to the Schedule Consumption Hierarchy.

If you have established optional OM or PLN Forecast Fences for demand management in the Release Management Processing Rules, and a customer demand dated **within** the Forecast Fence(s), the Demand Processor will update Order Management or MRP Planning as specified. However, for demand dated **after** the Forecast Fence(s), the Demand Processor will drop those demand lines; they are not updated to the Order Management or MRP Planning.

Matching Applicable to OM Forecast Fence

If you have established optional OM Forecast Fences for demand management in the Release Management Processing Rules, the demand within the fence date range will be updated to the sales order. The status of the demand on the schedule within the fence date range will be overridden to be Not Authorized to Ship (NATS), not eligible for any Order Management processing related to shipment.

Demand is matched using Matching Attributes on a line by line basis.

Matching Applicable to PLN Forecast Fence

If you have established optional PLN Forecast Fences for demand management in the Release Management Processing Rules, the demand within the fence date range will be updated to Oracle Advanced Planning and Scheduling.

Demand is not matched using Matching Attributes on a line by line basis because Oracle Advanced Planning and Scheduling does not support the same attributes into MRP as does Order Management. MRP supports a replacement at the item level based on Forecast Designator for the Customer/Ship To combination; therefore, the schedule horizon dates are not considered.

Schedule Purpose Code Interpretation

The Release Management Demand Processor interprets demand for each item on a schedule within the horizon date range based on the value of the Schedule's Purpose Code. The purpose code can be one of the following:

- Add
- Cancellation
- Change
- Confirmation
- Delete
- Original
- Replace

Purpose Code Rules

The schedule purpose code determines how new demand is reconciled to old demand of the same schedule type once the logic for Matching Within Same Schedule Type has identified the existing demand which is eligible for reconciliation.

The following illustration shows the rule for each purpose code and how it affects the resulting demand picture for a particular Ship From/Ship To/Customer Item, assuming that all Match Within Attributes are identical and aggregation of like demand occurs:

New Demand received on a Shipping Schedule:

- Date = Today, Quantity = 50
- Date = Tomorrow, Quantity = 0

Existing Order Lines within the schedule horizon from other Shipping Schedules:

- Date = Today, Quantity = 10
- Date = Tomorrow, Quantity = 20

Resulting Order Lines from Shipping Schedules within the schedule horizon for various Schedule Purpose Codes:

Table B-6 Purpose Code Rules Example

Replace or Change / Original: New demand replaces old demand within the schedule horizon	Add: New demand is added to old demand if it exists	Cancel or Delete: New demand is matched to and subtracted from old demand	Confirmation: New demand does not update old demand
Date = Today, Quantity = 50	Date = Today, Quantity = 60	Date = Today, Quantity = 0	Date = Today, Quantity = 10
Date = Tomorrow, Quantity = 0	Date = Tomorrow, Quantity = 20	Date = Tomorrow, Quantity = 20	Date = Tomorrow, Quantity = 20

Managing Old Demand before System Date

Demand dated before the system date (formerly, dated before the Schedule Horizon Start Date) is managed depending on whether it is Authorized To Ship (ATS) or Not Authorized To Ship (NATS). ATS represents firm demand, whereas NATS represents forecast demand.

NATS Pre-Horizon Forecast Demand Cancellation

If any unshipped forecast demand exists on the sales order dated before the system date (formerly, dated before the Schedule Horizon Start Date), it is automatically canceled, since it is no longer relevant.

ATS Pre-Horizon Disposition Rule Application

If any unshipped firm demand exists on the sales order dated before the system date (formerly, dated before the Schedule Horizon Start Date), it is managed according to the value of ATS Pre-Horizon Disposition Code.

Oracle Release Management enables you to control how the Demand Processor handles unshipped firm (ATS) Sales Order demand dated before the system date (formerly, dated before the Schedule Horizon Start Date). For each

Ship-From/Customer or Ship-From/Address relationship you can select the appropriate value for ATS Pre-Horizon Disposition Code by selecting from the following options: Remain on File, Cancel after N Days, and Cancel All.

The value you select depends on how your customer's new demand schedules reflect past due demand. Some customers change the date of the past due demand, some leave it as it was originally sent, some cancel it and increase their requirements for dates within the new schedule horizon.

Consume Demand Hierarchy

Oracle Release Management provides the ability to tailor the way the Demand Processor nets inbound demand from different schedule types for each Ship-From/Customer or Ship-From/Address relationship. The user selects a Schedule Consumption Hierarchy that ranks each schedule type from least to most granular. Consume Demand Hierarchy logic controls the reconciliation of demand from lower ranking schedules with demand from a new higher-ranking schedule using Match Across Attributes.

The Demand Processor recognizes three types of inbound demand schedules: Planning, Shipping, and Sequenced. When demand from more than one of these schedule types exists on the sales order, demand from lower ranking schedules is overlaid or consumed by demand on a new higher ranking schedule. This is based on the applicable value of the Consume Demand Hierarchy Code in context of the new schedule's horizon start and end dates.

Consume Demand Hierarchy logic is used only when the new schedule's Purpose Code is Replace or Change; other purpose codes are excluded. Whether the demand is overlaid or consumed depends on the existing demand scheduled ship date and bucket type in context of the schedule's horizon:

Existing demand is **overlaid (replaced)** if its scheduled ship date and period of time represented by its corresponding bucket type falls completely within the schedule's horizon

Existing demand is **consumed** if its scheduled ship date with bucket type includes a period of time after the schedule's horizon end date

Consume Demand Hierarchy Code is defined in Release Management Processing Rules at the Ship From/Customer or the Ship From/Address levels. You may assign the value that reflects the trading partner's business practices as to how the inbound demand schedules relate to one another for demand consumption. The following list indicates the six choices for Consume Demand Hierarchy Code with their corresponding demand consumption rules:

Planning, Shipping, Sequenced (Default)

Planning Schedule does not overlay other schedules

Shipping Schedule overlays Planning but not Sequenced

Sequenced Schedule overlays Shipping and Planning

Planning, Sequenced, Shipping

Planning Schedule does not overlay other schedules

Sequenced Schedule overlays Planning but not Shipping

Shipping Schedule overlays Sequenced and Planning

Shipping, Planning, Sequenced

Shipping Schedule does not overlay other schedules

Planning Schedule overlays Shipping but not Sequenced

Sequenced Schedule overlays Shipping and Planning

Shipping, Sequenced, Planning

Shipping Schedule does not overlay other schedules

Sequenced Schedule overlays Shipping but not Planning

Planning Schedule overlays Shipping and Sequenced

Sequenced, Planning, Shipping

Sequenced Schedule does not overlay other schedules

Planning Schedule overlays Sequenced but not Shipping

Shipping Schedule overlays Planning and Sequenced

Sequenced, Shipping, Planning

Sequenced Schedule does not overlay other schedules

Shipping Schedule overlays Sequenced but not Planning

Planning Schedule overlays Sequenced and Shipping

Consume Demand Hierarchy Example

For example, suppose we have recently received six replacement schedules from our trading partner, and each one includes a daily bucket with a demand requirement for today. This trading partner setup has the default Consume Demand Hierarchy Code of Planning, Shipping, Sequenced.

Because the different schedules have the same date and bucket type for today, there will only be one sales order line to reflect today's demand, and the quantity and schedule type will change to reflect the most recent schedule which updated it.

The following table illustrates the results of Consume Demand Hierarchy logic for today's demand line:

Table B-7 Consume Demand Hierarchy Logic

Schedule Reference	Schedule Ship Date	Schedule Quantity	Sales Order Line Scheduled Ship Date	Sales Order Line Demand Quantity	Sales Order Line Schedule Type
Planning #1	Today	1	Today	1	Planning
Shipping #1	Today	2	Today	2	Shipping
Sequenced #1	Today	3	Today	3	Sequenced
Shipping #2	Today	4	Today	4	Sequenced
Planning #2	Today	5	Today	5	Sequenced
Sequenced #2	Today	6	Today	6	Sequenced

Notice that the second shipping and planning schedules did not update the sales order line, because they have a lower hierarchy than the sequenced schedule.

Tolerance Changes

You may define positive and negative demand tolerances specific to the Ship-From/Customer, Ship-From/Address, Ship From/Address/Customer Item, or Ship From/Customer item relationship in Oracle Release Management Processing Rules.

When the Demand Processor's Reconcile Old and New Demand procedure finds a match with an existing demand record and attempts to make a change to quantity, a calculation is made to verify that the change quantity doesn't violate the lowest

applicable level of tolerances. If the calculation determines that the quantity change does exceeds a tolerance, Oracle Release Management processes the change but raises a warning on the Exceptions report.

Order Management Workflow Status

Depending upon how far the existing sales order lines have progressed in their Order Management workflow, it may not always be possible to update the demand according to information on the new schedule due to conflict with rules governing restricted demand.

The update success or failure of incoming demand changes and replacements on existing sales order lines in Oracle Order Management depends on the Workflow status of the line, the type of schedule, and Order Management processing constraints.

If an attempted change or replacement fails, warning exceptions are issued. Manual intervention is then needed to examine the exceptions and decide how to incorporate the schedule changes into the existing sales order lines to reflect the customer's wishes.

Roll Forward Frozen Fence

If the customer has sent an increase in demand within the Frozen Fence, you can check the Roll Forward Frozen Fence parameter to automatically have the Demand Processor put this increased quantity in the first day after the frozen fence. Note that this just affects an increase in quantity - if the customer decreases the quantity within the Frozen Fence, the Demand Processor issues a warning, and makes no change to the quantity.

When the Roll Forward Frozen Fence parameter is unchecked, if the customer increases or decreases the quantities within the Frozen Fence, the Demand Processor issues warning messages and makes no change to the quantities.

Compare Replacement Schedules

For Replacement schedules, the Demand Processor compares the parts on the schedule being processed with the parts from the previous schedule of similar type from the same trading partner. If the Demand Processor finds a case where a part was on a previous schedule and not yet shipped, but is not on the current schedule, an informational message is generated in the Release Management Exceptions Report.

Demand Processing Logic

Blanket Sales Agreement Processing

Blanket sales agreement processing is the same as Sales Order Processing (see below) with the addition of two rules ("Release Rule" and "Time Frame") which dictate how and when release orders are created. The impact to the reconcile process is that with the use of blanket sales agreement, existing demand can be spread across several release orders.

If the Release Rule is: "Release Combines Items"

With this rule, all items on a blanket sales agreement will share the same release orders. For all items on the blanket sales agreement, the Demand Processor looks for an existing Release Order for the same customer information, and ensures the requested date of the demand is between the start and end effective date of the release order. If it finds a release number that matches this criteria, it adds the new demand to the release order. If it does not find a release order that matches this criteria, it creates a new release order.

If the Release Rule is: "Release Per Items"

With this rule, each item on the blanket sales agreement will have a separate release order from other items on the blanket sales agreement. For each item, the Demand Processor looks for an existing Release Order for the same customer and customer item, and ensures the requested date of the demand is between the start and end effective date of the release order. If it finds a release number that matches this criteria, it adds the new demand to the release order. If it does not find a release order that matches this criteria, it creates a new release order.

Sales Order Processing

With the schedule now accurately reflecting the incoming demand picture according to the business rules defined in Release Management Processing Rules, the Demand Processor updates the sales order lines.

Industry Specific Attributes

By extending Oracle Applications with industry specific attributes, Oracle Release Management captures information specific to an industry and passes this information to sales order lines, visible on the Sales Order form.

Sales Order Processing

This section describes how the Order Processing procedure updates sales order lines in Oracle Order Management.

Source Document References

A critical component of Order Processing is the link between the sales order line and the demand schedule line from which the sales order demand came or was updated. When Oracle Order Management interfaces a new sales order line, the Source Document References identify the corresponding schedule header and line. This provides a link between the Oracle Release Management table and Oracle Order Management's Sales Order Lines, so that information from the schedule can be retrieved for CUM Management and the electronic shipment notice.

A sales order line updated by the Demand Processor does not necessarily have one and only one corresponding schedule line. The trading partner's Optional Match Within Attributes can result in aggregation of demand when multiple demand lines have different values for matching attributes which are not enabled. The trading partner's Ship Delivery Pattern can result in either splitting or aggregation of demand, depending on the bucketing of the demand on the schedule.

For example, we are processing a planning schedule with demand expressed in weekly buckets, the trading partner's Ship Delivery Pattern specifies shipment of equal quantity on Monday and Wednesday. Each schedule line with *weekly* demand will be split into two sales order lines each containing 50% of the shipment quantity for the week, one for Monday and the other for Wednesday. Conversely, when we are processing a shipping schedule from the same trading partner with demand expressed in daily buckets, each schedule line with *daily* demand will be aggregated forward to ship on the specified days, Monday and Tuesday demand will be scheduled to ship on Monday, while Wednesday, Thursday, and Friday demand will be scheduled to ship on Wednesday.

Process Order

After completing the demand reconciliation procedure, the Demand Processor calls Oracle Order Management's Process Order API, that applies all Order Management business rules to all Sales Order updates. At this point, errors can occur that would prevent processing. If this happens, the Process Order API sends error messages back to the Release Management Exceptions Report.

Demand Reporting

You can view processed demand in Oracle Release Management's Demand Status Inquiry. You can peg demand to the sales order line or forecast and view the current shipping status of the transaction.

Forecast Processing

Forecast Processing

MRP supports a replacement at the item level based on Forecast Designator for the Customer/Ship To combination; therefore, the schedule horizon dates are not considered.

There are three types of MRP Planning updates based on the schedule purpose code:

Schedule Purpose = Add - new lines will be added to the forecast designator specified on each individual line.

Schedule Purpose = Delete/Cancel - delete all records for the inventory item within the forecast designator.

Schedule Purpose = Replace/Change/Original - replace all records for the inventory item within the forecast designator

Responding to Schedule Exceptions

Schedule Exceptions have three levels of severity: Information, Warnings, and Fatal Errors.

Information

Information Exceptions are generated when the demand schedule contains a situation that is noteworthy, but neither a warning nor error should be noted. For example, when a schedule with a confirmation purpose code is processed, an information exception is generated. A confirmation schedule is usually issued by the trading partner as an audit trail following a sudden verbal change in near term firm demand for the next shipment.

Assuming that actual demand has already been manually adjusted, this does not require user action upon the schedule.

Warnings

Warning Exceptions are generated when minor problems that do not halt processing are noted. The demand schedule continues to be processed as long as fatal errors are not encountered.

Evaluate and make corrections necessary to reduce the number of exceptions on future demand schedules.

Fatal Errors

Fatal errors at the schedule header level halt further processing for the entire schedule.

Fatal errors at the schedule line level halt further processing for related lines only. If the demand schedule had no fatal header errors, any scheduled items without fatal errors will continue processing.

Fatal errors at either level must be immediately corrected and the schedule re-submitted to the Demand Processor.

The process of correcting errors on a schedule involves four steps:

1. Identify errors and their causes.
2. Examine the schedule.
3. Correct the erroneous data.
4. Re-submit the schedule to the Demand Processor.

Identify Errors and Causes

Review Demand Processor Exceptions

If any exceptions were generated while processing the schedule, the Release Management Exceptions Report will contain the information. Using this report, do the following:

First, identify any fatal errors on the Exceptions report. These require immediate action.

Next, identify the cause of each fatal error. While the messages themselves provide sufficient information for resolving the exception conditions, the Demand Processor Exceptions topical essay provides an expanded discussion of exception processing.

Possible Exception Causes

Demand Processor Exceptions could be caused by various situations, including:

- Missing or inaccurate Oracle Receivables set up (e.g. customers, addresses, site uses)
- Missing or inaccurate Oracle Order Management set up (e.g. Sales Order, Pricing Agreement, Price List)
- Missing or inaccurate Oracle Inventory set up (e.g. Inventory Item, Customer Item, or Unit of Measure)
- Missing or inaccurate Oracle Release Management Processing Rules set up
- Missing or inaccurate mandatory schedule data elements
- Incorrect mapping of schedule data elements to the appropriate Oracle e-Commerce Gateway flat file for inbound demand schedules
- Missing or improper Code Conversion in the Oracle e-Commerce Gateway for inbound demand schedules

Examine Schedule

Before a customer schedule can update the sales order and planning systems, it must be validated, archived, and completely processed by the Demand Processor.

Two important fields enable the user to determine when Demand Processor activity took place and to distinguish between schedules that are processed, unprocessed, or in a suspended state because they contain validation errors which are preventing processing completion. These fields are maintained at two levels, for schedule headers and corresponding schedule lines:

Processed Status

Processed Date

Attention: The Release Management Workbench can also display customer demand schedule transactions *before* they have been validated, archived, and processed by the Demand Processor. The schedule status and processing time-stamp enable the user to distinguish processed schedules from unprocessed ones. For further discussion about using features of the Workbench to view and correct interface schedule transactions, see e-Commerce Gateway for Inbound Demand and Viewing and Managing Demand

Processed Status

Processed Status indicates how far the schedule has progressed in the processing steps done by the Demand Processor. It is maintained at two levels, for schedule headers and each corresponding schedule line.

Schedule lines are grouped by schedule item. A schedule may pass or fail validation item by item, if the header does not have a fatal error. If some of the lines belonging to a particular schedule item have fatal errors, all rows belonging to that schedule item fail validation, and no further processing is done on them until the errors are corrected.

Header Level Processed Status

The Processed Status of a schedule header reflects the status the entire schedule. Schedule Header Processed Status can have any of the following values:

Available To Process Indicates the schedule has not yet been validated, archived, or managed through the Demand Processor.

In Process Indicates the schedule has not yet been completely processed through the Demand Processor, and should not be viewed.

Processed with Error Indicates the schedule has been validated and has fatal errors that prevented any further processing of the header or any corresponding lines through the Demand Processor. This schedule did not update the netted demand.

Processed Successfully Indicates the schedule and all its corresponding lines have been completely and successfully processed through the Demand Processor and have updated the netted demand.

Partially Processed With Errors Indicates the schedule has some lines which were fully processed and some which were not. Check the status of the corresponding lines.

Line Level Processed Status

The Processed Status of a schedule line reflects the status of that line only, and is the same for all lines associated with the same schedule item. Line Processed Status can have any of the following values:

Available to Process Indicates the schedule line has not yet been validated, archived, or managed through the Demand Processor.

In Process Indicates the schedule line has not yet been completely processed through the Demand Processor, and should not be viewed.

Processed with Error Indicates the schedule line has been validated and at least one schedule line in the schedule item group has fatal errors which prevented any further processing of the schedule item group through the Demand Processor. This schedule item group did not update the netted demand, but it is possible that other schedule item groups on this schedule were completely processed.

Processed Successfully Indicates all its lines in the schedule item group have been completely and successfully processed through the Demand Processor and have updated the netted demand.

Processed Date

Processed Date indicates the most recent date and time when the Demand Processor activity corresponding to the Processed Status took place. It is maintained at two levels, for schedule headers and each corresponding schedule line. You can track the flow of error correction processing using Processed Date.

Example: Tracking Processed Status and Processed Date

You can track Processed Status and Processed Date to identify how and when lines in the schedule were processed. In this example, we are following the processing of a schedule that has five lines of demand for each of three schedule items: A, B, and C.

When the schedule is initially loaded into the Demand Processor Interface tables, the header and all fifteen lines will have Processed Status of **Available to Process** and Processed Date indicating the system date and time when the schedule was loaded.

When the Demand Processor begins to process this schedule, the header and all lines will have Processed Status of **In Process** and Processed Date indicating the system date and time when Demand Processor started to work with the schedule.

When the Demand Processor validation process is completed, the Processed Status and Processed Date will be updated on the header and all lines to reflect the results of the validation and the date and time when validation was completed. The header and schedule items A and B successfully passed validation, but schedule item C failed. At this point, the header has Processed Status of **In Process**, the five lines for schedule item A and the five lines for schedule item B have Processed Status of **In Process**, and the five lines for schedule item C have Processed Status of **Processed with Error**.

Since the lines for schedule items A and B are eligible for update, they will be processed through the Manage New Demand and Reconcile Demand routines, but the lines for schedule item C will be ignored.

When the Demand Processor has completed managing and reconciling the demand for schedule items A and B, the Processed Status and Processed Date are updated on the header and the lines for items A and B. Now, the header has Processed Status of Partially **Processed With Errors**, the ten lines for schedule items A and B have Processed Status of **Processed Successfully**, and Processed Date indicating when the Demand Processor completed updating the Order Entry and Planning systems. However, Processed Status and Processed Date of the five lines for schedule item C were not changed after validation: they still have Processed Status of **Processed with Error**, and Processed Date still indicates the date and time when validation was completed.

If the user now examines the current demand for items A, B, and C, he will find that the demand reflects the new schedule only for items A and B.

The user now examines the Error Exceptions associated with schedule item C, makes the necessary corrections, and resubmits the schedule to the Demand Processor, where no fatal errors are detected and schedule item C now processes successfully.

When the Demand Processor begins to re-process this schedule for schedule item C, the header and all lines for schedule item C will have Processed Status of **In Process** and Processed Date indicating the date and time when Demand Processor started to work with the schedule again. The lines for items A and B are not updated.

When the Demand Processor has completed managing and reconciling the demand for schedule item C, the Processed Status and Processed Date are updated on the header and the lines item C. When the entire schedule has been fully processed, the header has the Processed Status of **Processed Successfully** and Processed Date to

reflect the second run. The ten lines for schedule items A and B have Processed Status of **Processed Successfully** and Processed Date to reflect the first run, and the five lines for schedule item C have Processed Status of **Processed Successfully** and Processed Date to reflect the second run.

If the user now examines the current demand for schedule items A, B, and C, he will find that the demand now reflects the new schedule for all three schedule items.

View Schedules in Release Management Workbench

The Release Management Workbench has powerful query tools to help you find your demand schedules.

Queries

You can use a variety of query criteria to retrieve both regularly issued and special interim schedules. For example, if you want to find all schedules generated today for a particular customer, select the customer and enter the system date in the Generation Date From field, then execute the query. From the schedule header information displayed in the Schedule Summary window, you can select the desired schedules and view their details.

Pre-Seeded Queries

Queries, which contain date ranges, have been pre-seeded in the Release Management Workbench. These queries have dynamic date calculation, executing based on today's date or this week's date range. The pre-seeded queries are:

- This week's planning, shipping, or sequenced schedules

- Today's planning, shipping or sequenced schedules

Saved Queries

You can also save queries to facilitate the retrieval of schedules for which you have responsibility. If the saved query contains date ranges, you may need to adjust the dates before executing it. You could create saved queries for such schedule groupings as:

- The newest planning, shipping, or sequenced schedule for a particular customer, ship to location, and organization

- All schedule types for a particular customer, ship to location, and organization

- All schedules with a particular status (e.g. **Error**, **Available to Process**)

Correct Erroneous Data

Correction Depends on Cause of Exception

Demand Processor Exceptions are corrected by taking appropriate action based on the cause of the exception.

Appropriate action may include one or more of the following:

- Oracle Receivables set up (e.g. customers, addresses, site uses)

- Oracle Order Management set up (e.g. Sales Order, Pricing Agreement, Price List)

- Oracle Inventory set up (e.g. Inventory Item, Customer Item, Unit of Measure)

- Oracle Release Management Processing Rules set up

- Adding or correcting schedule data fields using the Release Management Workbench

- Correcting the EDI Translator mapping of schedule data elements to the appropriate Oracle e-Commerce Gateway flat file for inbound demand schedules

- Adding or correcting Code Conversions in the Oracle e-Commerce Gateway for inbound demand schedules

Responding to Errors

In case of fatal errors, the processing was halted, and must be re-started as soon as possible. All schedule information needed to query and correct the erroneous data is provided on the report. Immediate response is needed for Fatal Errors.

At times there may be more than one way to correct data so that the schedule can be fully processed. This will be indicated in exception message text.

Error Correction Example

For example, a set of twelve demand details for a particular ship from / ship to / customer item all have the same invalid unit of measure. In this case, only one exception will be generated for the invalid unit of measure, rather than twelve exceptions.

To correct the situation that caused the invalid unit of measure exception, the user could take either one of two actions:

Change the UOM to be a valid value on each schedule line where it occurs using the Release Management Workbench

Define the UOM and corresponding UOM conversions in the Oracle Units of Measure form in Oracle Inventory

Responding to Warnings

In case of warnings, all schedule information needed to clarify the situation is provided on the report.

No immediate action is required for the schedule itself, since the warning did not halt the processing.

However, the condition that triggered the warning should be analyzed and corrected if possible, to reduce the number of warnings on future schedules from the same trading partner. A variety of responses could be applicable:

For some warnings, such as invalid external Unit of Measure, you may need to implement trading partner specific code conversions in the e-Commerce Gateway

For some warnings, such as Pricing Agreement exceptions, you may need to update the Release Management Processing Rules which reference the attribute, and/or the base table where the attribute is defined

For some warnings, such as Tolerance Limits, you may need to take subsequent action on the sales order line before shipping

For some warnings, such as CUM Discrepancy, you may need to investigate the difference between supplier and customer cumulative quantities, and possibly make a CUM adjustment before the next shipment

Responding to Informational Messages

In case of informational messages, all schedule information needed to clarify the situation is provided on the report.

Re-Submit Schedule to Demand Processor

Running the Demand Processor

You can re-submit the corrected schedule to the Demand Processor via:

Submit Demand Processor option under Tools Menu in the Release Management Workbench form

Standard Report Submission form

Demand Transactions option from the Release Management menu

Release Management Setup Issues

For more details regarding setting up Release Management prior to processing customer demand schedules, please see the *Oracle Release Management Implementation Manual*.

Release Management Processing Rules Order of Precedence

Attributes used to control Demand Processor actions can be defined at multiple levels within Release Management. When new Processing Rules are defined, defaults are provided from the next higher level, which can be accepted or overridden, with a different value. However, when a higher value is changed, corresponding lower level values are not automatically updated.

The Demand Processor determines the lowest defined level of all processing attributes using the following order of precedence for Processing Rules:

1. RELEASE MANAGEMENT Ship From/Address/Customer Item Terms
2. RELEASE MANAGEMENT Ship From/Address Terms
3. RELEASE MANAGEMENT Ship From/Customer Item Terms
4. RELEASE MANAGEMENT Ship From/Customer Terms

The following charts illustrate this order of precedence using the example of Planning Fence Days. The first chart shows customer level terms, the second chart shows address level terms, the third chart shows customer item level terms, and the fourth shows the terms that the demand processor uses.

Table B-8 Processing Rule Order of Precedence: Customer Level Terms

Attribute	Value for Customer Level Terms
Planning Fence Days	0
Frozen From	1
Frozen To	2
Firm From	3
Firm To	14
OM Forecast From	15

Table B–8 Processing Rule Order of Precedence: Customer Level Terms

Attribute	Value for Customer Level Terms
OM Forecast To	25
PLN Forecast From	26
PLN Forecast To	80

Table B–9 Processing Rule Order of Precedence: Address Level Terms

Attribute	Value For Address A Terms	Value for Address B Terms
Planning Fence Days	0	No terms
Frozen From	1	No terms
Frozen To	3	No terms
Firm From	4	No terms
Firm To	21	No terms
OM Forecast From	22	No terms
OM Forecast To	40	No terms
PLN Forecast From	41	No terms
PLN Forecast To	60	No terms

Table B–10 Processing Rule Order of Precedence: Customer Item Level Terms

Attribute	Value For Address A, Customer Item 1 Terms	Value for Address A, Customer Item 2 Terms	Value for Customer Level, Customer Item 1 Terms	Value for Customer Item 2 Terms
Planning Fence Days	0	No terms	0	No terms
Frozen From	<null>	No terms	<null>	No terms
Frozen To	<null>	No terms	<null>	No terms
Firm From	1	No terms	1	No terms
Firm To	14	No terms	14	No terms
OM Forecast From	15	No terms	0	No terms
OM Forecast To	40	No terms	<null>	No terms
PLN Forecast From	41	No terms	<null>	No terms
PLN Forecast To	110	No terms	<null>	No terms

Table B–11 Processing Rule Order of Precedence: Demand Processor Uses

Attribute	Value For Address A, Customer Item 1 Terms	Value for Address A Terms	Value for Customer Level, Customer Item 1 Terms	Value for Customer Terms
Planning Fence Days	0	0	0	0
Frozen From	<null>	1	<null>	1
Frozen To	<null>	3	<null>	2
Firm From	1	4	1	3
Firm To	14	21	14	14

Table B-11 Processing Rule Order of Precedence: Demand Processor Uses

Attribute	Value For Address A, Customer Item 1 Terms	Value for Address A Terms	Value for Customer Level, Customer Item 1 Terms	Value for Customer Terms
OM Forecast From	15	22	0	15
OM Forecast To	40	40	<null>	25
PLN Forecast From	41	41	<null>	26
PLN Forecast To	110	60	<null>	80

Consume Demand Hierarchy

There are three types of inbound demand schedules recognized by the Demand Processor:

- Planning Schedule (830/DELFOR/DELINS)
- Shipping Schedule (862/DELJIT/DELINS)
- Sequenced Schedule (866/DELJIT/SYNCRO & SYNPAK)

When demand from more than one of these schedule types exists on the sales order, it is overlaid, or consumed, when a new schedule is processed, based on the value of the Consume Demand Hierarchy Code, while matching on the Match Across Attributes.

When your customer does not use a particular schedule type, choose a value that reflects the desired order of demand consumption for applicable schedule types. For example, when the default Consume Demand Hierarchy value Planning, Shipping, Sequenced is chosen:

Planning Schedule does not overlay other schedules

Shipping Schedule overlays Planning but not Sequenced

Sequenced Schedule overlays Shipping and Planning

Attention: Changing the value of the Consume Demand Hierarchy Code after demand schedules have been processed is not recommended.

Sales Orders and Forecast Sets

Oracle Release Management needs established sales orders and forecast sets to capture the incoming demand. During the setup process, you must identify these sales orders and forecasts so Oracle Release Management can associate firm and forecast demand appropriately.

Attention: The Changing the value of Sales Order Number after demand schedules have been processed is not recommended. Sales Order Number is a mandatory matching attribute, and changing its setup value will cause the Demand Processor to miss demand on the old sales order when attempting to reconcile old and new demand, resulting in duplicated demand on the old and new sales order

Booking Order and Order Type

Open, booked orders in Oracle Order Management act as a repository for firm demand transactions. These sales orders remain open to capture demand changes and subsequent requirements. Demand can be sent to different sales orders based on the customer, ship-to address, or item. The number and frequency of sales order setup is dependent upon your requirements.

Depending upon the workflow used for the sales order, you may have to create an activity or order hold that prevents the sales order from automatically closing when all the lines are closed. Without this activity or hold, the Oracle Order Management Close Open Orders process could accidentally close a sales order, preventing any demand transactions from getting captured for this order number.

In addition, the sales order should not have a header level purchase order number, since multiple purchase orders can now be referenced on a single sales order and Oracle Release Management captures the purchase order number on demand transactions at the line level.

Forecast Interface to Planning

Similar to the sales orders, forecast designators require setup to capture forecast demand transactions. You identify these forecast designators both in Oracle Advanced Planning and Scheduling's Source List and in an Oracle Release Management System Profile. Oracle e-Commerce Gateway does not reference the forecast designator information.

Forecasts Setup

You must define forecast designators, forecast sets and a forecast source list in Oracle Advanced Planning and Scheduling. The source list must also be specified in the Oracle Release Management system profile to provide the link from the Demand Processor to the correct forecast designator. You can define forecasts at the customer, customer/ship-to and customer/ship-to/bill-to levels. When defined correctly, the Demand Processor will send transactions to the forecast designator that matches the incoming demand information.

CUM Management and Sourcing Rules

You must coordinate the setup of CUM Management with your supply chain sourcing rules. If you perform CUM Management across Ship Froms (CUM Organization Level set to Ship To/All Ship Forms) you should define sourcing rules that will split the demand across Ship Froms. If you do not perform CUM Management across Ship Froms, you should not have sourcing rules enabled for an item. Since your customer maintains a CUM by Ship From, when you receive a schedule, all demand should be placed against the Ship From that they referenced, or you will have multiple CUMs based on the multiple Ship Froms that result from the split due to sourcing rules.

Troubleshooting Illustrations

This section describes how you can use Release Management tools to resolve specific problems related to demand schedule processing. It provides specific illustrations of demand management processing results that may be helpful when troubleshooting.

Optional Matching Attributes

Release Management Flexibility

Release Management provides a great deal of flexibility that enables you to manage demand appropriately for different trading partners. However, it must be carefully set up to reflect the customer's presentation of demand, especially when enabling Optional Matching Attributes. Once established, modifications to Optional Matching Attributes setup can cause unexpected results when new demand transactions are processed against existing demand.

The Demand Processor will give different updated demand results depending on various combinations of these factors:

- Whether or not a particular attribute is enabled as an Optional Matching Attribute in Release Management Processing Rules

- Whether or not enabled Optional Match Within Attributes correspond to enabled Optional Match Across Attributes

- Whether or not successive inbound demand schedules are consistent in the presentation of demand using the Optional Matching Attribute

- Whether or not Release Management Processing Rules are modified for Optional Matching Attribute after demand transactions have been processed

Matching & CUM Management

There are two Optional Matching Attributes that are also used as CUM Key components for certain types of CUM Management: Record Year and Purchase Order. Three demand management factors are important in the context of CUM Management: business relationship level for CUM Management Setup, Active status for CUM keys, and CUM Key Components as Optional Matching Attributes.

Business relationship level for CUM Management Setup

The definition of CUM Management attributes and Optional Matching Attributes must be set up at the same business relationship level. If applicable to the type of CUM Management used by your trading partner, always enable the attributes which are used as CUM Key components at the same business relationship level as the CUM Management definition.

- If the CUM Management is defined at the Ship-From/Customer level, enable Optional Matching Attributes at the Ship-From/Customer level

If the CUM Management is defined at the optional Ship-From/Address level, enable Optional Matching Attributes at the Ship-From/ Address level

Active Status for CUM keys

Oracle Release Management gives you the ability to inactivate CUM keys on the Cum Workbench. This allows you to inactivate CUM keys that were created in error, and to inactivate CUM keys you no longer need. If shipment or adjustment transactions exist for the CUM key, before inactivating the CUM key, the system will issue a warning, and ask for verification that you still want to inactivate this CUM key.

Inactive CUM keys are not considered for:

- CUM processing by Demand Processor
- CUM key adjustment program
- CUM calculation at Ship Confirm

CUM Key Components as Optional Matching Attributes

Optional Matching Attributes that are also used as CUM Key components must be synchronized with the CUM Management Type. If applicable to the type of CUM Management used by your trading partner, always enable as a Match Within Attribute the attributes that are used as CUM Key components at the same business relationship level as the CUM Management definition.

If the CUM Management Type is **CUM By Date and Record Year**, enable **Record Year** as a Match Within Attribute

If the CUM Management Type is **CUM By Date and Purchase Order**, enable **Purchase Order** as a Match Within Attribute

If the CUM Management Type is **CUM By Purchase Order Only**, enable **Purchase Order** as a Match Within Attribute

Matching vs. Ship From/Ship To/Customer Item Demand Reconciliation

In Oracle Release Management, demand reconciliation tasks are performed for each Ship From/Ship To/Customer Item combination on the schedule. For planning and shipping schedules, the Scheduled Item equates to a Ship From/Ship To/Customer Item; for a sequenced schedule, this equates to a single production sequence number.

e-Commerce Gateway Integration

Unexpected results in the Demand Processor may be caused directly or indirectly by changes to components of the Oracle e-Commerce Gateway application.

Three functional areas should be evaluated as potential problem causes when troubleshooting:

- Inbound Demand Flat Files

- Code Conversions

- Trading Partner Definition

Also see the chapter entitled *e-Commerce Gateway for Inbound Demand*.

Inbound Demand Flat Files

Oracle e-Commerce Gateway receives inbound demand transactions from the EDI translator software of your choice as SPSI, SSSI, or PSQI flat files, and loads them as interface schedules into Oracle Release Management.

Inaccurate mapping of schedule data to the flat file can be responsible for unexpected results in the demand Processor.

If your EDI Translator is an Oracle CAI Partner, default mapping to these flat files may be available for you. However, each trading partner's schedules must be mapped using the default, which introduces the risk of mapping error. Also, the flat file format can be customized within Oracle e-Commerce Gateway, potentially taking it out of sync with the EDI Translator mapping.

If you customize the flat file format within Oracle e-Commerce Gateway, carefully synchronize mapping to your trading partner's schedules with your EDI Translator.

Code Conversions

Oracle e-Commerce Gateway utilizes code conversions to determine the corresponding internal value for several external data elements occurring on the inbound demand schedule before the schedule is loaded into the Demand Processor interface tables. These include Unit of Measure, Schedule Type, Detail Type, Detail Subtype, Date Type, Quantity Type, and Purpose Code.

If you define specific Code Conversions applying to trading partners or groups of trading partners using search keys, carefully coordinate corresponding mapping to your trading partner's schedules with your EDI Translator, and verify that the internal code conversion value accurately reflects the intent and value of the external data element.

Inaccurate mapping of schedule data to specific external Code Conversion attributes can be responsible for unexpected results in the demand Processor. For example, if the Detail Type for inventory balance information was inaccurately mapped as Firm Demand, the demand picture would be overstated, introducing a risk of unauthorized shipment.

Trading Partner Definition

By defining trading partner locations within a trading partner group, you establish a link between the business entity defined in the Oracle Applications and the trading partner definition in the EDI translator. For each trading partner, you enable the inbound demand transactions.

Buyouts and mergers may result in changes to customer business relationships. Corresponding changes to Oracle Receivables and Order Management setup for customers, addresses, and site uses required by these new relationships must be evaluated for impact upon the Trading Partner Definition and all Trading Partner Specific Code Conversions in the Oracle e-Commerce Gateway.

In addition, Release Management Processing Rules must be evaluated for impact when changes are made to Oracle Receivables and Order Management setup for customers, addresses, and site uses

Processing Rules Hierarchy

Implementation of Processing Rules Hierarchy

If the Demand Processor is giving unexpected results, the problem may be caused by a particular processing rule overriding the expected value.

Suppose you change the Default Ship Delivery Pattern Code on the Ship From/Customer Terms to reflect a new customer delivery policy, but neglect to make corresponding changes at the corresponding Ship From/Address Terms or Ship From/Customer Item Terms level. When the next schedule is processed, the old Default Ship Delivery Pattern Code was still used, although you expected the new one to be reflected.

Attributes used to control Demand Processor actions can be defined at multiple levels within Release Management. It is important to understand that Release Management Processing Rules at each level are considered to be a complete group of terms for that level. In addition, some attributes can be defined in other Oracle applications.

The Demand Processor determines the lowest defined level and uses all attributes stored at that level, but it does not evaluate each attribute individually across levels. Defaults from the next highest level are initially provided when a new lower level is being entered.

Care should be taken to evaluate the impact on lower levels if a higher level attribute is subsequently changed, since the new attribute value does not automatically cascade down to lower levels. It must be specifically updated at each level to which it applies.

For example, if Ship From/Customer Item Terms are being defined for a Customer Item associated with a particular address, defaults are taken from the corresponding Ship From/Address Terms. If the customer policy requires a change at the Ship From/Address level, all corresponding Ship From/Customer Item Terms which should reflect that change also need to be updated.

The order of precedence for Demand Processor processing attributes is:

1. Release Management Ship From/Ship To/Customer Item Processing Rules.
2. Release Management Ship From/Address Processing Rules.
3. Release Management Ship From/Customer Item Processing Rules.
4. Release Management Ship From/Customer Processing Rules.

Also see the Processing Rules section in the *Oracle Release Management User's Guide*.

Trading Partner Toolkit

Trading Partner Specific Attributes and Processing

By extending Oracle Applications with trading partner specific attributes, Oracle Release Management captures information specific to a trading partner and passes this information to sales order lines.

The Workflow can be customized to recognize these attributes and perform additional processing using them. Although the Trading Partner Architecture (TPA) layer itself does not have additional matching logic, various parts of the code are enabled in TPA and become available to Layer developers to change if desired.

Also see the *Oracle Automotive Trading Partner Toolkit User's Guide*.

Profile Options

RLM Debug Mode: Use this profile option to obtain details from the Demand Processor. The Debug Mode is especially useful when implementing new trading partners. The Debug report enables you to follow the overall processing steps of Demand Processor, enabling you to follow the logic that was applied for any given requirement. For example, if you received an error message for a particular customer item, you can find the customer item in the debug report and understand why the Demand Processor raised an exception. This report also provides valuable information to Oracle Support and Oracle Development. However, running the Demand Processor with Debug Mode on does adversely affect the performance of the Demand Processor.

Also see the *Oracle Release Management Implementation Guide*.

XML Gateway Integration

Unexpected results in the Demand Processor may be caused directly or indirectly by changes to components of the Oracle XML Gateway application.

Evaluate the following functional areas as potential problem causes when troubleshooting:

- Code Conversions
- Trading Partner Definition

Code Conversions

Oracle XML Gateway utilizes code conversions to determine the corresponding internal value for external data elements occurring on the inbound demand schedule before the schedule is loaded into the Demand Processor interface tables. These include Unit of Measure, Schedule Type, Detail Type, Detail Subtype, Date Type, Quantity Type, and Purpose Code.

If you define specific Code Conversions using search keys that apply to trading partners, carefully coordinate corresponding mapping to your trading partner's schedules and verify that the internal code conversion value accurately reflects the intent and value of the external data element.

Inaccurate mapping of schedule data to specific external Code Conversion attributes can be responsible for unexpected results in the Demand Processor. For example, if the Detail Type for inventory balance information is inaccurately mapped as Firm Demand, the demand picture would be overstated, introducing a risk of unauthorized shipment.

Trading Partner Definition

For each trading partner, you enable the inbound demand transactions.

Buyouts and mergers may result in changes to customer business relationships. Corresponding changes to Oracle Receivables and Oracle Order Management setup for customers, addresses, and site uses required by these new relationships must be evaluated for impact upon the Trading Partner Definition and all Trading Partner Specific Code Conversions in the Oracle XML Gateway.

In addition, Release Management Processing Rules must be evaluated for impact when changes are made to Oracle Receivables and Order Management setup for customers, addresses, and site uses.

Viewing and Managing Demand

The Viewing and Managing Demand chapter covers the following topics:

- Overview on page C-2
- Business Flow on page C-3

Overview

Viewing And Managing Demand

The focus of this chapter is viewing and managing demand using Oracle Release Management forms and reports.

Oracle Release Management is part of the Oracle integrated supply chain management solution. Release Management provides the tools needed by the supplier to manage the customer's material demand for manufacturers of subassemblies, components, and parts through the entire process flow from planning through shipping.

The Release Management process includes:

- Receiving demand schedules electronically from the customer
- Viewing and managing demand schedules at various processing states
- Processing demand through ordering and manufacturing
- Viewing and managing the orders resulting from the demand schedules
- Shipping the product
- Communicating demand fulfillment to the customer

Demand management tools related to viewing and managing demand enable the supplier to deal effectively and efficiently with both the demand schedules and the netted demand in the Sales Order and Forecast applications. Forms and reports provide visibility to individual archived demand schedules and the resulting order lines after the Demand Processor nets new schedules with the existing current demand picture.

Also see topical essay entitled *Using Release Management Demand Processor*.

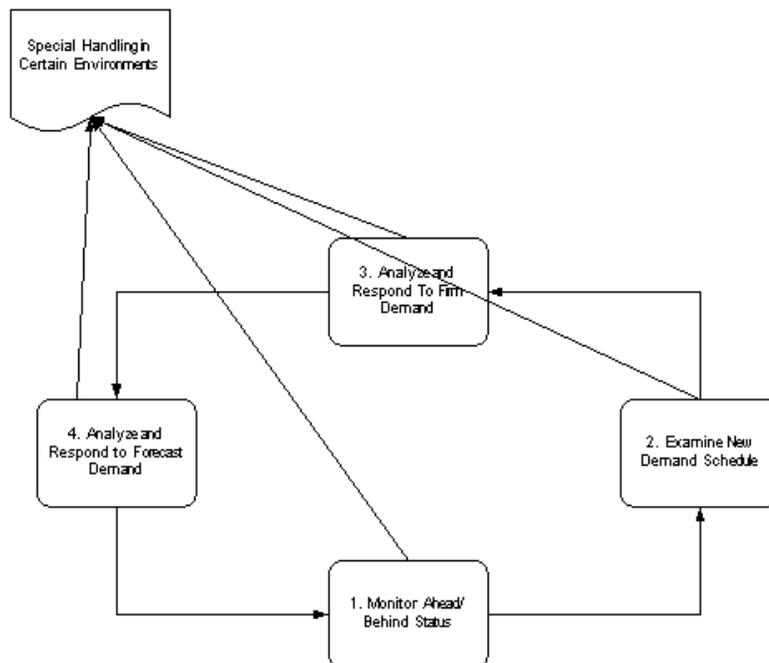
Business Flow

The process of viewing and managing demand is an ongoing cycle with four recurring general phases:

- Monitor Ahead/Behind status
- Examine new demand schedules
- Analyze and respond to firm demand
- Analyze and respond to forecast demand

Within these phases, certain customer environments require special handling, for example, when the customer issues demand requirements with Kanban pull signals, bar code labeling information, or Production Sequencing attributes.

Figure C-1 Fig.1 - Phases of Managing Demand



Using Release Management Tools for Viewing and Managing Demand

This section describes the general tasks involved in each phase of the ongoing cycle of viewing and managing demand, and describes specific actions the user can take using Oracle Release Management forms and reports.

Monitor Ahead/Behind Status

Internal vs. External Ahead/Behind Status Ahead/Behind Status of the scheduled item can be either Internal or External:

Internal Ahead/Behind Status is calculated by the supplier based upon the system date in context of the scheduled and actual shipment dates of firm sales order lines; it reflects all in-transit shipments

External Ahead/Behind Status is calculated by the customer and indicated on the demand schedule as either demand quantities with a detail type of Past Due Demand, or Shipped/Received information labeled Ahead/Behind Status; it may not reflect all in-transit shipments

Monitor Internal Ahead/Behind Status - Release Management Workbench You can monitor Internal Ahead/Behind status of customer items using the Release Management Workbench. Internal Ahead/Behind quantities are dynamically calculated and displayed in the Horizontal Demand window using the Ordered Quantity, Shipped Quantity, and Open Quantity for the date ranges you specify.

Monitor External Ahead/Behind Status - Release Management Workbench You can monitor External Ahead/Behind status of customer items using the Release Management Workbench to view the Horizontal Schedule window.

Monitor Internal Ahead/Behind Status - Demand Status Inquiry Report You can easily monitor Behind status of a customer items using options of the Demand Status Inquiry Report to identify Immediate and Past Due Demand exceptions. Specify the following options and parameter values on the Standard Report Submission form:

On the **Firm/Forecast Indicator** field, select **Firm**

On the **Shipped, Unshipped, or Both** Field, select **Unshipped Only**

On the **Include Canceled Lines** Field, select **No**

To identify Immediate Demand that should be shipped today, enter the system date in both the **From Requirements Date** and **To Requirements Date** fields

To identify Past Due Demand that should have been shipped before today, enter a date earlier than yesterday's date in the **From Requirements Date** field and yesterday's date in the **To Requirements Date** field

Use other parameters to further tailor the report to your needs

Monitor External Ahead/Behind Status - Net Change Report You can monitor External Behind status of customer items using the Net Change Report to compare a Trading Partner's most recent and second most recent schedules of the same type.

Examine New Demand Schedules

Interface Schedules versus Archived Schedules Interface schedules are temporary transactions to be processed through the Demand Processor. Interface schedules are purged from the interface when processing is completed.

Archived schedules are copies of the interface schedules made after successful validation of the schedule data, but before schedule data is manipulated using the Release Management Processing Rules. Archived schedules provide a history and audit trail of Demand Processor activity.

Both interface and archived schedules can be viewed in the Release Management Workbench. The processing status of the header and lines determine which tables the schedule is being displayed from:

- Unprocessed schedules are only in the interface

- Partially processed schedules have archived header and archived processed lines; the entire schedule including the unprocessed lines remain in the interface until fully processed

- Fully processed schedules are archived; they are purged from the interface when processing is completed

Schedule versus Schedule Item Processing Before a customer schedule can update the sales order and planning systems, it must be validated, archived, and processed by the Demand Processor.

The entire schedule does not need to pass validation to have any further processing; the Demand Processor applies following rules after validation to determine eligibility for further processing:

- If a schedule header has a fatal error, all schedule lines will not be processed

If a schedule header does not have a fatal error, schedule line details associated with a particular schedule item pass or fail validation as a group. If some of the line rows have belonging to a particular schedule item have fatal errors, all rows belonging to the schedule item are set to error status, with no further processing done on them until the errors are corrected

A schedule item is defined as:

one LIN loop in an 830 or 862 (usually an item/Ship-From/Ship-To combination, but may be subdivided further into requirements for a particular purchase order, model year, item revision, or other Trading Partner specific attributes which are used to separate item entities in the customer's system for issuing requirements and calculating cumulative quantities)

one configuration in an 866 (what determines a configuration is dependent on several factors: the structure of 866 used, what product identification attributes the customer sends on the transaction, such as job, job sequence, VIN, order, use of SLN segment within LIN, etc.)

Monitoring Demand Processor Activity Two important fields enable the user to determine when Demand Processor activity took place and to distinguish between schedules which are processed, unprocessed, or in a suspended state because they contain validation errors which are preventing processing completion. These fields are maintained at two levels, for schedule headers and corresponding schedule lines:

Processed Date

Processed Status

Attention: : The Release Management Workbench can also display customer demand schedule transactions *before* they have been validated, archived, and processed by the Demand Processor. The schedule status and processing time-stamp enable the user to distinguish processed schedules from unprocessed ones.

For a discussion about using features of the Workbench to view and correct interface schedule transactions which have not yet been archived, see *Inbound Demand e-Commerce Gateway and Using Release Management Demand Processor*.

Processed Date Processed Date indicates the most recent date and time when the Demand Processor activity corresponding to the Processed Status took place. It is maintained at two levels, for schedule headers and each corresponding schedule line. You can track the flow of error correction processing using Processed Date.

Processed Status Processed Status indicates how far the schedule has progressed in the processing steps done by the Demand Processor. It is maintained at two levels, for schedule headers and each corresponding schedule line.

Schedule lines are grouped by schedule item. A schedule may pass or fail validation item by item, as long as the header does not have fatal errors. If some of the lines belonging to a particular schedule item have fatal errors, all rows belonging to that schedule item fail validation, and no further processing is done on them until the errors are corrected.

Header Level Processed Status

The Processed Status of a schedule header reflects the status the entire schedule. Schedule Header Processed Status can have any of the following values:

Available To Process Indicates the schedule has not yet been validated, archived, or managed through the Demand Processor.

In Process Indicates the schedule has not yet been completely processed through the Demand Processor, and should not be viewed.

Processed with Error Indicates the schedule has been validated and has fatal errors that prevented any further processing of the header or any corresponding lines through the Demand Processor. This schedule did not update the netted demand.

Processed Successfully Indicates the schedule and all its corresponding lines have been completely and successfully processed through the Demand Processor and have updated the netted demand.

Partially Processed with Errors Indicates the schedule has some lines that were fully processed and some that did not. Check the status of the corresponding lines.

Line Level Processed Status

The Processed Status of a schedule line reflects the status that line only, and is the same for all lines associated with the same schedule item. Line Processed Status can have any of the following values:

Available to Process Indicates the schedule line has not yet been validated, archived, or managed through the Demand Processor.

In Process Indicates the schedule line has not yet been completely processed through the Demand Processor, and should not be viewed.

Processed with Error Indicates the schedule line has been validated and at least one schedule line in the schedule item group has fatal errors which prevented any further processing of the schedule item group through the Demand Processor. This schedule item group did not update the netted demand, but it is possible that other schedule item groups on this schedule were completely processed.

Processed Successfully Indicates all its lines in the schedule item group have been completely and successfully processed through the Demand Processor and have updated the netted demand.

Using the Release Management Workbench

Viewing Schedules in Release Management Workbench The Release Management Workbench has powerful query tools to help you quickly find your demand schedules.

Queries

You can use a variety of query criteria to retrieve both regularly issued and special interim schedules. For example, to find all schedules generated today for a particular customer, select the customer and enter the system date in the Generation Date From field, then execute the query. From the schedule header information displayed in the Schedule Summary window, you can select the desired schedules and view their details.

The following pre-seeded queries are provided:

This week's planning, shipping, or sequenced schedules

Today's planning, shipping, or sequenced schedules

Saved Queries

You can also save queries to facilitate the retrieval of schedules in your responsibility. If the saved query contains date ranges, you may need to adjust the dates before executing it. You could create saved queries for such schedule groupings as:

- The newest planning, shipping, or sequenced schedule for a particular customer, ship to location, and organization

- All schedule types for a particular customer, ship to location, and organization

- All schedules with a particular status (e.g. **Processed with Error, Available to Process**)

Horizontal Schedule The Release Management Workbench can display the demand schedule for a Ship From/Ship To/Customer Item in a horizontal format. Status, bucket type, and date group demand. Cumulative demand quantities and cumulative shipped quantities are calculated. Customer cumulative received quantity and information concerning the last shipments received are displayed if they were included in the schedule.

Horizontal Demand The Release Management Workbench can display the current netted demand for a Ship From/Ship To/Customer Item in a horizontal format. In contrast to the Horizontal Schedule window, status, bucket type, and date group Demand. Cumulative demand quantities, cumulative shipped quantities, and Ahead/Behind quantities are calculated. Current supplier CUM Management information is also provided.

Visibility of Release Management Exceptions The Release Management Workbench can display information about exceptions that were generated during the most recent run of Demand Processor for the schedule if any are on file. Exceptions identify warnings and errors. When an interface schedule has an error status, data may be corrected in the Workbench and re-submitted to the Demand Processor.

Visibility of Current Demand Picture Firm and Forecast demand from Planning, Shipping, and Sequenced Production schedules are netted into Oracle Sales Orders by the Release Management Demand Processor.

The current demand picture for each of Ship-From/Ship-To business entity will be visible to the user via the Release Management Workbench. The current ahead/behind situation will be visible in the horizontal demand picture.

Visibility of Shipment History Shipments of the item to the customer destination will be visible in the Release Management Workbench. Additional sequencing or kanban detail information will also be shown, such as job and job sequence number, vehicle identification, pull signal number, etc.

Container Label Information on Schedule If your customer includes container label information on schedules, you may view it by using the Packing tab on the Non-Sequenced window.

This information may be extracted from the archived schedule and directed to a third party bar code software application using a custom consulting solution.

Easy Access to Information on Related Forms The Release Management Workbench provides easy access to additional forms that are related to Release Management. Tools Menu links are established to the following forms:

Release Management Processing Rules

CUM Workbench

Workflow Monitor

Workflow Status

Managing CUMs

Visibility of Supplier CUM The CUM Management Workbench in Oracle Release Management displays the shipment transactions and adjustments that make up an item's CUM. A complete history of all the CUM Keys for the customer item can also be viewed in this form.

Oracle Release Management gives you the ability to inactivate CUM keys on the Cum Workbench. This allows you to inactivate CUM keys that were created in error, and to inactivate CUM keys you no longer need. If shipment or adjustment transactions exist for the CUM key, before inactivating the CUM key, the system will issue a warning, and ask for verification that you still want to inactivate this CUM key.

Inactive CUM keys are not considered for:

- CUM processing by Demand Processor
- CUM key adjustment program
- CUM calculation at Ship Confirm

The Demand Status Inquiry Report displays CUM information for the customer item enabled for CUM Management.

Also see the topical essay entitled *Using CUM Management*.

Visibility of Authorization History Material authorization information from archived customer planning schedules for Ship-From/Ship-To/Customer Items will be visible in the Release Management Workbench.

If the customer is tracking CUMs, the high authorization watermark will be identified from the archived schedules. This is the quantity representing the single highest authorization level for each authorization type for the CUM period.

CUM Reconciliation When CUM Discrepancy is Detected If the customer has CUM Management enabled, you will need to synchronize the customer and supplier cumulative quantities. Ensure that Release Management Processing Rules have been accurately defined. The Demand Processor facilitates CUM synchronization by issuing a warning whenever it detects that the customer and supplier CUM do not match.

You can identify CUM Discrepancies in two ways:

View Exceptions associated with any schedule using the Release Management Workbench and look for CUM Discrepancy warnings

Define a message category for CUM discrepancy message and print the Release Management Exception Report by selecting the category from the list of values for the parameter Message Category. You can identify CUM Discrepancies for many schedules at the same time using a parameter to limit the report to a single exception message type. CUM Discrepancy exceptions are available for reporting until they are purged.

Attention: : You can optionally customize the Demand Management Workflow to issue an alert to the planner for the customer item when a CUM Discrepancy exception is issued.

Also topical essays entitled *Using Release Management Demand Processor and Using CUM Management*.

When a CUM Discrepancy is detected, you can reconcile the customer and supplier cumulative quantities using the following procedure:

1. Calculate the difference between the customer and supplier cumulative quantities noted in the CUM Discrepancy exception.
2. Query the schedule triggering the CUM Discrepancy warning using the Release Management Workbench and examine the schedule detail lines of CUM and last shipments recognized by the customer by clicking Non-Sequenced View and selecting the Ship From/Ship To/Customer Item combination that triggered the CUM Discrepancy warning.
3. Open the Shipments window and compare the shipments noted by the customer on the schedule with actual shipments which updated the CUM.
4. Determine if in-transit shipments exist by evaluating the schedule generation date in context of the estimated arrival time of the most recent shipments; determine if these in-transit shipments account for the difference.
5. If in-transit shipments do not account for the difference, determine if the customer has indicated quantity received discrepancies by examining the details of EDI Receiving Advice transactions or verbal communication; determine if these quantity received discrepancies account for the difference; if needed, make a manual CUM Adjustment using the CUM Management Workbench.
6. If the CUM Discrepancy still cannot be explained, ask the customer to provide a report of shipment history for this item for evaluation.

Using Release Management Reports

Oracle Release Management provides six reports to facilitate demand management, that supplement the standard Oracle Order Management reports:

Demand Status Inquiry Report The Demand Status Inquiry Report gives the current status of all sales order lines that reflect the demand from all applicable planning, shipping, and sequenced schedules from the Trading Partner that have been processed by the Demand Processor. You will be able to:

- report for specific exception conditions using flexible selection parameters

Net Change Report The Net Change report compares two archived demand schedules of the same type from the same customer, and identifies the differences between them, such as demand date and quantity, cumulative quantities, authorizations, and shipment information. You will be able to:

- Tailor a report for specific exception conditions using flexible selection parameters

Release Management Exceptions Report The Release Management Exceptions Report provides a listing of error and warning exceptions generated during the execution of the Demand Processor. You will be able to:

- Print exceptions which were generated during processing within the Demand Processor automatically after the processing has completed
- Print exceptions independently of the Demand Processor until the exceptions are purged
- Optionally suppress printing of lower levels of exceptions (warnings and information)
- Use Message Categories to specify certain types of messages to see in a specific execution of the report
- Tailor a report for specific exception conditions using flexible selection parameters

Retro-Billing Report The Retro-Billing report identifies adjustments to already invoiced items, that may be used for retroactive billing with the customer. You can search by Customer, Address, Item ranges, Invoice number ranges, or Invoice Date ranges for eligible invoices.

Demand Status Report The Demand Status Report provides you with a reporting tool to facilitate comparison of Processed and Partially Processed Schedule to the Sales Order demand.

This report compares the requested quantity of an item in the Processed Schedule to the quantity that was interfaced into the Sales Order for the given requested date.

The Sales Order lines reflect the demand for an item for a given Schedule processed by the Demand Processor. The discrepancy between the item quantity in the given Processed Schedule and the quantity that was interfaced into the Sales Order may be due to:

- Applicable Schedule Type, Horizon, and Purpose Code
- Applicable Frozen, Firm, and Forecast Time Fences
- Applicable Shipment/Delivery Codes
- In Transit time
- Report for specific exception conditions using flexible selection parameters

Schedule / Release Report The Schedule / Release Report provides you with a reporting tool to print raw or processed schedules.

The report should be similar to what is presented on the RLM Workbench. Given the size of some of the schedules, this will facilitate the reconciliation process.

- Report for specific exception conditions using flexible selection parameters

Analyze and Respond to Firm Demand

Ability to Modify Current Demand Picture Provided the user has security to modify sales orders, the dates and quantities on current sales order demand may be directly modified via the Release Management Workbench, without the time-consuming process of manually entering a customer material release transaction and launching the Release Management Demand Processor.

Using the Optional Frozen Fence If you have established optional Frozen Fences for demand management in the Release Management Processing Rules, demand within the Frozen Fence may not accurately reflect immediate demand requirements of the customer. However, they will be visible on the archived schedule with the customer-specified status before the fence was applied. Any increase in requirements requested by the customer within the Frozen Fence will be automatically applied to the first sales order line outside of the Frozen Fence.

You should examine the Demand Processor Frozen Fence Exceptions for the most recent schedule, and determine the desired course of action for the unprocessed changes. For example, you can manually change the scheduled shipment date on the sales order lines via the Demand window of the Release Management Workbench, or select sales order lines for early shipment. If this type of intervention becomes frequently necessary, you may want to consider shortening the duration of the Frozen Fence or eliminating it.

Using the Optional Firm Fence If you have established optional Firm Fences for demand management in the Release Management Processing Rules, the demand within the fence date range will be updated to the Sales Order. The status of the demand on the schedule will be overridden to be Authorized to Ship (ATS), and eligible for all Order Management processing through shipment and invoicing. They will be visible on the archived schedule with the customer-specified status before the fence was applied.

Evaluate Current Demand You can examine the current demand picture that has been netted from all applicable planning, shipping, and sequenced schedules from the

Trading Partner using either the Release Management Workbench or the Status Inquiry report.

In the Release Management Workbench, demand can be presented in either of two formats; a listing of the individual sales order lines, or a horizontal bucketed representation of the individual sales order lines. You can switch between the two formats using the **Demand** and **Horizontal Demand** buttons after selecting any Ship From/Ship To/Customer Item on a schedule.

You can use the following tools to evaluate the current demand picture from sales order lines:

- Open the **Demand** window in the Release Management Workbench to view a listing of all sales order lines for the selected Ship From/Ship To/Customer Item. Note that if your cursor is on the schedule line detail section of the form, you will be taken to the exact sales order line that is linked to the schedule line. If your cursor is on the ship from/ship to/customer item section of the form, all sales order lines for that combination will be displayed.
- Open the **Horizontal Demand** window in the Release Management Workbench to view a horizontal bucketed representation of all sales order lines for the selected Ship From/Ship To/Customer Item
- Print the **Demand Status Inquiry Report** with the option **Summarize By Date and Bucket** set to **No** to obtain a listing of all sales order lines for the selected Ship From/Ship To/Customer Item
- Print the **Demand Status Inquiry Report** with the option **Summarize By Date and Bucket** set to **Yes** to obtain a summary listing by date similar to the bucket contents in the Horizontal Demand window

Evaluate Changes from Previous Schedule Once the new schedule has been archived and processed, you can compare it to customer's previous schedule to identify changes the customer has made to the demand picture, such as items included on the schedule, demand dates and quantities, cumulative quantities, authorizations, and shipment information changes.

You can evaluate changes from a previous schedule in two ways:

- View both schedules using the Release Management Workbench looking for differences between their contents
- Print the Net Change report

Fine Tuning Demand Tolerances Oracle Release Management enables you to define positive and negative demand tolerance percentages that are in context of the Supplier/Customer relationship. For example, you can define specific demand tolerance percentages for all customer items shipped to particular destination from a specific supplier plant.

Release Management Demand Tolerances can be defined at any setup level: Ship From/Customer, Ship From/Customer Item, Ship From/Ship To, Ship From/Ship To/Customer Item. The order of precedence for Demand Processor processing attributes is:

- RLM Ship From/Ship To/Customer Item Rules
- RLM Ship From/Address Rules
- RLM Ship From/Customer Item Rules
- RLM Ship From/Customer Rules

Plan Shipments You can view the Horizontal Demand for any Ship From/Ship To/Customer Item to see the summarized daily quantity of individual Sales Order Lines. This is useful when planning shipments, if multiple.

Fine Tune Release Management Processing Rules As you analyze and respond to updated demand, you can identify situations where Release Management Processing Rules can be fine-tuned to improve the efficiency and accuracy of the Demand Management process. For example, if you have a new purchase order with the customer or address that will go into effect in the future, you can set it up on the Processing Rules form as a Future Effective Pricing Agreement. The Demand Processor will interrogate this Pricing Contract to see when it goes into effect, and start using it automatically at that time.

Analyze and Respond to Forecast Demand

Using the Optional Forecast Fences The archived schedule contains demand with the customer-specified status. The interface schedule is then updated according to the Forecast Fences processing rules setup.

If you have established optional OM or MRP Forecast Fences for demand management in the Release Management Processing Rules, and a customer demand dated **within** the Forecast Fence(s), the Demand Processor will be updated to the Order Management or MRP Planning as specified. However, for demand dated **after** the Forecast Fence(s), the Demand Processor will drop those demand lines; they are not updated to the Order Management or MRP Planning.

OM Forecast Fence If you have established optional OM Forecast Fences for demand management in the Release Management Processing Rules, the demand within the fence date range will be updated to the sales order. The status of the demand on the schedule within the fence date range will be overridden to be Not Authorized to Ship (NATS), not eligible for any Order Management processing related to shipment.

Demand is matched using Matching Attributes on a line by line basis.

MRP Forecast Fence If you have established optional MRP Forecast Fences for demand management in the Release Management Processing Rules, the demand within the fence date range will be updated to Oracle Advanced Planning and Scheduling.

Demand is not matched using Matching Attributes on a line by line basis because Oracle Advanced Planning and Scheduling does not support the same attributes into MRP as does Order Management.

MRP supports a replacement at the item level based on Forecast Designator for the Customer/Ship To combination; therefore, the schedule horizon dates are not considered.

There are three types of MRP Planning updates based on the schedule purpose code:

Schedule Purpose = Add - new lines will be added to the forecast designator specified on each individual line.

Schedule Purpose = Delete/Cancel - delete all records for the inventory item within the forecast designator.

Schedule Purpose = Replace/Change/Original - replace all records for the inventory item within the forecast designator

If you have established optional MRP Forecast Fences, Forecast Designators must be carefully defined with the Customer/Ship To/Bill To or Customer/Ship To or Customer. The Demand Processor generates a Fatal Error if no Forecast Designator is found, or if Multiple Designators are found for the same Customer/Ship to Combination.

Sequenced Demand

Display on Release Management Workbench The Production Sequence transaction set can provide the receiver of goods a method to request the order in which shipments

of goods arrive, or to specify the order in which the goods are to be unloaded from the conveyance method, or both. This specifies the sequence in which the goods are to enter the materials handling process, or are to be consumed in the production process, or both. Dates are always discrete, never bucketed, therefore the schedule line data for a Production Sequence schedule is different on the Release Management Workbench. For a Production Sequence line, Organization, Ship To, and Date group the schedule lines. The left portion of the window lists Ship From/Ship To/Dates included on the schedule. The right portion of the window displays corresponding schedule lines information and lines for the current Ship From/Ship To/Date, displayed in Production Sequence Number order, rather than being grouped by Item, as is the display for non-sequenced schedules.

Demand Matching Logic The customer with a Production Sequenced environment may issue planning schedules that are less specific than the Production Sequence schedule. For example, the planning schedule may simply identify the Customer Item, but the Production Sequence schedule may identify the Customer Item, Vehicle ID, Production Sequence Number, Job Number, Receiving Dock, and Production Line.

Demand Matching Logic must be defined accurately for Matching Within Schedule Types and Matching Across Schedule Types for changes to demand in subsequent Production Sequence schedule to be reflected, and for the planning schedule to be consumed by the Production Sequence schedule.

Kanban Demand

Frequent Pull Signal Shipping Schedules There may be little time to respond to frequently issued shipping schedules containing pull signals in a high volume Just-In-Time (JIT) customer production environment. Therefore, you must respond immediately if errors are detected by the Demand Processor when a pull signal schedule is being processed, so that the new demand can be updated to the sales orders and quickly prepared for shipment.

You can optionally customize the Demand Management Workflow to issue an alert to an appropriate employee if errors are detected on pull signal schedules.

Viewing Kanban Information Oracle Release Management stores kanban related information in the Pull Signal Reference, Pull Signal Starting Number, and Pull Signal Ending Number fields. These fields are visible on both the archived schedule and the resulting sales order line. The Release Workbench displays this data on the References tab on the Lines window. The sales order displays this data under the

Industry Attributes, in the Other tab on the Lines window. This data can be extracted by third party bar code software to print kanban labels, if required by the customer.

Schedule Purge

To purge unnecessary archived schedules from the system, use the Release Management Purge Schedule process. Information about this process is in the *Oracle Release Management User's Guide*, Reports and Processes.

Release Management Exceptions

Topics covered in this appendix include:

- Overview on page D-2
- Business Flow on page D-3
- Managing Release Management Exceptions on page D-5

Overview

The Release Management Demand Processor is an Oracle Open Interface that provides complete defaulting, derivation, and validation for inbound demand schedules regardless of their source. The Release Management Demand Processor can process customer demand schedules from diverse sources including:

- EDI planning, shipping, and production sequence schedules processed through the Oracle e-Commerce Gateway

- XML planning and shipping schedules processed through the Oracle XML Gateway

- Manually entered schedules via Oracle Release Management Workbench

- External system schedules loaded into the Demand Processor Interface via a custom process

This chapter addresses exceptions that occur during the processing of demand interface files by Oracle Release Management, and the features provided for handling them. The Demand Processor screens incoming demand files and the existing Oracle setup for many different exception conditions that generate error and warning messages. While the messages themselves provide sufficient information for resolving the exception conditions, this chapter provides an expanded discussion of exception processing.

See also *Using Release Management Demand Processor* topical essay.

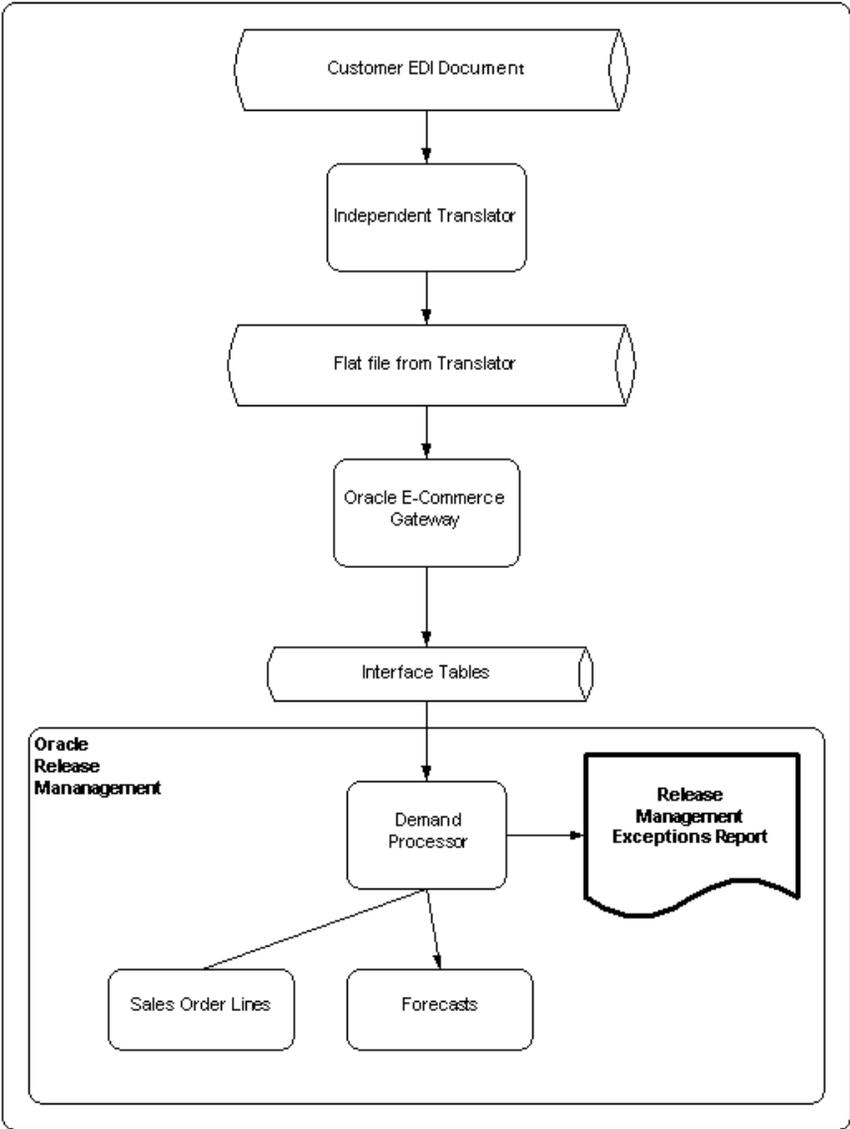
See also *Inbound Demand e-Commerce Gateway* topical essay.

Business Flow

Release Management exceptions are generated at the end of the inbound demand processing flow. During this process, exception conditions are checked with resulting exception messages stored in the database. If problems exist during Demand Processing, then a separate concurrent request will generate the Release Management Exceptions Report. This report will generate only if exceptions exist and will contain information needed to resolve error conditions. Warning messages will also print out but will not prevent processing. If no exception conditions exist, the Release Management Exceptions Report will not generate.

The following figure displays how exceptions are generated from the inbound demand processing:

Figure D-1 Oracle Release Management - Inbound Demand EDI Processing



Managing Release Management Exceptions

This section addresses the aspects of managing Release Management Exceptions. Exception handling features can be divided into the following general areas:

- Generating Exceptions
- Reporting Exceptions
- Message Categories
- Viewing Exceptions
- Responding to Exceptions

Generating Exceptions

Exception Severity Levels

The Release Management Demand Processor verifies inbound demand files against the data setup in the Oracle system, and generates exceptions at three levels of severity:

Information Information messages are not caused by any exception condition, but are useful for schedule interpretation. They do not affect the demand processing.

Warning Warnings are caused by minor exception conditions and are informational only. They do not affect the demand processing. However, if a warning condition arises, you may need to take subsequent action before shipping.

Error Errors halt demand processing for the associated schedule as a whole, or for all details related to the associated schedule item, depending on whether the error is encountered at the schedule header or line level. If an error condition arises, you must resolve the data issues causing the error using the Release Management Workbench or another application form, and rerun the Demand Processor on the corrected schedule.

Exception Message Numbers All exceptions that can be generated by the Demand Processor are identified in the Applications Messages table, and are assigned a standard number in the format APP-nnnnn. The message number range assigned to Release Management is 226001 - 226999.

Exception Data Attributes Exception messages are stored with a common set of data attributes for use in resolving the issue.

When message text does not contain enough information to resolve the issue, data elements will be embedded in the message.

The Release Management Exception Report can be customized to include several extra data elements stored in the exception table.

Occurrences of a Specific Exception In some cases, exceptions recur on multiple schedule lines that have the same attribute that triggered the exception.

For example, a set of twelve demand details for a ship from / ship to / customer item all have the same invalid unit of measure. In this case, only one exception will be generated for the invalid unit of measure, rather than twelve exceptions.

Old Exceptions When Reprocessing a Schedule When a schedule is re-processed by the Demand Processor after fatal errors are corrected, exception messages generated by the previous run of the Demand Processor are purged.

Reporting Exceptions

Real Time Report Generation The Release Management Exception report generates immediately following the demand processing, if warning(s) or error(s) were generated during processing. Depending on the process default settings, the system can print the report or save it in a specified directory.

When printed as part of the Release Management report set, the report includes only those schedules that were processed in the assigned Request/Batch ID.

On-Demand Report Generation The Release Management Exception report can also be printed independently of the Demand Processor via Standard Report Submission form. Report features include:

- Flexible report parameters such as Request ID Range, External Customer Name, Trading Partner Range, External Trading Partner Location, External Customer Item Range, Inventory Item Range, Schedule Number Range, Message Category Range, Exception Severity, and Exception Generation Date Range
- Optionally print exceptions independently of the Demand Processor using selection parameters
- Optionally suppress printing of lower levels of exceptions (warnings and information)
- Optionally print occurrences a specific message category or type

Grouping and Sorting The exception report groups and sorts messages. Grouping occurs at the request ID, customer, schedule, and schedule line level. Within this grouping, exceptions sort in ascending order by ID.

Exception Severity Levels Using the Severity Level selection parameter for the report, the user can optionally suppress printing of lower levels of exceptions (warnings and information).

Message Categories

Message Categories Message Categories are used to organize the messages on the Exception Report. There are six predefined Message Categories and new Message Categories can be defined and assigned to exception messages as needed.

Define Message Categories To define message categories, you must perform the following step:

Using the Application Developer responsibility, navigate to the Application Object Library Lookups form. Query RLM_MESSAGE_CATEGORY Lookup Type. Enter a new code and message. You may define as many Message Categories as needed.

Setup Message Categories Navigate to the Message Category form under the Release Management Responsibility. On this form you will see all of the Release Management Exception Messages. Number is the exception number, Text is the text of the exception message and Message Category is the category currently assigned to the message. The following Message Categories are currently available:

- Action messages
- Default
- Data related issue
- Matching criteria related issue
- Non-matching criteria related issue
- Quantity changes
- Newly defined message categories are also available in the list of values

Viewing Exceptions

Release Management Workbench The current exceptions associated with any schedule can be viewed in the Release Management Workbench. First, query the schedule. Then, either click Exceptions from the Schedule Summary window, or click the Exceptions check box in the Schedule Details window.

The Exceptions window will display all exceptions generated for this schedule in any execution of Demand Processor:

- Request ID identifies the batch of the concurrent process that included this schedule.
- Level indicates severity of the exception
- Message Name indicates the exception code
- Line ID associates the exception with the schedule header or a specific schedule line. If the Line ID column is not populated, the exception relates to the schedule header. If populated, the exception relates to the schedule line.

Responding to Exceptions

Release Management Exception Actions in e-Commerce Gateway Some Release Management exceptions can be corrected by making changes in the e-Commerce Gateway, such as defining additional code conversions mapping external values used by the trading partner to valid internal values that already exist.

Once the Demand Processor Interface tables contain the schedule data, making changes in the e-Commerce Gateway to correct the data will not affect the Interface schedule, because it is past the point where e-Commerce Gateway processing affects it.

If the schedule header status is **Processed With Errors**, the schedule must be corrected using the Release Management Workbench, because part of the schedule has been fully processed. The schedule cannot be reloaded into the e-Commerce Gateway from the flat file provided by the EDI Translator without risk of duplicating data in the Release Management and Order Management system.

If the schedule header status is **Processed With Errors**, the schedule can be corrected in either of two ways:

1. It can be corrected using the Release Management Workbench, and re-processed through Demand Processor.

2. It can be deleted using the Release Management Workbench, reloaded into the e-Commerce Gateway from the flat file provided by the EDI Translator, and re-processed through the e-Commerce Gateway and Demand Processor after the changes in the e-Commerce Gateway are made, such as missing code conversions are defined.

Corrections of Internal vs. External Values Several data elements have an external value from the EDI schedule, and a corresponding internal value or ID which is derived by code conversion or table lookups.

When you are correcting a schedule using the Release Management Workbench, make corrections to the corresponding internal value. When the attribute has an e-Commerce Gateway code conversion, changing the external value will not correct the Demand Processor exception, because code conversions are not performed in the Demand Processor.

The following attributes have e-Commerce Gateway code conversions:

RLM_SHP_DEL_CODE
RLM_SCHEDULE_TYPE
RLM_ITEM_DETAIL_TYPE
RLM_ITEM_DETAIL_SUBTYPE
RLM_DATE_TYPE
RLM_QTY_TYPE
RLM_TRX_PURP
UOM

Demand Validation Process The Demand Processor attempts to completely validate a schedule, and continues to validate as much as possible even after a fatal error is detected. However, some validations are dependent upon successful validation of related data. For example, if the customer ID cannot be identified, the default Release Management Processing Rules cannot be identified either. Even though this fatal error is at the schedule header level, schedule lines will still be validated for anything that is not dependent upon the customer ID.

Therefore, responding to exceptions can become an iterative process, involving correction and reprocessing of the schedule several times before all exceptions are discovered and resolved.

Process Halting Defaulting, Derivation, and Validation routines keep going even when fatal errors are detected, to find as many errors as possible on the schedule in one processing run.

Halting occurs after the Defaulting, Derivation, and Validation routines have completed, if any fatal errors have occurred. Halting Level of the Demand Processor is the Ship From / Ship To / Customer Item, also known as Schedule Item.

Fatal errors at the schedule header level halt processing for the entire schedule.

Fatal errors at the schedule line level halt processing for all schedule lines related to the Ship From / Ship To / Customer Item associated with the fatal error.

Scheduled items without fatal errors will be archived and processed *only* if the schedule header had no fatal errors

Depending on the specific exception, corrections may need to be made either to the schedule using the Release Management Workbench or to the setup data using a particular application form.

Order Management Process Order Exception Actions When the Order Management Process Order API returns an error or warning message to the Demand Processor, that error/warning will be included in the Release Management Exception Report. The actions for these warnings or errors are generally within the Order Management Responsibility, relating to the sales order or Order Management setup. Review the error or warning message to determine what action should be taken. The messages commonly encountered are related to price lists, processing constraints, etc.

Using the Order Management profile option: OM: Debug Level, more details on the errors or exceptions encountered by the Process Order API are passed to the Demand Processor and can be viewed in the request log of the Demand Processor request.

NOTE: Manually entered processing constraints can effect the ability of the Demand Processor to insert, delete, or update lines on a sales order. Use caution when adding processing constraints in the Order Management responsibility.

CUM Management

The CUM Management chapter covers the following topics:

- Overview on page E-2
- Business Flow on page E-4
- Using CUM Management on page E-6

Overview

This document addresses the needs for managing and using CUM accounting rules within Oracle Release Management. Although CUM Accounting is not done in many manufacturing environments, it is essential to the automotive industry, that implements cumulative material releasing and material authorizations.

The CUM quantity is the basis for the supplier's cumulative scheduled quantity to which the customer expects shipment compliance. The customer's CUM quantity is included in planning and shipping schedules sent to the supplier, along with identification of the last receipt that updated the customer's CUM. From the customer's CUM, the supplier can accurately determine where they stand in terms of 'shipping to' the scheduled CUM, by comparing their last shipment to the customer's last receipt.

Table 3-1 CUM Quantity Example

Quantity Type	Month 1 Amount	Month 2 Amount	Month 3 Amount
Quantity Shipped	50	75	125
CUM Quantity Shipped	50	125	250

CUM Accounting in Oracle Release Management is intended to support the customer's CUM Management requirements. Internal supplier CUM management requirements (CUM by internal part number, CUM rejected) are not a feature of Oracle Release Management.

If CUM Accounting is enabled, CUM quantities are calculated according to the customer's rules, usually as the sum of:

- Qualified shipments or receipts dated within the defined CUM Period
- CUM Adjustment transactions dated within the defined CUM Period

CUM Accounting includes the following CUM management features:

- CUM Rules
- CUM Adjustments
- CUM Discrepancy Checking / Notification
 - Processing Customer-Initiated CUM Adjustments

Customer vs. Supplier CUM Synchronization

If CUM Accounting is enabled, it is imperative that the customer and supplier CUM quantities remain in synchronization.

If the supplier is participating in electronic commerce with the customer, the integrity of the CUM can be automatically monitored by both the supplier and customer. On both sides, an investigation of the cause of the discrepancy can be done, an adjustment can be made where needed before the next shipment to the customer.

Supplier Side If the customer's CUM is included in the inbound electronic Planning Schedule or Shipping Schedule the customer's CUM can be compared to the supplier's CUM based on the last shipment recognized. If the supplier detects a discrepancy when the demand transaction is processed, an in-house notification can be given.

Customer Side If the supplier's CUM is included in outbound electronic Advance Ship Notices, the customer compares it to his CUM when the ASN is received. If there is a discrepancy, the customer can generate an electronic Receiving Advice or Application Advice transaction to notify the supplier.

To facilitate CUM Accounting, Oracle Release Management supports following features:

- CUM Rules

- CUM Adjustments

- CUM Discrepancy Checking / Notification

- Processing Customer-Initiated CUM Adjustments

For each ship from/ship to/customer item under CUM control CUM Management can be viewed:

- In the Release Management Workbench form

- In the CUM Management Workbench form

- In reports pertaining to the customer's release transactions or items

Business Flow

As a supplier, you define the CUM rules for each trading partner. These rules can be set at the ship from/customer level, the ship from/ship to level. An item can be enabled or disabled for CUM management.

Oracle Release Management gives you the ability to inactivate CUM Keys on the Cum Workbench. This allows you to inactivate CUM Keys that were created in error, and to inactivate CUM Keys you no longer need. If shipment or adjustment transactions exist for the CUM Key, before inactivating the CUM Key, the system will issue a warning, and ask for verification that you still want to inactivate this CUM Key.

Inactive CUM Keys are not considered for:

- CUM processing by Demand Processor
- CUM Key adjustment program
- CUM calculation at Ship Confirm

When customers send demand schedules that include CUM information, the Demand Processor will compare the CUM sent in the schedule by the customer with the supplier CUM that exists. If these CUMs do not match, a warning is generated.

The Demand Processor converts cumulative quantities to discrete quantities based on Supplier CUM (formerly, based on Customer CUM) and interfaces the demand to Order Management. The archived schedule contains the customer's CUM and any authorization information sent on the schedule.

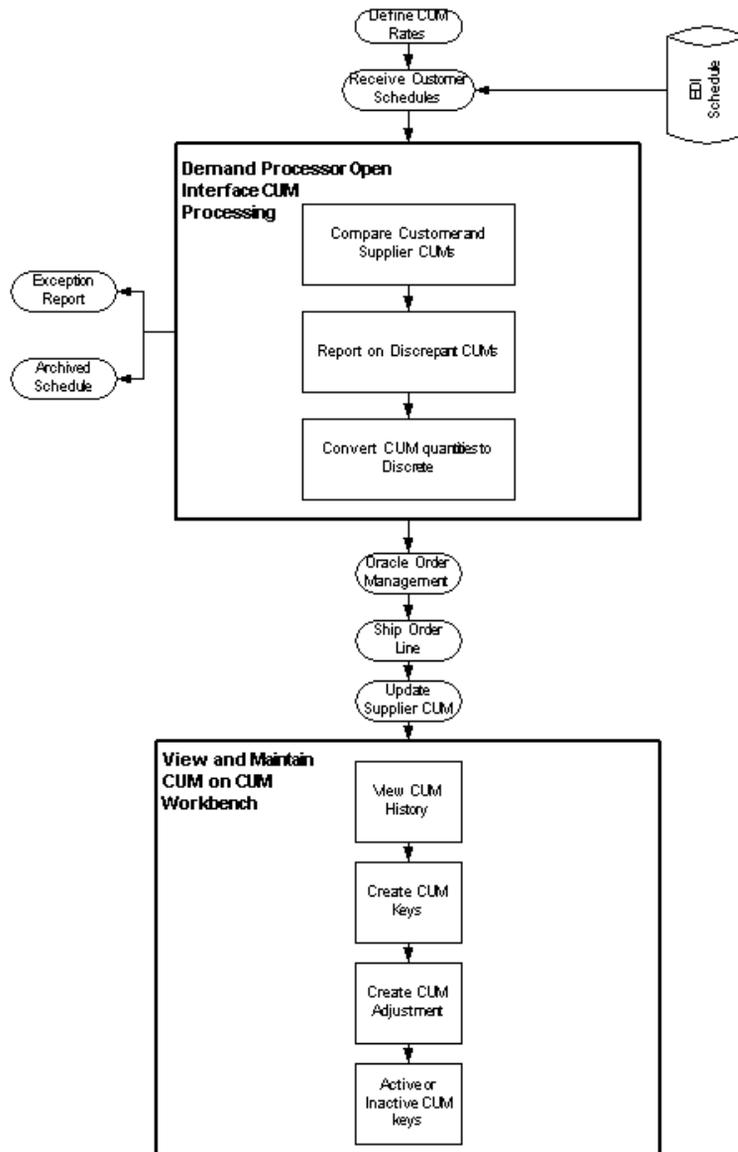
Upon shipment, the supplier CUM for the item under CUM management is updated, and the CUM information is sent on the Advanced Ship Notification. The CUM history, including all shipments and CUM adjustment transactions, can be viewed on the CUM Workbench.

Tools exist to enable you to create a new CUM Key, either manually or automatically, and adjust previously shipped order lines with a new CUM Key.

By default, a new CUM Key has active status.

The following figure displays the CUM Management process in Oracle Release Management:

Figure E-1 Figure 1.0CUM Management Process Flow



Using CUM Management

Define your customer's CUM rule

Each customer may have a different way of calculating CUMs. The customer's CUM rule defines how to calculate the CUM for that customer so the supplier's CUM will generally be in synchronization. You set up the customer's CUM rule on the Release Management Processing Rules form, on the CUM Management tab at the Customer or Address level. The CUM rule consists of the following components:

CUM Management Type (Cum by Date, by Date/PO, by PO, by Date/Record Keeping Year)

CUM Org Level (Ship To/Ship From, Bill To/Ship From, Intermediate Ship To/Ship From, or Ship To/All Ship From)

Shipment Inclusion Rule Code (As of Current, As of Prior Shipment, As of Yesterday)

Yesterday Cut-off Time (only applicable with Shipment Incl Rule Code set to 'As of yesterday')

All items associated with a Ship-From / Ship-To business entity relationship fall under the same CUM Management rules, however, there is a flag on the customer item if you don't want the CUM calculated for this customer item.

Receive Inbound Schedules with Cumulative Requirements

Oracle Release Management enables you to receive electronic demand from your customer. If your customer uses CUMs, the electronic demand may include customer's current CUM for each item. This information is stored in the Release Management Schedule Archives for each schedule and is also used in the Demand Processor to report any discrepancies between your CUM and your customer's CUM.

The Oracle Release Management supplier CUM shipped is used in the demand processor to derive new and changed demand from your customer (formerly, the customer CUM received was used).

Demand Processor - CUM Management Processing

Automatic Adjustments to the customer's demand based on in-transit shipments

The Demand Processor will compare the customer's last received shipment with the last shipment you sent them to determine if there are in-transit shipments that are not accounted for in the customer's CUM. If so, it will automatically adjust the incoming demand so that the in-transit shipment is accounted for.

CUM Discrepancy Check

As part of Demand Processor, the CUM that the customer sent for an item is compared to the calculated CUM that resides in the Oracle Applications, reflecting the shipments and CUM adjustments that make up supplier's CUM for the customer's item. If the CUMs are discrepant, the Demand Processor indicating the discrepancy generates a warning exception. You can then use the CUM Adjustments feature to correct your CUM or communicate the discrepancy to your customer for further investigation.

The Demand Processor also notifies of any change in CUM Key values detected in the inbound demand transaction based on the business entity's CUM Management rules, such as change of Cumulative Start Date, Record Year code, or Purchase Order. The Demand Processor will also issue a warning if the CUM Management Type is by Purchase Order Only or by Date and Purchase Order, and there is no PO on the inbound schedule

Note that the Cum Discrepancy Check is performed by the Demand Processor only if the CUM Received information is transmitted by the customer on their schedule. Also, if there is not a corresponding CUM Key on file, CUM Discrepancy Check will not be performed.

Calculate discrete quantities using the supplier CUM shipped

If the customer has indicated their demand in terms of cumulative rather than discrete quantities, a discrete quantity will be calculated so that it can be imported into Oracle Order Management and Oracle Advanced Planning and Scheduling. The CUM to discrete calculation uses the supplier cum shipped, existing on the CUM Key, to calculate the first discrete bucket.

Formerly, the Demand Processor used the CUM Shipped/Received records on the schedule, plus a calculation for in-transit quantities, to determine the first discrete bucket. With this change, the calculation is simplified, and does not depend on the customer sending CUM Shipped/Received information in the schedule, thereby ensuring a more accurate CUM to discrete calculation.

Order Management/Shipping

CUM Calculation on your shipments

For any items under CUM management, an API will be executed after a shipment has been confirmed to calculate the CUM. This program will assign a CUM Key id to each sales order line that was shipped, thereby enabling the item's CUM to be dynamically calculated for use by the Demand Processor and the CUM Management Workbench. It will also calculate the supplier's YTD CUM, and update the shipped order line with this information

CUM Calculation for CUM enabled items includes the following events:

- The CUM is calculated based on CUM Management and Shipment Inclusion Rules defined for the Ship-From/Ship-To business entity

- The calculated CUM is stored in an Order Management sales order line industry attribute 7 and referenced on shipping documents. It is also extracted onto DSNO file for shipments

- The applicable CUM Key ID is assigned to each sales order line

- The CUM Key CUM quantity & the 'pending CUM' quantity are updated based on Shipment Inclusion Rules

CUM Calculation

CUM Calculation is performed when the CUM Discrepancy Check is done in the Demand Processor, and when reporting on shipment of customer demand after the correct CUM Key has been determined wherever CUM must be shown (Shipping documents, electronic ASN).

When the CUM Management style CUM By Date Only is enabled, the supplier CUM will be calculated according to the Shipment Inclusion Rules from shipments and CUM adjustments dated since the current Cumulative Start Date* associated with the Customer Ship-To/Ship-From Terms relationship or the Ship From/Customer Item relationship

When the CUM Management style CUM By Date and Record Year is enabled, the supplier CUM will be calculated according to the Shipment Inclusion Rules from shipments and CUM adjustments dated since the current Cumulative Start Date* and referencing the same Record Year as the customer demand being shipped indicates

When the CUM Management style CUM By Date and Purchase Order is enabled, the supplier CUM will be calculated according to the Shipment Inclusion Rules

from shipments and CUM adjustments dated since the current Cumulative Start Date. The same Customer Purchase Order Number is referenced as the customer demand being shipped indicates.

When the CUM Management style "CUM By Purchase Order Only" is enabled, the supplier CUM will be calculated according to the Shipment Inclusion Rules from shipments and CUM adjustments associated with the same Customer Purchase Order Number as the customer demand being shipped indicates.

Adjustments are immediately included in the CUM quantity, regardless of the transaction date associated with them.

Shipment Inclusion Rules do not apply to CUM Adjustment transactions.

NOTE: : The Cumulative Start Date and Purchase Order Date is derived from the latest customer inbound schedule.

Automatic CUM Key creation

The CUM Key is not associated with sales order line demand until Shipment Confirmation (i.e. it is not calculated by the Demand Processor, since attributes affecting the CUM Key could be modified before shipment). The Demand Processor does not create a new CUM Key, but it will issue a warning exception for this situation if the customer demand schedule includes CUM information.

If a new CUM Key is automatically created, the data required for the CUM management type is obtained from a combination of the sales order line and the archived schedule.

View and Maintain Supplier CUM

View item CUM information on the Release Management forms and reports

The Release Management Workbench will display sales order information with the appropriate item CUM information. Also, the Demand reports and the Horizontal Demand window in the Release Management Workbench will display CUM information, with future and historical visibility.

View CUM information for an item on the CUM Workbench

The CUM Management Workbench in Oracle Release Management displays the shipment transactions and adjustments that make up an item's CUM. A complete history of all the CUM Keys for the customer item can also be viewed in this form, on the CUM Details window.

Oracle Release Management gives you the ability to inactivate CUM Keys on the Cum Workbench. This allows you to inactivate CUM Keys that were created in error, and to inactivate CUM Keys you no longer need. If shipment or adjustment transactions exist for the CUM Key, before inactivating the CUM Key, the system will issue a warning, and ask for verification that you still want to inactivate this CUM Key.

Inactive CUM Keys are not considered for:

- CUM processing by Demand Processor
- CUM Key adjustment program
- CUM calculation at Ship Confirm

Also the Demand Status Inquiry Report displays CUM information for the customer item enabled for CUM Management.

Create a new CUM Key when the customer resets the CUM

Occasionally (usually annually), the customer may reset their CUM. When they do this, the Demand Processor issues a warning exception stating that CUM Key relevant data changed on the latest incoming customer schedule. You may then choose to manually create a new CUM Key on the CUM Management Workbench form, on the Create CUM Keys window, or let the system create it automatically with the next shipment.

You can also inactivate CUM Keys on the CUM Keys Details window by clearing the Active flag and adding information in the Comments field.

Manual vs. Automated CUM Key Creation

To invoke an automated CUM Reset you have to create a new CUM Key. To do so, you may first have to either change the value of any of the CUM Key variables on the Processing Rules Setup form or process a new customer schedule with changed CUM Key data. Then a new CUM Key needs to be created either manually on the CUM Management Workbench form automatically at the time of the next shipment.

For example, when the CUM start date is a factor and it has changed on the latest customer schedule, the Demand Processor will issue a warning and a new CUM Key will be created with the next shipment.

If you want to reset the CUM Key on previously shipped order lines, you must launch the concurrent program; Adjust CUM Transactions CUM Key ID. Please see “Optionally adjust the CUM Key identifier on shipment transactions” below.

The following identifies what happens when the CUM is reset (that is, when a new CUM Key is created) based on CUM Management Type:

- No CUM: CUM is not reset; CUM Key is never created.
- By Date Only: When the Current Cumulative Start Date is changed for the business entity relationship
- By Date and Record Year: When either of the following attributes are changed for the business entity relationship:
 - Current Cumulative Start Date
 - Current Record Year
- By Date and Purchase Order: When either of the following attributes associated with any Customer Item for the business entity relationship are changed:
 - Current Cumulative Start Date
 - Purchase Order Number on the Sales Order Line
- By Purchase Order Only: When the customer purchase order number on the sales order line is changed for the business entity relationship.

Perform a CUM Adjustment transaction to set the current CUM

The CUM Adjustments feature on the CUM Workbench form enables you to adjust the CUM for a particular item. You can use this feature to manually set the initial CUM figure for the item after you manually created the new CUM Key or when you cut over to the Oracle Release Management Applications.

Note: : Cum Transactions CUM Key Adjustment concurrent program is for assigning a CUM Key ID to Oracle shipments and it should not be used for adjusting a particular CUM.

CUM Reset

Optionally adjust the CUM Key identifier on shipment transactions

When the customer resets the CUM, they can sometimes back date the CUM start date so that it is in the past. When this happens, you may need to reset the CUM Key id on the shipments and CUM adjustment transactions that have occurred since the start of the new CUM rule. Use the CUM Transactions CUM Key Adjustment concurrent program for this. It requires a CUM start date along with some other CUM Key relevant information as parameters. The program not only resets the

shipment transactions and CUM adjustment transactions that are affected but also recalculates the CUM for the old and new CUM Keys.

Special Considerations

There are certain issues one should be aware of when using CUM Management.

CUM Management & Sourcing Rules

When you are using the Ship to/Ship from - CUM Organization Level then you should not make use of any Sourcing Rules at the same time or you will either have to constantly manually adjust the CUM Quantity or receive CUM Discrepancy Exceptions from the Demand Processor.

Return Material Authorizations

Return Material Authorizations (RMAs) do not automatically update the CUM. If you want to adjust the CUM for an RMA, you must perform a CUM Adjustment Transaction using the CUM Management Workbench.

DSP - CUM Discrepancy Warnings

Since the two CUM Key attributes CUM Start Date and Customer Purchase Order Number are derived from the latest customer schedule received, changes to either of this two values will automatically result in a CUM Reset/New CUM Key Creation at the time of the next shipment.

Therefore it is recommended to check the Demand Management Exception Reports for CUM Key Discrepancy Warnings regularly, that will reflect these changes. In cases where there are doubts whether the change of one of these values might be a mistake in the inbound schedule, the customer should be contacted before shipping any items for that particular schedule.

If you did ship an item with the wrong CUM Key being applied, you must first create a new CUM Key (either manually or automatically after the customer sends a new schedule with the correct CUM relevant data) and then run the Adjust CUM Transactions CUM Key ID program.

Manual Schedule Entry

As previously mentioned, the two CUM Key attributes CUM Start Date and Customer Purchase Order Number are derived from the customer schedule as opposed to other CUM Management setups like CUM Org Level etc. that are setup in the Processing Rules form. Since changes to either of these two values will automatically result in a CUM Reset/New CUM Key Creation at the time of the next shipment, you should be very carefully when entering these values manually. Always make sure that the entered values correspond to the current CUM Key unless you explicitly want to establish a new CUM Rule/Key.

Glossary

A

ABR

Attribute Based Release system. This is an alternate acronym for FBO or FBR used by Navistar.

Advanced Ship Notice (ASN)

An electronic document that notifies the customer of a supplier shipment and its contents. This document can include a list of shipment contents, order information, product description, physical characteristics, type of packaging, marking carrier information and configuration of the goods within the transportation equipment.

The ASC X12 transaction name for this EDI document is the 856. The EDIFACT message name for this EDI document is DESADV. Also referred to as Ship Notice/Manifest.

ahead

Quantities were delivered in advance of the customer's anticipated delivery date, or an over shipment in quantities occurred. The supplier must control this situation in such a way that he will not manufacture or deliver these quantities again. See: Behind.

AIAG

Automotive Industry Action Group, an organization which publishes combined EDI implementation requirements for the major automotive industry manufacturers and suppliers.

ANSI

American National Standards Institute which establishes national standards for the United States. The parent organization for X12 and also serves as the North American representative to ISO (International Standards Organization).

ANX

Automotive Network Exchange. A common, global TCP/IP network infrastructure created to meet the data communications needs of the automotive industry. Using ANX, each automotive supplier and OEM needs only a single commercial-grade TCP/IP data transport connection to communicate globally with all trading partners. This network meets specific automotive industry requirements for performance, reliability, security and management.

archival

The saving of transaction data. There are different types of archival relating to EDI transactions; this document uses the second meaning when referring to archival:

1) Legal Archival: setting aside a copy of the actual EDI transaction in its legal state immediately before (for outbound) or after (for inbound) electronic transmission, prior to any manipulation or interpretation of data by the EDI translator or application software

2) Oracle Application Archival: setting aside a copy of data contained in the EDI transaction loaded into the Release Management Archived Schedule tables after defaulting, derivation, and validation processing in the Release Management Demand Processor Open Interface, but before applying delivery date and quantity calculation rules and netting procedures.

ASC

Accredited Standards Committee X12 group. Accredited by ANSI, this group maintains and develops EDI standards for the United States and Canada.

ATS

Authorized To Ship. This term applies to sales order lines eligible to enter the workflow processes which ultimately result in shipment of the product to the customer (such as production, departure planning, picking, and ship/confirm). It distinguishes them from sales order lines which are not eligible for any shipment-related processing.

Automotive Address Extras

Used in Release 11 of Oracle Automotive. The Automotive Address Extras represented ship-from/ship-to data that was established in Oracle Automotive, and exported to Radley CARaS.

Automotive address extras is not used in Release 11i. Instead, the ship-from/ship-to terms window is used to store information critical to Oracle Release Management.

B

balancing out

The process of monitoring and balancing production of a scheduled item as it moves into a later phase in its life cycle. The item's planned change in status may be known up to a year in advance, and is closely monitored during the last few months of the model year by both the customer and supplier.

behind

Quantities were not delivered in time (past due) in context of the customer's anticipated delivery date, or an under shipment occurred. The supplier must control this situation in such a way that he will deliver these quantities as soon as possible. **See: ahead.**

best discount

The most advantageous discount for the customer. For example, suppose you have a customer discount of 15% and a item discount of 25% for Product B. If you enter an order line for the customer for Product A, the line is discounted 15%. If you enter an order line for the customer for product B, the line is discounted 25%.

bill of lading

A carrier's contract and receipt of goods transported from one location to another.

bill-to address

The customer's billing address. It is also known as **invoice-to address**. It is used as a level of detail when defining a forecast. If a forecast has a bill-to address associated with it, a sales order only consumes that forecast if the bill-to address is the same.

Blanket Sales Agreement

A sales order for a customer that has specific characteristics related to an order between a customer and a vendor.

bucket days

The number of workdays within a repetitive planning period.

bucket type - daily

Bucket based on a single calendar day.

bucket type - flexible

When the customer specifies the start date and end date of the bucket, instead of using standard bucket types of daily, weekly, monthly or quarterly.

bucket type - monthly

Bucket based on a calendar month.

bucket type - quarterly

Bucket based on calendar quarters (Jan - Mar, Apr - Jun, Jul - Sep, Oct - Dec.)

bucket type - weekly

Bucket based on a weekly interval, usually Monday through Sunday.

C**container**

The receptacle (box, tank, etc.) in which items to be shipped are placed.

Critical Attributes

Optional Matching Attributes should always have a value as turnaround data, regardless of what schedule type is associated with the demand. If this flag is on and the attribute does not have a value, the Demand Processor will issue a warning exception identifying it.

CUM entity

The identifier of the customer's business entity applicable for CUM Management when the supplier ships to a particular customer location. This may be the Ship To Location, Deliver To Location or Bill To Location, depending on the CUM Entity Type assigned to the Ship To/Ship From Terms relationship.

CUM entity type

The customer's business entity type applicable for CUM Management when the supplier ships to a particular customer location. The valid CUM Entity Types are:

Ship To/Ship From, Bill To/Ship From, Deliver To/Ship From, Ship To/All Ship Froms, Bill To/All Ship Froms, Deliver To/All Ship Froms.

CUM key

The set of attribute values applicable to accumulation of shipments and CUM adjustments of a Customer Item in a Ship To / Ship From relationship. The applicable attributes are determined by the CUM Management Type and CUM Entity selected for the Ship To / Ship From relationship; the applicable values are captured at the time the CUM Key is created.

CUM management type

The style of CUM Management applicable to a customer/supplier relationship. One of six styles of CUM Management may be associated with a customer/supplier relationship: No CUM Management, CUM By Date, CUM By Date/Record Year, CUM By Date/PO, CUM By Purchase Order, CUM Until Manual Reset at Item.

CUM period

A defined period of time during which cumulative shipment, requirement, and resource authorization quantities are calculated, e.g. Record keeping year, Calendar Year, or life of Purchase Order. In the automotive industry, the CUM Period typically coincides with a customer's scheduled plant shutdown for record keeping year tooling changeovers. All ship-from locations to the same customer destination will share the same CUM Period.

CUM Rule

The definition of how the CUM is to be calculated for Customer Items under Release Management within a specific Ship To/Ship From relationship. The rule consists of the following components: CUM Management Type, CUM Entity, CUM Start Date, Shipment Inclusion Rule.

cumulative received quantity

The total quantity of goods (e.g. shipped or received) during a defined period of time, e.g. Model Year. This can be used by suppliers to represent year-to-date shipped and by trading partners as year-to-date received.

customer control number

AIAG term for an external customer's order number for a finished good, e.g. a vehicle, apart from job numbers assigned in the production process.

customer item

Allows you to define specific attributes for items per customer class, customer and ship-to/bill-to location. Demand Tolerance is an example for such an attribute.

customer job number

The number customers assign to jobs on their production line. These numbers are arbitrarily assigned and not sequential.

customer line number Vs. supplier line number

The term customer line number represents the line sequence number as defined in the Purchasing application. Once this number or code is assigned to a line in the *purchase order*, it should not be changed. The general term supplier line number or Oracle Order Management's 'order line number represents the line sequence number as defined in the Order Management application. Once this number or code is assigned to a line in the *sales order*, it should not be changed.

customer model serial number

In the Automotive industry, this is the Vehicle Identification Number (VIN).

customer production line number

The identifier for the customer's production line, i.e. the line on which they are building the product. This can affect the delivery and departure if, for example, the customer wants all items for production line A123 to be on the same delivery.

customer production sequence number

A customer (trading partner) may have a particular sequence in which items are built into an assembly. For example, the customer may specify that the front axle of a car has a production sequence 45 assigned to it, while the production sequence of the rear axle is 46. **see loading order sequence, planning production sequence number.**

Customs Invoice

An electronic or paper document for international shipments similar to a Ship Notice/Manifest, but including additional information to satisfy all customs requirements of the borders through which the shipment must pass, such as the value of the shipment, VAT code and amounts, tariff and duty information, port information, customs broker identification, exporter identification, import license information, and letter of credit information.

D

delivery

A set of order lines to be shipped to a customer's ship-to location on a given date in a given vehicle. Multiple deliveries can be grouped into a single departure. A single delivery may include items from different sales orders and may include backorders as well as regular orders.

delivery assignment

Defines the relationship of deliveries and child deliveries through consolidations as well as the relationship between delivery details and itself to track containerization of items.

delivery date

The date on which the product is to arrive at the Ship-To Location. This date is either specified by the customer on a delivery-based demand transaction, or calculated by applying in-transit lead time to a customer-specified Shipment Date.

delivery detail

Contains items to be shipped out of a warehouse. This may be a sales order line, an RMA line, a WIP line or a PO line. They can be referred to as deliverables.

Delivery Instruction (DELINS)

The Delivery Instruction Message is sent by a buyer to provide information regarding details for both short term delivery instructions and medium-to-long-term requirements for planning purposes according to conditions set out in a contract or order.

delivery lead time

Time (in days) it takes for items to reach the customer once it is shipped. It accounts for any non-working days in between.

delivery leg

A single segment of a delivery. Every delivery consists of at least two legs, when the delivery is picked up and dropped off, but may travel through several intermediate legs.

delivery line

A shippable and booked line from the planning pool which has been allocated to a delivery. After allocation, the line is no longer available in the planning pool. After the delivery is closed, the delivery line will also be considered closed.

Delivery Shipping Notice Outbound (DSNO)

An Advanced Ship Notice generated by Oracle e-Commerce Gateway for a shipped delivery.

demand

Current or future product need communicated by the customer to the supplier, via EDI or other means. Sources of demand include Purchase Orders, Planning Schedules, Shipping Schedules, and Sequenced Production schedules.

Demand Processor

The Oracle Release Management program that resolves items from an Oracle open interface demand schedule file, validates demand data against Oracle Applications information, then passes the demand into Oracle Order Management to create or replace sales order lines or into Oracle Advanced Planning and Scheduling to create or replace forecasts.

demand schedule

A planning, shipping, or sequenced production schedule received by a supplier from a customer, usually in an EDI file format.

destination-street

The destination street name and number are very important. The consignee is extremely difficult to locate without the exact and proper street address where the shipment is to be delivered. Therefore to avoid additional delivery charges and possible delays, it is imperative that this information be furnished.

destination-zip

The zip is required to determine the exact location of the shipping point. Zip codes are the basis for many carriers freight charges. presented to the user as a workbench.

detail container

Inner container that is enclosed within the master container. **See master container.**

DSNO

Transaction code assigned to outbound electronic Departure Based Ship Notice/Manifest transaction in the Oracle E-Commerce Gateway, based on information processed through the Oracle Departure Planning application.

E**EDI**

See **Electronic Data Interchange (EDI)**.

Electronic Data Interchange (EDI)

Exchanging business documents electronically between trading partners. EDI subscribes to standard formats for conducting these electronic transactions as stated by various standards.

Evaluated Receipts Settlement (ERS)

A Payment on Receipt system, a process whereby Trading Partners generate payment obligation transactions in their accounts payable system upon receipt of a shipment of goods, eliminating the need for invoices or invoice transactions. This system combines information from the electronic Advance Shipment Notice (ASN), the receipt, and the purchase order. It ensures accurate and timely data processing. Also known as Self Billing.

export paper

A document required by governmental agencies that provides information on goods shipped out of or into a country.

export licenses

A government license to supply certain products to certain countries that would otherwise be restricted.

extended line amount

Oracle Order Management prints the extended order line amount for each order line.

extended price

The extended price is the cost of the line. This is computed by multiplying the selling price per unit by the number of units ordered on that line. Thus, if two of item A cost \$10.00 each, the extended price is \$20.00 for the line.

extensible order contacts model

How will we specify contacts for the order for any purpose relevant to your business.

external forecast

This is the forecast that is created based on the customers transmitted forecasted demand for a specific time horizon. The transmission of this forecast is predominantly via EDI. In Release Management any forecast information that is interfaced to MRP by the Demand Processor is considered external forecast.

external system

Any application outside of the Oracle environment.

F**FAS**

Final Assembly Schedule. A discrete job created from a custom configuration or a standard configure-to-order item and linked to a sales order.

FBO

Feature Based Ordering (FBO), also known as Feature Based Releasing (FBR) and Attribute Based Releasing (ABR), is a business process of ordering and releasing product by specifying a feature or group of features rather than the traditional upper level identifier or item number.

FBR

Feature Based Releasing. This is an alternate acronym for FBO or ABR, used by Ford and others.

firm demand

Inbound demand that Oracle Release Management passes as Authorized To Ship (ATS) to a sales order in Oracle Order Management.

firm fence

An optional Release Management setup feature which defines a range of days either from the system date or following the optional frozen fence. The firm fence instructs the Demand Processor to override the demand status on the schedule with a Firm status when updating the sales order lines.

forecast demand

A part of your total demand that comes from forecasts, not actual sales orders.

forecast fence (OM)

An optional Release Management setup feature which defines a range of days from the system date or following the optional Frozen and firm fences. The Forecast Fence instructs the Demand Processor to override the demand status on the schedule with a Forecast status when updating the sales order lines.

forecast fence (MRP)

An optional Release Management setup feature which defines a range of days from the system date or following the optional Frozen, Firm, and OM Forecast Fences. The MRP Forecast Fence instructs the Demand Processor to override the demand status on the schedule with a Forecast status and update MRP Planning rather than the sales order. When the demand is scheduled to be shipped later than the ending day of MRP Forecast Fence, the demand is not updated to MRP Planning.

frozen fence

An optional Release Management setup feature which defines a range of days from the system date . The frozen fence instructs the Demand Processor to leave existing sales order demand intact if the schedule indicates changes to demand within this time.

fulfilled quantity

In the Order Management schema, the accepted quantity was the number of items received from the customer on a given line that are approved to issue credit for. In Order Management, the accepted quantity is referred to as the fulfilled quantity.

fulfillment

Fulfilled sales order lines have successfully completed all Workflow processing activities up to the point of becoming eligible for invoicing.

fulfillment method

Fulfillment method is an activity which will be considered as a prerequisite before a line or a group of lines can be fulfilled. The fulfillment method must be associated with one and only one work flow activity. In this document fulfillment method and fulfillment activity have been used in the same context. If no fulfillment activity has been set in a flow for a line which is not part of any fulfillment set or PTO/KIT, the line will not wait at the fulfillment.

fulfillment set

Items in a fulfillment set will be available for scheduling and shipping only when all the items are available and ready to be scheduled/shipped. Fulfillment sets can be complete only, or partially allowed but in proportions. ATO model, and a PTO Ship model Complete will be in a fulfillment set.

G**gross weight**

The weight of the fully loaded vehicle, container, or item, including packed items and packaging material.

H**hierarchical levels**

The nesting of information within an electronic Ship Notice/Manifest. Each hierarchical level is identified with its own unique sequence number and, if nested, the sequence number of its parent hierarchical level.

hierarchical structure

Defines the actual layout of different hierarchical levels indicating the nesting of information in an electronic Ship Notice/Manifest transaction.

hold

A feature that prevents an order or order line from progressing through the order cycle. You can place a hold on any order or order line.

Industry Attributes

Elements specific to an individual industry. An example of an industry attribute for the automotive industry would be the model year.

INO

Transaction code assigned to outbound electronic Invoice transaction in the Oracle E-Commerce Gateway, based on information processed through the Oracle AutoInvoice application.

internal forecast

The forecast information created by the planners. It differs from the external forecast which is fed into MRP by transmissions from the customer.

Item/Entity Relationship

The collection of key attributes defined by the customer which cause Planning or Shipping Schedule details to be processed together as a group. If the customer manages CUMs, it is usually the collection of key attributes on which the cumulative quantity is based. An Item/Entity consists of a unique combination of: Customer Item Number, Address entities deemed relevant to the customer, Other customer-specific identifiers which separate items on a schedule, such as Purchase Order, Record-Keeping Year, or Item Revision.

K

kanban

A method of Just-in-Time production that uses standard containers or lot sizes with a single card attached to each. It is a pull system in which work centers signal with a card that they wish to withdraw parts from feeding operations or suppliers. The Japanese word *kanban*, loosely translated, means *card*, *billboard*, or *sign*. The term is often used synonymously for the specific scheduling system developed and used by the Toyota Corporation in Japan.

KANBAN Signal Message (KANBAN)

The KANBAN Signal ODETTE Message is an electronic transaction issued by a consignee giving authorization to the consignor to ship material based upon receiving a Kanban signal and following the principles of the Just-In-Time philosophy.

key attributes

A set of demand attributes that uniquely identifies the requirement, consisting of all mandatory matching attributes and those optional matching attributes which have been enabled. Demand Processor uses key attributes to determine if incoming demand is new or a change on previously transmitted demand.

L

lane

Single Origin/Destination pairs which can be established at any level of a geographic hierarchy (a given address, Postal Code, City, County, State, Country, or Zone).

load interface - Create 830 / 862 Flatfile

In Oracle Supplier Scheduling, the e-Commerce Gateway Interface tables are populated for confirmed planning or shipping schedules for all electronic supplier sites. The appropriate outbound 830 or 862 flat file is then created.

M

mandatory matching attributes

Matching Attributes always applied to demand regardless of the specific business entities or schedule type associated with the demand. They are always enabled within like schedule type and across different schedule types.

master container

Outer-most container in a container within container scenario. See: Detail Container.

matching attributes

Data elements used by Oracle Release Management's Demand Processor to compare new demand lines on inbound demand schedules to existing demand lines on sales orders for the purpose of demand reconciliation, to prevent unwarranted duplication of demand.

N

NAFTA

North American Free Trade Association.

NATS

Not Authorized To Ship. This term applies to sales order lines which are forecast status only, not eligible to enter any workflow processes which ultimately result in shipment of the product to the customer, such as production, departure planning, picking, and ship/confirm. This distinguishes them from sales order lines which are eligible for all shipment-related processing (ATS).

net weight

Weight of the contained load. Commonly calculated as GROSS - TARE, this includes the weight of any packing materials (paper, cardboard separators, Styrofoam peanuts, etc.).

O

optional matching attributes

Matching Attributes which can vary based on the business needs of specific business entities or schedule type associated with the demand.

P

pick release

An order cycle action to notify warehouse personnel that orders are ready for picking.

picking line

An instruction to pick a specific quantity of a specific item for a specific order. Each pick slip contains one or more picking lines, depending on the number of distinct items released on the pick slip.

picking rule

A user-defined set of criteria to define the priorities Order Management uses when picking items out of finished goods inventory to ship to a customer. Picking rules are defined in Oracle Inventory.

planning schedule

An EDI document (830/DELFOR/DELINS) used to communicate long-range forecast and material release information to suppliers.

production lineset

The units committed and sequenced to build in production for a specific number days at a customer's manufacturing facility.

Production Sequence Schedule (PSQI)

An EDI document (866/CALDEL/SYNPRO & SYNPAK) used to request the order in which shipments of goods arrive, or to specify the order in which the goods are to be unloaded from the conveyance method, or both. This specifies the sequence in which the goods are to enter the materials handling process, or are to be consumed in the production process, or both. Dates are always discrete, never "bucketed".

profile option

A set of changeable options that affect the way your applications run. In general, profile options can be set at one or more of the following levels: site, application, responsibility, and user.

Q**QS-9000**

An automotive quality standard incorporating the ISO 9000 series requirements and those specific to the automotive industry, agreed upon by the Big Three plus five truck manufacturers, who joined forces to streamline their quality system requirements.

R**RAN Number**

Release Authorization Number. This may be included in an electronic Shipping Schedule (862) transaction. If given, it must be referenced on the shipping documents, ASN, and invoice which are sent to the customer.

See Ship Reference Number.

release

An actual order of goods and services you issue against a blanket purchase agreement. The blanket purchase agreement determines the characteristics and the prices of the items. The release specifies the actual quantities and dates ordered for the items. You identify a release by the combination of blanket purchase agreement number and release number.

resource authorizations

Resource Authorizations address the supplier's need to have long lead time components or to invest in material processing without incurring economic hardship if requirements are reduced.

Retroactive Billing

A pricing system which can extend to shipped products. Pricing is based on customer purchase order modifications, for example, changes in commodity prices or expected production volume. The difference between the price originally billed when the product shipped and the new applicable price is calculated and applied to

applicable shipped quantities. The customer is billed (or credited) for the adjustment.

route

An ordered sequence of Lane Segments, from point of Origin to point of Ultimate Destination for a shipment. The sum of all of the lane segments, i.e.: where “A” to “B” and “B” to “C” are lane segments, the route will be “A” to “C”.

S

schedule

A transaction containing current or future product demand, communicated by the customer to the supplier via EDI or other means. Types of schedules include Planning, Shipping, and Sequenced Production schedules.

schedule horizon

Consists of the dates enclosed by the Horizon Start Date and the Horizon End Date. In a customer demand schedule, demand requirements and resource authorizations will be dated on or within this date range.

schedule item

A specific Customer Item on a demand schedule associated with a specific set of business entities and important CUM-related qualifiers. Demand and other information is grouped by the customer within Schedule Item.

schedule item number

The number assigned to all demand, authorizations, shipment/receipt information, and other information related to the Schedule Item. This number is not applicable to sequences schedules.

schedule purpose code

Criteria used by the Release Management Demand Processor to interpret demand for each item on a schedule within the horizon date range.

scheduled ship date

The date on which the product is scheduled to depart from the Ship-From Location.

Sequenced Delivery Message (SYNCRO)

Issued by a consignee giving authorization to the consignor to ship material in sequence based upon actual production requirements following the principles of the Just-In-Time philosophy.

ship-to address

A location where items are to be shipped.

ship confirm

A process in Shipping Execution which allows you to identify shipped quantities, assign inventory control information for released lines, assign freight charges, and specify whether or not to backorder unfulfilled quantities of released line items.

Ship Delivery Pattern Code

Usually applied against a weekly quantity to describe how demand is allotted. This code indicates which days of the week the customer wants the quantity delivered and how the weekly quantity is to be divided between the different ship days.

shipment reference number

A unique reference number associated with a unique shipment date/time and quantity combination.

shipment set

A group of items that must ship-together.

shipping schedule

An EDI document (862/DELJIT/DELINS) used by a customer to convey precise shipping schedule requirements to a supplier, and intended to supplement the planning schedule transaction set (830/DELFOR).

SPSI

Transaction code assigned to inbound electronic Planning Schedule with Release Capability transaction in the Oracle e-Commerce Gateway. Data from this transaction feeds into Oracle Release Management Demand Processor.

SSSI

Transaction code assigned to inbound electronic Shipping Schedule transaction in the Oracle e-Commerce Gateway. Data from this transaction feeds into Oracle Release Management Demand Processor.

supply chain sourcing rules

A set of rules that define the supplier priority rank and percentage split for the ship-to organization's planning requirements or the ship-from organization's demand routing.

T**TAG**

Truck Advisory Group. An association of heavy truck and off-road vehicle manufacturers, suppliers, carriers, and value added networks.

tare weight

The weight of an item, excluding packaging or included items.

trading partner

Any company that sends and receives documents via EDI.

transaction set

A complete business document such as an invoice, a purchase order, or a remittance advice. Synonym for document or message.

transportation network

The organized substructure which defines the path and means of transportation between points of origin and points of ultimate destination. Includes Routes, Lanes, Zones, Locations.

trip

An instance of a specific Freight Carrier departing from a particular location containing deliveries. The carrier may make other stops on its way from the starting point to its final destination. These stops may be for picking up or dropping off deliveries.

trip stop**trip stop**

A location at which the trip is due for a pick-up or drop-off.

trip stops

Represents a point along the route a trip makes to its final destination. This point may also have some activity associated with it. The activity might include picking up a new delivery, dropping off a delivery or both.

V**Value Added Network (VAN)**

A secure and privately owned network offering services such as mailboxing, reliable data transmission, carbon copy services, access methods and other value-added capabilities.

vehicle

An exact instance of a vehicle type (for example, truck123). This information is sent to the customer through the Advance Ship Notice.

X**X12**

ANSI standard for inter-industry electronic interchange of business transactions.

XML

Extensible Markup Language. Used to describe information which is usually associated with Web based applications and documents destined for usage or access by or through the Internet. It is a structured way of representing data that will be electronically exchanged and is platform and standards independent.

Z**zone**

The geographic region surrounding a city, a postal code, a county, a state, a country to which carriers' transportation lead time and rate for the city, postal code, county, state, or country also apply.

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