Oracle® Configure To Order

Implementation Manual, Release 11i

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Oracle Configure To Order Implementation Manual, Release 11i

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Author: Evelyn Tran

Contributing Authors: Yuana Kumala, Perry Toscano

Contributors: David Reitan

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Preface

Welcome to *Oracle® Configure to Order Implementation Manual, Release 11i*.

This implementation manual assumes that you are using installation notes provided with the media to perform the installation. It does not contain information regarding the installation steps necessary to transfer the Applications from the disbursement media to the computer system.

Once the installation has been completed, this manual may be used to step through the setup and implementation steps required to get Configure To Order functional.

This preface also explains how this implementation manual is organized and introduces other sources of information that can help you.

Intended Audience

This manual is intended for anyone who is interested in Oracle Configure To Order.

About This Manual

This manual contain overviews, as well as task and reference information, for implementing Oracle Configure To Order. This manual contains the following chapters:

Chapter 1 provides an overview of the Oracle Configure To Order product and its integration with other Oracle Applications.

Chapter 2 describes the setup steps required to setup Oracle Configure To Order.

Chapter 3 discusses model items, bills, and routing.

Chapter 4 discusses forecast models and options.

Chapter 5 discusses master schedule models and options.

Chapter 6 discusses entering configured orders.

Chapter 7 discusses check ATP.

Chapter 8 discusses creating configuration items.

Chapter 9 discusses building unique configurations.

Chapter 10 discusses reservation.

Chapter 11 discusses pick release and ship confirm.

Chapter 12 discusses order changes.

Chapter 13 discusses processing configured orders over supply chain.

Chapter 14 discusses customizing the order processing workflow.

Chapter 15 discusses deactivating configuration items.

Assumptions

This implementation manual, combined with the user's guides listed in the section *Other Information Sources*, should provide you with all the information needed to implement Oracle Flow Manufacturing.

It also assumes you are familiar with the following Oracle Applications:

- Oracle Inventory
- Oracle BOM/ENG
- Oracle Order Management
- Oracle Planning
- Oracle Purchasing
- Oracle Work In Process

If you have never used these products, we suggest you attend one or more of the Oracle training classes, including Configure To Order, available through World Wide Education. For more information about Oracle Configure To Order and Oracle training, see: Other Information Sources.

Do Not Use Database Tools to Modify Oracle Applications 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.

Consequently, we STRONGLY RECOMMEND that you never use SQL*Plus or any other tool to modify Oracle Applications data unless otherwise instructed.

Other Information Sources

Here are some other ways you can increase your knowledge and understanding of Oracle Configure To Order.

Online Documentation

All Oracle Applications documentation is available online on CD–ROM, except for technical reference manuals. There are two online formats, HyperText Markup Language (HTML) and Adobe Acrobat (PDF).

All user's guides are available in HTML, Acrobat, and paper. Technical reference manuals are available in paper only. Other documentation is available in Acrobat and paper.

The content of the documentation does not differ from format to format. There may be slight differences due to publication standards, but such differences do not affect content. For example, page numbers and screen shots are not included in HTML.

The HTML documentation is available from all Oracle Applications windows. Each window is programmed to start your web browser and open a specific, context–sensitive section. Once any section of the HTML documentation is open, you can navigate freely throughout all Oracle Applications documentation. The HTML documentation also ships with Oracle Information Navigator (if your national language supports this tool), which enables you to search for words and phrases throughout the documentation set.

Related User's Guides

Configure To Order 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 Configure To Order.

If you do not have the hardcopy versions of these manuals, you can read them online using the Applications Library icon or Help menu command.

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 Configure To Order (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.

Oracle Applications Demonstration User's Guide

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

Oracle Bills of Material User's Guide

This guide describes how to create various bills of materials to maximize efficiency, support customer requirements, 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 Cost Management User's Guide

This guide describes how to use Oracle Cost Management in either a standard costing or average costing organization. Cost Management can be used to cost inventory, receiving, order entry, and work in process transactions. It can also be used to collect transaction costs for transfer to Oracle Projects. Cost Management supports multiple cost elements, multiple subelements, and activity–based costing. It also provides comprehensive valuation and variance reporting.

Oracle Engineering User's Guide

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

Oracle Inventory User's Guide

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

Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide

This guide describes a variety of tools offerred to manage and manipulate demand information for both design and operational phases. 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, manage spare parts, sales orders, copy existing sales orders, schedule orders, release orders, plan departures and deliveries, confirm shipments, create price lists and discounts for orders, and create reports.

Oracle Project Manufacturing User's Guide

This guide describes the unique set of features Oracle Project Manufacturing provides for a project–based manufacturing environment. Oracle Project Manufacturing can be tightly integrated with Oracle Projects; however, in addition to Oracle Projects functionality, Oracle Project Manufacturing provides a comprehensive set of new features to support project sales management, project manufacturing costing, project manufacturing planning, project manufacturing execution and project quality management.

Oracle Purchasing User's Guide

This guide describes how to create and approve purchasing documents, including requisitions, different types of purchase orders, quotations, RFQs, and receipts. This guide also describes how to manage your supply base through agreements, sourcing rules and approved supplier lists. In addition, this guide explains how you

can automatically create purchasing documents based on business rules through integration with Oracle Workflow technology, which automates many of the key procurement processes.

Oracle Quality User's Guide

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

Oracle 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 HRMS User's Guide

This manual explains how to enter your employees. It also explains how to set up organizations and site locations. Even if you do not install Oracle HRMS, you can set up your employees, site locations, and organization using Oracle HRMS forms.

Oracle Projects User's Guide

This guide explains how to set up projects for use in project manufacturing and project accounting.

Reference Manuals

Oracle Technical Reference Manuals

Each technical reference manual 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.

You can order a technical reference manual for any Oracle Applications product you have licensed.

Oracle Manufacturing, Distribution, Sales and Service 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 open interfaces found in Oracle Manufacturing.

Oracle Applications Message Reference Manual

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

Oracle Self–Service Web Applications Implementation Manual

This manual describes the setup steps for Oracle Self–Service Web Applications and the Web Applications dictionary.

Installation and System Administration

Oracle Alert User's Guide

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

Oracle Applications Implementation Wizard User's Guide

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

Oracle Applications Developer's Guide

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

Oracle Applications Flexfields Guide

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

Oracle Applications Installation Manual for Windows Clients

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

Oracle Applications Product Update Notes

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

Oracle Applications Upgrade Preparation Manual

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

Oracle Applications System Administrator's Guide

This manual provides planning and reference information for the Configure To Orderg System Administrator.

Other Sources

Training

We offer a complete set of formal training courses to help you and your staff master Oracle Configure To Order and reach full productivity quickly. We organize these courses 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 Services at any one of our many Education Centers, or you can arrange for our trainers to teach at your facility. 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 Configure To Order 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 Oracle8 server, and your hardware and software environment.

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 45 software modules for financial management, supply chain management, manufacturing, project systems, human resources and sales and service 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 140 countries around the world.

Thank You

Thank you for using Oracle Flow Manufacturing and this implementation guide.

We value your comments and feedback. At the end of this guide is a Reader's Comment Form you can use to explain what you like or dislike about Oracle Flow Manufacturing or this implementation manual. Mail your comments to the following address or call us directly at (650) 506–7000.

Oracle Applications Documentation Manager

Oracle Corporation

500 Oracle Parkway

Redwood Shores, CA 94065 U.S.A.

Or, send electronic mail to appsdoc@us.oracle.com .

1

Overview

This chapter will give you an overview of the featrures contained in Oracle Configure To Order, including:

Overview

This Oracle Configure to Order Implementation Manual contains current information about how Oracle ERP products support configure to order capability. It provides detailed implementation consideration for every step of the process.

This manual is organized into the following chapters:

Overview of Oracle Configure to Order

Setup

Model Item, Bills and Routing

Forecast Models and Options

Master Schedule Models and Options

Entering Configured Orders

Check ATP

Creating Configuration Items

Build Unique Configurations

Reservation

Pick Release and Ship Configurations

Order Changes

Processing Configured Orders Over Supply Chain

Customizing the Order Processing Workflow

Deactivate Configuration Items

Overview of Oracle Configure to Order

A Configure to Order environment is one where the product or service is assembled or kitted on receipt of the sales order. Oracle Applications supports the Configure to Order environment with a range of features in order entry, demand forecasting, master scheduling, production, shipping, and financial accounting.

Configure to Order includes Pick-to-Order (PTO) and Assemble-to-Order (ATO) items, models, and hybrids.

Definitions

Assemble-to-Order Model (ATO Configuration)

Assemble-to-Order model consists of:

- Model bill of material with optional items and option selection rules
- Configuration manufactured from mandatory components and selected options

Assemble-to-Order Item

Assemble-to-Order item consists of:

- Standard bill of material with mandatory standard components
- Item manufactured from mandatory standard components

Pick-to-Order Model (PTO Configuration)

Pick-to-Order model consists of:

- Model bill of material with optional items and option selection rules
- Pick slip used to kit included items and selected options

Pick-to-Order Item (Kit)

Kit consists of:

- Standard bill of material with mandatory included items
- Pick slip used to kit included items

Hybrid

Hybrid consists of:

- Pick-to-Order models with optional Assemble-to-Order items
- Pick-to-Order model containing Assemble-to-Order model
- Assemble-to-Order models within Assemble-to-Order models

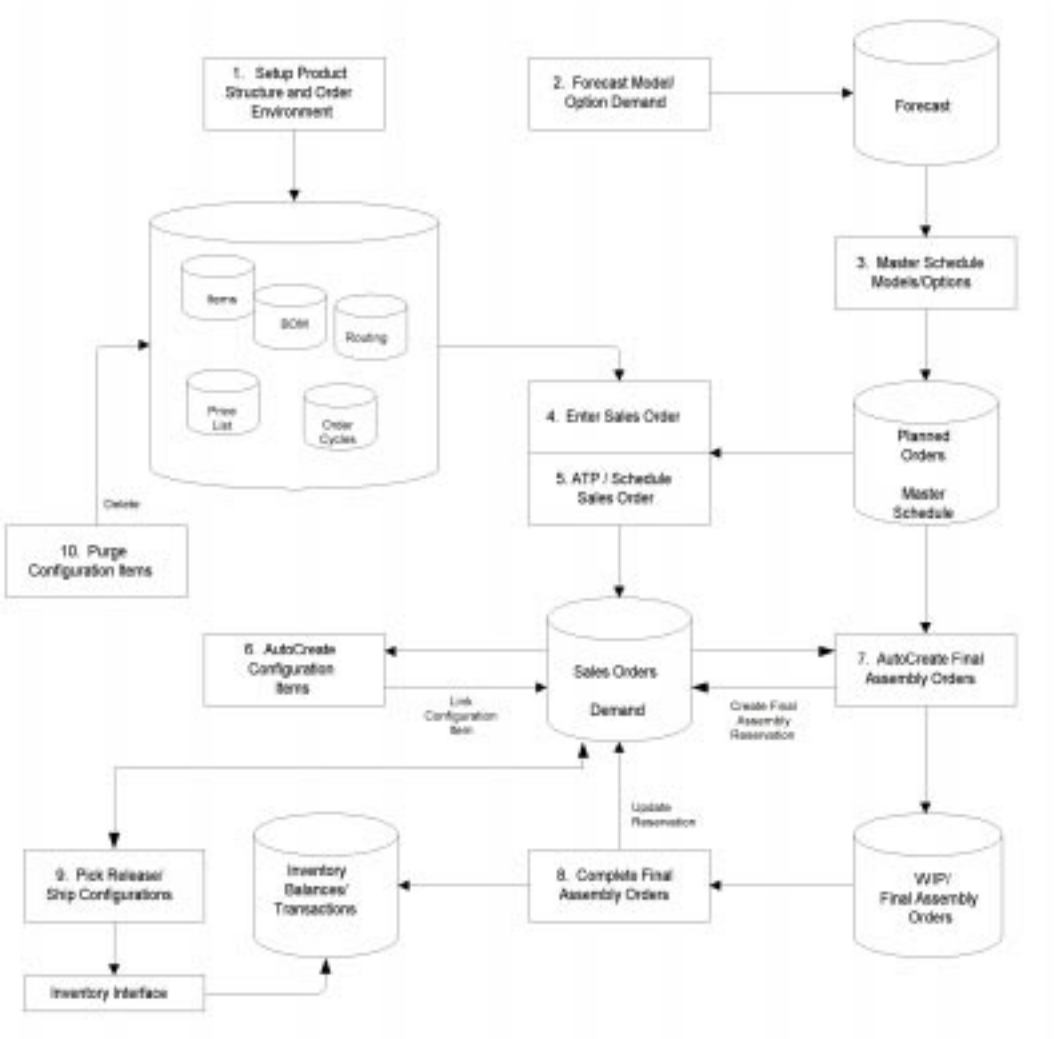
Process Flow

Process orders for ATO and PTO using the following steps:

#	ATO	PTO	Name	Description
1	†		Define Model and Option Class Bills of Material	Define multilevel model and option class bills to control order management, master scheduling / MRP, work in process, and costing.
2	†	†	Forecast Model / Option Demand	Forecast demand for model, options, or both. Explode forecasts through planning bills to models and / or options.
3	†	†	Master Schedule Models and Options	Master schedule ATO models, options, or both.
4	†	†	Enter Sales Order	Enter sales orders for models with options.
5	†	†	Check ATP	Perform group ATP check for all supply-constrained components to find earliest possible ship date for configuration.
6	†		AutoCreate Configuration Items	Automatically generate a new item number, bill, and routing for each new sales order and assign new item to sales order.
7	†		AutoCreate Final Assembly Orders	Automatically open a discrete job for each new ATO configuration order. Reserve work in process job to sales order.
8	†		Complete Final Assembly Orders	Complete configuration item to inventory, automatically convert work in process reservation into inventory reservation.
9	†	†	Pick Release and Ship Configuration Orders	Pick Release all configuration sales orders.

10	†	Deactivate Configuration Items	Deactivate auto-generated configuration item numbers whose orders are complete more than *x* days ago.

The following diagram illustrates the flow of an assemble-to-order sales order. Each numbered the step will be explained in detail in the following chapters.



Feature Highlight

The following is a list of key Configure to Order features supported by Oracle Applications:

Product Definition

- Support assemble-to-order (ATO), pick-to-order (PTO) and hybrid (PTO / ATO, ATO / ATO) product structures
- Mandatory and mutually exclusive option selection rules
- Option dependent routings
- Simple, intuitive graphical interface and robust range of configuration logic types to rapidly define configuration rules by dragging & dropping components and selecting pertinent logic

Planning Configurations

- Forecast any planned item, anywhere on your bill of material, including models, options, and mandatory components
- Use constraint based planning to generate feasible plans based on material and capacity constraints
- Master schedule models and options
- Define sourcing rule for models and options

Ordering Configurations

- Interactive option validation / auto-selection using Oracle Configurator
- ATP inquiry based on option material and resource availability
- Match to previously ordered configuration
- Reserve to available onhand configuration (partial or full)
- Automatic configuration pricing calculation taking into account of discounts
- Order capture from any source (e.g. your web store)
- Workflow based order processing

Manufacturing Configurations

- Unique configuration item, BOM, and routing created automatically
- Supports both discrete manufacturing and flow manufacturing environments
- Automatic configuration item, BOM, routing creation
- Automatic configuration lead time and cost calculation

- Automatic final assembly work order creation (discrete manufacturing environment)
- Constraint based finite scheduling of final assembly work orders
- Automatic flow schedule creation (flow manufacturing environment)
- Automatic sales order reservation upon production completion

Integration

The following Oracle Application products are integrated to provide Configure to Order features:

- Bills of Material
- MRP / MPS, SCP
- Order Management products
- Configurator products
- Work in Process
- Flow Manufacturing
- Cost Management

Example Used in This Manual

The following is an example of a hybrid (PTO / ATO). It is used throughout the entire book for easy illustration.

Level	Item	Item Type	Optional	Planning %	Qty	Mutually Exclusive
1	Promotional Laptop	PTO Model				
.2	. Battery Pack	Kit	No	110%		
.2	. Accessories	PTO Option Class	Yes	40%		No
.2	. Diskettes	Purchased Item	Yes	95%		
. 2	. Laptop Computer	ATO Model	No	100%		

. . 3	. . CPU	ATO Option Class	No	100%		Yes
. . . 4	. . . Pentium I	Purchased	Yes	65%		
. . . 4	. . . Pentium II	Purchased	Yes	35%		
. . 3	. . Monitor	ATO Option Class	No	100%		No
. . . 4	. . . VGA	ATO Option Class	Yes	70%		No
. . . . 5	. . . . VGA Manual	Purchased Item	No	100%		
. . . . 5	. . . . VGA1	Purchased Item	Yes	50%		
. . . . 5	. . . . VGA2	Purchased Item	Yes	50%		
. . . 4	. . . EGA	ATO Option Class	Yes	30%		No
. . . . 5	. . . . EGA1	Product	Yes	55%		
. . . . 5	. . . . EGA2	Product	Yes	45%		
. . . 4	. . . Monitor Manual	Purchased Item	No	100%		
. . 3	. . Operating System	ATO Option Class	Yes	90%		Yes
. . . 4	. . . Windows	Phantom	Yes	80%	1	
. . . . 5	. . . . Windows Manual	Purchased Item	No	100%	1	
. . . . 5	. . . . Windows Diskettes	Subassembly	No	100%	1	
. . . 4	. . . UNIX	Phantom	Yes	20%	1	
. . . . 5	. . . . UNIX Manual	Purchased Item	No	100%	1	
. . . . 5	. . . . UNIX Diskettes	Subassembly	No	100%	1	

2

Setup

This chapter provides information on:

Setup

There are key parameters and profiles that are pertinent to the CTO functionality. The key parameters and profiles are described in this section.

Parameters

BOM Parameters

The following table lists the fields in the BOM Parameters form that are relevant to configurations.

Field Name	Value	Usage Notes
Inactive Status	The list of value consists of all the item statuses that are defined in the system.	The Deactivate Configuration Items program sets item status of configuration items to this value.
Numbering Segment	The list of value consists of all the item segments.	Item field is a flexfield that may contain multiple segments. Let's say you have a two segment item field. The two segments are Item-Group. Item, Group will show up in the LOV. The segment you choose here will be the field that the 'Numbering Method' applies.
Numbering Method	You can choose one of the following values: Append with sequence Replace with sequence Replace with order, line number, shipment # User defined	Using the above example, let's say you choose the Item segment in the Numbering Segment. For an ATO model CN97444-Laptop, the configured item number will be the following for each Numbering Method: CN97444*1236-Laptop 1236-Laptop 45623*1*1-Laptop (45623 is the sales order number, 1 is the line number, 1 is the shipment number.) User defined

WIP Parameter

The following table lists the field in the WIP Parameters window that is relevant to configurations.

Field Name	Value	Usage Notes
Respond to Sales Order Changes	Never Always When linked 1 to 1	This parameter determines whether or not a work order that is reserved to a sales order will be put on hold after a configured item is de-linked from a sales order line. Never: The work order(s) will not be put on hold if you de-link the configured item from the sales order. Always: The work order(s) will be put on hold if you de-link the configured item from the sales order. The work order will be put on hold if it is the only work order reserved to the sales order.

Profiles

BOM:Match to Existing Configurations

This profile controls whether a match is performed during AutoCreate Configuration, Create Configuration Item workflow activity, and Match from Sales Order Pad. If the profile value is Yes, then a match is performed; if it is No, then a match is not performed.

BOM: Use Custom Match Function

This profile controls whether the match performed uses the standard match function or a custom match function. If the profile value for Match to Existing Configurations is No, then the value of this profile does not matter since a match is not performed.

The above two profiles replace profile BOM: Check for Duplicate Configuration used in Release 10.7 and 11.

The following table summarizes the relationship between these two profiles:

Match to Existing Config	Use Custom Match	Result
No or NULL	No or NULL	No match is performed
No or NULL	Yes	No match is performed
Yes	No or NULL	Match using standard match
Yes	Yes	Match using custom match

BOM: Configuration Item Delimiter

When you choose any numbering method other than 'User Defined', Append with sequence, or Replace with Order, line number Numbering Method, the system inserts a delimiter before the sequence number or between the sales order number and line number. You use this profile to define the delimiter to be used by the system.

Anything may be entered as the delimiter character. Do not choose the same delimiter as the item segment delimiter if you have multi-segment item number. It will cause configuration item process to fail.

BOM:Configuration Item Type

This profile indicates the user item type of the new configuration items created by the Create Configuration Item program. A typical setting is ATO item.

BOM:Inherit Option Class Operation Sequence Number

This profile controls whether components within the model structure inherit the operation sequence from their parent option class or model. The list of values is Yes or No. When the profile is set to Yes, Bills of Material applies inheritance logic for all items in the model structure with an operation sequence defaulted to 1.

In the example below, the profile option is set to yes, and the CPU and Monitor option class items have operation sequence numbers for the Laptop Computer routing. The processor options are defaulted to an operation sequence of 1, and inherit operation sequence 30 from the CPU option class item. The VGA Option class, options and included item are defaulted to an operation sequence of 1, and inherit operation sequence 40 from the manual option class item. Routings are not required for the CPU, Monitor, and VGA option classes.

Level	Item	Item Type	Op Seq	Operation Sequence Inherited
. 2	. Laptop Computer	ATO Model		
. . 3	. . CPU	Option Class	30	Retains 30
. . . 4	. . . Pentium I	Option	1	Inherits 30
. . . 4	. . . 486 Processor	Option	1	Inherits 30
. . 3	. . Monitor	Option Class	40	Retains 40
. . . 4	. . . VGA	Option Class	1	Inherits 40
. . . . 5	. . . . VGA Manual	Included Item	1	Inherits 40
. . . . 5	. . . . VGA1	Option	1	Inherits 40
. . . . 5	. . . . VGA2	Option	1	Inherits 40

BOM:Perform Lead Time Calculations

You have the option to calculate lead time for the configured item when you run AutoCreate Configurations concurrent program. The value of this profile defaults

to the Perform Lead Time Calculations parameter of AutoCreate Configurations concurrent program. The list of values is Yes or No.

QP:Item Validation Organization

This profile points to the organization that Order Management uses for model bills of material definition for configuration. If you maintain your bills of material in any other organization other than the QP:Item Validation Organization, you need to ensure the consistency between the bills. Using common bills of material is often the practice.

If an Operating Unit has multiple OE responsibilities, then those OE responsibilities must have the same OE validation organization in order for AutoCreate Configuration to work properly.

3

Model Items, Bills, and Routing

This chapter provides information on:

Model Items, Bills, and Routing

This section describes item, bills of material, and routing features for models and option classes. It also describes the features of cataloging configurations and configuration rules.

Items Setup

Several key item attributes are central to ensure correct processing of a configure-to-order sales order. The following table highlights these attributes and their typical setting.

	PTO Model	ATO Model	Option Class	ATO Item	Option (Component)
BOM Item Type	Model	Model	Option Class	Standard	Standard
BOM Allowed	Yes	Yes	Yes	Yes	Yes
Planning Method	Not Planned	MPS Planning	MRP Planning	MRP	MRP
Forecast Control	Consume	Consume	Consume & Derive	Consume & Derive	Consume & Derive
Build in WIP	No	Yes	No	Yes	(depends)
OE Transactable	Yes	Yes	Yes	Yes	Yes
Check ATP	No	Yes	Yes	Yes	Yes
ATP Components	Yes	Yes	Yes	Yes	(depends)
Assemble to Order	No	Yes	Yes	Yes	No
Pick Components	Yes	No	No	No	No
Ship Model Complete	Yes or No (only applicable for PTO model)	n/a	n/a	n/a	n/a

Model and Option Class Bills of Material

Model Bills of Material

An ATO model bill lists the option classes, options, and standard items that exist for a model. The bill of material for a PTO model lists the option classes, options, and included items that exist for that model.

An ATO model can have another ATO model as its component. The sub-ATO model must have Supply Type of Phantom.

A PTO model can have another PTO model or an ATO model as its components.

Option Class Bills of Material

Option class bills can contain standard components, options, and other option classes. Oracle Manufacturing enables you to structure any number of levels of option classes within option classes so you can create an indented hierarchy of choices. You can also specify a mandatory component under any option class in the indented structure that would automatically be included anytime you choose an option from that option class (or a lower level option class).

BOM Attributes

The following BOM attributes are import for model or option class bills of material:

- **Maximum and Minimum Quantity**: For each option, you can specify a quantity range that limits the quantity of the option you can order during Order Management.
- **Check ATP**: This attribute is used by Order Management to determine whether to perform ATP check on this item. The value is defaulted from Check ATP item attribute of the item. See Check ATP chapter for more detail.
- **Optional**: The Optional attribute is applicable only to component items on model and option class bills of material. If this attribute is not checked for an option, you are required to select an option from the option class bill of material during configuration.
- **Mutually Exclusive**: The Mutually Exclusive attribute is only applicable to option class items. If this box is selected, you are only allowed to select only one option from the option class bill of material.
- **Planning Percent**: Planning percent is used in forecast explosion. The planning percent for mandatory components is default to 100%. You can enter a planning percent for all the optional items and it can exceed 100%.

For more information on setting up bills of material, please See: *Oracle Bills of Material User's Guide*.

Model and Option Class Routing

Oracle Bills of Material supports both discrete and flow manufacturing.

Discrete Manufacturing

Option Dependent Routing Steps

Oracle Bills of Materials enables you to define routing steps for models that can be selected as options for configurations. You can specify that a routing step is option dependent which causes the configuration to include that routing step only if an option referencing that step was chosen.

Level	Item	Item Type	Op Seq	Optional	Qty
. 2	. Laptop Computer	ATO Model		No	1
. . 3	. . Carrying Case	Product	10	No	1
. . 3	. . Keyboard	Product	20	No	1
. . 3	. . CPU	Option Class	30	No	1
. . . 4	. . . Pentium I	Purchased Item	30	Yes	1
. . . 4	. . . Pentium II	Purchased Item	25	Yes	1

Op Seq	Option Dependent	Department	Operation Description
10	No	Casing	Cut and smooth case edges
20	No	Assembly 1	Attach keyboard and cable
25	Yes	Assembly 2	Clean processor
30	No	Assembly 2	Insert processor into board

In the example above, Oracle Manufacturing automatically includes Operation Sequence 25 in any configuration containing a Pentium II since the Pentium II option in the bill references step 25. This routing step can also add to the standard cost for configurations with the Pentium II, since Oracle Manufacturing performs a

single level rollup for configurations and accounts for all costed resources used in the configuration routing.

Operation Sequence Inheritance

You can specify that items within the model structure inherit the operation sequence from their parent option class or model. You invoke this option by setting the site level profile BOM: Inherit Option Class Operation Sequence Number to Yes. Bills of Material applies inheritance logic for all items in the model structure with an operation sequence defaulted to 1. You should maintain a routing for the top-level model, but may not need to maintain a routing for any option class or model where all items below it have an operation sequence of 1.

In the example below, the profile option is set to Yes, and the CPU option class items have operation sequence numbers for the Laptop Computer routing. The processor options are defaulted to an operation sequence of 1, and inherit operation sequence 30 from the CPU option class item. Routing is not required for the CPU option class.

Level	Item	Item Type	Op Seq	Operation Sequence Inherited
. 2	. Laptop Computer	ATO Model		
. . 3	. . CPU	Option Class	30	Retains 30
. . . 4	. . . Pentium I	Option	1	Inherits 30
. . . 4	. . . Pentium II	Option	1	Inherits 30

Flow Manufacturing

Option Dependent Event

A flow routing consists of processes, line operations and events. You can designate option dependent event by checking the Optional check box for an event. On your bills of material, you associate an option with event sequences. The option dependent events will only be included in the configuration routing if an option referencing that event was chosen.

Implementation Tips

Common Model Routing to Option Classes

The routing for your model should include all steps that any configuration might require. You can then establish option class routings by referencing the model routing as a common routing, so lower level options can still reference the model's routing. For example, you can reference the Laptop Computer's routing as a common routing for the CPU option class, referencing the Laptop Computer's routing steps in the option class bill.

Cataloging Configurations

Oracle Manufacturing provides features that help you catalog your assemble to order configurations so you can easily find on hand configurations that meet customer requirements, or find configuration item numbers that were used to fulfill previous orders for the same configuration. Oracle Manufacturing lets you set up rules to automatically assign Item Catalog descriptive element values to assemble to order configurations based on the options selected.

For example, you might want to catalog computer configurations using descriptive elements that indicate the Processor Type and Operating System (OS) chosen for each configuration. You could then assign the Laptop Computer model item to a catalog group that specifies those descriptive elements, but not assign any values to those attributes since the Laptop Computer is a model, not a specific configuration. You would also assign each option item to a catalog group with descriptive elements that describe that option. So you would assign the processor option items (Pentium I, Pentium II) to a Processors catalog group containing a Processor Type descriptive element as well as others that might describe more specific processor attributes.

Item	Catalog Group	Descriptive Element Name	Descriptive Element Value
Laptop Computer	Personal Computers	Processor Type OS	
Pentium I	Processors	Processor Type	Slow
Pentium II	Processors	Processor Type	Fast
Windows	Operating Systems	OS	Windows
UNIX	Operating Systems	OS	Unix

You would also specify which descriptive elements to assign automatically to an ordered configuration, based on options chosen under each option class in the Laptop Computer's bill. For example, when you defined the bill for the CPU option class, you would specify that the Processor Type descriptive element should be assigned automatically based on options chosen under this class. The Bills of Material window lets you specify descriptive elements for each model or option class bill of material to be used to populate configuration item description. If you want the Autocreate Configuration Items program to concatenate descriptions, you must specify descriptive elements for each model and option class bill. An example of a concatenated description might be Pentium II-Windows.

Item	Item Type	Element Name
CPU	Option Class	Processor Type
Operating System	Option Class	OS

Configuration Rules

Configuration rules will be defined in Oracle Configurator Developer.

For more information on setting up configuration rules, please See: *Oracle Configurator User's Guide.*

4

Forecast Models and Options

This chapter provides information on:

Forecast Models and Options

Oracle Master Scheduling/MRP lets you define and maintain forecasts for any item, at any level on your bills of material. You can forecast demand for products directly, or forecast product families and explode forecasts to individual products through planning bills. You can directly forecast demand for option classes, options, and mandatory components. You can also explode forecasts for models and option classes, through model and option class bills, to selected option classes, options, and mandatory components.

Forecast Control

Forecast Control

Use the Forecast Control item attribute to tell Master Scheduling/MRP the types of demand that you place for models, option classes, options, and mandatory components. Master Scheduling/MRP uses the Forecast Control value you assign to each assemble-to-order and pick-to-order item when forecasting and master scheduling models and options.

Independent Forecast Demand

Independent forecast demand is demand that you place for an item by directly entering forecasts for the item, rather than exploding forecast to the item.

If you forecast demand directly for an item, then set Forecast Control to Consume.

Exploded Forecast Demand

The forecast explosion process generates the exploded forecast demand for an item by collecting the forecasted demand for all the components in the item's bill of material. You typically generate exploded forecast demand for items, such as option classes and options, whose demand is directly related to or derived from the bill of material structure for other items.

If you forecast demand for an item by exploding demand from a higher level item in a bill of material, then set Forecast Control to Consume and derive.

If you forecast demand for an item directly, and explode forecast demand to the item, then set Forecast Control to Consume and derive.

Sales Order Demand

Sales order demand is demand that you place when your customers order configurations. As your customers order configurations, Order Management can automatically place sales order demand for each model, option class, and option selected by your customer when they place the order.

If you place sales order demand for an item, but do not forecast the item, then set Forecast Control to None.

Derived Sales Order Demand

Under normal circumstances, Order Management does not place sales order demand for mandatory components when your customers order configurations.

You can set the Forecast Control attribute to Consume or Consume and Derive to automatically place demand and consume forecasts for mandatory components when you place sales orders demand for configurations that include the mandatory components.

If you forecast demand for a mandatory component, either directly or through forecast explosion, then set Forecast Control to Consume or Consume and Derive.

Forecast Explosion

Forecast explosion is the process that explodes forecasts for planning items, models, product families, and option classes to selected components on your planning, model, product family, and option class bills. Forecast explosion calculates exploded forecast quantities by extending parent forecast quantities using the component usages and planning percents defined on your planning, model, and option class bills.

A product family can be exploded to dependent quantity explosion for those members that have a forecast control of Consume and Derive. This explosion is based on the product family allocation percentage in relation to the existing sales order quantity. You can associate alternate bills of material to multiple forecasts for the same item. This lets you explode the same forecast using different components, usages, and planning percents.

You explode forecasts, using the Load Forecasts or Load Master Schedules forms, by choosing the Explode Forecasts option when loading a forecast into another forecast or a master schedule.

The following table shows how forecast explosion explodes a forecast for 100 Laptop computers. Notice that forecast is only exploded to items where you have set Forecast Control to Consume and derive.

Level	Item	BOM Item Type	Forecast Control	Optional	Plan%	Forecast/Sales Order
. 2	. Laptop Computer	Model	Consume	No		100
. . 3	. . Carrying Case	Standard	Consume and derive	No	100%	100
. . 3	. . Keyboard	Standard	Consume and derive	No	100%	100
. . 3	. . CPU	Option Class	Consume and derive	No	100%	100
. . . 4	. . . Pentium I	Standard	Consume and derive	Yes	65%	65
. . . 4	. . . Pentium II	Standard	Consume and derive	Yes	35%	35
. . 3	. . Monitor	Option Class	Consume and derive	No	100%	100
. . . 4	. . . VGA	Option Class	Consume and derive	Yes	70%	70
. . . . 5	. . . . VGA Manual	Standard	Consume and derive	No	100%	70
. . . . 5	. . . . VGA1	Standard	Consume and derive	Yes	50%	35
. . . . 5	. . . . VGA2	Standard	Consume and derive	Yes	50%	35

Forecast Consumption

Forecast consumption is the process that replaces forecast demand with sales order demand. Each time you place a sales order, you create actual demand. If the actual demand is forecasted, then you typically want to reduce the forecast demand by the sales order quantity to avoid overstating demand.

Master Scheduling / MRP automatically consumes forecasts for configurations, models, product families, option classes, and options when you place sales order demand for configurations.

Forecast consumption for product families behaves the same as forecast consumption for models. A sales order for a family member will consume forecasts for the member item and forecasts for the entire family.

Attention: Under normal circumstances, no sales order demand is placed for mandatory components. You can generate derived sales order demand for selected mandatory components, since forecast consumption generates derived sales order demand for all items where you have set Forecast Control to Consume or Consume and Derive. This enables you to define and maintain forecasts for key mandatory components as well as models, option classes, and options.

The following table shows how forecast consumption consumes the exploded forecast for 100 Laptop Computers when a customer places a sales order for 10 Laptop Computers with Pentium IIs and VGA1 monitor. Notice that forecast consumption generates and consumes derived sales order demand for each mandatory component where you have set Forecast Control to Consume or Consume and Derive.

Level	Item	BOM Item Type	Forecast Control	Optional	Plan%	Forecast/Sales Order
. 2	. Laptop Computer	Model	Consume	No		90 10
. . 3	. . Carrying Case	Standard	Consume and derive	No	100%	90 10
. . 3	. . Keyboard	Standard	Consume and derive	No	100%	90 10

. . 3	. . CPU	Option Class	Consume and derive	No	100%	90 10
. . . 4	. . . Pentium I	Standard	Consume and derive	Yes	65%	65
. . . 4	. . . Pentium II	Standard	Consume and derive	Yes	35%	25 10
. . 3	. . Monitor	Option Class	Consume and derive	No	100%	90 10
. . . 4	. . . VGA	Option Class	Consume and derive	Yes	70%	60 10
. . . . 5	. . . . VGA Manual	Standard	Consume and derive	No	100%	60 10
. . . . 5	. . . . VGA1	Standard	Consume and derive	Yes	50%	25 10
. . . . 5	. . . . VGA2	Standard	Consume and derive	Yes	50%	35

5

Master Schedule Models and Options

This chapter provides information on:

Master Schedule Models and Options

Oracle Master Scheduling / MRP also lets you master schedule any planned item, anywhere on your bills of material, including models, option classes, options, product families, and mandatory components. You can create master production schedules to load forecasts and sales orders into a master demand schedule. You can then use the master demand schedule to drive the planning process. Identify your master production schedules as visible to the Oracle Inventory available-to-promise (ATP) process, so that Order Management can check ATP information for your key subassemblies when scheduling sales orders for configurations. The Shipment and Production Reliefs for product families prevents the duplication of supply / demand and keeps the supply / demand for the product family in sync with those of the member items.

Production Relief

Production relief, also known as MPS relief, is the process that replaces planned supply with actual supply when you create a work order to build a manufactured item, or when you create a purchase requisition to buy a purchased item. Each time you create a work order or purchase requisition, you create actual supply. If the actual supply is planned, then you typically want to reduce the planned supply by the work order or purchase requisition quantity to avoid overstating supply. When a purchase order, purchase requisition or discrete job is created for a member of a product family, the MPS is relieved for the member items as well as the product family.

Production relief relieves your master production schedules for any phantom item when you create a work order for the phantom's parent. Since models and option classes are created as phantoms on the configuration item bill, Master Scheduling / MRP automatically relieves your master production schedules for models and option classes when you create a final assembly order for a configuration. Production relief relieves your master production schedules for options and mandatory components when you create work orders for them.

Shipment Relief

Shipment relief, also known as MDS relief, is the process that reduces anticipated demand when you ship product that satisfies a sales order. Each time you ship a product to a customer, you satisfy demand. If the demand is included on your master demand schedules, then you typically want to reduce the anticipated demand by the sales order quantity to avoid overstating demand.

Master Scheduling / MRP automatically relieves master demand schedules when you ship a sales order for a configuration. If you have not reloaded your master demand schedule after the AutoCreate Configuration process, there will be no master demand schedule for the configuration item. When there is no master demand schedule for the configuration item, shipment relief explodes the configuration bill and relieves master demand schedules for each model and option class on the bill. Shipment relief also relieves master demand schedules for each standard item where you have set Forecast Control to Consume or Consume & Derive. If you ship a sales order for a member of a product family, sales order shipment relieves the master demand schedule for member items and the product family. If you have reloaded your master demand schedule since the AutoCreate Configuration process, shipment relief finds and relieves master demand schedules for the configuration item only.

For more information about master scheduling, please See: *Oracle MRP/Master Scheduling User's Guide,*

6

Enter Configured Orders

This chapter provides information on:

Enter Configured Orders

This chapter describes entering and configuring sales orders and provides a detailed description of the workflow for processing configured orders. It also describes the Match and Reserve functionality.

Release 11*i* Order Management Overview

One of the major features in R11*i* Order Management is the integration of Oracle Configurator, that is based on the SellingPoint Configurator engine. Oracle Configurator provides graphical configuration interface, dynamic validation and other features that make the order configuration a totally different experience.

Another major feature in Order Management is the use of Oracle Workflow to provide you control over the sequence of events that occur in processing of orders, returns, order lines, and return lines. Oracle Workflow maintains the state of all activities for an order, automatically executes functions and sends notification, and maintains a history of completed activities. Oracle Workflow lets you automate and continuously improve business processes, routing information of any type according to business rules you can easily change to people both inside and outside your enterprise. Workflow replace Order Cycles to process orders.

Enter Configured Orders

After the order header information is entered in the Sales Order window, you can enter a model in the lines section. For ATO and PTO models, you can click on the Configurator button to open the Configurator window to select options.

Oracle Configurator Developer User's Guide provides detailed information on how to define configuration rules to be used during option selection.

View Selected Options

Whether you use Oracle Configurator to select options or import a configured order, you can view selected options along with their option classes from the Sales Order Pad line region. However you can not modify the selections from the Sales Order Pad.

The View Line Detail option from the Tools menu in Sales Order Pad lets you toggle between displaying the model line only or model line plus all the configuration detail.

Match Configuration Item

Match enables you to check for an existing matching configuration. Once a match is found, the system will link the matched item to the sales order line.

Prerequisites

Match requires that the order is booked and scheduled and that a configuration item has not been created for the order line. As explained in the Setup chapter, you need to set the profiles accordingly before you use the Match function.

BOM: Match to Existing Configuration

BOM: Use Custom Match Function

Perform Match

You can perform Match for an ATO model order line after the line is scheduled. Match is available from the following form or program:

- Sales Order Pad Actions Button - Match: This action performs a match. If a match is found, the system links the matched item to the order line. If there is onhand inventory for the matched item, you have a choice to make reservation or not.
- AutoCreate Configuration Batch Program: This program performs a match. If a match is found, the system links the matched item to the order line.
- Sales Order Pad Actions Button - Progress Order: When you perform Progress Order - Create Configuration Item, the system performs a match. If a match is found, the system links the matched item to the order line.

Workflow for Configured Orders

Workflow vs. Order Cycle

Previously, the progression of a sales order from entry to closure was driven by Order Cycles. In R11*i* Workflow replaces Order Cycles; Workflow activities replace Cycle Steps. The workflow for configured order has the following main activities:

- Enter
- Schedule
- Create Configuration
- Lead Time Rollup

- Cost Rollup
- Create Supply (Work Order or Flow Schedule)
- Ship

Manufacturing Release cycle step does not exist in the workflow.

Seeded Workflow

Oracle Order Management User's Guide provides a description of all the seeded workflow. This section provides further information on the seeded workflow for ATO models and ATO items.

- **Line Flow - Generic** is a generic line workflow that works for all item types including ATO / PTO models and ATO items.
- **Line Flow - ATO Model** is a line workflow that works only with ATO models. It is a subset of Line Flow - Generic workflow.
- **Line Flow - ATO Item** is a line workflow that works only with ATO Items. It is a subset of Line Flow - Generic workflow.

This special type workflow offers you the flexibility to assign unique processing activities for ATO models or items to the workflow. You may decide not to use the generic workflow for ATO models or items and use the special type workflow instead.

Workflow Activities for ATO Model

The following are the main workflow activities for an ATO Model order line:

- Enter
- Schedule
- Create Configuration Item, BOM, Routing, lead time calculation and cost rollup
- Create work order or flow schedule
- Ship
- Invoice

Workflow Activities for ATO Item

Following are the main workflow activities for an ATO item order line:

- Enter

- Schedule
- Create work order or flow schedule
- Ship
- Invoice

ATO Model Line vs. Configuration Item Line

Once a configuration item is created for an ATO model order line, Order Management creates a new order line for the configuration item. The configuration item line goes through manufacturing and shipping processes while the ATO model line waits for the completion of those processes. The following describes the differences between the two lines.

Line Type	(Main) Activities for the Line
ATO Model Line	Enter, book, schedule, create configuration item (including BOM and routing) invoice
Configuration Item Line	Configuration item cost rollup and lead time calculation, Create work order / flow schedule, pick release, ship confirm

Order Line Statuses

The status on an order line provides good information on the current state of a line. The following table lists the line status for both ATO model and configuration line.

Order Line Type	Line Status	Status Description	Comments/Tips
ATO Model	Entered	The line is entered and not booked.	
	Booked	The line is booked.	The status remains Booked until the configuration item is shipped.
	Fulfilled	After the configuration line is shipped, the model line shows this status. It is eligible for invoicing.	
	Closed	The line is closed.	

Configuration	Production Open	When a work order is linked to the order line, the configuration line shows this status.	The cursor must be on the configuration order line in order to run Progress Order -> Create Supply
	Production Partial	This status is shown when there is partial production completion.	
	Production Complete	This status is shown when the entire production is complete.	
	Fulfilled	The line is shipped.	
	Closed	Closed Line	Line will close once invoiced

De-link Configuration Item

You can de-link a configuration item from an ATO model line through the Sales Order Pad Action Button - Delink Config Item. This is useful for sales order changes such as configuration change or cancellation where the original configuration item is no longer needed.

If there is work order or inventory reservation against sales order for the configuration item, Delink Configuration Item will automatically unreserve the supply to the sales order.

Link Configuration Item

You can manually link a configuration item to an ATO model line through the Sales Order Pad Action Button - Link Config Item. This is useful when you want to ship a near match item or need to re-link a configuration item back to the original model line after you de-link the configuration item.

The system does not perform a match validation when you manually link a configuration item.

7

Check ATP

This chapter provides information on:

Check ATP

Using Order Management, you can promise ship dates for configurations based on Available-to-Promise(ATP) / Capable-to-Promise(CTP) information for key components. ATP functionality for configurations is discussed here.

Setup

The following are the key attributes you need to be aware of for performing ATP / CTP check on an item.

Check ATP Item Attribute

This item attribute indicates what kind of ATP check you want to perform at the level of this item or higher. Settings include:

None - No need to check ATP at this level.

Materials Only - Check material availability for this item at this level.

Resource Only - Check availability of the resources required to assemble this item.

Material and Resource - Check both material and transportation resource availability for this item.

The typical setting for a model or option class is None.

ATP Components Item Attribute

The ATP Component Flag indicates what kind of ATP check you want to perform at the component level. ATP Component flag tells the system to check to see if its components are set for ATP.

None - No need to check ATP for this item at the component level.

Materials Only - Check availability of the components in the bill for this item.

Resource Only - Check availability of the resources required to assemble this item.

Material and Resource - Check availability of both materials and resources required to assemble this item.

The typical setting for a model or option class is anything other than None.

ATP Flag at BOM Level

The ATP Flag on the Bill of Material form lets you control the depth of the BOM considered in the ATP calculation. The ATP Flag for a component, defaults from the component item attribute Check ATP. If the item attribute is Yes, you can change value. If the item attribute is No, you can not change it to Yes in the bill.

Resource Capacity

Check the CTP Flag of each resource where the capacity needs to be checked. The CTP flag is on the routing resource level.

Group ATP for Configurations

You would set item attributes according to the following table if you wanted to promise ship dates for Laptop Computers based on the available supply of keyboards, processors, and monitor manuals, but the supply for other components was not constrained.

Select Code	Level	Item	Type	Optional	ATP Components	Check ATP
Yes	. 2	. Laptop Computer	ATO Model	No	Yes	
	. . 3	. . Carrying Case	Product	No		
	. . 3	. . Keyboard	Product	No		Yes
	. . 3	. . CPU	Option Class	No	Yes	
	. . . 4	. . . Pentium I	Purchased Item	Yes		Yes
Yes	. . . 4	. . . Pentium II	Purchased Item	Yes		Yes
	. . 3	. . Monitor	Option Class	No	Yes	
	. . . 4	. . . VGA	Option Class	Yes	Yes	
	 5	. . . . VGA Manual	Purchased Item	No		Yes
Yes	 5	. . . . VGA1	Purchased Item	Yes		
	 5	. . . . VGA2	Purchased Item	Yes		
	. . . 4	. . . EGA	Option Class	Yes		
	 5	. . . . EGA1	Product	Yes		

	 5	.... EGA2	Product	Yes		
	... 4	... Monitor Manual	Purchased Item	No		Yes
	.. 3	.. Operating System	Option Class	Yes		
Yes	... 4	... Windows	Phantom	Yes		
	... 4	... UNIX	Phantom	Yes		

If you ordered a Laptop Computer with a Pentium II, VGA1 monitor, and Windows operating system and requested a shipment on 2/5, Order Management would offset that ship date to compute a requested availability date for components, then perform a group ATP check for all Check ATP components simultaneously.

The table below illustrates sample results of a group ATP check. It includes all components from the previous table that would be included in the selected configuration and whose Check ATP attribute is **Yes**. In this case, the requested date for components is offset to 2/1, four days before the requested ship date because of manufacturing lead time. The group ATP check found that the Keyboard is the latest available component, so the ship date for the entire configuration would be set to 2/3 plus the four day offset for manufacturing lead time. The group availability date for the configuration is 2/7.

Level	Item	Type	Qty	Requested Date	ATP Date
.. 3	.. Keyboard	Product	1	2/1	2/3
... 4	... Pentium II	Purchased Item	1	2/1	1/28
.... 5	.... VGA Manual	Purchased Item	1	2/1	2/2
... 4	... Monitor Manual	Purchased Item	1	2/1	2/1

Using Global ATP Server

Oracle Global ATP Server supports distributed order promising besides centralized order promising. It offers multi-level supply chain Available to Promise (ATP), Capable to Promise (CTP) and Capable to Deliver (CTD). In earlier versions of Oracle Applications, ATP checks were for a single level (top level for standard items, down to the option level for models and option classes) of the bills of

material and resources. Oracle Global ATP Server now offers multi-level bills of material and resource checks.

In the Laptop example above, if the CPU items (Pentium I, Pentium II) are sourced from supply chain (e.g. another organization), Global ATP Server will check for the availability of the CPU item at the source when there is shortage.

Oracle Advanced Supply Chain Planning and Global ATP Server User's Guide provides detailed description on how to setup and use Global ATP Server for order promising.

8

Create Configuration Items

This chapter provides information on:

Create Configuration Items

After a sales order for an ATO model is scheduled, you can create unique configuration item, bill of material, and routing. You can also establish the cost and lead time for the configuration item. This chapter explains in detail the process of creating configuration items.

Process Description

Creating configuration items for an ATO model order line completes the following tasks:

- Creation of a configuration item
- Creation of configuration bill of material based on the model bill of material
- Creation of configuration routing based on the model routing
- Lead time calculation for the configuration item
- Single level cost rollup for the configuration item

Configuration Item

Configuration item number is determined by the Numbering Method parameter in BOM Parameters window.

If profile BOM: Match to Existing Configuration is set to Yes, the system will attempt to find an existing configuration item. If it is found, the system will use the matched configuration item instead of creating a new item. Match is not organization dependent.

The configuration item will be enabled in the following organizations (assuming the organizations are different):

- Item Master organization
- OE: Validation Organization
- Shipping Warehouse

Configuration BOM

The model bill of material from the shipping warehouse is used for the creation of configuration bill of material. The configuration bill of material is only created in the shipping organization.

The following table shows the bills of material for the Laptop Computer. The Selected column indicates the option selection during order entry.

Level	Item	Item Type	Optional	Selected
.1	. Laptop Computer	ATO Model	No	Yes
. . 2	. . CPU	ATO Option Class	No	Yes
. . . 3	. . . Pentium I	Purchased	Yes	
. . . 3	. . . Pentium II	Purchased	Yes	Yes
. . 2	. . Monitor	ATO Option Class	No	Yes
. . . 3	. . . VGA	ATO Option Class	Yes	Yes
. . . . 4	. . . . VGA Manual	Purchased Item	No	
. . . . 4	. . . . VGA1	Purchased Item	Yes	Yes
. . . . 4	. . . . VGA2	Purchased Item	Yes	
. . . 3	. . . EGA	ATO Option Class	Yes	
. . . . 4	. . . . EGA1	Product	Yes	
. . . . 4	. . . . EGA2	Product	Yes	
. . . 3	. . . Monitor Manual	Purchased Item	No	

The following table shows the configuration bill of material. Notice that the configuration BOM looks like a single level bill with models and option classes as components.

Level	Item	Item Type	Optional	Selected
.1	. Laptop Computer*001	ATO Item (Configuration)	No	Yes
. . 2	. Laptop Computer	ATO Model		
. . 2	. . CPU	ATO Option Class	No	Yes
. . 2	. . Pentium II	Purchased	Yes	Yes
. . 2	. . Monitor	ATO Option Class	No	Yes
. . 2	. . VGA	ATO Option Class	Yes	Yes

. . 2	. . VGA Manual	Purchased Item	No	
. . 2	. . VGA1	Purchased Item	Yes	Yes
. . 2	. . Monitor Manual	Purchased Item	No	

Configuration Routing

The model routing from the shipping warehouse is used for the creation of configuration routing.

Configuration Lead Time Calculation

The configuration manufacturing and cumulative lead times are calculated for the configuration item based on the configuration item routing.

Configuration Item Cost Rollup

If the organization is using Standard costing method, a single level Cost Rollup is performed for the configuration item using the configuration BOM and routing.

If the organization is using Average costing method, the configuration item has zero cost for the Average cost type.

Batch vs. Online Mode

You can launch the AutoCreate Configuration Items concurrent program to create configuration items for one or more sales orders. You can also create a configuration item for a single sales order line online from the Sales Order Pad Action button (Progress Order).

AutoCreate Configuration Items

You can launch this concurrent program from the Bills of Material menu. The program supports the following parameters:

Sales Order: You can specify a specific sales order number. If the parameter is blank, it means any eligible sales orders.

Release Offset Days: Only those sales orders for which the expected release dates for the final assembly work orders are within the release offset days specified.

The program calculates an expected work order release date using the following formula:

Schedule Ship Date - Order Lead Time

Example: Schedule Ship Date = 6/20/2000

Order Quantity = 10

Fixed Lead Time = 1 day; Variable Lead Time = .5 day

Result: 6/20/2000 - ((10 * .5) + 1) = 6/12/2000 (excluding 2 weekend days)

If today is 6/9/2000 and Release Offset Days is set to 5, this order will be processed.

Organization: You can optionally specify an organization. Only those sales order with this organization, as the shipping warehouse will be processed.

Perform Leadtime Calculation: If you specify Yes, manufacturing and cumulative lead times are calculated for the configuration item based on the configuration item routing. If you specify No, the configuration item lead-time attributes default from the base model.

This parameter gets defaulted from the profile BOM: Perform Lead Time Calculations.

Perform Flow Calculation: If you specify Yes, Total Product Cycle Time, Yield, Net Planning %, Operation times will be calculated for your processes, operations and events in the configuration flow routing. If you specify No, those data will be copied from the model.

Sales Order Pad Action Button - Progress Order

You can create configuration item for one sales order line from the Sales Order Pad. This mode does not give you the option to perform lead time calculation and it will always calculate the lead time.

Supply Chain Support

In an environment where a configuration is shipped from one organization and manufactured in another organization, the system will create configurations in the shipping organization and the manufacturing organization based on the sourcing rule you setup.

Configuration Item, BOM and Routing

The following table shows the organizations where configuration item, BOM and routing will be created or enabled. Sourcing rule is used to determine the manufacturing organization (transfer from organization).

	Item Master Org	Item Validation Org (Used by OM)	Shipping Warehouse (Transfer To Org)	Mfg Org (Transfer From Org)
Item	Yes	Yes	Yes	Yes
BOM				Yes
Routing				Yes

If the sourcing rule specifies more than one Transfer From organizations, the configuration item, BOM and routing will be created in all the Transfer From organization.

AutoCreate Configuration Item program looks at the BOM parameters defined for the organization defined by the QP:Item Validation Organization to determine the configuration item naming method.

Configuration Item Attributes

The configuration item inherits most item attributes from the ATO model. The system sets Yes to the following item attributes for the configuration item in organizations where the configuration item is enabled.

- Shippable
- Purchased Item
- Purchasable
- Customer Ordered
- Customer Orders Enabled
- Internal Ordered
- Internal Orders Enabled

Supply Chain Cost Rollup

Cost Rollup for the configuration is performed in the organization that manufactures the item using the configuration bill of material and routing. The cost of the configuration (transfer cost) in the shipping warehouse (transfer to organization) is establish by taking the configuration item cost in the manufacturing organization plus any transfer charge defined in the Shipping Network. Currency conversion is also taken into consideration if the two organizations use different currency.

9

Build Unique Configurations

This chapter provides information on:

Build Unique Configurations

You can create final assembly work orders or flow schedule to build configurations. The system supports both discrete and flow manufacturing environment.

Discrete Manufacturing

Oracle Work In Process User's Guide provides complete information on how you manage work orders, and shop floor activities. The following information is only intended to provide some additional tips and hints on managing work orders in a configuration environment.

Create Final Assembly Work Orders

Oracle Applications provides you with various methods of creating work order to fulfill a configuration sales order. The following table explains the benefits and the implementation consideration of each method.

Method	Description	Implementation Consideration	Reference Document
1. AutoCreate FAS concurrent program	-This is a concurrent program that you can launch from Work in Process menu. -It can be run at any frequency you specify to create work orders; -Work order is reserved to the sales order.	-Typically used to create supply for short term demand; -Useful in a high volume, short product lead time environment where you may need to run this program more than once a day; -Creates one work order for the full order quantity; -This program does not take capacity into consideration	Oracle Work in Process User's Guide
2. Progress Order (action) from Sales Order Pad	-From the Sales Order Pad in Order Management, you can invoke Progress Order action to create a work order for an order line. -Work order is reserved to the sales order.	-Need to manually progress the order (in Order Management) one at time; -A way to create supply for a single order with minimum delay. If you have an urgent order that need to be pushed to manufacturing, this may be a way to quickly progress an order to production; -Creates one work order for the full order quantity	Oracle Order Management User's Guide

3. Planner's Workbench	-From the Planner's Workbench, you can release planned orders to work orders for configurations; -The work order is not reserved to sales order;	-With Advanced Planning and Scheduling products, material and resources constraints are being considered during the planning process; -Enable planner to manage configured and non-configured demand the same way; -Limited by planning run frequency; -Work order is not reserved to the sales order.	Oracle Master Scheduling / MRP User's Guide
4. Create Discrete Job	-You can manually create a job for a configured item and reserve the work order to a sales order; -You can reserve the work order to multiple sales orders.	-Manual process, only used for exceptions.	Oracle Work in Process User's Guide

Work Order Reservation

If you use method 1 & 2 (see above) to create the work order for configurations, the work order are automatically reserved to the sales order. If you use method 3 & 4, you will need to manually reserve the work order to the sales order (if necessary).

Complete an Assembly

When you complete assembly from WIP, the assembly will be automatically reserved against the sales order.

Perform an Assembly Return

When you perform assembly return from WIP, the system will automatically un-reserve the onhand inventory from the sales order. However the system will not automatically reserve the work order to the original sales order. If you need to reserve the work order to the original sales order or to a different sales order, you can do this by entering the sales order number in the WIP Completions form when you perform return transaction.

Transfer Reservation from One Sales Order to Another

If you need to transfer WIP reservation from one sales order to another sales order, you need to delete the existing WIP reservation for sales order 1 and add a new reservation for sales order 2. Sales order 1 and sales order 2 must have the same configuration item.

You can do this in Discrete Job form in Oracle Work In Process.

For more information about discrete work orders, please See: *Oracle Work In Process User's Guide*.

Flow Manufacturing

Oracle Flow Manufacturing Implementation Manual provides complete information on implementing flow manufacturing at your facility. The manual covers flow line design, line balancing, production execution and kanban planning and execution.

The Flow Manufacturing Implementation Manual explains how flow manufacturing supports building customized products. See: *Oracle Flow Manufacturing Implementation Manual.*

The following information provides some additional tips and hints when you deploy flow manufacturing in a configure to order environment.

Create Final Assembly Flow Schedules

Oracle Applications let you create flow schedules via the Line Scheduling Workbench in Flow Manufacturing or the Sales Order Pad in Order Management. The following table provides some explanation of each method.

Method	Description	Implementation Consideration	Reference Material
1. Line Scheduling Workbench	-You can use the Line Scheduling Workbench to manage production schedules for your flow lines. -You can create flow schedules for planner orders and sales orders	Scheduler can manage configured and non-configured orders in the same workbench	Oracle Flow Manufacturing Implementation Manual; Oracle Flow Manufacturing User's Guide
2. Progress Order (action) from Sales Order Pad	-A way to create supply for a single order line;	-This method provides a way to quickly create production schedule for urgent orders; -Need to manually progress the order (in Order Management) one at time;	Oracle Order Management User's Guide

For more information about flow schedule, please See: *Oracle Flow Manufacturing User's Guide,* and *Oracle Flow Manufacturing Implementation Manual.*

10

Reservation

This chapter provides information on:

Reservation

This chapter describes the various methods of reserving onhand inventory or work orders to an ATO model sales order.

Reserve Supply

Reservation for an ATO model sales order is placed against the configuration item. The following table describes the various method of reserving a supply.

Supply Type\ Method	Onhand	Work Order	Description
Automatic	Match action from Sales Order Pad		-If a match is found, and there is available inventory available, the system gives you an option to make reservation. -The cursor must be on the ATO model order line when you perform the Match action.
		-AutoCreate Orders from WIP	
	Work Order Completion Form in WIP		-If the work order is reserved to a sales order, the reservation is transferred to inventory when you complete finished assembly.
	Work Orderless Completion Form in Flow Manufacturing		-When you perform an assembly completion for a flow schedule, the system automatically places a reservation on the finished assembly against the sales order demand for the configuration item.
Manual	Reservation from Sales Order Pad in OM. (Sales Order Pad -> Tools->Scheduling->Reserve)		-You can reserve available inventory to a configuration order line. -The Cursor must be on the configuration order line when you perform reservation.
	INV Reservations Form		-You can reserve available inventory to a configuration order line via the Reservation window in Inventory
		Discrete Jobs Form in WIP	-You can manually reserve a work order to one or more sales orders through the Discrete Job window.

11

Pick Release and Ship Confirm

This chapter provides information on:

Pick Release and Ship Confirm

Once production is complete, the sales order is ready to be picked and shipped to customer. This chapter provides explanation of some settings for configured order that will affect shipping for configured products.

For a complete guide on shipping, please refer to Oracle Shipping Execution User's Guide.

Setup

Item Attribute

Ship Model Complete: If this attribute is set to Yes, the entire configuration must be delivered in the same shipment. If the attribute is set to No, components can ship separately. ATO models are inherently ship together models. If you have a PTO model which has an ATO model and some other PTO options underneath, and you want to ship the PTO options proportionately with the ATO model, then Ship Model Complete must be set to Yes on the PTO model.

BOM Attributes

The following shipping attributes are on the Bills of Material window.

Include On Shipping Docs: Indicates whether the component will be printed on external shipping documents such as pack slips and commercial invoices. For example, for an ATO model, it may be more reasonable to print the order lines, ATO model, and options on the shipping documents, in addition to the configured item.

Required to Ship: Indicates whether the component is required to ship the order. You can only update this check box if the Assemble to Order item attribute for the assembly item in the Define Item window is disabled.

This attribute only affects PTO included items (not ATO items or configurations).

12

Order Changes

This chapter provides information on:

Order Changes

Order Management provides you with the ability to automate the process of changing various types of orders. However, system and processing constraints can prevent specific changes to an order depending on the flow status.

Order Management User's Guide provides a detailed description of the processing constraint.

This chapter explains the seeded processing constraints specifically for configurations.

Processing Constraints

Order Management has seeded processing constraints for configurations that deny certain actions when the workflow reaches certain status.

ATO Model

For ATO Model order line, there are processing constraints that prevent certain order changes because these changes can either invalidate the configuration item or cause data inconsistency between Order Management and WIP.

After a configuration item is created, these actions are not allowed:

- Increase / Decrease quantity
- Change warehouse
- Update schedule ship date
- Modify selected options (add or delete options)
- Cancel line

Processing Constraint on Schedule Ship Date

This constraint exists because different schedule dates may result in a slightly different configuration item due to component effectivity, however if this is not applicable to you, you can remove this constraint or modify it to suit your needs.

If you remove the constraint and reschedule a sales order while there is a work order linked to the sales order, the new schedule will not be reflected on the work order.

ATO Item

For ATO Item order line, there are processing constraints that prevent certain order changes because these changes can cause data inconsistency between Order Management and WIP.

After a work order is created and reserved to the ATO item, these actions are not allowed:

- Increase / Decrease quantity
- Change warehouse
- Update schedule ship date
- Cancel line

Delink Configuration Item

You can delink a configuration item from a sales order line by performing the Delink Configured Item action from the Sales Order Pad.

Delink configuration item accomplishes the following:

- Resets the ATO model line workflow back to Create Configured Item Eligible. At this stage, you can make changes to order line quantity, warehouse, schedule date, and configuration to the ATO model line.
- Un-reserves any supply against the configuration item. E.g. if there is a work order reserved to the configuration item, the delinking action will unreserve the work order to the sales order.

After you make any change to the ATO model line, you can either create a new configuration item and proceed, or link the old configuration item back depending on the change.

Put Work Order On Hold

Respond to Sales Order Changes WIP Parameter

This WIP parameter determines whether or not a work order will be put on hold after the delinking of configuration item takes place. The values are:

- Never

  Will not put work order on hold after delinking config item takes place.

- Always

Will put work order on hold after delinking config item takes place.

If a work order is linked to multiple sales orders, delinking config item on one of the sales orders will put that one work order on hold.

If multiple work orders are linked to a sales order, delinking config item on that sales order will put the multiple work orders on hold.

- When Linked 1 to 1

  Will put work order on hold after delinking config item only if the relationship between the work order and the sales order is 1 to 1.

Link Configuration Item

You can link an existing configuration item to an ATO model line through Link Configured Item action from the Sales Order Pad.

You should not link the old configuration item back if you have made changes to configuration (add or delete options).

13

Process Configured Orders Over Supply Chain

This chapter provides information on:

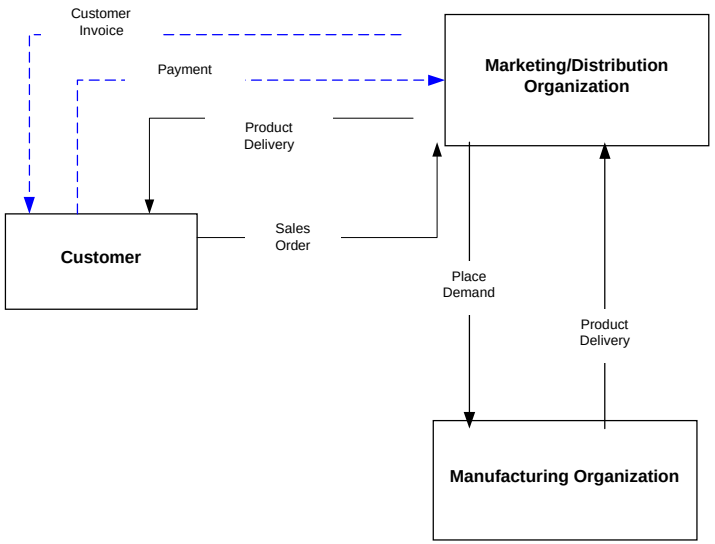
Process Configured Orders Over Supply Chain

If you are in an environment where configurable products are ordered and shipped in one organization and manufactured in another organization, you may find this chapter useful for a reference on the setup and process flow.

Business Scenario

The diagram below depicts a supply chain scenario where a customer's order for a unique configuration is placed in one inventory organization (may be referred to as consolidation organization) and then sourced from another organization (typically referred to as manufacturing organization). It is typical in this environment that there are multiple consolidation centers and one manufacturing plant.

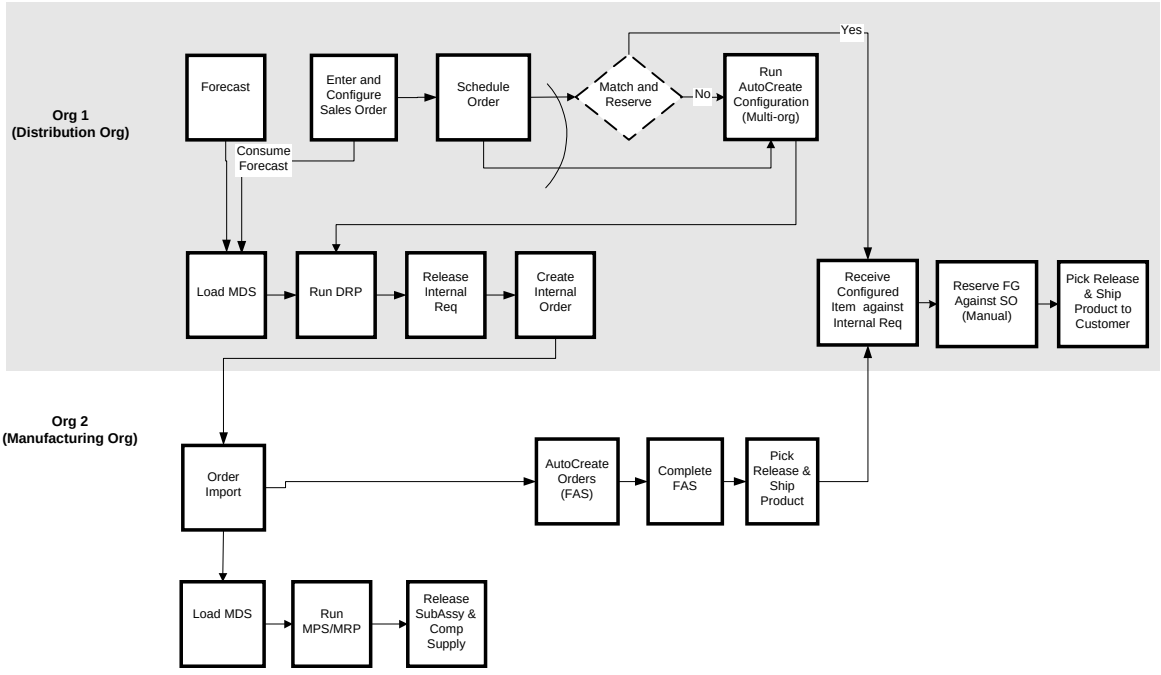
Both the consolidation and manufacturing organizations may forecast demand that they book and ship directly. Demand from the consolidation organization will feed into the manufacturing organization. The manufacturing organization consolidates the demand and plans the detail material requirements plan. The finished goods are shipped from the manufacturing plant to the consolidation organization for order consolidation and then shipped to customers.



Process Flow

Process will vary depending on each company's business environment. The following is an example of a process flow based on a specific scenario. You should use the following process flow as a guideline during your implementation and modify it to suite specific business scenario.

Scenario description: Org 1 forecasts and sales a configuration product (ATO model). It sources the ATO model from Org 2. Org 2 does not ship the product directly to any customer.



The following table provides a description of each process steps.

Organization	Process Step	Process Description	Implementation Notes
Org 1	Forecast	The consolidation organization may forecast the sales and create a forecast for the organization.	

	Enter and Configure Sales Order	Enter Sales Order from an External Customer to be shipped from the consolidation warehouse for an ATO/PTO Model. Select PTO and ATO options in the Configurator Window and book the sales order.	
	ATP/Schedule Order	ATP is against the shipping warehouse. Scheduling places the sales order demand against the shipping warehouse.	If you want to perform availability over the supply chain, in this case from Org 2, you will need Global ATP Server.
	Match and Reserve	If you perform matching to find an existing configuration. If a match is found, and if there is available onhand from the shipping warehouse, you can reserve the supply.	
	Run AutoCreate Configuration Item	Configuration items will be created in the shipping warehouse (Org 1) and manufacturing organization (Org 2). Configuration BOM and routing will be created in the Org 2. Cost Rollup is performed for the configuration item in Org 2 since Org 2 is the manufacturing organization. The cost of the configuration item in Org 1 will be the manufacturing cost plus any transfer charge (defined in the Shipping Network).	
	Load MDS	Load forecast and sales orders into MDS. Sales orders in Org 1 consume forecast for Org 1.	
	Run Multiorg DRP Plan (Org1, Org2)	You can run a DRP plan for distribution planning. In this scenario, DRP plan will create planned supply for the configuration item in Org 1 and planned demand and supply in Org 2.	
	Release Internal Requisition	For the planned supply in Org 1, you can implement it as an internal requisition from the Planner's Workbench. The requisition is against the configuration item.	You can view the internal requisition from Requisition Summary form. Internal requisition will be automatically approved. Since the requisition is not reserved to the sales order, the order line status will remain at Configured Item Created.

	Create Internal Order	You need to launch the Create Internal Order concurrent program (from Purchasing responsibility) to import the internal requisition to OM Order Import table. The internal sales order is against the configuration item.	
Org 2	Order Import	You need to launch the Order Import concurrent program to create the internal sales order.	The internal requisition number is in the Requisition Number field of the internal sales order.
	Load MDS	Internal sales order is loaded into the MDS.	If Org 2 has forecast, you can load both Org 2's forecast and demand from Org 1 into the MDS.
	Run MPS/MRP	Since Org 2 is the manufacturing organization, it will run MPS/MRP as usual.	
	Release SubAssy & Comp Supply	You can release supply (work orders or requisitions) for sub-assemblies and purchase components through the Planner's Workbench as usual.	
	AutoCreate Orders (FAS)	You can create final assembly work orders for the configuration item. The work order is reserved to the sales order.	You can also release final assembly work order from the Planner Workbench.
	Complete FAS	Complete final assembly work order. The finished assembly is reserved to the internal sales order.	
	Pick Release & Ship Product	Pick release the internal sales order. Ship the configuration item against the internal sales order.	
Org 1	Receive Configured Item Against Internal Requisition	Org 1 receives the configuration item against the internal requisition. The configuration item is not reserved to the (customer) sales order.	

	Reserve FG Against (External) SO	You may manually place a reservation on the inventory against the (customer) sales order.	The (customer) sales order line status remains 'Configured Item Created' until you receive the supply. The status then changes to Production Complete.
	Pick Release & Ship Product to Customer	Pick release (customer) sales order. Ship the product to the customer.	

Setup Considerations for Configurations

Since the solution involves many application products, you should consult each product's User's Guide for a complete description of all the setup steps. The following is a list of recommended User's Guide:

Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide has the complete setup

Oracle Order Management User's Guide

Oracle Purchasing User's Guide

Oracle Bills of Material User's Guide

Oracle Inventory User's Guide

Oracle Cost Management User's Guide

Some Configuration specific considerations you should be aware of:

Item, BOM and Routing Setup for ATO Model

The following table shows the organizations that you need to setup the model item, bills of material and routing.

Items	Item Master Org	Item Validation Org (Used by OM)	Shipping Warehouse	Mfg Org (Transfer From Org)
Item	Yes	Yes	Yes	Yes
BOM		Yes		Yes
Routing				Yes

Sourcing Rule and Bills of Distribution

Oracle Supply Chain Planning enables you to define sourcing rules and bills of distribution for the movement of material between organizations in your global enterprise. In our scenario, you need to establish sourcing rule and bills of distribution to indicate that the ATO model is transferred from Org 2 to Org 1.

The setup of sourcing rule and bills of distribution for models are the same as for standard items. Please refer Oracle Master Scheduling/MRP and Supply Chain Planning User's Guide for detailed steps.

Once you have defined sourcing rule and bills of distribution, you must assign them to particular items and/or organizations. These assignments are grouped together in assignment sets. This is where your various sourcing strategies define a particular supply chain network.

In an assignment set, you can assign your sourcing rules and bills of distribution at different level, as follows:

an item across all organizations

a single item in an inventory organization

all items in an inventory organization

categories of items

categories of items in an inventory organization

all organizations

A configuration item will inherit the sourcing rule from the ATO model.

14

Customize the Order Processing Workflow

This chapter provides information on:

Customize the Order Processing Workflow

The ATO Model Line, the Configuration Line, and the ATO Item workflow can be customized by adding blocks or approval activities or by removing some optional blocks and activities.

ATO Model Workflow

The following table shows all the activities in the ATO Model line workflow are mandatory.

ATO Model Line Workflow Activity	Mandatory	Comments
Enter Line	Yes	
Schedule Line	Yes	
Create Configuration Eligible	Yes	
Create Configuration	Yes	Creates item, BOM and routing
Wait for CTO	Yes	
Line Level Invoice Interface	Yes	
Close Line Process	Yes	

Configuration Line Workflow

This table summarizes which activities in the Configuration Line workflow activity are mandatory and which are optional.

Configuration Line Workflow Activity	Mandatory	Comments
Wait for Create Configuration	Yes	This block activity is automatically completed by the Model workflow after the configuration item is created.
Calculate Cost Rollup	No	
Calculate Lead Time Process	No	
Create Supply Order Eligible	Yes	
Check Supply Type	No	Not Required if routings for all models is only discrete routings or flow routings.
Create Work Order Process	No	Not Required if Routing of all models used is flow routing
Create Flow Schedule	No	Not Required if Routing of all models used is discrete routing.
Ship Line	Yes	
Fulfill Line	Yes	
Close Line	Yes	

Block activities cannot be added inside the Create Manufacturing Configuration Data process and the Create Supply Order process.

ATO Item Workflow

This table summarizes which activities in the ATO Item workflow activity are mandatory.

ATO Item Line Workflow Activity	Mandatory	Comments
Enter Line	Yes	
Schedule Line	Yes	
Create Supply Order Eligible	Yes	

Check Supply Type	No	Not Required if routings for all models is only discrete routings or flow routings.
Create Work Order Process	No	Not Required if Routing of all models used is flow routing
Create Flow Schedule	No	Not Required if Routing of all models used is discrete routing.
Ship Line	Yes	
Fulfill Line	Yes	

Block activities cannot be added inside the Create Supply Order process.

15

Deactivate Configuration Items

This chapter provides information on:

Deactivate Configuration Items

Bills of Material enables you to automatically deactivate item numbers associated with completed configuration orders. You can also deactivate configuration items to remove them from item master reports and screens before you actually purge them from the database.

When you set up Inventory and Bills of Material, you can define an item status to identify completed configuration items. You can use this status to disable the configuration item from all Oracle Manufacturing functions. You would normally specify No for each of the following item attributes for inactive configuration items:

- BOM allowed
- Build in WIP
- Transactable
- Stockable

When defining bills of material parameters, specify the item status to use for completed configuration items. See: Defining Bills of Material Parameters.

You can run the Deactivate Configuration Items concurrent program to automatically deactivate all configuration items that have no open sales orders or on-hand inventory, and whose most recent sales order shipped more than the number of days ago you specify. Each deactivated configuration item has its status updated.

To deactivate configuration items:

1. From Bills of Material menu, navigate to the Submit Requests window.
2. Select Report and select Deactivate Configuration Items.
3. Enter the organization for which you want to deactivate configuration items that were completed and shipped more than the number of days ago you specify.
4. Enter the shipped number of days ago. Configuration items completed and shipped more than this are deactivated. The default is 90.

Note: You can delete item information for completed configurations from the database, including the bills of material and routings.

The ability to delete configuration items is subject to the same deletion constraints that operate for other item types as well.

See Also: Deleting Items, Bills, Routings, Components, and Operations.

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W