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Send Us Your Comments

Part No. B10512-01

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

- Did you find any errors?
- Is the information clearly presented?
- Do you need more information? If so, where?
- Are the examples correct? Do you need more examples?
- What features did you like most?

If you find any errors or have any other suggestions for improvement, please indicate the document title and part number, and the chapter, section, and page number (if available). You can send comments to us in the following way:

- Electronic mail: mfgdoccomments_us@us.oracle.com

If you would like a reply, please give your name, address, telephone number, and (optionally) electronic mail address.

If you have problems with the software, please contact your local Oracle Support Services.
Preface

Audience for This Guide


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

- The principles and customary practices of your business area.

- Oracle Global Order Promising
  
  If you have never used Oracle Global Order Promising, Oracle suggests you attend one or more of the Oracle Global Order Promising training classes available through Oracle University.

- The Oracle Applications graphical user interface.
  
  To learn more about the Oracle Applications graphical user interface, read the Oracle Applications User’s Guide.

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

How To Use This Guide

This guide contains the information you need to understand and use Oracle Global Order Promising.

- Chapter 1 provides an overview of Oracle Global Order Promising and describes new features in this release.

- Chapter 2 instructs you how to set up Oracle Global Order Promising.
Chapter 3 describes features available with Oracle Global Order Promising based on collected data.

Chapter 4 describes features available with Oracle Global Order Promising based on planning data.

Chapter 5 continues the description of the features available with Oracle Global Order Promising based on planning.

Chapter 6 describes how to navigate through the Oracle Global Order Promising ATP Inquiry user interface.

Chapter 7 describes how to use the Order Backlog Workbench.

Chapter 8 provides how to fix error messages users may receive and how to debug Oracle Global Order Promising.

Appendix A contains a list of the profile options used by Oracle Global Order Promising.

Appendix B details the Oracle Global Order Promising Application Program Interface.

Appendix C details the Oracle Global Order Promising application navigation paths.

**Documentation Accessibility**

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Standards will continue to evolve over time, and Oracle Corporation is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For additional information, visit the Oracle Accessibility Program Web site at http://www.oracle.com/accessibility/.

**Accessibility of Code Examples in Documentation**

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

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

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

Online Documentation

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

- **Online Help** - The new features section in the HTML help describes new features in 11i. This information is updated for each new release of Oracle Global Order Promising. The new features section also includes information about any features that were not yet available when this guide was printed. For example, if your administrator has installed software from a mini-packs an upgrade, this document describes the new features. Online help patches are available on MetaLink.

- **11i Features Matrix** - This document lists new features available by patch and identifies any associated new documentation. The new features matrix document is available on MetaLink.

- **Readme File** - Refer to the readme file for patches that you have installed to learn about new documentation or documentation patches that you can download.

Related User’s Guides

Oracle Global Order Promising 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 Global Order Promising.

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

If you require printed guides, you can purchase them from the Oracle Store at http://oraclestore.oracle.com.
Guides Related to All Products

**Oracle Applications User’s Guide**
This guide explains how to enter data, query, run reports, and navigate using the graphical user interface (GUI) available with this release of Oracle Global Order Promising (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 selecting Getting Started with Oracle Applications from any Oracle Applications help file.

**Oracle Alert User Guide**
Use this guide to define periodic and event alerts that monitor the status of your Oracle Applications data.

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

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

User Guides Related to This Product

**Oracle Advanced Supply Chain Planning Implementation and User’s Guide**
This guide describes how to use Oracle’s planning solution for supply chain planning performance.
Oracle Applications Flexfields Guide
This guide provides flexfields planning, setup, and reference information for the Oracle Inventory implementation team, as well as for users responsible for the ongoing maintenance of Oracle Applications product data. This guide also provides information on creating custom reports on flexfields data.

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

Oracle Capacity User's Guide
This guide describes how to validate a material plan by verifying that there are resources sufficient to perform the planned work for repetitive and discrete jobs. Using finite capacity planning techniques, you learn how to use rough-cut capacity planning to validate a master schedule and capacity planning to validate the material plan.

Oracle Flow Manufacturing User's Guide
This guide describes how to use Oracle's Flow Manufacturing functionality to support the processes of flow manufacturing. It describes design features of demand management, line design and balancing, and kanban planning. It also describes production features of line scheduling, production, and kanban execution.

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 Order Management User’s Guide
This guide describes how to process sales orders through their entire lifecycle. Specifically, this guide shows how to enter sales orders and returns, copy existing sales orders, schedule orders, release orders, create price lists and discounts for orders, run processes and create reports.
Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User’s Guide
This guide describes how to anticipate and manage both supply and demand for your items. Using a variety of tools and techniques, you can create forecasts, load these forecasts into master production schedules, and plan your end-items and their component requirements. You can also execute the plan, releasing and rescheduling planning suggestions for discrete jobs and repetitive schedules.

Oracle 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 Self Service Web Applications User’s Guide
This guide describes how Oracle Self Service Web Applications enable companies to provide a self-service and secure web interface for its employees, customers and suppliers. Employees can change their personal status, submit expense reports or request supplies. Customers can check on their orders. And suppliers can share production schedules with their trading partners.

Oracle Shipping Execution User’s Guide
This guide describes how to set up Oracle Shipping Execution to process and plan your trips and deliveries, ship confirmations, query shipments, and determine freight cost and charges to meet your business needs.

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.
Installation and System Administration

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

**Installing Oracle Applications**
This guide provides instructions for managing the installation of Oracle Applications products. In Release 11i, much of the installation process is handled using Oracle Rapid Install, which minimizes the time to install Oracle Applications, the Oracle8 technology stack, and the Oracle8i Server technology stack by automating many of the required steps. This guide contains instructions for using Oracle Rapid Install and lists the tasks you need to perform to finish your installation. You should use this guide in conjunction with individual product user’s guides and implementation guides.

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

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

**Oracle Applications System Administrator’s Guide**
This guide provides planning and reference information for the Oracle Applications System Administrator. It contains information on how to define security, customize menus and online help, and manage concurrent processing.
Oracle Alert User’s Guide
This guide explains how to define periodic and event alerts to monitor the status of your Oracle Applications data.

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

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

Other Implementation Documentation

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

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

Multiple Organizations in Oracle Applications
This guide describes how to set up and use Oracle Global Order Promising with Oracle Applications’ Multiple Organization support feature, so you can define and support different organization structures when running a single installation of Oracle Global Order Promising.
Oracle Workflow Guide
This guide explains how to define new workflow business processes as well as customize existing Oracle Applications-embedded workflow processes. You also use this guide to complete the setup steps necessary for any Oracle Applications product that includes workflow-enabled processes.

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

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

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

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

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

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

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

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

Do Not Use Database Tools to Modify Oracle Applications Data
Oracle STRONGLY RECOMMENDS that you never use SQL*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle Applications data unless otherwise instructed.

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

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

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

About Oracle

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

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

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

Your Feedback

Thank you for using Oracle Global Order Promising and this user’s guide.

Oracle values 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 Global Order Promising or this user’s guide. E-mail your comments to the following address: mfgdoccomments_us@oracle.com.
Topics covered in this section include the following:

- **Overview** on page 1-2
- **Configuration** on page 1-6
Overview

Oracle Global Order Promising (GOP) provides you with an internet based, sophisticated, and fast order promising tool that provides accurate delivery promises that your customers can rely on. Oracle Global Order Promising is a comprehensive order promising solution that determines, based on the current and projected demands and supplies across a supply chain and on an extended supply chain, when a customer order can be fulfilled. This includes distributed global order promising and multi-level supply chain Available-To-Promise (ATP), Capable-To-Promise (CTP), and Capable-To-Deliver (CTD).

Oracle Global Order Promising allows you to consolidate supply and demand information from multiple transaction systems to provide a consolidated global picture of supply and demand. It is accessible from multiple order entry systems or other order capture systems such as call centers or web stores. It is fully integrated with all of Oracle’s Order Management and customer relationship management applications for capturing orders.

It can be deployed either as a component of a complete eBusiness suite implementation, or on a separate server. This flexibility allows you to support any combination of standalone order promising configurations. This also ensures high availability and unequaled scalability. You can provide an extremely accurate statement of availability to all customers in your global supply chain.

Oracle Global Order Promising addresses the following key business issues:

- How can I promise the most accurate dates?
- How quickly can I respond to a customer request?
- How can I get availability information from anywhere?

Key Capabilities

Supply Chain Available-To-Promise Large global companies have many different manufacturing and distribution locations that can ship the same product to customers. In this environment with multiple supply locations, your customers or sales representatives must be able to easily and quickly identify which location has the appropriate product and select the best location. Oracle Global Order Promising determines the best location for you based on the product and order request date. Sourcing rules determine the acceptable choices, allowing you to maintain control over which orders get routed to which fulfillment locations.
Multi-Level Supply Chain Available-To-Promise, Capable-To-Promise, and Capable-To-Deliver

Oracle Global Order Promising calculates promise dates on the basis of both current on-hand supplies (available-to-promise) and future demand versus supply. It checks for availability at multiple bills of material levels and at multiple supply chain locations, drilling down into resource and supplier capacities as necessary (capable-to-promise). Oracle Global Order Promising also considers intransit lead times in its calculations.

You can perform a multi-level component and resource availability check across your entire supply chain for the products requested. Using Oracle Global Order Promising, you control the organizations and suppliers to be included in the availability inquiry, and you control the number of levels in your supply chain bill to be considered in your check. At each level in the supply chain, you specify the key components and the bottleneck resources for which to check availability. Oracle Global Order Promising’s Multi-Level ATP functionality considers transit lead time at each stage of your supply chain from suppliers, through internal facilities to customers, to provide accurate delivery promises your customers can rely on.

Allocated ATP  Allocated ATP allows you to allocate supply by sales channels or customers. You can protect your sales channels or customers from each other by ensuring that each one gets certain portion of supply. Depending on the situation, the allocation can be equal to the forecast of the sales channel or customer, or a portion of supply when supply is constraint.

Available To Promise for Multi-Level Configurations  Oracle Global Order Promising supports Assemble-To-Order (ATO) environments. You designate any optional items for an ATP check at any level of the configuration. This provides an accurate availability date for the end configuration. Oracle Global Order Promising integrates with Oracle Configurator to provide real time availability information during product configuration.

Graphical Information for your Planners  The result of a multi-level ATP is represented in a detailed pegging tree that shows you the component and resource availability at all the levels across the supply chain. You can easily identify a material shortage or bottleneck resource. You can further look at the component or resource cumulative availability, or supply and demand information for any time in the planning horizon.

Global Access  Oracle Global Order Promising is implemented as a PL/SQL package that is call-able from web stores, order entry applications such as Oracle Order Management, and from the menu structure of the Oracle Advanced Planning Suite.
**Overview**

**Product Family ATP**  In a customer driven manufacturing environment, it may not always be possible to forecast the exact demand of the end item. However, it may be possible to define aggregate requirements and forecast at an aggregate level. Product Family ATP allows you to promise orders for a specific end item based on the supply statement at an aggregate (product family) level.

**Single Statement of Availability**  You can consolidate data from multiple instances and different versions of Oracle Applications. Existing Oracle Application (Releases 10.7 and 11) customers need not upgrade other applications. Thus, multiple order entry systems can access a global statement of availability.

**Scalability**  Oracle Global Order Promising leverages the multi-threading capabilities of the Oracle database to provide support for multiple concurrent order promising requests.

**Backward Compatibility**  Using Oracle Global Order Promising, you consolidate availability information from multiple instances and different versions of Oracle Applications. Oracle Global Order Promising is compatible with any supported version of Oracle Applications. Current Oracle customers implement Oracle Global Order Promising without upgrading their other Oracle Applications.

**Interface to Non-Oracle Applications**  You can also include data from non-Oracle systems in your global statement of supply, demand, and availability. Interface tables allow you to collect data from non-Oracle applications. Non-Oracle application order entry or web store systems communicate with Oracle Global Order Promising through application program interfaces (APIs).

**Flexible Configuration**  Oracle’s Global Order Promising solution is flexible and configurable. You control the complexity of the availability inquiry. You specify the list of potential sources to be considered in the availability check. Sourcing rules are used to specify the approved sources. These sourcing rules are assigned to products or customers. Sourcing rules allow you to control which products can be quoted to a customer from specific locations.

A flexible, hierarchical, approach is used to assign sources. This hierarchical assignment allows you to employ sophisticated sourcing strategies with minimal data entry. Rules can be applied at several levels. For example, you can apply rules globally to entire organizations, to categories of products, or to individual stock keeping units. More specific rules override more general rules, allowing you to apply default rules and maintain them on an exception basis. This reduces the overhead necessary to maintain your global model.
Oracle Global Order Promising also provides these additional flexibilities:

- Check availability for an item or a set of items across bills and across organizations.
- Control single level or multi-level availability check.
- Availability checks at a product family level allowing more rapid response in mixed mode production environments.
- Specify ship set or arrival set as constraints in the availability inquiry.
- Specify infinite time fence to limit the time the availability is constrained.
- Allow forward and backward consumption.

**Integration with Other Oracle Applications**

Oracle Global Order Promising is integrated with, but not limited to the following:

- Oracle Order Management
- Oracle Configurator
- Oracle iStore
- Oracle Spares Management
Configuration

Oracle Global Order Promising supports the following configurations for implementation:

- Standalone Planning Server Configuration: Oracle Global Order Promising sits on a different instance from other enterprise resource planning (ERP) applications.
- Integrated Planning Server Configuration: Oracle Global Order Promising sits on the same instance as other enterprise resource planning applications.

**Standalone Planning Server Configuration**

In the Standalone Planning Server Configuration, supply and demand are pulled from the source instances to the Oracle Global Order Promising instance through database links.

The following figure shows the centralized order promising configuration:

*Figure 1–1  Standalone Planning Server Configuration*
Integrated Planning Server Configuration

With the Integrated Planning Server Configuration, Oracle Global Order Promising and its source data reside in the same database. No database link is required in this case. The two components can communicate through the planning object application program interfaces (APIs) and the interface tables defined in Oracle Applications.

The following figure shows the decentralized order promising configuration:

Figure 1–2  Integrated Planning Server Configuration

Deployment

Oracle Global Order Promising can be deployed in the following two ways:

- Deployed without Oracle Advanced Supply Chain Planning (ASCP). Availability calculation is based on the collected supply and demand data from transactional systems. It is often referred to as **ATP Based on Collected Data**.

- Deployed with Oracle Advanced Supply Chain Planning. Availability calculation is based on an ASCP plan output. It is often referred to as **ATP Based on Planning Output**. The advantage of this deployment is the ability to do CTP and CTD checks, as well as an ability to use advanced order promising capabilities, such as Allocated ATP and End Item Substitution.

**Note:** When you deploy Oracle Advanced Supply Chain Planning, there is no restriction on how you can deploy ATP. You can choose ATP Based on Collected Data or ATP Based on Planning Output. However, if you choose ATP Based on Collected Data, you can only use the capabilities that are enabled for that mode.
ATP Based on Collected Data
This deployment offers backwards compatibility to existing application users. Most of the 10.7 and R11 ATP capabilities are available in this deployment.

The major difference is the introduction of data collection. It is a process to pull transactional data into a repository for Oracle Global Order Promising.

The section called ATP Based on Collected Data Setup Flow on page 2-9 provides detailed setup instructions for this deployment method.

Chapter 3, ATP Based on Collected Data, provides an explanation of the capabilities supported with this deployment method. The main capabilities are:

- Basic ATP
- Single-Level Supply Chain ATP
- Product Family ATP
- Configuration ATP
- Demand Class ATP

ATP Based on Planning Output
With the deployment of Oracle Advanced Supply Chain Planning, you have a more realistic supply picture that considers various constraints. Oracle Global Order Promising takes advantage of the output from an ASCP plan and promises delivery dates based on that. Additionally, there are a set of enhanced capabilities that provide you with a better and more flexible order promising solution.

The ATP Based on Planning Output Setup Flow on page 2-22 provides detailed setup instructions for this deployment method.

Chapters 4 and 5, ATP Based on Planning Output, provide an explanation of the capabilities supported in this deployment method. The main capabilities are:

- Basic ATP
- Multi-Level Supply Chain ATP
- Product Family ATP
- Configuration ATP
- Allocated ATP
- Demand Class ATP
- End Item Substitution
Topics covered in this section include the following:

- System Setup on page 2-2
- Functional Setup for ATP Based on Collected Data on page 2-9
- Functional Setup for ATP Based on Planning Output on page 2-22
System Setup

The following section explains the system and database preparation for Oracle Global Order Promising.

The Source instance refers to the database where other enterprise resource planning (ERP) applications, including Oracle Order Management, reside. The Destination instance refers to the database where Oracle Global Order Promising and Oracle Advanced Supply Chain Planning reside.

One Instance Setup

When Oracle Global Order Promising resides on the same instance as the other enterprise resource planning applications, you need to perform the following system setup steps:

Figure 2–1 One Instance Setup

Step 1 Install Patches
Context: You need to perform this step only once.

Required: Yes

You need to install the Oracle Global Order Promising (or ATP) source and destination patches on the same instance. The Data Collection patches also need to be applied. The patch numbers can be release specific. You can find the patch numbers on Oracle Support Metalink under Top Tech Docs in Advanced Planning and Scheduling, or by contacting Oracle Support.
Step 2  Run Create APS Partitions Concurrent Program
Context: You need to perform this step only once.

Required: Yes

You need to run Create APS Partitions concurrent program. This step is also part of Oracle Advanced Supply Chain Planning system setup. If you have already performed this step as part of Oracle Advanced Supply Chain Planning setup, you do not need to repeat this step.

Note: This step is not needed unless the profile MSC: Share Plan Partitions is set to No.

Step 3  Run Create Global ATP Flexfields Concurrent Program
Context: Run this program on the source instance only if you are on Release 10.7 or Release 11.

Required: Yes

The Create Global ATP Flexfields concurrent program creates new flexfield segments to hold ATP data at the item, bills of material, routing, and resource levels.

Step 4  Define Instance
Context: Set up for each source instance.

Required: Yes

Under the Order Management User responsibility, go to Scheduling, and ATP and Scheduling Setup. Then select Instances.
Figure 2–2  Application Instances Window

- Instance Code: this is a user-defined, three character short form for the instance to be planned.
- Instance Type: the valid values are Discrete, Process, and Discrete and Process. This field controls whether discrete manufacturing data, process manufacturing data, or both are collected from the transaction instance to the destination instance for order promising.
- Version: the Oracle Application version of the transaction instance.
- From Source to APS: leave it blank.
- From APS to Source: leave it blank.
- Enable Flag: select this option to enable the collection process.
- GMT Difference: leave it blank. This field is for future use.
- Assignment Set: enter the default assignment set for this instance. The assignment is used to resolve sourcing for order promising inquiries.
Two Instances Setup

**Figure 2–3 Two Instances Setup**

Database 1

ERP

Database 2

GOP/ASCP

**Step 1 Install Patches**

**Context:** You need to perform this step only once.

**Required:** Yes

Step 1 Install Patches

You need to install the Oracle Global Order Promising source patches on the source instance and the Oracle Global Order Promising destination patches on the destination instance. The Data Collection patches also need to be applied. The patch numbers can be release specific. You can find the patch numbers from Oracle Support Metalink under Top Tech Docs in Advanced Planning and Scheduling, or by contacting Oracle Support.

**Note:** Before beginning the installation of the source patch, count all, if any, invalid database objects. If after the patch is installed, there are more invalid objects than before, there was a problem with the patch application.
Step 2  Create Database Links
Context: You need to perform this step only once.
Required: Yes
The database administrator needs to create two database links: one that points from source database to destination database, and the other that points from the destination database to the source database.

Step 3  Run Create APS Partition Concurrent Program
Context: You need to perform this step on the instance where Oracle Global Order Promising resides.
Required: Yes
You need to run the Create APS Partitions concurrent program. This step is also part of the Oracle Advanced Supply Chain Planning system setup. If you have already performed this step as part of the Oracle Advanced Supply Chain Planning setup, you do not need to repeat this step.

Note: This step is not needed unless the profile MSC: Share Plan Partitions is set to No.

Step 4  Run Create Global ATP Flexfields Concurrent Program
Context: Run this program on the source instance only if you are on Release 10.7 or Release 11.
Required: Yes
The Create Global ATP Flexfields concurrent program creates new flexfield segments to hold ATP data at the item, bills of material, routing, and resource levels.

Step 5  Define Instance
Context: Set up for each source instance. The setup is performed on the destination instance.
Required: Yes
Under the Oracle Advanced Supply Chain Planner responsibility, set up the Instances window.
**Note:** This Instances windows resides on the destination instance.

**Figure 2–4 Application Instances Window**

- Instance Code: this is a user-defined, three character short form for the instance to be planned.
- Instance Type: the valid values here are Discrete, Process, and Discrete and Process. This field controls whether discrete manufacturing data or process manufacturing data or both are collected from the transaction instance to the destination instance for order promising.
- Version: the Oracle Application version of the transaction instance.
- From Source to APS: this is the database link name that points from the source instance to the destination instance. Use the database link defined by the DBA in Step 2.
From APS to Source: this is the database link name that points from the destination instance to the source instance. Use the database link defined by the DBA in Step 2.

Enable Flag: select this option to enable the collection process.

GMT Difference: leave it blank. This field is for future use.

Assignment Set: enter the default assignment set for this instance. The assignment is used to resolve sourcing for order promising inquiries. This is not mandatory and can also be set in the profile options MRP: ATP Assignment Set or MSC: ATP Assignment Set. See Appendix A for details. The value in this field will be used if none of the profiles are defined.

Note: This step is also part of the Oracle Advanced Supply Chain Planning system setup. If you have already performed this step as part of the Oracle Advanced Supply Chain Planning setup, you do not need to repeat this step.

**Step 6 Profile MRP: ATP Database Link Profile**

**Context:** Set up this profile once in each source instance.

**Required:** Yes

Set this profile at the source instance. The value should equal to the value you put in the From Source to APS of the source instance you define in the Instance form.

For example, you have a source instance with the name OMT and a destination instance with the name APS. You define a database link with name OMTTOAPS that points from OMT to APS. You should set the profile MRP: ATP Database Link to OMTTOAPS.
Functional Setup for ATP Based on Collected Data

The following section explains the functional setup steps for ATP Based on Collected Data.

ATP Based on Collected Data Setup Flow

**Figure 2–5 ATP Based on Collected Data Setup Flowchart**

**Step 1** Check ATP item attribute
- Context: You need to perform this step for every item.
- Required: Yes

**Step 2** ATP Rules.
- On Source

**Step 3** Profile INV Capable to Promise
- On Source & Destination

**Step 4** Profile MSC: ATP Summary Mode
- On Source

**Step 5** Transit Lead Time
- On Source

**Step 6** Single-Level Supply Chain ATP
- On Source

**Step 7** Configuration ATP
- On Destination

**Step 8** Product Family ATP
- On Source

**Step 9** Demand Class ATP
- On Source

**Step 10** Audit Statement Report
- On Destination

**Step 11** Data Collection
- On Destination

**Key**

- GOP setup steps can be organized into 3 groups:
  - Mandatory Steps: You need to perform these setup steps.
  - Optional Steps: You need to perform optional steps only if you plan to use the related feature.
  - Function Specific Steps: You need to perform these steps if you plan to use a particular ATP function.

**Step 1 Check ATP item attribute**
- **Context:** You need to perform this step for every item.
- **Required:** Yes
Oracle Global Order Promising uses this flag to determine whether to use the supply of this item to promise demand. You need to set the Check ATP Flag item attribute to either:

- Material only: check material availability for this item at this level.
- None: no need to check ATP at this level.
- Material and Resource: not currently supported.
- Resource only: not currently supported.

For details on defining item attributes, see: Defining Item Attributes, Oracle Inventory User’s Guide.

**Step 2  ATP Rules**

**Context:** Every ATP-able item must have an ATP Rule assigned. An ATP Rule can be used for multiple items.

**Required:** Yes

You need to define an ATP Rule. An ATP Rule indicates the ATP options. Each ATP Rule is a combination of time fence options, supply sources, and demand sources to use during the ATP Inquiry.

**To define an ATP Rule:**

1. Navigate to the Inventory setup, and find Available-To-Promise Rules.
2. Enter a unique name and a description for the ATP Rule.
   - Oracle Global Order Promising always performs Backward Consumption, regardless of the setting.
   - Oracle Global Order Promising always performs Forward Consumption, regardless of the setting.
   - Oracle Global Order Promising always performs Accumulation, regardless of the setting.

3. Past Due Supply and Demand Days fields can be used to limit supply and demand with past due dates. Enter the number of days to limit the past-due demand and supply. Or leave blank for the inclusion of all the past due supply...
Functional Setup for ATP Based on Collected Data

and demand. When calculating the ATP quantity of an item, Oracle Global Order Promising does not consider any demand or supply source before these dates.

4. The Infinite Supply Time Fence specifies the end of your ATP horizon. ATP considers any demand that falls beyond this time fence as available. This is displayed in the ATP Details window as 10,000,000 available on the horizon date. There are four options:
   - Cumulative total lead time: the total lead time of an assembly plus the largest adjusted cumulative total lead time of its components.
   - Cumulative manufacturing lead time: the manufacturing lead time of an assembly. It may also include and add to the previous lead time, the largest adjusted cumulative manufacturing lead time of its components. This only occurs for ATO items.
   - Total lead time: the sum of the pre-processing, processing, and post-processing lead times of the item.
   - User-defined time fence: the lead time that you specify in the Days field.

5. The ATP by Demand Class indicates whether to calculate ATP based on defined demand classes. Demand classes allow you to segregate scheduled demand into user-defined groups. If you choose to calculate ATP based on defined demand classes, then the following Supply Source options are not available:
   - On-hand available
   - Inter-org transfers
   - Purchase orders
   - Internal and supplier requisitions

This is to enable Demand Class ATP.

For details, see: Demand Class ATP on page 3-30.

6. Select the Demand and Supply Sources to use in ATP calculations. When you use ATP based on the collected data, then supply and demand are specified in the ATP rules.

The possible supply sources are:
   - Discrete Master Production Schedule (MPS)
   - Repetitive MPS
   - Discrete Work-In-Process (WIP)
Repetitive WIP
- Non-standard WIP
- Available QOH
- Internal requisitions
- Vendor requisitions
- Purchase orders
- Intransit shipments
- User-defined supply

You control which sources are selected for consideration for the availability requests. You use the on-hand available checkbox to choose whether to include the available on-hand quantity as a source of supply. Typically, make-to-order and assemble-to-order manufacturing environments do not use the available on-hand quantity as a source of supply. Oracle Global Order Promising designates a supply period as beginning on a scheduled supply date and ending the day before the next scheduled supply date. A supply period covers several days or be a minimum of one day in duration. If supply occurs on a non-work day, the ATP calculation considers that supply as belonging to the next working day. If multiple supply events occur on the same day, the ATP process sums the supplies.

The possible demand sources are:
- Sales orders
- Internal orders
- Discrete WIP demand
- Repetitive WIP demand

7. Save your work.

Example
The following example explains how Oracle Global Order Promising performs Backward Consumption, Forward Consumption, and Accumulation when calculating what is available-to-promise.

Assume supply and existing demand as follows:
Step 1: Calculate net availability for each bucket. Net = Supply - Demand.

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>20</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Demand</td>
<td>0</td>
<td>-35</td>
<td>0</td>
</tr>
<tr>
<td>Net</td>
<td>20</td>
<td>-25</td>
<td>20</td>
</tr>
</tbody>
</table>

Step 2: For each negative Net, perform backward consumption and forward consumption until there is no more negative.

Step 2.1: On Day 2, Net = -25. Consume backward. There are 20 available on Day 1 to cover partial shortage. Availability on Day 1 becomes 0.

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>20</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Demand</td>
<td>0</td>
<td>-35</td>
<td>0</td>
</tr>
<tr>
<td>Net</td>
<td>20</td>
<td>-25</td>
<td>20</td>
</tr>
<tr>
<td>Backward</td>
<td>0</td>
<td>-5</td>
<td>20</td>
</tr>
</tbody>
</table>

Step 2.2: After consuming the 20 units backward, there are still 5 short on Day 2. Consume forward. There are 20 units on Day 3 to cover the shortage of 5. Availability on Day 3 becomes 15.

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>20</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Demand</td>
<td>0</td>
<td>-35</td>
<td>0</td>
</tr>
<tr>
<td>Net</td>
<td>20</td>
<td>-25</td>
<td>20</td>
</tr>
<tr>
<td>Forward</td>
<td>0</td>
<td>0</td>
<td>15</td>
</tr>
</tbody>
</table>
Step 2.3: There is no more shortage on Day 2. On Day 4, there is a shortage of 5. Consume backward. There are 15 available on Day 3 to cover the shortage. Availability on Day 3 becomes 10.

<table>
<thead>
<tr>
<th></th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>20</td>
<td>10</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Demand</td>
<td>0</td>
<td>-35</td>
<td>0</td>
<td>-25</td>
</tr>
<tr>
<td>Net</td>
<td>20</td>
<td>-25</td>
<td>20</td>
<td>-5</td>
</tr>
<tr>
<td>Backward</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

Step 3: Accumulate the above result starting from Day 1.

<table>
<thead>
<tr>
<th></th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>20</td>
<td>10</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Demand</td>
<td>0</td>
<td>-35</td>
<td>0</td>
<td>-25</td>
</tr>
<tr>
<td>Net</td>
<td>20</td>
<td>-25</td>
<td>20</td>
<td>-5</td>
</tr>
<tr>
<td>Cum</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

The cumulative quantity on each day is the quantity available to promise for that day.

**Step 3 Profile INV: Capable to Promise**

**Context:** You need to perform this step only once.

**Required:** Yes

When Oracle Global Order Promising is deployed without Oracle Advanced Supply Chain Planning, ATP is based on collected, transactional data. You set this profile to ATP Based on Collected Data.

**Step 4 Profile MSC: Enable ATP Summary Mode**

**Context:** You need to perform this step only once.

**Required:** Optional

Oracle Global Order Promising response times can be improved by means of a summary approach that stores summary supply and demand information.
Set this profile to Yes to use summary approach. You may only set this profile to Yes when Oracle Global Order Promising is on the same instance as other ERP application.

The summary process is accomplished through a concurrent program that is automatically launched through Data Collection. For a detailed explanation on ATP summary approach, see: Improved ATP Performance on page 3-32.

**Step 5 Transit Lead Time**

**Context:** Ongoing maintenance.

**Required:** Optional

If there is transit lead time between your shipping warehouse and customer, you need to define the lead time for each shipping method using the Transit Times form in Oracle Shipping. You define shipping network from most specific to least specific at the following levels:

- Warehouse location to an internal location associated with a customer site.
- Warehouse location to a region.
- Warehouse location to a user-defined geographic area called zone.
Figure 2–7  Inter-Location Transit Times Window

Per a given shipping method on an ATP request, Oracle Global Order Promising searches for the shipping method in the above three levels from the most specific to the least specific. If it finds the shipping method in a particular level, it uses the lead time associated with the shipping method to calculate the scheduled arrival date for an order. If the shipping method is not specified at any level, Oracle Global Order Promising uses the default shipping method and its lead time in any level you define from the most specific to the least specific.

For example, you define shipping lane from your shipping organization to a specific customer location with shipping method of GROUND that has a lead time of 3 days. You also define a shipping lane from your shipping organization to a region, where the previous customer resides. This lane has GROUND as a valid shipping method, and a lead time of 2 days. On a sales order to this customer using the
GROUND shipping method, Oracle Global Order Promising uses 3 days for the transit lead time.

Before you set up transit times between the locations, you need to have set up shipping methods and a default shipping location as the shipping organization. Optionally, you can set up an internal location and its association with the customers ship-to address, regions and zones.

For detailed setup instructions on Regions, Zones, and Transit Times, see: Regions and Zones, Oracle Shipping Execution User’s Guide.

**Step 6  Single-Level Supply Chain ATP**

**Context:** Perform this step when you want to use Single-Level Supply Chain ATP.

**Required:** Function specific for Single-Level Supply Chain ATP.

When there are multiple shipping organizations to fulfill customer orders, Oracle Global Order Promising recommends the desired shipping organization based on sourcing rules you define.

For detailed instructions, see: Single-Level Supply Chain ATP on page 3-4.

**Step 7  Configuration ATP**

**Context:** You perform this step when you want to use Configuration ATP.

**Required:** Function specific for Configuration ATP.

Oracle Global Order Promising enables you to promise orders for those items used in Configure-To-Order environments.

For detailed instructions, see: Configuration ATP on page 3-10.

**Step 8  Product Family ATP**

**Context:** You perform this step when you want to use Product Family ATP.

**Required:** Function specific for Product Family ATP.

Oracle Global Order Promising enables you to promise orders at the aggregate level based on product family item supply.

For detailed instructions, see: Product Family ATP on page 3-27.

**Step 9  Demand Class ATP**

**Context:** You perform this step when you want to use Demand Class ATP.

**Required:** Function specific for Demand Class ATP.
Oracle Global Order Promising lets you promise orders for a specific demand class based on a predetermined supply statement for the same demand class.

For detailed instructions, see: Demand Class ATP on page 3-30.

**Step 10 Audit Statement Report**

**Context:** You perform this step when you want to check for errors.

**Required:** Optional, but strongly recommended.

The Audit Statement Report concurrent program checks for common data setup errors that can lead to collection or plan failures, or incorrect ATP Results. You should run this program to validate the ATP setup before you initiate an ATP Inquiry.

You may run the report for any of the following report areas:

- Collections Setup: typically you choose this option when there are problems in Collections that you want to diagnose.
- ATP Data Setup: choose this option to report on ATP data setup.

You can control the level of detail of the resulting audit report. The supported levels of detail are:

- Summary.
- Detailed - Errors Only.
- Detailed - Errors and Warnings.
- Detailed - Complete: provides a complete listing of errors and warnings along with properly executed data setup.

**Step 11 Data Collection**

**Context:** Ongoing.

**Required:** Yes

Data Collection is a process that pulls data from source instances into an area called the Operational Data Store (ODS) in Oracle Global Order Promising. Oracle Global Order Promising uses the data in ODS for order promising. When there is a change with the source data, you need to run collections to bring the changes into the ODS so that the ATP result reflects the changes. Source data includes items, ATP Rules, on-hand, WIP jobs, and purchase orders.
To run data collection without Oracle Advanced Supply Chain Planning, sign on using the Oracle Order Management responsibility, and select ATP Data Collection.

Currently, the ATP Data Collection concurrent program only contains the following parameters:

- Instance: the source instance for data collection.
- Number of Workers: number of processes that simultaneously pull transaction data.
- Timeout: number of minutes before the collection errors out if it has not finished.
- Collection Type: complete Refresh or Net Change Refresh. Note that Net Change Refresh is faster.
- Sales Orders: complete Refresh or Net Change Refresh.

The following table describes the data that ATP Data Collection collects. It also indicates which data entity is supported by the Net Change Refresh mode. When you create a new data entity or update an existing data entity that is not supported by Net Change Refresh, you need to run Complete Refresh to obtain the new information.

<table>
<thead>
<tr>
<th>Data Entity</th>
<th>Supported by Net Change Refresh</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATP Rules</td>
<td>No</td>
</tr>
<tr>
<td>Calendars</td>
<td>No</td>
</tr>
<tr>
<td>Demand Class</td>
<td>No</td>
</tr>
<tr>
<td>Items</td>
<td>Yes</td>
</tr>
<tr>
<td>Master Production Schedule</td>
<td>Yes*</td>
</tr>
<tr>
<td>On Hand</td>
<td>Yes</td>
</tr>
<tr>
<td>Purchase Requisitions / Orders</td>
<td>Yes</td>
</tr>
<tr>
<td>Sales Orders</td>
<td>Yes</td>
</tr>
<tr>
<td>Sourcing Rules</td>
<td>No</td>
</tr>
<tr>
<td>Subinventories</td>
<td>No</td>
</tr>
<tr>
<td>Trading Partners (Customers)</td>
<td>No</td>
</tr>
<tr>
<td>Units of Measure</td>
<td>No</td>
</tr>
<tr>
<td>Work-In-Process</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Functional Setup for ATP Based on Collected Data

Note: *Only new entries to an existing Master Production Schedule are collected in the Net Change Refresh collection method. Cancelled sales orders, purchase orders, requisitions, and WIP jobs are not be picked up by Net Change Refresh collections.*
Functional Setup for ATP Based on Planning Output

The following section explains the functional setup steps for using Oracle Global Order Promising with Oracle Advanced Supply Chain Planning. It is also referred to as ATP Based on Planning Output.

ATP Based on Planning Output Setup Flow
Step 1 Check ATP and Component ATP item attributes

**Context:** You need to perform this step for every item.

**Required:** Yes

You can set the Check ATP item attribute to:
You can set the Component ATP item attribute to:

- Material only: check material availability for this item at this level. For a standard item for which you want to check availability, select this value.
- None: no need to check ATP at this level.
- Resource only: not currently supported.
- Material and Resource: not currently supported.

You only need to be concerned with this flag if you use Multi-Level Supply Chain ATP or Configuration ATP.

Under the Manufacturing and Distribution Manager responsibility, go to Bills. In the Bills of Material window, select the Order Management tab.
Figure 2–9  Bills of Material Window

Step 3  ATP Rule

**Context:** Every ATP-able item must have an ATP Rule assigned. An ATP Rule can be used for multiple items.

**Required:** Optional

When Oracle Global Order Promising is based on Oracle Advanced Supply Chain Planning output, you only need to define the infinite supply time fence option in an ATP Rule.

If you do not associate an ATP Rule to an ATP-able item, Oracle Global Order Promising assumes that the infinite time fence is equal to the planning horizon.
To define an ATP Rule:

Navigate to the Inventory Setup, and find Available-To-Promise Rules.

*Figure 2–10  ATP Rules Window*

1. Enter a unique name and a description for the ATP Rule.
   - Oracle Global Order Promising always performs Backward Consumption, regardless of the setting.
   - Oracle Global Order Promising always performs Forward Consumption, regardless of the setting.
   - Oracle Global Order Promising always performs Accumulation, regardless of the setting.
2. Oracle Global Order Promising honors all the past due supply and demand that are honored by the Oracle Advanced Supply Chain Planning plan. You do not need to specify any value here.

3. Infinite Supply Time Fence: this time fence specifies the end of your ATP horizon. ATP considers any demand that falls beyond this time fence as available. This is displayed in the ATP Details window as 10,000,000 available on the horizon date. If you do not specify a value, Oracle Global Order Promising uses the plan horizon as the infinite time fence. There are four options:
   - Cumulative total lead time: the total lead time of an assembly plus the largest adjusted cumulative total lead time of its components.
   - Cumulative manufacturing lead time: the manufacturing lead time of an assembly. It may also include and add to the previous lead time, the largest adjusted cumulative manufacturing lead time of its components. This only occurs for ATO items.
   - Total lead time: the sum of the pre-processing, processing, and post-processing lead times of the item.
   - User-defined time fence: the lead time that you specify in the Days field.

4. ATP by Demand Class: Indicate whether to calculate ATP based on defined demand classes. Demand classes allow you to segregate scheduled demand into user-defined groups. If you choose to calculate ATP based on defined demand classes, then the following Supply Source options are not available:
   - On-hand available
   - Inter-org transfers
   - Purchase orders
   - Internal and supplier requisitions

This is to enable Demand Class ATP.

For Demand and Supply Sources: when you use ATP based on the planning output, Oracle Global Order Promising honors all the supply and demand in the Oracle Advanced Supply Chain Planning plan. You do not need to make any selection here.

5. Save your work.
Example

The following example explains how Oracle Global Order Promising performs Backward Consumption, Forward Consumption, and Accumulation when calculating what is available-to-promise.

Assume supply and demand as follows:

<table>
<thead>
<tr>
<th></th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>20</td>
<td>10</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Demand</td>
<td>0</td>
<td>-35</td>
<td>0</td>
<td>-25</td>
</tr>
</tbody>
</table>

Step 1: Calculate net availability for each bucket. Net = Supply - Demand.

<table>
<thead>
<tr>
<th></th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>20</td>
<td>10</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Demand</td>
<td>0</td>
<td>-35</td>
<td>0</td>
<td>-25</td>
</tr>
<tr>
<td>Net</td>
<td>20</td>
<td>-25</td>
<td>20</td>
<td>-5</td>
</tr>
</tbody>
</table>

Step 2: For each negative Net, perform backward consumption and forward consumption until there is no more negative.

Step 2.1: On Day 2, Net = -25. Consume backward. There are 20 available on Day 1 to cover partial shortage. Availability on Day 1 becomes 0.

<table>
<thead>
<tr>
<th></th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>20</td>
<td>10</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Demand</td>
<td>0</td>
<td>-35</td>
<td>0</td>
<td>-25</td>
</tr>
<tr>
<td>Net</td>
<td>20</td>
<td>-25</td>
<td>20</td>
<td>-5</td>
</tr>
<tr>
<td>Backward</td>
<td>0</td>
<td>-5</td>
<td>20</td>
<td>-5</td>
</tr>
</tbody>
</table>

Step 2.2: After consuming the 20 units backward, there are still 5 short on Day 2. Consume forward. There are 20 units on Day 3 to cover the shortage of 5. Availability on Day 3 becomes 15.
Step 2.3: There is no more shortage on Day 2. On Day 4, there is a shortage of 5. Consume backward. There are 15 available on Day 3 to cover the shortage. Availability on Day 3 becomes 10.

<table>
<thead>
<tr>
<th></th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>20</td>
<td>10</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Demand</td>
<td>0</td>
<td>-35</td>
<td>0</td>
<td>-25</td>
</tr>
<tr>
<td>Net</td>
<td>20</td>
<td>-25</td>
<td>20</td>
<td>-5</td>
</tr>
<tr>
<td>Forward</td>
<td>0</td>
<td>0</td>
<td>15</td>
<td>-5</td>
</tr>
</tbody>
</table>

Step 3: Accumulate the above result starting from Day 1.

<table>
<thead>
<tr>
<th></th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>20</td>
<td>10</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Demand</td>
<td>0</td>
<td>-35</td>
<td>0</td>
<td>-25</td>
</tr>
<tr>
<td>Net</td>
<td>20</td>
<td>-25</td>
<td>20</td>
<td>-5</td>
</tr>
<tr>
<td>Backward</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Cum</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

The cumulative quantity on each day is the quantity available to promise for that day.

**Step 4 Profile INV: Capable to Promise**

**Context:** You need to perform this step on the source and destination instances.

**Required:** Yes

Set this profile to ATP/CTP Based on Planning Data on both the source and destination instances.
Step 5  Profile MSC: Enable ATP Summary Mode

Context: You need to perform this step only once on the destination instance.

Required: Optional

Oracle Global Order Promising response times improve with a summary approach that stores summary supply and demand information. Set this profile to Yes to use summary approach.

You should only set this profile to Yes when:

- Oracle Global Order Promising is on the same instance as other ERP applications.
- Allocated ATP is not enabled.

For detailed explanation on ATP Summary approach, see: Improved ATP Performance on page 5-34.

Step 6  Transit Lead Time

Context: Ongoing maintenance.

Required: Optional

If there is transit lead time between your shipping warehouse and customer, you need to define the lead time for each shipping method using the inter-location Transit Times form in Oracle Shipping. You define shipping lead times from the most specific to the least specific at the following levels:

- Warehouse location to an internal location associated with a customer site.
- Warehouse location to a region.
- Warehouse location to a geographic area called zone.
Given a shipping method on an ATP request, Oracle Global Order Promising will search for the shipping method in the above 3 levels from most specific to least specific. If it finds the shipping method in a particular level, it will use the lead time associated with the shipping method to calculate the scheduled arrival date for an order. If the specified shipping method is not specified at any level, Oracle Global Order Promising will use the default shipping method and its lead time in any level you define from most specific to least specific.

For example, you define shipping lane from your shipping organization to a specific customer location with shipping method of GROUND that has a lead time of 3 days. You also define a shipping lane from your shipping organization to a region where the previous customer resides. This lane has GROUND as a valid shipping method, and a lead time of 2 days. On a sales order to this customer using GROUND shipping method, Oracle Global Order Promising uses 3 days for the transit lead time.
Before you set up transit times between the locations, you need to have set up shipping methods and a default shipping location as the shipping organization. Optionally, you can set up an internal location and its association with the customers ship-to address, regions and zones.

For detailed instructions, see: Transit Times, Oracle Shipping Execution User’s Guide.

**Step 7 Multi-Level Supply Chain ATP**

*Context:* You need to perform this step for Multi-Level Supply Chain ATP.

*Required:* Optional

With Oracle Global Order Promising, you can promise demand based on the sourcing rule you define for any number of shipping organizations. If there is not sufficient supply, Oracle Global Order Promising explodes the supply chain bills of material to find additional component and resource supplies to promise.

For detailed instructions, see: Multi-Level Supply Chain ATP on page 4-4.

**Step 8 Configuration ATP**

*Required:* Function specific for Configuration ATP.

Oracle Global Order Promising enables you to promise orders for those items used in Configure-To-Order environments.

For detailed instructions, see: Configuration ATP on page 4-35.

**Step 9 Product Family ATP**

*Required:* Function specific for Product Family ATP.

Oracle Global Order Promising enables you to promise orders at aggregate level based on product family item supply.

For detailed instructions, see: Product Family ATP on page 4-62.

**Step 10 Allocated ATP**

*Required:* Function specific for Allocated ATP.

Oracle Global Order Promising lets you allocate scarce supply to different sales channels or customers, and promise orders based on allocated supply.

For detailed instructions, see: Allocated ATP on page 4-70.
Step 11 Audit Statement Report

Required: Optional, but strongly recommended

The Audit Statement Report concurrent program checks for common data setup errors that may lead to collection or plan failures, or incorrect ATP results. You run this program to validate the ATP setup before you initiate an ATP inquiry.

You can run the report for any of the following report areas:

- Collections Setup: typically you choose this option when there are problems in Collections you want to diagnose.
- ATP Data Setup: choose this option to report on ATP data setup.

You control the level of detail of the resulting audit report. The supported levels of detail are:

- Summary.
- Detailed - Errors Only.
- Detailed - Errors and Warnings.
- Detailed - Complete: provides a complete listing of errors and warnings along with properly executed data setups.

Step 12 Run Collections

Context: Ongoing.

Required: Yes

Data Collection is a process that pulls data from source instances into an area called the Operational Data Store (ODS) in Oracle Global Order Promising and Oracle Advanced Supply Chain Planning. An ASCP plan is run based on the collected data. The output of an ASCP plan is used for order promising. It is typical that you run Collections before you rerun your ASCP plan.

Also, you need to be logged on using the Advanced Supply Chain Planner responsibility.
For more information on data collection, see: Running Collections, *Oracle Advanced Planning and Scheduling Implementation and User’s Guide*.

**Step 13  ASCP Plan**

**Context:** Perform this step as needed.

**Required:** Yes

You need to identify a particular plan for ATP by checking the Check ATP flag in the plan definition window in Oracle Advanced Supply Chain Planning.

For detailed instructions, see: Setting Plan Options, *Oracle Advanced Planning and Scheduling Implementation and User’s Guide*.

**Step 14  Run Plan**

**Context:** Ongoing.

**Required:** Yes
This chapter provides the explanation of the various capabilities supported when performing ATP based on collected data.

Topics covered in this section include the following:

- Basic ATP on page 3-2
- Single-Level Supply Chain ATP on page 3-4
- Configuration ATP on page 3-10
- Product Family ATP on page 3-27
- Demand Class ATP on page 3-30
- Improved ATP Performance on page 3-32
Basic ATP

Basic ATP allows you to perform an availability check based on a statement of current and planned material supply against a given organization. You perform ATP checks by specifying the item, the need by date, and the ship-from. Results describing the need by date quantity and the fulfillment date are returned to you.

Business Application

Basic ATP allows you to receive detailed information on whether your availability check request can be met and on what date the request can be fulfilled. Based on statements of current and planned material supply, Basic ATP determines the availability of items.

You perform a Basic ATP check when you only have one ship-from location in your company, or when you want to check availability in one inventory location.

Setup

After you perform the mandatory and optional setup steps explained in the Setting Up chapter, then you may perform Basic ATP.

When you initiate ATP from another application such as Oracle Order Management, you need to specify a shipping organization. The calling application may have its own way to default a shipping organization. When Oracle Global Order Promising is called with a specific organization, it performs Basic ATP. Otherwise, it attempts to perform Single-Level Supply Chain ATP, which requires additional setup.

Refer to the calling application’s user guide for further details on shipping organization specifications.

ATP Logic

ATP Logic in a Single Organization

1. If Check ATP is set to None, then there is no ATP check.

   If ATP item attribute is Material Only, then the system checks ATP for the item on the request date. If there is availability, then you are done. Otherwise, go to step 2.
2. ATP fails to satisfy this request. From the sysdate, ATP performs forward scheduling for this request. ATP finds the earliest date that you can meet the shortage based on the supply in the ATP Rule. This is the ATP date.

3. If the ATP Date is less than or equal to the Latest Acceptable Date, Oracle Global Order Promising returns a success. Otherwise, it returns a failure.

---

**Note:** The Latest Acceptable Date is a date beyond the request date that the customer will accept the order. This date is determined by any calling application, and is passed to Oracle Global Order Promising.

---

**ATP Result**

Oracle Global Order Promising returns very detailed information and presents the data in the ATP Details window. However, the calling application may decide to only show a subset of the information. For example, Oracle Order Management shows some of the ATP results such as Warehouse, Request Date Quantity, Available Date, and Error Message in its Availability window. It provides an ATP Details selection for you to drill down to the ATP Details window, if you want detailed information.

For details on the ATP Details window, see: ATP Inquiry on page 6-2.
Single-Level Supply Chain ATP

Single-Level Supply Chain ATP enables you to perform availability checks based on current and planned supply across multiple supply organizations. You rank the supply organizations so that ATP checks for availability in the order you want. Single-Level Supply Chain ATP automatically finds the best supply organization for your request. Oracle Global Order Promising also drills down to look at the availability at every supply organization.

Business Application

ATP for Multiple Supply Locations

If you have multiple distribution centers in your enterprise, Oracle Global Order Promising determines the best location to fulfill a customer request. Alternatively, you can check ATP for any of the possible supply locations, drill down to ATP details, and select the desired location.

Any environment where multiple supply locations are used to fulfill order demand can benefit from this feature. As you utilize available inventory from other locations, you can successfully meet customers requirement and thus increase your company’s overall order fill rate by utilizing inventories that might otherwise be in excess.

For example, a company has three stores throughout the United States. When a customer inquires about the availability of a particular product A, the company wants to first check the preferred store (Org1). The product may not be available at the preferred store. The company then wants to check the other stores (Org2 and Org3) to find the store that can meet the customer’s requirement. Single-Level Supply Chain ATP helps the company to accomplish this goal. This is shown in the following diagram:

Figure 3–1 Single-Level Supply Chain ATP

---

A/Customer1, Site1

Rank 1: 100%

A/Org1

Rank 2: 50%

A/Org2

Rank 2: 50%

A/Org3

---

Oracle Global Order Promising Implementation and User's Guide
Setup

Perform the mandatory and optional setup steps explained in the Setting Up chapter. The following are the additional setup steps.

Sourcing Rule

Sourcing Rules are used to describe all of the possible shipping warehouses. The sourcing rule priority determines the order that Oracle Global Order Promising uses to search for supply. The receiving party can be a customer or an internal organization. You must use a Sourcing Rule that is non-organization specific to define the movement of goods from shipping organizations to customers. The type of the sourcing rule must be Transfer From.

---

**Note:** Oracle Global Order Promising currently does not support sourcing a customer sales order from a supplier, directly, in a Drop Ship scenario.


Assignment Set

Once you define your sourcing rules, you assign them to particular items, and / or organizations and customers. These assignments are grouped together in assignment sets.

In an assignment set, you assign your sourcing rules at different levels, as follows:

- A single item in an organization / for a customer site
- A category of items in an organization / for a customer site
- An item across all organizations / customer sites
- A category of items across all organizations / customer sites
- All items in an organization / for a customer site
- All organizations (global) / customer sites

You create an assignment set at different levels based on your needs. If the receiving party is a customer, then assign the sourcing rule to this customer and its site. If you want a sourcing rule to be applicable to any customer or any items, then you assign the sourcing rule to global.
For detailed setup instructions, see: Sourcing Rules and Bills of Distribution, Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User Guide.

Profile MRP: ATP Assignment Set
When you perform Single-Level Supply Chain ATP from the source instance, this profile determines the assignment set ATP uses to determine the shipping organization for the receiving organization or customer. This profile should point to the assignment set discussed above and be set up at the source instance.

Profile MSC: ATP Assignment Set
This profile points to an assignment set that contains the Sourcing Rule, which defines the movement of goods from shipping organizations to customers. This profile is set up at the destination instance. The profile MRP: ATP Assignment Set, defined at the source instance, takes precedence over the profile MSC: ATP Assignment Set.

ATP Logic
An ATP request is processed by the system in the following order:

1. For each shipping organization starting with the highest ranked organization. If the ranks are the same, the source that has the higher allocation percentage is selected first. If the allocation percentages are the same, the source is selected arbitrarily.

2.
   a. Check the availability of the item in the organization.
   b. If there is enough supply, then the ATP Date equals request date and the ATP status equals success.
   c. If there is not enough supply, forward schedule to find the earliest date that the shortage can be met. The ATP Date equals the earliest available date. If the date is less than or equal to the Latest Acceptable Date, then the ATP status equals success. Otherwise, the ATP status equals failure.

3. If the ATP status equals success, then return the ATP Date with a success status. Otherwise, go to step 1 for the next ranked organization.

4. If there is no more organizations, then return the ATP Date and ATP status from the highest ranked organization.
ATP Result

When the ATP check is performed without a shipping organization, Oracle Global Order Promising automatically performs Single-Level Supply Chain ATP based on the sourcing rules defined in the assignment set pointed to by the profile MRP: ATP Assignment Set. It returns a shipping warehouse based on the logic described in ATP Logic, quantity available on request date, the available date, and other information. The detail information can be obtained from the ATP Details window.

From Oracle Order Management or Oracle Global Order Promising ATP Inquiry, users can select Global Availability to view availability information in each of the shipping organization.

For details about viewing availability information, see: ATP Inquiry on page 6-2.

Example

The following example guides you through some of the setup steps and shows you the Single-Level Supply Chain ATP result.

You have two supply organizations: M1 and M2. M1 is the preferred warehouse. For end item A, it is Make at M1, but it is a Buy From supplier S1 at M2. This sourcing strategy is applicable to all customers.

You ship the product to customers using either the standard 3 day delivery or 1 day express.

For any demand, you want ATP to look at the two supply warehouses based on the current and planned supply.

Sourcing Rule

You set up a sourcing rule as shown in the following table:

   Note that you must check the All Org field in the Define Sourcing Rule form. For this example, the sourcing rule name is SR-A:
This is a non-organization specific sourcing rule.

**Assignment Set**

In the assignment set, you make an item level assignment by assigning sourcing rule SR-A to item A, as shown in the following table:

<table>
<thead>
<tr>
<th>Assigned To (Type)</th>
<th>Item / Sourcing Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>A</td>
</tr>
<tr>
<td>SR</td>
<td>SR-A</td>
</tr>
</tbody>
</table>

**Transit Times**

You can set up different shipping methods and transit lead times from the shipping organization to a customer.

The following table shows the transit lead times from the shipping location to the region of the United States:

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Shipping Method</th>
<th>Lead Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1-ShipLoc</td>
<td>USA (region)</td>
<td>Express</td>
<td>1 day</td>
</tr>
<tr>
<td>M1-ShipLoc</td>
<td>USA (region)</td>
<td>Standard</td>
<td>3 days</td>
</tr>
<tr>
<td>M2-ShipLoc</td>
<td>USA (region)</td>
<td>Express</td>
<td>1 day</td>
</tr>
<tr>
<td>M2-ShipLoc</td>
<td>USA (region)</td>
<td>Standard</td>
<td>3 days</td>
</tr>
</tbody>
</table>

**Profile MRP: ATP Assignment Set**

This profile points to the assignment set defined above.

The cumulative ATP quantity for each of the warehouses is as shown in the following table:
The following list shows the ATP request information:

- Order Quantity = 100
- Request Arrival Date = Day 11
- Customer = ABC
- Address = 1234 Evergreen Lane, California, CA 96666, USA
- Shipping Method = Express
- Latest Schedule Limit = 2 days

Oracle Global Order Promising performs the following:

1. Single-Level Supply Chain ATP first looks at M1. Since the shipping lead time is 1 day, the quantity must be available on Day 10. However, it is not available.
2. Because the latest schedule limit for this customer is 2 days, Single-Level Supply Chain ATP looks forward to Day 11 and Day 12. M1 is still not available.
3. Single-Level Supply Chain ATP now looks at M2. It is available on Date 12.
4. Based on this search, Single-Level Supply Chain ATP returns M2 as the warehouse for the request with the availability date of Day 12.

Note: You must provide a shipping warehouse for the ATO Model, PTO Model, and ATO Item. Currently, Oracle Global Order Promising does not recommend sourcing for these items.
Configuration ATP

A Configure-To-Order (CTO) environment is one where the product or service is assembled or kitted on receipt of the sales order. This section provides a detailed explanation of order promising on items used in a configure-to-order environment.

Oracle Global Order Promising supports a Configure-To-Order environment. You designate the optional and included items for the ATP Check. This provides an accurate availability date for the end configuration.

Business Application

In a configure-to-order environment, it is not possible or practical to project and plan for every possible configuration. Inventory is planned and held at component level. To accurately promise a customer order, you need to check availability based on the actual options selected. Oracle Global Order Promising lets you promise a sales order for configuration based on the selected options.

Items Used in Configure-To-Order Environment

The following items may be used in a configure-to-order environment:

- ATO Model
- PTO Model
- ATO Item
- Kit (PTO Item)

For detailed feature descriptions, see: Oracle Configure-To-Order Implementation Guide.

Examples

Example 1  ATO Model

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>BOM Item Type</th>
<th>Mutually Exclusive</th>
<th>Optional</th>
<th>Assemble-To-Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Laptop X11</td>
<td>ATO Model</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
</tr>
<tr>
<td>1</td>
<td>- Base System</td>
<td>Standard</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>- Board</td>
<td>Standard</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
### Example 2 PTO Model

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>BOM Item Type</th>
<th>Mutually Exclusive</th>
<th>Optional</th>
<th>Assemble-To-Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Laptop X11 Deluxe</td>
<td>PTO Model</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
</tr>
<tr>
<td>1</td>
<td>Laptop X11</td>
<td>ATO Model</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>External Mouse</td>
<td>Option Class</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>Logitech Optical Mouse</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

---

### Example 2 PTO Model

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>BOM Item Type</th>
<th>Mutually Exclusive</th>
<th>Optional</th>
<th>Assemble-To-Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Network Card</td>
<td>Standard</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>Graphics Card</td>
<td>Standard</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>Processor Class</td>
<td>Option Class</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>Mobile Pentium®4 2.2 GHz</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>Mobile Pentium®4 2.0 GHz</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>Mobile Pentium®4 1.8 GHz</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>Mobile Pentium®4 1.7 GHz</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>Memory Class</td>
<td>Option Class</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>256 MB</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>512 MB</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>640 MB</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>Monitor Class</td>
<td>Option Class</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>17in Flat Screen</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>19in Flat Screen</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>Modular Drive Class</td>
<td>Option Class</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>24X CD-Rom</td>
<td>Standard</td>
<td>N/A</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>8X Max DVD Rom</td>
<td>Standard</td>
<td>N/A</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>24X CD-RW</td>
<td>Standard</td>
<td>N/A</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>24X CD-RW/DVD Combo</td>
<td>Standard</td>
<td>N/A</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
### Example 3  ATO Item

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>BOM Item Type</th>
<th>Mutually Exclusive</th>
<th>Optional</th>
<th>Pick Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>- COMPAQ Mouse</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>- Wireless Networking Card</td>
<td>Option Class</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>- External TrueMobile 1150 PC Card</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>- Internal TrueMobile 1150 miniPCI Card</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>- Laptop Case</td>
<td>Standard</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>- External Speaker</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>- Premium Speaker</td>
<td>Standard</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>- Speaker Manual</td>
<td>Standard</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

### Example 4  Kit

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>BOM Item Type</th>
<th>Mutually Exclusive</th>
<th>Optional</th>
<th>Pick Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>External Speaker</td>
<td>Standard</td>
<td>No</td>
<td>-</td>
<td>Yes</td>
</tr>
<tr>
<td>1</td>
<td>- Premium Speaker</td>
<td>Standard</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>- Speaker Manual</td>
<td>Standard</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
Configuration ATP Based on Collected Data

Oracle Global Order Promising lets you check availability for an ATO Model, PTO Model, ATO Item, and Kit. The following section explains the setup needed to perform availability checks for such items, as well as the data that is passed from front-end applications to Oracle Global Order Promising.

ATO Model

Front-end applications such as Oracle Order Management and Oracle Configurator are used to configure an ATO Model. The ATO Model, selected option classes, selected optional items, and mandatory items are grouped into a set and passed to Oracle Global Order Promising for ATP check.

Setup

ATP Item Attributes and BOM ATP Flag

When the availability for the ATO Model depends on the availability of the included items and optional items, you should set up the Check ATP item attribute according to the following table:

<table>
<thead>
<tr>
<th>Item Type</th>
<th>Check A TP</th>
<th>Component A TP</th>
<th>Check ATP Flag on BOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATO Model</td>
<td>None</td>
<td>Material</td>
<td>-</td>
</tr>
<tr>
<td>Option Class</td>
<td>None</td>
<td>Material</td>
<td>Yes</td>
</tr>
<tr>
<td>Mandatory Component</td>
<td>Material or None</td>
<td>None</td>
<td>Yes</td>
</tr>
<tr>
<td>Optional Item</td>
<td>Material or None</td>
<td>None</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Oracle Global Order Promising checks the availability of the included and selected optional items on a date that is offset from the ATO Model request date by:

Fixed Lead Time + Request Quantity * Variable Lead Time

of the ATO Model. Oracle Global Order Promising returns a Group Ship Date that is either the request date or a later date, if any ATP-able items are not available.
**Examples**

**Example 5  ATO Model**
Consider the ATO Model from Example 1. Let us say for a particular order, some options are selected. The ATP item attributes for these items are shown below:

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>Check ATP</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Laptop X11</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>- Base System</td>
<td>Material</td>
</tr>
<tr>
<td>2</td>
<td>- Board</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>- Network Card</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>- Graphics Card</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>- Processor Class</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>- Mobile Pentium®4 2.2 GHz</td>
<td>Material</td>
</tr>
<tr>
<td>1</td>
<td>- Memory Class</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>- 256 MB</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>- Monitor Class</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>- 19in Flat Screen</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>- Modular Drive Class</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>- 24X CD-RW/ DVD Combo</td>
<td>Material</td>
</tr>
</tbody>
</table>

**Laptop X11 lead time:**
- Fixed lead time = 0
- Variable lead time = 0.05 day

The cumulative availability picture for the items that have the Check ATP attribute set is described as follows:

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>- Base System</td>
<td>0</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>- Mobile Pentium®4 2.2 GHz</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>- 24X CD-RW/DVD Combo</td>
<td>0</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>
For this configuration, the ATP Inquiry for a sales order demand for a quantity of 10 with a request date of Day 2 can be promised on Day 3. This is because:

- Model’s lead time = Round (0 + 10 * 0.05) = 1 day
- The Base System and 24X CD-RW/DVD Combo are not available on Day 1.
- All components are available on Day 2. It takes 1 day to produce the configuration. Thus, the configuration is only available on Day 3.

The ATP Details window shows you the following:

<table>
<thead>
<tr>
<th>Item</th>
<th>Request Date</th>
<th>Request Date Qty</th>
<th>Ship Date</th>
<th>Group Ship Date</th>
<th>Error Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laptop X11</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Base System</td>
<td>Day 2</td>
<td>0</td>
<td>Day 3</td>
<td>Day 3</td>
<td>-</td>
</tr>
<tr>
<td>Processor Class</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Mobile Pentium®4 2.2 GHz</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>Day 3</td>
<td>-</td>
</tr>
<tr>
<td>Memory Class</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>256 MB</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Monitor Class</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>19in Flat Screen</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Modular CD/DVD Drive</td>
<td>Day 2</td>
<td>19</td>
<td>Day 2</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>24X CD-RW/DVD Combo</td>
<td>Day 2</td>
<td>0</td>
<td>Day 3</td>
<td>Day 3</td>
<td>-</td>
</tr>
</tbody>
</table>

Explanation:

- The availability information on the ATO Model tells you the availability on the request date in the Request Date Quantity field. If the entire quantity is not available on the request date, the Ship Date tells you the earliest date that the order quantity is available.
- Since the model, selected option class, mandatory items, and selected optional items are grouped into a set, all of the items appear in ATP Details window. In the Oracle Order Management ATP Results and Configurator windows, availability is only shown for the selected optional items. You can go to the ATP Details window from the ATP Results window in Oracle Order Management.
- Items that have Check ATP set to None receive the error message: ATP not applicable.
The Request Date for all the items reflect the Request Date from sales order line.

The Request Date Quantity reflects the supply available on the date the items are needed. For included items and optional items, the date the items are needed equals the Request Date minus the Model’s Lead Time. In this example, these items are needed on Day 1.

The Ship Date equals the date the items are available plus the model lead time. The Base System is available on Day 2. Thus, the Ship Date equals Day 3.

The Group Ship Date reflects the date that the entire configuration is available. It is the maximum Ship Date of any line in the set.

The ATP Details window also provides the pegging information for items that have the Check ATP item attribute set to Material.

For the item Base System, the pegging tree looks like the following:

- (D) Base System - Org Qty 10 on Day 1.
- (S) Base System - ATP Org Qty 0 on Day 1.
- (S) Base System - ATP Org Qty 10 on Day 2.

Explanation:

- In pegging, different graphical icons are used for supply and demand. In the above representation, the icons are represented by (S) and (D) respectively.
- Line 1: Base System is required 10 on Day 1.
- Line 2: Base System is not available on Day 1.
- Line 3: Base System is available on Day 2.

**Match to Existing Configuration**

Oracle Global Order Promising does not attempt to match a new sales order to an existing configuration. Oracle Global Order Promising is based on the availability of the options and mandatory items. Once the order is scheduled and booked, you use the Match and Reserve capability from Oracle Order Management to match to an existing configuration with supply.

For details on Matching, see: Matching Configuration Items, *Oracle Configure-to-Order Implementation Manual*. 
Reschedule Order

When a sales order line is rescheduled, Oracle Global Order Promising first unschedules the original order lines, and then reschedules the order based on the availability of the revised order lines. Examples of order lines include models, option classes, included items, and optional items.

Note:

- If you have Multi-Level or Multi-Org ATO Models, you need to deploy Oracle Advance Supply Chain Planning to accurately promise such orders through the use of the Multi-Level ATP or Multi-Level CTP functionalities and sourcing capabilities. For configuration details for ATP based on planning data, see: Configuration ATP on page 4-35.

- When the Check ATP item attribute for an ATO Model is set to None, Oracle Global Order Promising ignores the infinite time fence for the model.

- A shipping warehouse must be specified for an ATO Model order for availability check.

PTO Model

A front-end application, such as Oracle Order Management and Oracle Configurator, is used to configure a Pick-To-Order (PTO) Model. When the PTO Model has Ship Model Complete checked, Oracle Order Management groups the PTO Model and the selected option classes with items and optional items into a set for the ATP check. Otherwise, Oracle Order Management treats each PTO line, including items and selected options, independently for the availability check.

Setup

ATP Item Attributes and BOM ATP Flag

You need to set the Check ATP item attribute. You do not need to set Component ATP or BOM Check ATP flags.

<table>
<thead>
<tr>
<th>Item Type</th>
<th>Check ATP</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTO Model</td>
<td>None</td>
</tr>
</tbody>
</table>
Examples

Example 6  PTO Model with Ship Model Complete set to Yes
Let us say for a particular order with a PTO Model, some options are selected. The ATP item attributes for these items are shown below:

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>Check ATP</th>
<th>Ship Model Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Laptop X11 Deluxe</td>
<td>-</td>
<td>Yes</td>
</tr>
<tr>
<td>1</td>
<td>- Laptop X11</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>- Base System</td>
<td>Material</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>- Processor Class</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>- Mobile Pentium®4 2.2 GHz</td>
<td>Material</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>- Memory Class</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>- 256 MB</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>- Monitor Class</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>- 19in Flat Screen</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>- Modular Drive Class</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>- 24X CD-RW/DVD Combo</td>
<td>Material</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>- External Mouse</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>- Logitech Optical Mouse</td>
<td>Material</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>- Laptop Case</td>
<td>Material</td>
<td>-</td>
</tr>
</tbody>
</table>

The cumulative availability picture for the items that have the Check ATP item attribute set is described as follows:
An ATP Inquiry for a sales order demand of the above configuration for a quantity of 10 with a request date of Day 2 can only be promised on Day 3. This is because:

- The Logitech Optical Mouse is not available when the request date = Day 2.

The ATP Details window shows the following result:

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>- Base System</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>- Mobile Pentium®4 2.2 GHz</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>- 24X CD-RW/DVD Comb</td>
<td>20</td>
<td>30</td>
<td>40</td>
</tr>
<tr>
<td>2</td>
<td>- Logitech Optical Mouse</td>
<td>0</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>1</td>
<td>- Laptop Case</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
</tbody>
</table>
Example 7  PTO Model with Ship Model Complete set to No
Same scenario as the previous example, except the PTO Model has Ship Model Complete set to No. In this case, Oracle Global Order Promising does not derive a Group Ship Date. Each individual lines can be shipped on the Ship Date.

The ATP Details window shows the following result:

<table>
<thead>
<tr>
<th>Item</th>
<th>Request Date</th>
<th>Request Qty</th>
<th>Ship Date</th>
<th>Group Ship Date</th>
<th>Error Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laptop X11 Deluxe</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Laptop X11</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Base System</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Processor Class</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Mobile Pentium® 2.2 GHz</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Memory Class</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>256 MB</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Monitor Class</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>19 inch Flat Screen</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Modular CD/DVD Drive</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>24X CD-RW/DVD Combo</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>External Mouse</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Logitech Optical Mouse</td>
<td>Day 2</td>
<td>0</td>
<td>Day 3</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Laptop Case</td>
<td>Day 2</td>
<td>20</td>
<td>Day 2</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

ATO Item

When an order is created in Oracle Order Management for an ATO Item, Oracle Order Management constructs a set of items to be passed to Oracle Global Order Promising for availability check based on the ATP item attributes setting.
Setup

ATP Item Attributes and Bill-of-Material ATP Flag

Oracle Global Order Promising supports the following ATP item attributes setting for an ATO Item:

1. The ATO Item is forecasted and planned. There is a statement of supply for the ATO Item. Order promising for the ATO Item is based on the supply for the ATO Item. In this case from the order promising perspective, the ATO Item is similar to a standard item. The significance of the ATO is on the transactional side. You should only enable Check ATP for the ATO Item.

Oracle Global Order Promising returns a Ship Date that is either the request date or a later date if the ATO Item is not available.

2. The ATO Item is created for a commonly ordered configuration. It is not individually forecasted and planned. Oracle Global Order Promising for the ATO Item is based on the availability of its immediate components.

You should enable Component ATP flag for the ATO Item and enable the Check ATP flag for its key components.

<table>
<thead>
<tr>
<th>Item Type</th>
<th>Check ATP</th>
<th>Component ATP</th>
<th>BOM Check ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATO Item (Standard)</td>
<td>Yes</td>
<td>None</td>
<td>-</td>
</tr>
<tr>
<td>- Components (Standard)</td>
<td>None</td>
<td>None</td>
<td>No</td>
</tr>
</tbody>
</table>

Oracle Global Order Promising checks the availability of the components on a date that is offset from the ATO Item request date by:

\[
\text{Fixed Lead Time} + \text{Request Quantity} \times \text{Variable Lead Time}
\]
of the ATO Item. Oracle Global Order Promising returns a Group Ship Date that is either the request date or a later date, if any ATP-able items are not available.

Examples

Example 8  ATO Item
Only the ATO Item has ATP Check set to Material.

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>Check ATP</th>
<th>Component ATP</th>
<th>BOM Check ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Laptop X11-1</td>
<td>Material</td>
<td>None</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>- Base System</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>- Mobile Pentium®4 2.2 GHz</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>- 512 MB</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>- 17in Flat Screen</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>- 24X CD-RW/DVD Combo</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

The cumulative availability picture for the items that have Check ATP item attribute set is described as follows:

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Laptop X11-1</td>
<td>0</td>
<td>0</td>
<td>10</td>
</tr>
</tbody>
</table>

An ATP Inquiry for a sales order demand of the ATO Item for a quantity of 10 with a request date of Day 2 can only be promised on Day 3.

The ATP Details window shows the following result:

<table>
<thead>
<tr>
<th>Item</th>
<th>Request Date</th>
<th>Request Date Qty</th>
<th>Ship Date</th>
<th>Group Ship Date</th>
<th>Error Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laptop X11-1</td>
<td>Day 2</td>
<td>0</td>
<td>Day 3</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Example 9  ATO Item
Using the ATO example above, here is another example. The ATP item attribute for the items are shown below:
The cumulative availability picture for the items that have Check ATP item attribute set is described as follows:

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>Check ATP</th>
<th>Component ATP</th>
<th>BOM Check ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Laptop X11-1</td>
<td>-</td>
<td>Material</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>- Base System</td>
<td>Material</td>
<td>-</td>
<td>Material</td>
</tr>
<tr>
<td>1</td>
<td>- Mobile Pentium®4 2.2 GHz</td>
<td>Material</td>
<td>-</td>
<td>Material</td>
</tr>
<tr>
<td>1</td>
<td>- 512 MB</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>- 17in Flat Screen</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>- 24X CD-RW/DVD Combo</td>
<td>Material</td>
<td>-</td>
<td>Material</td>
</tr>
</tbody>
</table>

Laptop X11-1 lead time:
- Fixed lead time = 0
- Variable lead time = 0.05 day

An ATP Inquiry for a sales order demand of the ATO Item for a quantity of 10 with a request date of Day 2 can be promised on Day 2.

The ATP Details window shows the following result:

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>- Base System</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>1</td>
<td>- Mobile Pentium®4 2.2 GHz</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>1</td>
<td>- 24X CD-RW/DVD Combo</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>
Explanation:

- The availability information on the ATO item line tells you the availability on the request date in the Request Date Quantity field. If the entire quantity is not available on the request date, the Ship Date tells you the earliest date that the order quantity is available.

- Since the ATP Check is at the component level, the components are grouped into a set and appear in the ATP Details window.

- Items that have Check ATP set to None receive the error message: ATP not applicable.

- Request date for all the items reflects the Request Date from sales order line.

- Request Date Qty reflects the supply available on the date the component items are needed. The date the items are needed equals the Request Date - ATO Item's lead time. In this example, these items are needed on Day 1.

- Ship Date equals the date the component items are available plus the ATO Item's lead time. For example, the Base System is available on Day 1. Thus, the Ship Date equals Day 1 + 1 = Day 2.

- Group Ship Date reflects the date that the entire set is available. It is the maximum Ship Date of any line in the set.

Reschedule Order

- When a sales order line of an ATO Item is rescheduled: Oracle Global Order Promising first unschedules the original order demand. Then it reschedules for the new demand.

- When the ATO Item has Check ATP enabled and the components do not have Check ATP enabled: during rescheduling, the original demand is unscheduled first for the ATO Item. The ATO Item is scheduled based on new scheduling attributes, such as new quantity.

- When the ATO Item has Check ATP set to None and components have Check ATP set to Material: during rescheduling, the original demand is unscheduled first for the components. The components are scheduled based on new scheduling attributes, such as new quantity.

Note: A shipping warehouse must be specified for availability check on an ATO Item.
Kit

A Kit, also known as a PTO Item, is a standard item with Pick Component item attribute checked. When an order is created in Oracle Order Management for a Kit, Oracle Order Management explodes the next level components of the Kit, groups the items into a set, and passes the set to Oracle Global Order Promising for availability check.

Setup

**ATP Item Attributes**

You need to set the Check ATP item attribute. You do not need to set the Component ATP or BOM Check ATP flag.

Oracle Global Order Promising supports two types of settings:

1. **Check availability for the Kit:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Check ATP</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTO Item (Standard)</td>
<td>Material</td>
</tr>
<tr>
<td>- Next level components (Standard)</td>
<td>None</td>
</tr>
</tbody>
</table>

2. **Check availability for the components of the Kit:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Check ATP</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTO Item (Standard)</td>
<td>None</td>
</tr>
<tr>
<td>- Next level components (Standard)</td>
<td>Material</td>
</tr>
</tbody>
</table>

Oracle Global Order Promising checks the availability for the components on the request date of the Kit. Oracle Global Order Promising returns a Group Ship Date that is either the request date or a later date, if any ATP-able items are not available.

**Examples**

**Example 10  PTO Item**

Using a PTO Item, the ATP item attributes for the items are shown below:
The cumulative availability picture for the items that have Check ATP item attribute set is described as follows:

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>Check ATP</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>External Speaker</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>Premium Speaker</td>
<td>Material</td>
</tr>
<tr>
<td>1</td>
<td>Speaker Manual</td>
<td>Material</td>
</tr>
</tbody>
</table>

An ATP Inquiry for a sales order demand of the PTO Item for a quantity of 10 with a request date of Day 2 can be promised on Day 3.

The ATP Details window shows the following result:

<table>
<thead>
<tr>
<th>Item</th>
<th>Request Date</th>
<th>Request Date Qty</th>
<th>Ship Date</th>
<th>Group Ship Date</th>
<th>Error Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>External Speaker</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Premium Speaker</td>
<td>Day 2</td>
<td>0</td>
<td>Day 3</td>
<td>Day 3</td>
<td>-</td>
</tr>
<tr>
<td>Speaker Manual</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>Day 3</td>
<td>-</td>
</tr>
</tbody>
</table>
Product Family ATP

Oracle Manufacturing lets you define product family item as a percentage composition of member items. If the product family item is set up to perform ATP based on product family, then when an ATP Inquiry is launched for a member item, the ATP is actually performed against the product family item.

When you set ATP to be based on collected data, and define setups to perform ATP based on product family, the product family supply should be present in the source as a Master Production Schedule (MPS) schedule.

Business Application

It may not always be possible to forecast the exact demand of the end item. However, it may be possible to define aggregate requirements and forecast at an aggregate level, instead of at the item level. This is shown in the following diagram:

Figure 3–2 Aggregate Product Family Level Forecast

Setup

Once you define product family item and product family item / member item relationship, you need to perform the following setup to enable ATP based on Product Family:

- Check ATP item attribute: needs to be set to Material for product family item in order to perform Product Family ATP.

You must set the Check ATP flag for all the member items to be Material. Otherwise incorrect result can occur. This is because the demand and supply for
Product family is an aggregation of the demand and supply of the member items.

ATP Rule: designate an ATP Rule for a product family item.

**ATP Logic**

When an item is set to Check ATP at product family level, Oracle Global Order Promising uses the cumulative availability at the product family level to promise an order.

To calculate availability at product family level:

1. Obtain a supply picture of product family item per day up to the infinite time fence of the product family item.
2. Sum the demand from its member items per day up to the infinite time fence of the product family item.
3. Calculate the net availability for each day.
   
   \[ \text{Net Availability} = \text{Supply (step 1)} - \text{Demand (step 2)}. \]
4. If any buckets have negative quantities, then perform backward and forward consumption.
5. Cumulate the supply from step 4.

**ATP Result**

ATP Result is expressed in terms of the requested member item. You see the requested item in ATP Details window as well as in ATP Pegging.

**Example**

Product family item, PF1, has two members A and B. The supply demand picture for these items is described in the following table:

<table>
<thead>
<tr>
<th>Item</th>
<th>Row Type</th>
<th>Today (Day 1)</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>PF1</td>
<td>Supply</td>
<td>10</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>A</td>
<td>Demand</td>
<td>2</td>
<td>10</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>B</td>
<td>Demand</td>
<td>3</td>
<td>10</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>PF1</td>
<td>Net</td>
<td>5</td>
<td>30</td>
<td>35</td>
<td>20</td>
</tr>
</tbody>
</table>
A request for item A of quantity 30 on Day 3 can be promised on Day 3, because there is cumulative supply of 70 on Day 3.

<table>
<thead>
<tr>
<th>Item</th>
<th>Row Type</th>
<th>Today (Day 1)</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>PF1</td>
<td>Cum</td>
<td>5</td>
<td>35</td>
<td>70</td>
<td>90</td>
</tr>
</tbody>
</table>
Demand Class ATP

Demand Class ATP enables you to perform availability checks by demand class. The availability calculation only considers the supply in a master schedule with the same demand class as that on the ATP request.

Business Application

This feature is useful when you want to use a known statement of supply of independent items for a specific sales channel for order promising. For example, your sales channels may be countries. You know how much supply you give to each country. The aggregate demand from the customers in a country cannot exceed supply allocated to that country. You use demand class to represent the country, and declare the supply for each country by using a specific MPS. Oracle Global Order Promising honors the MPS, and only promises demand based on the demand class MPS.

Setup

Additional setup steps and details, beyond the mandatory and optional steps explained in Functional Setup for ATP Based on Collected Data on page 2-9 section, are described below for the Demand Class ATP functionality:

ATP Rule

You need to check the Demand Class field in the ATP Rule. Demand Class ATP restricts the supply and demand to sources with a specified demand class. A demand class ATP Rule cannot include on-hand quantity, purchase orders, supplier requisitions, internal requisitions, or intransit shipments as sources of supply.

Demand Class MPS

You need to define an MPS for each demand class for which you perform Demand Class ATP. You need to create entries for each demand class MPS.

Demand Class ATP Compared To Allocated ATP

In Demand Class ATP, you promise orders by sales channels through the use of demand class. You use a specific MPS for each demand class, and populate the master production schedules with a statement of supply for that demand class. Oracle Global Order Promising uses the demand class MPS to calculate the
available supply against the demand with the same demand class. The mechanism is simple, and can work well in an environment where demand does not fluctuate much and supply is relatively fixed.

Allocated ATP on page 4-70 lets you obtain the same result as the Demand Class ATP by ensuring some level of supply for your designated sales channels. However, this feature is much more powerful and the implementation is more flexible. It differs from Demand Class ATP in the following ways:

- Allocated ATP allows you to designate sales channel by demand class, customer class, customer site, or ship-to site hierarchy. Demand Class ATP lets you designate sales channel by demand class only.
- Allocated ATP allows you to define time phased allocation rules that designate a percentage of your total supply to each sales channel. The allocation rule is applied to your designated production MPS or MRP plan during order promising. Demand Class ATP requires that you to maintain a specific MPS for each demand class, and uses that as the statement of supply during order promising. You need to synchronize the demand class MPS’s and the production MPS.
- Allocated ATP performs a capable-to-promise check when demand exceeds allocation. Demand Class ATP cannot.
- Allocated ATP provides automatic stealing from lower ranked sales channels. Demand Class ATP requires that you to resolve the shortage by manually adjusting the demand class MPS.

Oracle Advanced Supply Chain Planning is required to deploy Allocated ATP capability in Oracle Global Order Promising.

**ATP Logic**

An ATP request is processed by the system as follows:

1. The ATP Rule, either item level or org level, is checked to see if Demand Class ATP needs to be done.
2. If Demand Class ATP is enabled on the ATP Rule, the system checks for a plan having the same demand class as the demand class on the ATP request.
3. If no demand class specific plan is found, then the generic plan with no demand class is used.
Improved ATP Performance

Oracle Global Order Promising response times can be improved by a summary approach that stores summarized supply and demand information into a separate table. This allows each ATP request to quickly retrieve summarized availability information without computing availability from detailed supply and demand information. The result is the same as using detailed data. It is highly recommended that you use summarized data.

The summary process is accomplished through the concurrent program: Load ATP Summary Based on Collected Data. This summary concurrent program is automatically run after each data collection.

This feature is currently only supported for non-distributed environments only: environments where the transaction data source and the Oracle Global Order Promising are on the same database instance.

Setup

To enable ATP based on summary data:
1. Set the system profile MSC: Enable ATP Summary Mode to Yes.

Manually Generating Summary Tables
While the summary tables required to support summary data based order promising are automatically triggered by collections, you can also load the summary data by manually invoking summary concurrent program. You may want to do this if you do not want to rerun collections before enabling summary data based order promising.

To manually generate the Global Order Promising summary tables from the Order Management Super User responsibility:
1. Log in using the Order Management Super User responsibility.
2. From the Navigator, go to Scheduling, and ATP and Scheduling Setup. Now Run Requests.
3. From the list of values in the Names field, select the following concurrent request: Load ATP Summary Based on Collected Data.
4. Select the following ATP Summary Based on Collected Data parameters:
   Instance
Load Method:

* Complete Refresh: completely resummarizes sales orders and supplies/demands. Demands mean other demand such as WIP Job demand.

* Net Change Refresh: summarizes the new sale orders and supplies/demands change after last collection run.

* Targeted Refresh: performs a Complete Refresh on either sales orders or supplies/demands.

Refresh Sales Orders: yes or no. You can only set to Yes if Load Method = Net Change Refresh.

Refresh Supplies/Demands: yes or no. You can only set to Yes if Load Method = Net Change Refresh or Complete Refresh.

5. Select Submit.
This chapter provides the explanation of the various capabilities supported when performing ATP based on planning output.

Topics covered in this section include the following:

- Basic ATP on page 4-2
- Multi-Level Supply Chain ATP on page 4-4
- Configuration ATP on page 4-35
- Product Family ATP on page 4-62
- Allocated ATP on page 4-70
Basic ATP

Basic ATP allows you to perform an availability check based on statement of current and planned material supply against a given organization. You can perform ATP checks by specifying the item, need-by date, and organization. Results describing the need-by date quantity and the fulfillment date of their request are returned to you.

Business Application

Basic ATP allows customers to perform availability checks and receive detailed information on whether their request can be met or on what date the order can be fulfilled. Based on statements of current and planned material supply, Basic ATP determines the availability of items.

You perform a Basic ATP check when you only have one inventory location in your company or you simply want to check availability in one inventory location.

Setup

After you perform the mandatory and optional setup steps explained in the Setup chapter, you should be able to perform Basic ATP.

ATP Logic

ATP Logic in a Single Organization

1. If Check ATP and Component ATP item attributes are set to None, there is no ATP check.

   If the ATP item attribute is Material Only, the system checks ATP for the item on the request date. If there is availability, you are done. Otherwise go to step 2.

2. ATP fails to satisfy the request on the request date. From the request date, Oracle Global Order Promising looks forward for future supply. It returns an ATP Date that is the earliest date that the request quantity is available.

3. If the ATP Date is less than or equal to the Latest Acceptable Date, Oracle Global Order Promising returns success. Otherwise, it returns failure.
ATP Result

Oracle Global Order Promising returns very detailed information and presents the data in ATP Details window. However, the calling application may decide to only show a subset of that information. For example, Oracle Order Management shows some of the ATP results such as warehouse, Request Date Quantity, Available Date, and Error Message in the Availability window. It provides an ATP Detail selection for users to drill down to in the ATP Details window, if user desires detailed information. The information provided in the ATP Details window is typically not needed for end users.

For details on ATP Details window, see: ATP Details on page 6-5.

Note: The Latest Acceptable Date is a date beyond the request date that the customer will accept the order. This date is determined by any calling application, and is passed to Oracle Global Order Promising.
Multi-Level Supply Chain ATP

Oracle Global Order Promising lets you perform a multi-level component and resource availability check across your supply chain for the end items you specify. You can control the organizations and suppliers to be included in the availability inquiry, and you can control the number of levels in your supply chain bill to be considered in your check. At each level in the supply chain, you can check the availability of key components and bottleneck resources.

The diagram depicts a supply chain scenario where item A can be shipped from organization Org1 and Org2 to a customer. Both organizations manufacture the item. Item A has a key component B and a bottleneck resource (R1 is a bottleneck resource in Org1, R2 is a bottleneck resource in Org2). Component B comes from different suppliers for different organizations with different lead times.

Figure 4–1 Simplified Supply Chain Scenario

Multi-Level ATP can help you decide the following:

- Which shipping organization can meet the demand on request date?
- If there is not enough supply (on-hand plus scheduled receipts) in a shipping organization, then can I make it or source it from another organization?
- If there is not enough supply for a component, does my supplier have additional capacity?
Business Application

Multi-Level Supply Chain ATP helps companies to increase order fill rate by promising orders using extra manufacturing and supplier capacity. Because of demand fluctuation, your planned production level can change and thus result in under utilization of manufacturing resources or supplier capacity at times. However, if demand increases beyond forecast, you want to be able to book those orders using the extra capacity. A Multi-Level Supply Chain ATP check will ensure whether you have enough capacity to book the unanticipated demand.

As companies today out source more and more of their assemblies or subassemblies, order promising can only become accurate if the supply chain is being considered. A factory must be capable of not only making the product on time, but also delivering the product to the parent factory on time. Transit lead time between the facilities and from the suppliers become critical elements in the availability calculation. Only Multi-Level Supply Chain ATP is capable of providing you with an accurate promise date based on the entire supply chain.

Setup

Besides the mandatory and optional steps discussed in the Setting Up, the following are the additional setup steps for using Single-Level or Multi-Level Supply Chain ATP.

ATP Plan

You need to establish an Advanced Supply Chain Planning plan to be used for ATP/CTP for Multi-Level Supply Chain ATP.

For detailed setup instructions, see: Setup on page 4-44.

Supply Chain

You can model your supply chain through sourcing rules or bills of distribution, and assign the sourcing rules or bills of distributions to your items, organizations, suppliers, and customers in assignment sets. Oracle Global Order Promising shares the same supply chain setup as Oracle Advanced Supply Chain Planning.

The following is an example of a supply chain. Order for item A from customers can be shipped from either Org1 or Org2. Shipping from Org 1 is preferred (rank 1). A is made of component B and uses resource R1 in Org1. Item B is sourced from Supplier1. A in Org2 can be transferred from Org3 or made in Org2. Transferring is more preferred than making.
You can use either Sourcing Rules or Bills of Distribution to define the supply chain below the shipping organizations. This is illustrated in the above diagram.

MRP: ATP Assignment Set or MSC: ATP Assignment Set should be set to point to the assignment set that contains the Sourcing Rules that define the movement of goods from shipping organizations to customers.

For more information about how to set up sourcing rules, bills of distribution, and assignment sets, see: Sourcing Rules and Bills of Distribution, Oracle Master Scheduling/MRP and Oracle Advanced Planning and Scheduling User’s Guide.

Regional Level Sourcing

Geographic Regions and Zones

Oracle Shipping supports country, state/province, county, city, and zip code geographic region levels. A zone is a user-defined collection of regions. You can group the regions into user-defined zones. For example, you can group all the west coast states into a zone called West Coast.

Note: Oracle Global Order Promising does not support county as a region.
For detailed description and setup instruction, see: Regions and Zones, *Oracle Shipping Execution User’s Guide*.

**Sourcing Rules at Region or Zone Level**

You can assign a sourcing rule at various levels including region and zone. Oracle Global Order Promising selects the most specific assignment based on the priority provided in table below. Then it uses the sourcing rule in the assignment to determine the shipping organization.

Oracle Global Order Promising uses the customer ship-to to determine the region or zone that the ship-to address belongs to. Then it automatically uses the correct regional or zonal sourcing rule. If more than one sourcing rule applies, Oracle Global Order Promising chooses the sourcing rule that is assigned to the most specific, smallest geographic area. If there is a more specific sourcing assignment exists, for example: Instance-Item-Organization type, then the specific sourcing rule is used.

This capability allows you to easily manage regional distribution centers that serve designated sales in the region.

The following table shows the assignment level. The higher the priority, the more specific the assignment level.

<table>
<thead>
<tr>
<th>Assignment Level</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item-Instance-Organization</td>
<td>1</td>
</tr>
<tr>
<td>Item-Instance-Region</td>
<td>2</td>
</tr>
<tr>
<td>Category-Organization</td>
<td>3</td>
</tr>
<tr>
<td>Item-Instance</td>
<td>4</td>
</tr>
<tr>
<td>Category-Region</td>
<td>5</td>
</tr>
<tr>
<td>Category</td>
<td>6</td>
</tr>
<tr>
<td>Instance-Organization</td>
<td>7</td>
</tr>
<tr>
<td>Instance-Region</td>
<td>8</td>
</tr>
<tr>
<td>Instance</td>
<td>9</td>
</tr>
</tbody>
</table>
Multi-Level Supply Chain ATP

---

**Note:**
- When you choose an assignment level that has an organization, you can make the assignment either an organization or customer/ship-to site.
- Region level sourcing only applies to customers as receiving parties.

---

For detailed setup instructions, see: Sourcing Rules, *Oracle Master Scheduling/MRP* and *Oracle Supply Chain Planning User’s Guide*.

**To enable Oracle Global Order Promising to use region level sourcing:**
1. On the source instance, setup region level and zone.
2. On the source instance, create the appropriate sourcing rules.
3. Logon to Advanced Supply Chain Planner responsibility.
4. Run collections.
5. On the planning server, create an assignment set that has the sourcing rules assigned at the region/zone level.
6. Enter the assignment set name and description.

7. In the Assigned To drop-down menu, choose Item-Instance-Region or Category-Instance-Region or Instance-Region to create a region-level sourcing rule assignment.

8. Select an item from the LOV in the Item/Category column.

9. Select either Sourcing Rule or Bill of Distribution from the LOV in the Type column.

10. Select a sourcing rule or bill of distribution from the LOV in the Sourcing Rule/BOD column.

11. Scrolling to the right, select a region or zone from the LOV in the Region/Zone column. A Regions search window appears to help you make this selection.
12. Save the assignment set.

13. On the planning server, set the profile option MSC: ATP Assignment Set to the assignment set that was saved.

---

**Notes:**

- Region level sourcing assignments can only be defined on the destination instance under Sourcing menu in Oracle Advanced Supply Chain Planner responsibility. They cannot be defined in the source in the Sourcing Rule and the Bill of Distribution Assignments windows of Oracle MRP and Oracle Supply Chain Planning.

- Since MRP: ATP Assignment Set defined at the source instance takes precedence over the MSC: ATP Assignment Set defined on the planning server, you need to make sure it is set to NULL. Thus, Oracle Global Order Promising uses MSC: ATP Assignment Set.
Transit Lead Times
Oracle Global Order Promising considers the transit lead time associated with a shipping method from shipping warehouse to customers as well as transit lead time between source-from and source-to organizations.

You set up transit lead times using Transit Times form available in Oracle Shipping. For detailed setup instruction, see: Transit Times, Oracle Shipping Execution User’s Guide.

The following diagram describes the transit lead times between various parties and shows how Oracle Global Order Promising honors the lead times:

**Figure 4–5 Transit Lead Times**

**From shipping warehouse to customers:** You can define shipping methods and their related lead time from your shipping organization to a location. A location can be from most specific to least specific: an internal location associated with a customer ship-to location, a region, or a zone. When more than one applicable transit lead time exists in the shipping lane, the most specific lead time specification is used. For example, you have defined shipping lane from your shipping organization to a specific customer location with shipping method of GROUND that has lead time of 3 days. You must have also defined a shipping lane from your shipping organization to a region where the customer resides. It also has GROUND as a valid shipping method that has lead time of 2 days. For a sales order to this customer using GROUND shipping method, Oracle Global Order Promising will use 3 days for the transit lead time.
Between organizations: You can define shipping methods and their related lead time between a source-from and source-to organizations. Oracle Global Order Promising will honor the lead time during its capable-to-promise calculation.

From supplier to organization: Oracle Global Order Promising does not currently consider shipping methods used between a supplier and a receiving organization. A typical implementation approach to model the lead time is by using the item post processing lead time or by using the item / Approved Suppliers List (ASL) lead time.

For detailed setup instruction, see: Inter-Location Transit Times, Oracle Shipping Execution User’s Guide.

Resource Capacity
Oracle Global Order Promising shares the same resources and routing information as Oracle Advanced Supply Chain Planning.

To designate a specific resource for Capable-To-Promise check:
1. Sign on using the Manufacturing and Distribution Manager responsibility.
2. From the Navigator, select Bills of Material. Then select Routings, and finally Departments.
3. Select the department to which the resource belongs.
4. Click Resources button. The Resources window appears.
   This window shows the resources that have the Enable the Check CTP flag enabled.
Figure 4–6  Resources Window

Note:

- The ATP Rule field in the Planning tab is not currently used.
- Oracle Global Order Promising only uses primary resource capacity during capable-to-promise calculation, not alternate resource capacity.

For details on how to setup up routing, see: Setting up Routings under Supply Chain Modeling, *Oracle Advanced Planning and Scheduling User’s Guide.*
Supplier Capacity

Oracle Global Order Promising checks supplier capacity when performing capable-to-promise calculation. It uses the same supplier capacity information used in Oracle Advanced Supply Chain Planning. You can define multiple supplier sources. Oracle Global Order Promising checks the supplier capacity in the order of the source rank defined on the sourcing rule.

For more information about setting supplier capacity constraints, see: Supply Chain Modeling, Oracle Advanced Planning and Scheduling User’s Guide.

Profile MRP: ATP Assignment Set

This profile points to an assignment set that contains the Sourcing Rule that defines the movement of goods from shipping organizations to customers. This profile is set up at the source instance. If you plan to use Region/Zone level sourcing, you must set this profile to NULL.

Profile MSC: ATP Assignment Set

This profile points to an assignment set that contains the Sourcing Rule that defines the movement of goods from shipping organizations to customers. This profile is set up at the destination instance. MRP: ATP Assignment Set defined at the source instance takes precedence over the MSC: ATP Assignment Set. If you plan to use region or zone level sourcing, you need to set the latter instead of MRP: ATP Assignment Set.

Data Collection and Run Plan

Once you finish setup at source instance, you need to run Collection.

For details, see: Setting Up on page 2-1.

Once you finish setup on the destination side, you need to launch the ASCP plan that is used for ATP. Please review plan output for correctness because Oracle Global Order Promising uses the result.

ATP Logic

For Request With Specified Shipping Organization

If a request has shipping organization specified, then only search for availability from the specified organization and its sources.
1. Check availability for the item at that organization based on the Check ATP flag. If the organization is the shipping organization, check for the entire requested quantity. If the organization is a source-from organization for the shipping organization or supply organization for a lower level component, check for the remaining shortage. If both the Check ATP flag and the Component ATP flag are set to None, no ATP check is performed. If the Check ATP flag is set to Materials, an ATP check for the item on the request date is performed. If there is enough supply on the request date, the system goes to step 5.

2. If the Component ATP flag is set to None, the request is not satisfied. The system goes to step 4, otherwise, go to step 5.

3. If the Component ATP flag of the item in step 1 is not set to None, determine the sourcing of the item:
   
   d. If source is Make At, the bills of material is exploded to get to the next level component (if Component ATP Flag contains the Material check) and resource (if Component ATP Flag contains the Resource check) to check availability.
      * If there is not enough resource availability, go to step 4.
      * If there is enough resource availability, go to next step.
      * Repeat step 1 for the components of the item in step 1.

   e. If source is Buy From, supplier capacity is checked. If there is not enough capacity, go to step 4. If there is enough supply, go to step 5.

   f. If source is Transfer From, go to the source-from organization to check availability. Repeat step 1 for the item in the source-from organization.

4. ATP has failed to satisfy this request. From request date, forward scheduling for this request is performed. The system searches for the earliest date that it can get the remaining quantity. The earliest date is the ATP date. If the ATP date is &ge; Latest Acceptable Date (LAD), then the ATP status is success. Otherwise, the ATP status is failure. Also note that the LAD is determined by the calling application.

5. ATP has successfully found supply on the request date. ATP returns the request date as the ATP date, and success as the ATP status.
For Request Without Specified Shipping Organization

If a request does not specify a shipping organization, start with the shipping organization with the highest rank from sourcing rule. If the ranks are the same, then choose the one that has highest percentage. If the percentages are the same, then choose any one. In the following example, the shipping organization Org1 will be picked first.

Using the above logic for the following supply chain, a request from a customer for item A without a specific shipping warehouse triggers Oracle Global Order Promising do the following:

For each of the shipping warehouses starting from the highest ranked one, obtain the ATP Date, ATP status:

- If ATP status = success, return shipping warehouse, ATP Date, status and other information.
- If ATP status = failure, go to next shipping organization.
- If ATP status = failure for all the shipping organizations, return shipping warehouse, ATP Date, status and other information from the highest ranked organization.

Figure 4–7  Supply Chain for Item A
**Forward Scheduling**

When Oracle Global Order Promising cannot meet the requested quantity on the request date, it forward schedules for the remaining shortage. If a shipping warehouse is given, then forward scheduling is performed in the given warehouse regardless of how many shipping organizations are defined in sourcing rule. If a shipping warehouse is not given, Oracle Global Order Promising uses the highest ranked shipping organization to search for a future date for the remaining quantity.

In the given shipping organization or the highest ranked shipping organization, Oracle Global Order Promising evaluates the future date when the shortage can be met by:

- Using scheduled receipts
- Using other sources such as Make, Transfer, or Buy (each source is evaluated individually)

The earliest date the shortage can be met from the above sources will be the date that the request can be met.

In the above figure, if Org1 and Org2 cannot meet the demand on request date, Oracle Global Order Promising picks Org1 to look for a future date since Org1 is a higher ranked source. In Org1, Oracle Global Order Promising evaluates the future date when the shortage can be met by:

- Using scheduled receipts in Org1
- Creating new supplies through Make

The source that gives the earliest date is the source used by Oracle Global Order Promising to return the ATP date.

**Transit Lead Time**

There can be transit lead time from your shipping warehouse to customers and between organizations. The transit lead time days are considered as calendar days.

For demand, Oracle Global Order Promising derives the demand date as the following: Demand date at the shipping organization = request date at the receiving party - transit lead time. If the result is a non-working day at the shipping organization, then the demand is moved to previous working day. If there is no previous working day, then the demand is moved to the following working day.

For supply, Oracle Global Order Promising derives the supply date as the following: Supply date at the receiving party (organization or customer) - shipping date at the shipping organization + transit lead time. If the date falls on a non-working date at
the receiving party (Shipping organization’s manufacturing calendar is used for customers), the receiving date is the next working day.

**Note:** Currently, Oracle Global Order Promising does not support shipping calendar.

### Detailed Logic for Make Item

#### Work Order Start Date

In the following example, A can be made using component B and requires resource R1. Oracle Global Order Promising calculates the start date of the job by offsetting manufacturing lead time from A’s request date. For example, A’s fixed lead time = 1 day, variable lead time = 0.5 day. A request for A of quantity of 10 on Day 10 means the job start date would be Day 4 (Day 10 - 1 - 10 * 0.5 = Day 4).

![supply_chain_for_make_item_a](image)

If the job start date falls before today’s date or within Planning Time Fence of the item, Oracle Global Order Promising fails to meet the demand on request date.

The start date calculation is based on the manufacturing calendar of the organization. In this example, if Day 5 and Day 6 are non-working days, then the start date should be Day 2.

**Note:** Planning Time Fence (PTF) is calculated at the time of each plan run. The PTF Date = the date the plan runs + PTF days. If the Planning Time Fence control is off at the plan level, then PTF = the date the plan runs.

### Resource Requirement Calculation

Oracle Global Order Promising calculates resource requirement as the following:

For resources with basis of Item:
Demand quantity * Resource usage / (Reverse cumulative yield * Resource efficiency %* Resource utilization %)

For resources with basis of Lot:

Resource usage / (Reverse cumulative yield * Resource efficiency %* Resource utilization %)

Oracle Global Order Promising uses resource offset % to determine when to check resource availability. The logic is the following:

- Compute resource start date: Resource start date = Demand request date - (1-offset %) * manufacturing lead time.
- Sort resources by the start date from earliest to latest.
- Check availability of a resource on the start date of the next resource in the above sort. The last resource is checked on the request date.

Example: Item A has the following resources that have CTP flag checked on its routing.

<table>
<thead>
<tr>
<th>R1</th>
<th>Op 10</th>
<th>Offset=0%</th>
<th>Usage=1hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>R2</td>
<td>Op 20</td>
<td>Offset=60%</td>
<td>Usage=2hr</td>
</tr>
</tbody>
</table>

A’s Fixed lead time = 0 day and Variable lead time = 0.4 day

Assume 100% resource utilization and efficiency. Reverse cumulative yield = 1.

Request for A for quantity 10 on Day 5. There is no availability of A on Day 5. Oracle Global Order Promising performs capable-to-promise.

1. R1 start date = Day 5 - (1 - 0%) * (0 + 10 * 0.4) = Day 1.
2. R2 start date = Day 5 - (1 - 60%) * (0 + 10 * 0.4) = Day 3.
3. Sort R1 and R2.
4. Check R1’s availability on Day 3.
5. Check R2’s availability on Day 5.

**Resources Availability Calculation**

Oracle Global Order Promising cumulates resource availability from the planning time fence date of the assembly item that the resource belongs. The planning time fence date is calculated by Oracle Advanced Supply Chain Planning. If the Planning
Time Fence checkbox is not checked in the plan option, Oracle Advanced Supply Chain Planning uses the plan start date as the planning time fence date.

In the above example, let’s say A’s planning time fence date is D2. There is net availability of resource on each day. But cumulative availability only starts on Day 3.

<table>
<thead>
<tr>
<th>Resource</th>
<th>1</th>
<th>D1</th>
<th>D2</th>
<th>D3</th>
<th>D4</th>
<th>D5</th>
<th>D6</th>
<th>D7</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>Net</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Cum</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>15</td>
<td>25</td>
<td>35</td>
<td>45</td>
</tr>
</tbody>
</table>

**Shared Resources**

Shared resource is a resource owned by a department but can be used by other departments. Oracle Global Order Promising looks for the availability in the owning department and sums the requirement from all departments that uses the resource.

**Batch Resources**

Oracle Global Order Promising supports the ability to accurately consider the capacity of batch resources.

For details, see: Batch Resource Considerations on page 4-33.

**Component Requirement Calculation**

Oracle Global Order Promising checks component availability on the work order start date. The required quantity is calculated as follows:

\[
\text{Demand quantity} \times \frac{\text{Component usage}}{\text{Reverse cumulative yield}}
\]

**Component Availability Calculation**

Oracle Global Order Promising uses cumulative supply up to the component requirement date. The cumulative quantity starts from plan start date.

**Component Substitution**

ATP supports the use of substitute components if the primary component is not available.

For details, see: Component Substitution on page 4-31.
Detail Logic for Buy Item

The following example is used to explain the detail logic for a buy item:

Figure 4–9  Supply Chain for Buy Item B

Item B in Org 1 can be sourced from Supplier 1. Check ATP attribute for B is set to Material. Component ATP attribute for B is set to Material. A request comes for B for quantity of 10 on Day 9 in Org 1.

Lead time information:

- Post processing lead time for B = 1 day.
- Processing lead time for B = 2 days.
- Preprocessing lead time for B = 1 day.
- Processing lead time for Supplier1 = 3 days.
- Item B planning time fence date = Day 4.

Net and cumulative availability picture is the following:

<table>
<thead>
<tr>
<th>Item</th>
<th>Row Type</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
<th>Day 6</th>
<th>Day 7</th>
<th>Day 8</th>
<th>Day 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>B/Org1</td>
<td>Net</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>B/Org1</td>
<td>Cum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>B/Supplier1</td>
<td>Net</td>
<td>10</td>
<td>10</td>
<td>15</td>
<td>15</td>
<td>20</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>B/Supplier1</td>
<td>Cum</td>
<td>10</td>
<td>20</td>
<td>35</td>
<td>50</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
<td>110</td>
</tr>
</tbody>
</table>

Oracle Global Order Promising performs the following:

1. There is quantity of 2 on Day 9. Shortage is 8.
2. Component ATP flag is set to Material. There is a sourcing rule to purchase the item from Supplier1. Go to next step. Otherwise ATP fails to meet request date.
3. Item B has 1 day post processing lead time. This means we must receive the item from Supplier1 on Day 8 (dock date = Day 8). If the item’s post processing lead time puts the receipt date before today’s date or on or before planning time fence date, then ATP fails to meet request date.

4. Check to see if supplier has sufficient time to process. The time needed = item’s preprocessing lead time + ASL’s processing lead time = 4 days. If ASL’s processing lead time is not defined, item’s processing lead time will be used and is calculated as (fixed lead time + variable lead time * quantity). The request to Supplier 1 is Day 8. Day 8 - 4 days = Day 4. Since it is greater than today’s date, the supplier has sufficient time. If it is < today, ATP fails to meet request date.

5. Check supplier capacity on the dock date at the supplier. In this example, it is Day 8. There is a cumulative quantity of 100 on Day 8. This is enough to cover the shortage of 8. ATP succeeds.

**Detail Logic for Transferred Item**

Oracle Global Order Promising first ensures that the receiving organization has sufficient time to process the receipt. It offsets the demand date of the item in the receiving organization by item’s post processing lead time. If the result is before today’s date or on or before planning time fence date, ATP fails to meet the demand on request date.

The demand date in the source-from organization is calculated by offsetting transit lead time. Oracle Global Order Promising will honor the shipping method and its lead time from the sourcing rule. If shipping method and lead time are not present on the sourcing rule, Oracle Global Order Promising uses the default shipping method and its lead time defined in the shipping network for the two organizations. If there is no default shipping method, then 0 lead time is assumed.

After offsetting the transit lead time, if the demand date in the source-from organization is before today’s date, Oracle Global Order Promising fails to meet the request. Otherwise it proceeds with checking availability in the source-from organization based on the item’s ATP attributes in that organization.

**Planned Order**

Oracle Global Order Promising creates planned order supply when it determines that there is enough capacity to make, buy or transfer an item. These planned orders will be visible from Planner Workbench in Oracle Advanced Supply Chain Planning. The planned order created by Oracle Global Order Promising does not have pegging information.
When a sales order is cancelled, Oracle Global Order Promising removes the sales order demand from the plan, but it does not remove any planned order created previously to satisfy the sales order. The supply is available for new sales order demand.

**Examples**

The supply and demand figures in the following examples are expressed in the primary unit of measure of the referenced item or resource.

**Example 1 Multi-Level ATP in a Single Organization**

Assume assembly A has the following bill in Org1.

**Figure 4–10 Multi-Level ATP**

![Multi-Level ATP Diagram]

Lead time information for A and B is as shown in the following table:

<table>
<thead>
<tr>
<th>Item</th>
<th>Fixed Lead Time</th>
<th>Variable Lead Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0</td>
<td>0.1</td>
</tr>
<tr>
<td>B</td>
<td>1</td>
<td>0.01</td>
</tr>
</tbody>
</table>

The routing information for Item A and Item B is as shown in the following table:

<table>
<thead>
<tr>
<th>Item</th>
<th>Operational Sequence</th>
<th>Resource</th>
<th>Usage</th>
<th>Lead Time Offset</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>R1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>B</td>
<td>1</td>
<td>R2</td>
<td>2</td>
<td>20%</td>
</tr>
</tbody>
</table>
Planning information for Item A and Item B from an MRP run on Date1 is as shown in the following table. Assume every day is a working day.

<table>
<thead>
<tr>
<th>Supply / Demand Type</th>
<th>Item A</th>
<th>Item B</th>
<th>Item C</th>
<th>Item D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Orders</td>
<td>10</td>
<td>5</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td>Forecasts</td>
<td>100</td>
<td>10</td>
<td>75</td>
<td>60</td>
</tr>
<tr>
<td>Dependent Demand</td>
<td>0</td>
<td>145</td>
<td>270</td>
<td>135</td>
</tr>
<tr>
<td>Scheduled Receipts</td>
<td>5</td>
<td>25</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Planned Order</td>
<td>105</td>
<td>135</td>
<td>345</td>
<td>185</td>
</tr>
<tr>
<td>ATP</td>
<td>100</td>
<td>10</td>
<td>75</td>
<td>60</td>
</tr>
</tbody>
</table>

Suppose we have the cumulative ATP quantities from the planning run as shown in the following two tables:

<table>
<thead>
<tr>
<th>Item</th>
<th>Date1</th>
<th>Date2</th>
<th>Date3</th>
<th>Date4</th>
<th>Date5</th>
<th>Date6</th>
<th>Date7</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>100</td>
<td>100</td>
<td>110</td>
<td>110</td>
<td>150</td>
<td>160</td>
<td>170</td>
</tr>
<tr>
<td>B</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>200</td>
<td>255</td>
<td>260</td>
<td>270</td>
</tr>
<tr>
<td>C</td>
<td>10</td>
<td>75</td>
<td>85</td>
<td>85</td>
<td>85</td>
<td>90</td>
<td>100</td>
</tr>
<tr>
<td>D</td>
<td>50</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>65</td>
<td>70</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resource</th>
<th>Date1</th>
<th>Date2</th>
<th>Date3</th>
<th>Date4</th>
<th>Date5</th>
<th>Date6</th>
<th>Date7</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>20</td>
<td>22</td>
<td>24</td>
</tr>
<tr>
<td>R2</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>22</td>
<td>24</td>
<td>26</td>
</tr>
</tbody>
</table>

The values of the Check ATP flag and Component ATP flag of the request item determine the level of the ATP check, which may cause different results for the same request. Assume that the Check ATP flag at bill level is Yes for all items.

**Example 1-1: Request 100 of Item A on Date4 in Org1**

<table>
<thead>
<tr>
<th>Item</th>
<th>Check ATP Flag</th>
<th>Component ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Materials</td>
<td>None</td>
</tr>
</tbody>
</table>
We do have ATP quantity 100 on Date4. ATP date is Date4.

**Example 1-2: Request 120 of Item A on Date4 in Org1**

**Case 2.1**

<table>
<thead>
<tr>
<th>Item</th>
<th>Check ATP Flag</th>
<th>Component ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Materials</td>
<td>None</td>
</tr>
</tbody>
</table>

1. We do not have ATP quantity 120 on Date4.
2. Component ATP flag is None. We cannot go to next level. ATP fails for this request.

For Item A, we can have 110 on Date4 and 120 on Date5. ATP date is Date5.

**Case 2.2**

<table>
<thead>
<tr>
<th>Item</th>
<th>Check ATP Flag</th>
<th>Component ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Materials</td>
<td>Materials</td>
</tr>
<tr>
<td>B</td>
<td>Materials</td>
<td>None</td>
</tr>
</tbody>
</table>

1. We do not have 120 of Item A on Date4.
2. The Component ATP flag is Materials. The shortage is 10 for Item A. The lead time to build 10 of Item A is one day. Therefore, we need 10 of Item B on Date3 to build this simulated supply of 10.
3. We do have 10 of Item B on Date3, so the ATP date is Date4; use 110 of Item A on Date4 and 10 of Item B on Date3.

**Case 2.3**

<table>
<thead>
<tr>
<th>Item</th>
<th>Check ATP Flag</th>
<th>Component ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Materials</td>
<td>Materials and Resources</td>
</tr>
<tr>
<td>B</td>
<td>Materials</td>
<td>None</td>
</tr>
</tbody>
</table>

1. We do not have 120 of Item A on Date4. The shortage is 10.
2. The Component ATP flag of Item A is Materials and Resources. Simulate a supply of Item A for quantity 10. Explode the bill to the next level. The lead time to build 10 of Item A is one day. We need 10 of Item B on Date3 and 10 R1 on Date3 to build 10 of Item A.

We do have 10 R1 on Date3.

We do have 10 of Item B on Date3. So ATP date is Date4; use 110 of Item A on Date4, 10 of Item B on Date3, and 10 of R1 on Date3.

Example 1-3: Request 165 of Item A on Date5 in Org1

1. We do not have 165 of Item A on Date5. The shortage is 15.

2. The Component ATP flag of Item A is Materials and Resources. Simulate a supply of Item A for quantity 15. Explode the bill to the next level. The lead time to build 15 of Item A is two days. We need 15 of Item B on Date3 and 15 R1 on Date3 to build 15 of Item A.

3. We do have 15 R1 on Date3.

4. However, we only have 10 of Item B on Date3, and the shortage is 5.

5. The Component ATP flag of Item B is Materials and Resources. Simulate a supply of Item B for quantity 5. Explode the bill to the next level. The lead time to build 5 of Item B is two days. We need 10 of Item C and 5 of Item D on Date1, and 10 R2 on Date2 (Date3-CEIL((1+0.01*5)*80%)).

6. We do have 10 R2 on Date2.

7. We do have 10 of Item C and 5 of Item D on Date1, so the ATP date is Date5; use 150 of Item A on Date5, 10 of Item B on Date3, 15 of R1 on Date3, 10 of Item C on Date1, 5 of Item D on Date1, and 10 of R2 on Date2.
Example 1-4: Request 130 of Item A on Date3 in Org1

Case 4

<table>
<thead>
<tr>
<th>Item</th>
<th>Check ATP Flag</th>
<th>Component ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Material Only</td>
<td>Material and Resource</td>
</tr>
<tr>
<td>B</td>
<td>Material Only</td>
<td>None</td>
</tr>
</tbody>
</table>

1. We do not have 130 of Item A on Date3.

2. The Component ATP flag of Item A is Materials and Resources. Simulate a supply of Item A for quantity 20. Explode the bill to the next level. The lead time to build 20 of Item A is two days. We need 20 of Item B on Date1 and 20 R1 on Date1 to build 20 of Item A.

3. We do not have enough R1 on Date1. ATP fails for this request on request date.

4. We can only make 16 of Item A since we only have 16 R1 available on Date1.

5. We can only make 10 of Item A since we only have 10 of Item B available on Date1 although we have 16 R1 available on Date1. The request date ATP quantity is 120.

6. Do forward scheduling from sysdate (Date1) for Item A with quantity 10.

7. The earliest date we can have another 10 R1 is Date5 (the supply picture of R1 has been changed since we have used 10 R1 in Date1 to build 10 of Item A).

8. The earliest date we can have 10 of Item B is Date4 (the supply picture of Item B has been changed since we have used 10 of Item B in Date1 to build 10 of Item A).

9. Considering lead time, the earliest date we can have 10 of Item A built is Date6 (= max (Date4 + 1, Date5 +1)

10. If we do not build 10 of Item A, we can have 130 of Item A on Date5. Date5 < Date6. The ATP date is Date5. We can provide 130 on Date5.

Example 2 Multi-Level ATP for a Supply Chain BOM

The supply chain bill looks like the following figure:
For an item with no associated sourcing information, the item is assumed to be make or buy based on item's make / buy code. If the item is buy, Oracle Global Order Promising assumes infinite capacity.

Assume that Customer1 has the following sourcing rule, shown in the next table, with assembly A.

<table>
<thead>
<tr>
<th>Source Type</th>
<th>Org</th>
<th>Rank</th>
<th>Shipping Lead Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfer from</td>
<td>Org1</td>
<td>1</td>
<td>1 day</td>
</tr>
<tr>
<td>Transfer from</td>
<td>Org2</td>
<td>2</td>
<td>2 days</td>
</tr>
</tbody>
</table>

**Org1**

The bill and routing for item A in Org1 is the same as the information provided in the previous example. No sourcing information is defined for item A in Org1 and the make / buy code is make for item A. It is assumed that item A in Org1 has an implicit supply chain bill which is shown in the following table:

<table>
<thead>
<tr>
<th>Source Type</th>
<th>Org</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make at</td>
<td>Org1</td>
<td>1</td>
</tr>
</tbody>
</table>

The cumulative ATP quantities in Org1 are shown in the following table:
The supply chain bill for item A in Org2 is shown in the following table:

<table>
<thead>
<tr>
<th>Item</th>
<th>Date1</th>
<th>Date2</th>
<th>Date3</th>
<th>Date4</th>
<th>Date5</th>
<th>Date6</th>
<th>Date7</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>100</td>
<td>100</td>
<td>110</td>
<td>110</td>
<td>150</td>
<td>160</td>
<td>170</td>
</tr>
<tr>
<td>B</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>200</td>
<td>255</td>
<td>260</td>
<td>270</td>
</tr>
<tr>
<td>R1</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>20</td>
<td>24</td>
<td>26</td>
</tr>
</tbody>
</table>

Org2

The supply chain bill for item A in Org2 is shown in the following table:

<table>
<thead>
<tr>
<th>Source Type</th>
<th>Org</th>
<th>Rank</th>
<th>Shipping Lead Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfer from</td>
<td>Org3</td>
<td>1</td>
<td>1 day</td>
</tr>
<tr>
<td>Make at</td>
<td>Org2</td>
<td>2</td>
<td>0 days</td>
</tr>
</tbody>
</table>

Item A in Org2 uses the common bill from item A in Org1. The fixed lead time of Item A is 0 and the variable lead time is 0.1 day.

Item B is a buy item and it sources from Supplier1 with lead time of 0 days. Assume Supplier1 can provide 100 of Item B for Org2 from Date1 to Date10.

The cumulative ATP quantities in Org2 are shown in the following table:

<table>
<thead>
<tr>
<th>Item/Resource</th>
<th>Date1</th>
<th>Date2</th>
<th>Date3</th>
<th>Date4</th>
<th>Date5</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>100</td>
<td>120</td>
<td>120</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>10</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>R1</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

Org3

The cumulative ATP quantities in Org3 are shown in the following table:

<table>
<thead>
<tr>
<th>Item</th>
<th>Date1</th>
<th>Date2</th>
<th>Date3</th>
<th>Date4</th>
<th>Date5</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>30</td>
</tr>
</tbody>
</table>

Note: Assume that the Check ATP flag at bill level for all items in every organization is set to Yes.
Assume that the Latest Acceptable Date is the same as the request date for all the following cases:

**Example 2-1: Customer1 requests 100 of item A with Date5 delivery date**

<table>
<thead>
<tr>
<th>Item</th>
<th>Org</th>
<th>Check ATP Flag</th>
<th>Component ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Org1</td>
<td>Material Only</td>
<td>None</td>
</tr>
<tr>
<td>A</td>
<td>Org2</td>
<td>Material Only</td>
<td>None</td>
</tr>
</tbody>
</table>

1. The system checks the availability of 100 of Item A on Date4 at Org1. The item is available. Therefore, ATP date is Date4 from Org1 and Customer1 will receive it on Date5 because shipping lead time is 1 day. This request is satisfied by using 100 of Item A on Date4 in Org1.

**Example 2-2: Customer1 requests 120 of item A with Date5 delivery date**

<table>
<thead>
<tr>
<th>Item</th>
<th>Org</th>
<th>Check ATP Flag</th>
<th>Component ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Org1</td>
<td>Material Only</td>
<td>None</td>
</tr>
<tr>
<td>A</td>
<td>Org2</td>
<td>Material Only</td>
<td>Material and Resource</td>
</tr>
</tbody>
</table>

1. The system checks the availability of 120 of Item A on Date4 at Org1. Item A has enough supply on Date5. The ATP date in Org1 is Date5 and Customer1 receives it on Date6. From Org1, we will not be able to satisfy the request.

2. The system checks the availability of 120 of Item A on Date3 at Org2. The item is available. ATP date is Date3 from Org2 and Customer1 will receive it on Date5. The request is satisfied by using 120 of Item A in Org2 on Date3.

**Example 2-3: Customer1 requests 145 of Item A with Date5 delivery date**

<table>
<thead>
<tr>
<th>Item</th>
<th>Org</th>
<th>Check ATP Flag</th>
<th>Component ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Org1</td>
<td>Material Only</td>
<td>None</td>
</tr>
<tr>
<td>A</td>
<td>Org2</td>
<td>Material Only</td>
<td>Material and Resource</td>
</tr>
<tr>
<td>A</td>
<td>Org3</td>
<td>Material Only</td>
<td>None</td>
</tr>
</tbody>
</table>
1. The system checks the availability of 145 of Item A on Date4 at Org1. The request cannot be satisfied in Org1. Item A has enough availability on Date5. The ATP date in Org1 is Date5 and Customer1 will receive it on Date6.

2. The system checks the availability of 145 of Item A on Date3 at Org2. There is not enough of Item A and the shortage is 25.

3. The Component ATP flag is Material and Resources. There are two sources to obtain item A:
   1. Transfer from Org3

   Oracle Global Order Promising starts with the higher ranked source.

4. Oracle Global Order Promising checks the availability at Org3 and tries to transfer 25 of Item A from Org3 on Date2 to cover the shortage. There is only 20, and so the shortage is 5.

5. Oracle Global Order Promising checks the availability at Org2 and tries to make 5 of Item A to cover the shortage. Five of Item B and 5 R1 on Date2 is needed. There is 16 of R1 on Date2. There is 10 of Item B on Date2. ATP date is Date3 from Org2 and the customer receives it on Date5. The request is satisfied on the requested date by using 120 of Item A in Org2 on Date3, 20 of Item A in Org3 on Date2, 5 of R1 in Org2 on Date2, and 5 of Item B in Org2 on Date2.

Component Substitution

ATP supports the use of substitute components if the primary component is not available. If sufficient quantity of primary component is not available, the ATP searches for substitute components.

Many substitutes are possible for a primary item. In this case, the sequence of search for substitutes is determined by substitute priority, which is a flex field in the Bills of Material.

ATP splits demand among the primary and substitute components. For example:

- Demand for 10 comes for item A.
- Item A has Item B as a component.
- Item B has two substitutes: B1 and B2.
- Item B has 2 available, B1 has 4 available, and B2 has 20 available.
Then, the ATP results will return, 2 for Item B, 4 for B1, and 4 for B2. It will not just return 10 for B2.

Consider the Bills of Material, shown below, where A is made up of component B. B can be substituted by B(1) whenever B does not exist.

Figure 4–12  Bills of Material Example

```
A
  /
 / 
 B   B(1)
  |   |
  C   
```

Oracle Global Order Promising searches for substitute components before doing a multi-level search. If there is not sufficient quantity of A to meet the requirement at a given date, the quantity for B is checked. If that is also not enough, the substitute B(1) is considered. If that is also not sufficient, then C that is the component of B is considered.

Oracle Global Order Promising does not search for the components of B(1), which is the substitute for B.

Even after the inclusion of B(1) and C, the demand is not satisfied. Then Oracle Global Order Promising searches forward to find a date when the shortage can be met. In forward scheduling, substitute components are not considered.

**MRP: Include Substitute Components**

This site level profile must be enabled in order to consider substitute components in the ATP inquiry.
Batch Resource Considerations

Oracle Global Order Promising supports the ability to accurately consider the capacity of batch resources when performing Capable-To-Promise based on planning data. Batch resources are resources that can process multiple units of the same item or multiple units of different items simultaneously.

Batch resource capacity is expressed along two dimensions:

- Time dimension: how long each load takes to process.
- An additional size dimension that expresses the maximum size of each load: the number of units in each load, maximum weight of each load, or maximum volume of each load.

Oracle Global Order Promising considers the capacity of batch resources by converting multiple dimensions into a single dimension, such as unit-hours. Oracle Global Order Promising uses the cumulative available capacity for the Capable-To-Promise calculations. For example:

Batch Resource Heat_Treat_1 is for heat-treating pistons. The capacity information:

- Volume of 100 cubic feet
- Availability 8 hours / day
- Capacity / day = 100 cubic feet * 8 hours = 800 cubic feet hours

The capacity requirement:

- Piston1 requires 2 hours of processing and occupies 1 cubic foot
- Capable-To-Promise inquiry for a quantity of 100 Piston1 on Day 2. Capacity needed = 1 cu. ft. * 2 hours * 100 units = 200 cubic feet-hours.

The following table shows the capacity picture of Heat_Treat_1 at the time of the Capable-To-Promise inquiry:

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Day 1</th>
<th>Day 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total capacity</td>
<td>800 cubic feet-hours</td>
<td>800 cubic feet-hours</td>
</tr>
<tr>
<td>Consumed capacity</td>
<td>700 cubic feet-hours</td>
<td>600 cubic feet-hours</td>
</tr>
<tr>
<td>Net capacity</td>
<td>100 cubic feet-hours</td>
<td>200 cubic feet-hours</td>
</tr>
</tbody>
</table>

The next table shows the capacity picture of Heat_Treat_1 after the Capable-To-Promise inquiry and after the order is scheduled:
The Capable-To-Promise inquiry returns a result of Day 2.

Resource batching is honored only for constrained MRP / DRP plans and when routings (not bills-of-resources) are used and when items are planned at the individual item as opposed to product family level.

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Day 1</th>
<th>Day 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total capacity</td>
<td>800 cubic ft-hrs</td>
<td>800 cubic ft-hrs</td>
</tr>
<tr>
<td>Consumed capacity</td>
<td>700 cubic ft-hrs</td>
<td>800 cubic ft-hrs</td>
</tr>
<tr>
<td>Available capacity</td>
<td>100 cubic ft-hrs</td>
<td>0 cubic ft-hrs</td>
</tr>
</tbody>
</table>

**Note:** Oracle Global Order Promising does not support the Batching window functionality.

**To invoke Capable-To-Promise for batch resources:**

1. Set the profile option MSO: Global Batchable Flag to Yes to setup the resource as a batch resource.

For details, see: Setting Up Batch Resources, Oracle Advanced Planning and Scheduling Implementation and User’s Guide.
Configuration ATP

A Configure-To-Order environment is one where the product or service is assembled or kitted on receipt of the sales order. This chapter provides a detailed explanation of order promising for items used in a configure-to-order environment.

Oracle Global Order Promising supports Configure-To-Order (CTO) environment. You can designate any optional items as well as included items for ATP check. This provides an accurate availability date for the end configuration.

Business Application

In a configure-to-order environment, it is not always possible or practical to project and plan for every possible configuration. Inventory is planned and held at component level. To accurately promise a customer order, you need to check availability based on the actual options selected. Oracle Global Order Promising lets you promise sales order for configuration based on the selected options.

Items Used in Configure-to-Order Environment

The following items may be used in a configure-to-order environment.

- ATO Model
- PTO Model
- ATO Item
- Kit (PTO Item)

Examples of the above items are below. In all the examples, the component usage is assumed to be 1.

Examples

Example 1  ATO Model

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>BOM Item Type</th>
<th>Mutually Exclusive</th>
<th>Optional</th>
<th>Assemble-To-Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Laptop X11</td>
<td>ATO Model</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
</tr>
<tr>
<td>1</td>
<td>- Base System</td>
<td>Standard</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>-- Board</td>
<td>Standard</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Level</td>
<td>Item</td>
<td>BOM Item Type</td>
<td>Mutually Exclusive</td>
<td>Optional</td>
<td>Assemble-To-Order</td>
</tr>
<tr>
<td>-------</td>
<td>---------------</td>
<td>---------------</td>
<td>--------------------</td>
<td>----------</td>
<td>-------------------</td>
</tr>
<tr>
<td>2</td>
<td>-- Network Card</td>
<td>Standard</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>-- Graphics Card</td>
<td>Standard</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>- Processor Class</td>
<td>Option Class</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>-- Mobile Pentium®4 2.2 GHz</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>-- Mobile Pentium®4 2.0 GHz</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>-- Mobile Pentium®4 1.8 GHz</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>-- Mobile Pentium®4 1.7 GHz</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>- Memory Class</td>
<td>Option Class</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>-- 256 MB</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>-- 512 MB</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>-- 640 MB</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>- Monitor Class</td>
<td>Option Class</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>-- 17in Flat Screen</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>-- 19in Flat Screen</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>- Modular Drive Class</td>
<td>Option Class</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>-- 24X CD-Rom</td>
<td>Standard</td>
<td>N/A</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>-- 8X Max DVD Rom</td>
<td>Standard</td>
<td>N/A</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>-- 24X CD-RW</td>
<td>Standard</td>
<td>N/A</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>-- 24X CD-RW/DVD Combo</td>
<td>Standard</td>
<td>N/A</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Example 2  PTO Model

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>BOM Item Type</th>
<th>Mutually Exclusive</th>
<th>Optional</th>
<th>Pick Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Laptop X11 Deluxe</td>
<td>PTO Model</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
</tr>
<tr>
<td>1</td>
<td>- Laptop X11</td>
<td>ATO Model</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>- External Mouse</td>
<td>Option Class</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>-- Logitech Optical Mouse</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
### Example 3  ATO Item

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>BOM Item Type</th>
<th>Mutually Exclusive</th>
<th>Optional</th>
<th>Pick Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>-- COMPAQ mouse</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>- Wireless Networking Card</td>
<td>Option Class</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>-- External TrueMobile 1150 PC Card</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>-- Internal TrueMobile 1150 miniPCI card</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>- Laptop case</td>
<td>Standard</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>- External Speaker</td>
<td>Standard</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>-- Premium Speaker</td>
<td>Standard</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>-- Speaker Manual</td>
<td>Standard</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

### Example 4  Kit

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>BOM Item Type</th>
<th>Mutually Exclusive</th>
<th>Optional</th>
<th>Pick Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>External Speaker</td>
<td>Standard</td>
<td>No</td>
<td>-</td>
<td>Yes</td>
</tr>
<tr>
<td>1</td>
<td>- Premium Speaker</td>
<td>Standard</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>- Speaker Manual</td>
<td>Standard</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
Single-Level, Single-Org ATO Model

If you implement Oracle Advanced Supply Chain Planning and promise orders based on the output from the ASCP plan, you can promise configuration orders based on the availability of any item and resource in the entire supply chain bill.

A Single-Level, Single-Org ATO Model is referred to as an ATO Model that does not have another ATO Model as its component. It is not sourced from an organization different from the shipping organization.

Setup

Refer to the Setting Up chapter for the mandatory and optional setup steps.

ATP Item Attributes

- You need to set the Check ATP item attribute. See the table below.
- You need to set the BOM Check ATP flag. See the table below.

Oracle Global Order Promising supports the following settings:

1. In an environment where the ATO Model is created for the convenience of order entry, demand is forecasted at the material (optional item) level, and the underlying supply chain plan contains material and resource availability, you can set ATP item attributes according to the following:

<table>
<thead>
<tr>
<th>Item Type</th>
<th>Check ATP</th>
<th>Component ATP</th>
<th>BOM Check ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATO Model</td>
<td>None</td>
<td>Material</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Material and Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource</td>
<td></td>
</tr>
<tr>
<td>Option Class</td>
<td>None</td>
<td>Material</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Material and Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource</td>
<td></td>
</tr>
<tr>
<td>Mandatory Item</td>
<td>Material</td>
<td>Material</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Material and Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>
Oracle Order Management groups the ATO Model, selected option classes, selected options and mandatory items into a set and passes the set to Oracle Global Order Promising for availability check. Oracle Global Order Promising checks the availability of the mandatory and selected optional items on the date that is offset from the ATO Model request date by:

Fixed Lead Time + Request Quantity * Variable Lead Time

of the ATO Model. If the Check ATP attribute is set to Material for the model, Oracle Global Order Promising also considers model’s statement of supply.

2. When the underlying supply chain plan has model or option class demand and thus would load or plan resources used by model or option class phantom, you should set ATP item attributes according to the following:

<table>
<thead>
<tr>
<th>Item Type</th>
<th>Check ATP</th>
<th>Component ATP</th>
<th>BOM Check ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optional Item</td>
<td>Material</td>
<td>Material</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Material and Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Optional Item</td>
<td>Material</td>
<td>Material</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Material and Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item Type</th>
<th>Check ATP</th>
<th>Component ATP</th>
<th>BOM Check ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATO Model</td>
<td>None</td>
<td>Material</td>
<td></td>
</tr>
<tr>
<td>Option Class</td>
<td>None</td>
<td>Material</td>
<td>Yes</td>
</tr>
<tr>
<td>Mandatory Item</td>
<td>Material</td>
<td>Material</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Material and Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Optional Item</td>
<td>Material</td>
<td>Material</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Material and Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>
Examples

Example 5  Using the ATO Model
For a sales order, the options below are selected. The ATP item attributes and BOM attributes for these items are shown below:

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>Check ATP</th>
<th>Component ATP</th>
<th>BOM Check ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Laptop X11</td>
<td>-</td>
<td>Material</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>- Base System</td>
<td>Material</td>
<td>Material</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>-- Board</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>-- Network card</td>
<td>Material</td>
<td>-</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>-- Graphics card</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>- Processor Class</td>
<td>-</td>
<td>Material</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>-- Mobile Pentium® 4 2.2 GHz</td>
<td>Material</td>
<td>-</td>
<td>Yes</td>
</tr>
<tr>
<td>1</td>
<td>- Memory Class</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>-- 256 MB</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>- Monitor Class</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>-- 19in Flat Screen</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>- Modular Drive Class</td>
<td>-</td>
<td>Material</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>-- 24X CD-RW/DVD Combo</td>
<td>Material</td>
<td>-</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Laptop X11 Lead Time:
- Fixed lead time = 0
- Variable lead time = 0.05 day

Base System Lead Time:
- Fixed lead time = 0
- Variable lead time = 0.01 day

Cumulative availability picture for the items that have Check ATP attribute set is described as follows:
ATP Inquiry for a sales order demand of the above configuration for quantity of 10 with request date of Day 3 can be promised on Day 3. This is because:

- Model's lead time = Round (0 + 10 * 0.05) = 1 day. All the components of the model must be available on Day 2 and they are available.
- There is not enough Base System on Day 2. But there is enough of the Network Card component on Day 1 to make the shortage of Base System on Day 2. Base System's lead time = CEIL (0 + 10 * 0.01) = 1 day.

The ATP Details window shows you the following:

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>- Base System</td>
<td>0</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>-- Network Card</td>
<td>8</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>-- Mobile Pentium®4 2.2 GHz</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>-- 24X CD-RW/DVD Combo</td>
<td>0</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

ATP Inquiry for a sales order demand of the above configuration for quantity of 10 with request date of Day 3 can be promised on Day 3. This is because:

- Model's lead time = Round (0 + 10 * 0.05) = 1 day. All the components of the model must be available on Day 2 and they are available.
- There is not enough Base System on Day 2. But there is enough of the Network Card component on Day 1 to make the shortage of Base System on Day 2. Base System's lead time = CEIL (0 + 10 * 0.01) = 1 day.

The ATP Details window shows you the following:

<table>
<thead>
<tr>
<th>Item</th>
<th>Request Date</th>
<th>Request Date Qty</th>
<th>Ship Date</th>
<th>Group Ship Date</th>
<th>Error Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laptop X11</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Base System</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>-</td>
</tr>
<tr>
<td>Processor Class</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Mobile Pentium®4 2.2 GHz</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>-</td>
</tr>
<tr>
<td>Memory Class</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>256 MB</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Monitor Class</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>19in Flat Screen</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Modular CD/DVD Drive</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>24X CD-RW/DVD Combo</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>-</td>
</tr>
</tbody>
</table>

Explanation:

- The availability information on the ATO Model tells you the availability on the request date (Request Date Quantity). If the entire quantity is not available on the request date, the Group Ship Date tells you the earliest date that the order
quantity is available. In this case, the Check ATP flag item attribute for Laptop X11 is set to None, and the ship date for the model is always the request date. The Group Ship Date is the date when the entire configuration is available.

- Since model, option class, mandatory items, and optional items are grouped into a set; all of the items shows up in ATP Details window.
- Items that have Check ATP set to None will have error message ATP not applicable.
- Request date for all the items will reflect the Request Date from sales order line.
- Request Date Qty reflects the supply available on the date the items are needed. For included items and optional items, the date the items are needed equals the Request Date - Model's lead time. In this example, these items are needed on Day 2.
- Ship Date equals the date the items are available plus the model lead time. Base System is available on Day 2. Thus Ship Date equals Day 3.
- Group Ship Date reflects the date that the entire configuration is available. It is the maximum Ship Date of any line in the set.

The ATP Details window provides the pegging information for items that have Check ATP attribute set to Material.

For item Base System, the pegging tree looks like the following:

(D) Base System - Org Qty 10 On Day 2

(S) Base System - ATP Org Qty 5 On Day 2

(S) Base System - Make At Org Qty 5 on Day 2

(D) Network Card - Org Qty 5 on Day 1

(S) Network Card - Org Qty 8 on Day 1

Explanation:

- In pegging, different graphical icons are used for supply and demand. In the above representation, the icons are represented by (S) and (D) respectively.
- Line 1: Base System is required 10 on Day 2.
- Line 2: Base System only has 5 on Day 2.
- Line 3: 5 of Base System can be made available from its components on Day 2.
- Line 4: Demand for Network Card is 5 in order to make 5 unit of Base System.
Line 5: There are 8 units of Network Card available on Day 1.

**Match to Existing Configuration**
Oracle Global Order Promising does not attempt to match a new sales order to an existing configuration. Oracle Global Order Promising is based on the availability of the options and mandatory items. Once the order is scheduled and booked, you use Match and Reserve capability from Oracle Order Management to match to an existing configuration with supply.

For details on matching, see: Match Configuration Item, *Oracle Configure-to-Order Implementation Guide*.

**Reschedule Order**
When a sales order line is rescheduled, Oracle Global Order Promising first unschedules the original order lines, regardless of whether the configured item has been created or not. Then it schedules based on the availability of the revised order lines.

---

**Notes:**

- A shipping warehouse must be specified for an ATO Model order for availability check.
- When Check ATP is set to None for an ATO Model, Oracle Global Order Promising ignores the infinite time fence for the model.

---

**Multi-Level, Multi-Org ATO Model**
Multi-Level, Multi-Org ATO Model refers to a supply chain bill that has ATO Model as a non-phantom component of another ATO Model or the top model can be sourced from an organization other than the shipping organization.

The following section explains how Oracle Global Order Promising supports Multi-Level, Multi-Org ATO Model.

For details on forecast consumption and planning process description, see: CTO Enhancements, *Oracle Advanced Planning and Scheduling User’s Guide*. 
Setup

Verify that you have performed the mandatory and optional setup steps explained in the Setup chapter.

**ATP Item Attributes**

You need to set the Check ATP item attribute. See the table below.

**BOM Check ATP Flag**

You need to set the BOM Check ATP flag. See the table below.

Oracle Global Order Promising supports the following settings:

1. In an environment where ATO Model is created for the convenience of order entry, demand is forecasted at the material (optional item) level, and the underlying supply chain plan contains the material and resource availability, you can set ATP item attributes according to the following:

<table>
<thead>
<tr>
<th>Item Type</th>
<th>Check ATP</th>
<th>Component ATP</th>
<th>BOM Check ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATO Model (top or sub-models)</td>
<td>None</td>
<td>Material</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Material and Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource</td>
<td></td>
</tr>
<tr>
<td>Option Class</td>
<td>None</td>
<td>Material</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Material and Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource</td>
<td></td>
</tr>
<tr>
<td>Mandatory Item</td>
<td>Material</td>
<td>Material</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Material and Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource</td>
<td></td>
</tr>
<tr>
<td>Optional Item</td>
<td>Material</td>
<td>Material</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Material and Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

Oracle Order Management groups the ATO Model, selected option classes, selected options and mandatory items into a set and passes the set to Oracle Global Order Promising for availability check. Oracle Global Order Promising checks the
availability of the mandatory and selected optional items on the date that is offset from the ATO model request date by Fixed LT + Request Quantity * Variable Lead Time of the ATO model.

2. When the underlying supply chain plan has model or option class demand and thus would load or plan resources used by model or option class (phantom), you can set ATP item attributes according to the following:

<table>
<thead>
<tr>
<th>Item Type</th>
<th>Check ATP</th>
<th>Component ATP</th>
<th>BOM Check ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATO Model</td>
<td>None</td>
<td>Material</td>
<td>-</td>
</tr>
<tr>
<td>Option Class</td>
<td>None</td>
<td>Material</td>
<td>Yes</td>
</tr>
<tr>
<td>Mandatory Item</td>
<td>Material</td>
<td>Material</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Material and Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Optional Item</td>
<td>Material</td>
<td>Material</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Material and Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

Supply Chain: Sourcing Rule, Bills of Distribution, & Assignment Set
You can model the entire Multi-Level, Multi-Org ATO supply chain bill, starting from the shipping organization, where the top ATO Model is ordered through to the sourcing rules or bills of distribution, and assign the sourcing rules or bills of distribution.

For detail instruction on how to setup sourcing rules or bills of distribution, and assignment set, see: Setting up the Supply Chain, Oracle Advanced Planning and Scheduling User’s Guide.

Only one source organization is supported for an ATO Model.

Source Model from Supplier
When you source an ATO Model from a supplier, you can define supplier capacity for the ATO Model. If you set Component ATP to Material for the ATO Model, Oracle Global Order Promising checks the supplier capacity for the model.
MRP: Default Sourcing Assignment Set
This profile should be set to the assignment set that defines the supply chain for your model.

Plan
The plan for ATP uses the assignment set that defines the supply chain for your model. The sourcing definition for the model in this assignment set must be the same as the sourcing definition in MRP: Default Sourcing Assignment Set.

Examples

Example 6  Supply Chain Bill
Figure 4–13  Supply Chain Bill

Shipping Org: Singapore(SG)

- CNP Mainframe CO
  - CNP Mainframe BR

Shipping Org: Boston(BOS)

- CNP Mainframe BOS
  - CNP Mainframe BR

Sub Prod GG

- Power Supply
  - Cables

Sub Prod GG

- PTN 300G
  - PHY
  - PTN 300L

Sub Prod GG

- PTN 100C
  - PHY
  - PTN 100L

Legend:

- Guided Class
- ATP
- Non Guided Class
- Optimization
Sourcing relationships are shown in dotted lines and the BOM relationships are shown in continuous lines. The BOM and the sourcing is defined using Oracle Bills of Material and Oracle Supply Chain Planning or Oracle Advanced Planning Solution. You can find the item names within each of the nodes. The item name is followed by a two-letter code to identify the organizations.

CMP MainFrame has four configurable ATO model assemblies: PCI module, Dual Pod Enclosure, Sub Prod 32, and Sub Prod 64. The company sells CMP MainFrames from its shipping organizations at Boston and Singapore. It has three manufacturing sites: Hong Kong, Mexico, and Boston. CMP MainFrames are assembled in Boston and Hong Kong. The PCI module is manufactured and sourced at the Mexico facility. Dual Pod Enclosures are manufactured and sourced at Hong Kong along with the components Sub Prod32 and Sub Prod64. Optional items CD ROMs, DAT Drives, and Tape Drives can be sold as spares from either Boston or Hong Kong.

An order is accepted at the Singapore organization with the following selected options:

1. CMP MainFrame
2. CD-ROM
3. PTN32-2MB
4. 32TLC Add-On
5. 5V Card

The following table shows the ATP item attributes setting:

<table>
<thead>
<tr>
<th>Item</th>
<th>Org</th>
<th>Check ATP</th>
<th>Component ATP</th>
<th>BOM Check ATP</th>
<th>Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMP MainFrame</td>
<td>SG</td>
<td>-</td>
<td>Material</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>CMP MainFrame</td>
<td>HK</td>
<td>-</td>
<td>Material</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Console</td>
<td>HK</td>
<td>Material</td>
<td>-</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>P Devices</td>
<td>HK</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>CD ROM</td>
<td>HK</td>
<td>Material</td>
<td>-</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>PCI Module</td>
<td>HK</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>PCI Module</td>
<td>MEX</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Cables</td>
<td>MEX</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>PCI Cards</td>
<td>MEX</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>
Cumulative availability picture for the items that have the Check ATP attribute set is described as follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>Org</th>
<th>Check ATP</th>
<th>Component ATP</th>
<th>BOM Check ATP</th>
</tr>
</thead>
<tbody>
<tr>
<td>5V Card</td>
<td>MEX</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Compatibility Bridge</td>
<td>MEX</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dual Pod Enclosure</td>
<td>HK</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sub Prod OC</td>
<td>HK</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Power Supply</td>
<td>HK</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sub Prod 32</td>
<td>HK</td>
<td>- Material</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>PTN-32 OC</td>
<td>HK</td>
<td>- Material</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>PTN32-2MB</td>
<td>HK</td>
<td>Material</td>
<td>-</td>
<td>Yes</td>
</tr>
<tr>
<td>TLC1032</td>
<td>HK</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>32TLC Add-On</td>
<td>HK</td>
<td>Material</td>
<td>-</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Lead Time Setup:
- There is transit lead time of 1 day between all the organizations.
- CMP MainFrame (HK) lead time: fixed lead time = 0 and variable lead time = 0.05 day.
- Dual Pod Enclosure lead time: fixed lead time = 0 and variable lead time = 0.05 day.
- A sales order for the above configuration for quantity of 10 on Day 5 can be promised on Day 5.

The ATP Details window shows the following result:
ATP Pegging shows the following result:

1. (D) CMP MainFrame - Org SG Qty 10 On Day 5
2. (S) CMP MainFrame - Transfer From Org HK Qty 10 On Day 5
3. (D) CMP MainFrame - Org HK Qty 10 on Day 4
4. (S) CMP MainFrame - Make At Org HK Qty 10 on Day 4
5. (D) Console - Org HK Qty 10 on Day 3
6. (S) Console - Org HK Qty 30 on Day 3
7. (D) P devices - Org HK Qty 10 on Day 3
8. (D) CD ROM - Org HK Qty 10 on Day 3
9. (S) CD ROM - ATP Org HK Qty 30 on Day 3
10. (D) Dual Pod Enclosure - Org HK Qty 10 on Day 3
11. (S) Dual Pod Enclosure - Make At Org HK Qty 10 on Day 3
12. (D) Sub Prod - Org HK Qty 10 on Day 2
13. (D) Sub Prod 32 - Org HK Qty 10 on Day 2
14. (S) Sub Prod 32 - Make At Org HK Qty 10 on Day 2
15. (D) PTN 32 OC - Org HK Qty 10 on Day 1
16. (D) PTN32-2MB - Org HK Qty 10 on Day 1
17. (S) PTN32-2MB - ATP Org HK Qty 20 on Day 1
18. (D) 32 TLC Add-On - Org HK Qty 10 on Day 1
19. (S) 32 TLC Add-On - ATP Org HK Qty 12 on Day 1
20. (D) PCI Module - Org HK Qty 10 on Day 3
21. (S) PCI Module - Transfer From Org MEX Qty 10 on Day 3
22. (D) PCI Module - Org MEX Qty 10 on Day 2
23. (S) PCI Module - Org MEX Qty 10 Day
24                                               (D) PCI Cards - Org MEX Qty 10 on Day 1
25                                                       (D) 5V Cards - Org MEX Qty 10 on Day 1

Explanation:
- In pegging, different graphical icons are used for supply and demand. In the above representation, the icons are represented by (S) and (D) respectively.
- Non-ATP-able selected optional items appear in the pegging tree with demand line only. Line 24 is an example.
- Option classes appear on the same level as its components. They are treated as phantom items.
- Since there is 1 day transfer lead time, the demand line below the Transfer From supply lines reflect the 1 day lead time offset.
- The demand pegging line for the components of an ATO model reflect the lead time offset of the model. For example, the lead time for 10 units of CMP MainFrame = round (0 + 0.05 * 10) = 1 day. In order to make 10 units of CMP MainFrame on Day 4, Console is needed on Day 3. Line 5 reflects that.

Demand Flow
Upon scheduling a sales order, Oracle Global Order Promising inserts demand for ATO models as well as items that have Check ATP set to Material into the ASCP plan used for ATP purpose. The demand picture of the above example is after scheduling:

<table>
<thead>
<tr>
<th>Item</th>
<th>Org</th>
<th>Check ATP</th>
<th>Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMP MainFrame</td>
<td>SG</td>
<td>-</td>
<td>Sales Order</td>
</tr>
<tr>
<td>CMP MainFrame</td>
<td>HK</td>
<td>-</td>
<td>Planned Order Demand</td>
</tr>
<tr>
<td>Console</td>
<td>HK</td>
<td>Material</td>
<td>Planned Order Demand</td>
</tr>
<tr>
<td>P Devices</td>
<td>HK</td>
<td>-</td>
<td>None</td>
</tr>
<tr>
<td>CD ROM</td>
<td>HK</td>
<td>Material</td>
<td>Planned Order Demand</td>
</tr>
<tr>
<td>PCI Module</td>
<td>HK</td>
<td>-</td>
<td>Planned Order Demand</td>
</tr>
<tr>
<td>PCI Module</td>
<td>MEX</td>
<td>-</td>
<td>Planned Order Demand</td>
</tr>
<tr>
<td>Cables</td>
<td>MEX</td>
<td>-</td>
<td>None</td>
</tr>
<tr>
<td>PCI Cards</td>
<td>MEX</td>
<td>-</td>
<td>None</td>
</tr>
</tbody>
</table>
Oracle Global Order Promising does not attempt to match a new sales order to an existing configuration. Oracle Global Order Promising is based on the availability of the options and mandatory items. Once the order is scheduled and booked, use the Match and Reserve capability from Oracle Order Management to match to an existing configuration with supply.

For details, see: Matching, Oracle Configure-to-Order Implementation Manual.

**Reschedule Order**

When a sales order line is rescheduled, Oracle Global Order Promising first unschedules the original order lines with the model, option classes, mandatory items, or optional items regardless of whether the configured item has been created or not. Then Oracle Global Order Promising schedules based on the availability of the revised order lines with the model, option classes, mandatory items, or optional items.

<table>
<thead>
<tr>
<th>Item</th>
<th>Org</th>
<th>Check ATP</th>
<th>Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>5V Card</td>
<td>MEX</td>
<td>-</td>
<td>None</td>
</tr>
<tr>
<td>Compatibility Bridge</td>
<td>MEX</td>
<td>-</td>
<td>None</td>
</tr>
<tr>
<td>Dual Pod Enclosure</td>
<td>HK</td>
<td>-</td>
<td>Planned Order Demand</td>
</tr>
<tr>
<td>Sub Prod OC</td>
<td>HK</td>
<td>-</td>
<td>None</td>
</tr>
<tr>
<td>Power Supply</td>
<td>HK</td>
<td>-</td>
<td>None</td>
</tr>
<tr>
<td>Sub Prod 32</td>
<td>HK</td>
<td>-</td>
<td>Planned Order Demand</td>
</tr>
<tr>
<td>PTN-32 OC</td>
<td>HK</td>
<td>-</td>
<td>None</td>
</tr>
<tr>
<td>PTN32-2MB</td>
<td>HK</td>
<td>Material</td>
<td>Planned Order Demand</td>
</tr>
<tr>
<td>TLC1032</td>
<td>HK</td>
<td>-</td>
<td>None</td>
</tr>
<tr>
<td>32TLC Add-On</td>
<td>HK</td>
<td>Material</td>
<td>Planned Order Demand</td>
</tr>
</tbody>
</table>
PTO Model

Front-end applications such as Oracle Order Management and Oracle Configurator are used to configure a PTO model. When the PTO model has Ship Model Complete checked, Oracle Order Management groups the PTO model, selected option class, included items, and selected optional items into a set for ATP check. Otherwise, Oracle Order Management treats each PTO line with included items and selected options independently for availability check.

Setup

Refer to the Setting Up chapter for the mandatory and optional setup steps.

ATP Item Attributes

- You need to set the Check ATP item attribute.
- The Component ATP and BOM Check ATP flag are not relevant for PTO model and option classes.

<table>
<thead>
<tr>
<th>Item Type</th>
<th>Check ATP</th>
<th>Component ATP</th>
<th>BOM Check ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTO Model</td>
<td>None</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Option Class</td>
<td>None</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Included Item</td>
<td>Material</td>
<td>Material</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Material and Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>
Examples

Example 7  PTO Model has Ship Model Complete set to Yes
A sales order has items with options. The ATP item attributes for these items are shown below:

<table>
<thead>
<tr>
<th>Level</th>
<th>Item Type</th>
<th>Check ATP</th>
<th>Component ATP</th>
<th>BOM Check ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Optional Item</td>
<td>Material</td>
<td>Material</td>
<td>Yes</td>
</tr>
<tr>
<td>0</td>
<td>Optional Item</td>
<td>None</td>
<td>Material and Resource</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>Optional Item</td>
<td>None</td>
<td>Resource</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>Optional Item</td>
<td>None</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>Check ATP</th>
<th>Component ATP</th>
<th>BOM Check ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Laptop X11 Deluxe</td>
<td>-</td>
<td>Material</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>- Laptop X11</td>
<td>-</td>
<td>Material</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>-- Base System</td>
<td>Material</td>
<td>-</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>--- Board</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>--- Network Card</td>
<td>Material</td>
<td>-</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>--- Graphics Card</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>-- Processor Class</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>--- Mobile Pentium®4 2.2 GHz</td>
<td>Material</td>
<td>Yes</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>-- Memory Class</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>--- 256 MB</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>-- Monitor Class</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>--- 19in Flat Screen</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>-- Modular Drive Class</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>--- 24X CD - RW/DVD Combo</td>
<td>Material</td>
<td>Yes</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>- External Mouse</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>-- Logitech Optical Mouse</td>
<td>Material</td>
<td>Yes</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>- Laptop Case</td>
<td>Material</td>
<td>Yes</td>
<td>-</td>
</tr>
</tbody>
</table>
Cumulative availability picture for the items that have Check ATP attribute set is described as follows:

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>- Base System</td>
<td>0</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>-- Network Card</td>
<td>8</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>-- Mobile Pentium®4 2.2 GHz</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>-- 24X CD-RW/DVD Combo</td>
<td>0</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>-- Logitech Optical Mouse</td>
<td>0</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>1</td>
<td>- Laptop Case</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
</tbody>
</table>

An ATP Inquiry for a sales order demand in the above configuration for quantity of 10 with request date of Day 3 can only be promised on Day 3.

The ATP Details window shows the following result:

<table>
<thead>
<tr>
<th>Item</th>
<th>Request Date</th>
<th>Request Date Qty</th>
<th>Ship Date</th>
<th>Group Ship Date</th>
<th>Error Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laptop X11</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Base System</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>-</td>
</tr>
<tr>
<td>Processor Class</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Mobile Pentium®4 2.2 GHz</td>
<td>Day 3</td>
<td>20</td>
<td>Day 3</td>
<td>Day 3</td>
<td>-</td>
</tr>
<tr>
<td>Memory Class</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>256 MB</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Monitor Class</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>19in Flat Screen</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Modular CD/DVD Drive</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>24X CD-RW/DVD Combo</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>-</td>
</tr>
<tr>
<td>External Mouse</td>
<td>Day 3</td>
<td>10</td>
<td>Day 3</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Logitech Optical Mouse</td>
<td>Day 3</td>
<td>20</td>
<td>Day 3</td>
<td>Day 3</td>
<td>-</td>
</tr>
<tr>
<td>Laptop Case</td>
<td>Day 3</td>
<td>30</td>
<td>Day 3</td>
<td>Day 3</td>
<td>-</td>
</tr>
</tbody>
</table>
**Explanation:**

- Oracle Order Management groups the PTO Model and its included items, selected optional classes and items into a set. When there is an ATO Model under the PTO Model, Oracle Order Management also groups the ATO Model, its included items, selected optional classes and options into the same set. It passes the entire set to Oracle Global Order Promising for availability check.

- Items that have Check ATP set to None have the error message: ATP not applicable.

- Request Date for all the items reflects the Request Date from sales order line.

- Request Date Qty reflects the supply available on the date the items are needed. For included items and optional items under an ATO Model, the date the items are needed equals the Request Date - Model’s lead time. In this example, these items are needed on Day 2.

- Group Ship Date reflects the date that the entire configuration is available. It is the maximum Ship Date of any line in the set.

**Example 8  PTO Model has Ship Model Complete set to No**

In this case, Oracle Global Order Promising does not derive a Group Ship Date. Each individual line can be shipped on the Ship Date.

The ATP Details window shows the following result:

<table>
<thead>
<tr>
<th>Item</th>
<th>Request Date</th>
<th>Request Date Qty</th>
<th>Ship Date</th>
<th>Group Ship Date</th>
<th>Error Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laptop X11 Deluxe</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Laptop X11</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Base System</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Processor Class</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Mobile Pentium®4 2.2 GHz</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Memory Class</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>256 MB</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Monitor Class</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>19in Flat Screen</td>
<td>Day 2</td>
<td>1</td>
<td>Day 2</td>
<td>-</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Modular CD/DVD Drive</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td>ATP not applicable.</td>
</tr>
</tbody>
</table>
Verify that you have performed the mandatory and optional setup steps explained in the Setup chapter.

ATP Item Attributes
Oracle Global Order Promising treats an ATO Item like a standard item. The following setting is supported:

The ATO Item is forecasted and planned. There is statement of supply for the ATO item. Oracle Global Order Promising for the ATO Item is based the supply for the ATO Item. In this case, the ATO Item is similar to a standard item from order promising point of view. The ATO aspect significance is on the transactional side.

BOM Check ATP Flag
You should enable Check ATP Flag for the components of the ATO Item.

<table>
<thead>
<tr>
<th>Item Type</th>
<th>Check ATP</th>
<th>Component ATP</th>
<th>BOM Check ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATO Item (Standard)</td>
<td>Material Only</td>
<td>Material</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Material and Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>
Oracle Global Order Promising first checks the availability of the ATO Item. If there is not enough supply, it goes to its components to perform capable-to-promise check based on the Component ATP for the ATO Item.

**Examples**

**Example 9 Using an ATO Item**

The ATP Item attributes for the items are shown below:

<table>
<thead>
<tr>
<th>Level</th>
<th>Item Type</th>
<th>Check ATP</th>
<th>Component ATP</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Laptop X11-1</td>
<td>Material</td>
<td>Material</td>
</tr>
<tr>
<td>1</td>
<td>Base System</td>
<td>Material</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>Mobile Pentium®4 2.2 GHz</td>
<td>Material</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>512 MB</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>17in Flat Screen</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>24X CD-RW/DVD Combo</td>
<td>Material</td>
<td>-</td>
</tr>
</tbody>
</table>

Cumulative availability picture for the items that have Check ATP attribute set is described as follows:

<table>
<thead>
<tr>
<th>Level</th>
<th>Item Type</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Laptop X11-1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>Base System</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>1</td>
<td>Mobile Pentium®4 2.2 GHz</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>1</td>
<td>24X CD-RW/DVD Combo</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>
Laptop X11-1 lead time:
  - Fixed lead time = 0
  - Variable lead time = 0.05 day

An ATP inquiry for a sales order demand of the ATO item for quantity of 10 with request date of Day 2 can be promised on Day 2.

The ATP Details window shows the following result:

<table>
<thead>
<tr>
<th>Item</th>
<th>Request Date</th>
<th>Request Date Qty</th>
<th>Ship Date</th>
<th>Group Ship Date</th>
<th>Error Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laptop X11-1</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

ATP Pegging shows the following:

(D) Laptop X11-1 - Org Qty 10 On Day 2
  (S) Laptop X11-1 - ATP Org Qty 1 On Day 2
  (S) Laptop X11-1 - Make At Org Qty 9 on Day 2
    (D) Base System - Org Qty 9 on Day 1
    (S) Base System - Org Qty 10 on Day 1
    (D) Mobile Pentium®4 2.2 GHz - Org Qty 9 on Day 1
      (S) Mobile Pentium®4 2.2 GHz - Org Qty 10 on Day 1
    (D) 24X CD-RW/DVD Combo - Org Qty 9 on Day 1
      (S) 24X CD-RW/DVD Combo - Org Qty 10 on Day 1

Kit

A kit, also known as a PTO Item, is a standard item with Pick Component item attribute checked. When an order is created in Oracle Order Management for a PTO item, Oracle Order Management explodes the next level components of the PTO item and groups the items into a set and passes the set to Oracle Global Order Promising for availability check.

Setup

Refer to the Setting Up Chapter for the mandatory and optional setup steps.
ATP Item Attributes
Oracle Global Order Promising supports the following ATP item attribute setting for Kit:

1. Check availability for the Kit.

<table>
<thead>
<tr>
<th>Item</th>
<th>Check ATP</th>
<th>Component ATP</th>
<th>BOM Check ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTO Item (Standard)</td>
<td>Material</td>
<td>None</td>
<td>-</td>
</tr>
<tr>
<td>- Next Level Components (Standard)</td>
<td>None</td>
<td>None</td>
<td>Any</td>
</tr>
</tbody>
</table>

2. Check availability for the components of the Kit.

<table>
<thead>
<tr>
<th>Item</th>
<th>Check ATP</th>
<th>Component ATP</th>
<th>BOM Check ATP Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTO Item (Standard)</td>
<td>None</td>
<td>None</td>
<td>-</td>
</tr>
<tr>
<td>- Next Level Components (Standard)</td>
<td>Material</td>
<td>Material and Resource</td>
<td>Any</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

Oracle Global Order Promising checks the availability for the components on the request date of the PTO item. Oracle Global Order Promising returns a Group Ship Date that is either the request date or a later date if any ATP-able items are not available.

Examples

Example 10 Using a PTO Item
The ATP item attributes for the items are shown below:

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>Check ATP</th>
<th>Component ATP</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>External Speaker</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>- Premium Speaker</td>
<td>Material</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>- Speaker Manual</td>
<td>Material</td>
<td>-</td>
</tr>
</tbody>
</table>
The cumulative availability picture for the items that have Check ATP attribute set is described as follows:

<table>
<thead>
<tr>
<th>Level</th>
<th>Item</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Premium Speaker</td>
<td>0</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>1</td>
<td>Speaker Manual</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

An ATP inquiry for a sales order demand of the PTO item for quantity of 10 with request date of Day 2 can be promised on Day 3.

The ATP Details window show the following result:

<table>
<thead>
<tr>
<th>Item</th>
<th>Request Date</th>
<th>Request Date Qty</th>
<th>Ship Date</th>
<th>Group Ship Date</th>
<th>Error Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>External Speaker</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>Day 3</td>
<td>ATP not applicable.</td>
</tr>
<tr>
<td>Premium Speaker</td>
<td>Day 2</td>
<td>0</td>
<td>Day 3</td>
<td>Day 3</td>
<td>-</td>
</tr>
<tr>
<td>Speaker Manual</td>
<td>Day 2</td>
<td>10</td>
<td>Day 2</td>
<td>Day 3</td>
<td>-</td>
</tr>
</tbody>
</table>
Product Family ATP

Oracle Manufacturing lets you define product family item as a percentage composition of member items. If the product family item is setup to perform ATP based on product family, then once an ATP Inquiry is launched for a member item the ATP is actually performed against the product family item. Since Oracle Advanced Supply Chain Planning lets you plan for such items, you can define Bills of Resources to check and verify the available capacity for capable-to-promise for your critical resources.

---

**Note:** With the current setup for Product Family ATP, for a given item you can either perform ATP:

- Based on product family item
- Or based on the individual member items

---

If ATP is based on planning output, Oracle Global Order Promising views the entire planning horizon and does not differentiate between the various buckets and aggregation you have defined for the ATP enabled plan.

Business Application

In a customer driven manufacturing environment, it may not always be possible to forecast exact demand of the end item. However, it may be possible to define aggregate requirements and forecast at an aggregate level, instead of at the item level. This is shown in the following diagram:
When an order is scheduled for ATP based on planning data, the sales order is scheduled against the product family item. After data collection and plan rerun, the sales order demand for the member item is present in the plan where the member items are planned.

Setup

Once you defined product family item and the product family item / member item relationship, you need to perform the following setup to enable ATP based on Product Family.

Check ATP Item Attribute

It needs to be set to Material for product family item in order to perform Product Family ATP.

You must set the Check ATP flag for all the member items to be Material when using Product Family ATP. Otherwise, an incorrect result can occur. This is because the demand and supply for product family is an aggregation of the demand and supply of the member items.

Component ATP Item Attribute

The product family item can be set to:

- Resource only: check material availability for item at this level. System performs CTP if ATP is based on planning data.
- None: no need to check ATP at this level.
ATP Logic

1. If the requested item is not a member of a product family item, go to step 2. Otherwise go to step 3.

2. ATP is performed on requested item. For details, see: ATP Logic on page 5-5. End.

3. If Check ATP item attribute for the product family item is set to None, go to step 2. Otherwise go to step 4.

4. If product family item is found in multiple plans, then use the plan that serves as feeder plan to the other. For example, if an MPS plan feeds into an MRP plan and product family item exists in both the plans, Oracle Global Order Promising uses the MPS plan.

5. If there is enough cumulative supply for the product family item, then ATP succeeds. The request date is the ATP date. End. Otherwise go to next step.

6. If Component ATP flag is set to Resource, then go to next step. Otherwise, perform forward scheduling. Go to step 8.

7. If MPS plan is used, then use Bills of Resource for capacity check. If MRP plan is used, then use routing for capacity check. If there is sufficient capacity to build the shortage, then ATP succeeds, otherwise perform forward scheduling. Go to step 8.

8. Perform Forward Scheduling. For details, see: Forward Scheduling on page 4-17.

Capable-To-Promise for Product Family Item
When product family is in an MPS plan, you define Bills of Resource (BOR) for product family item. If you set Component ATP item attribute for the product family item to Resource, Oracle Global Order Promising uses Bills of Resource for capable-to-promise check.

Note: Material and Material & Resource options are not supported for product family items.

When ATP is based on the product family level, the Component ATP flag for the member items is not a factor in the setup.
When product family is in MRP plan, you define routing for product family item. However if member items also exist in MRP plan and have routing defined, you should not define routing for product family item because that will load resource twice if same resources are used in both routing. Thus, you should set Component ATP item attribute for the product family to None.

Examples

Example 1 Member Items and the Product Family Item in the Same Plan
Planning uses the ATP enabled plan for ATP Inquiry and sales order scheduling, as long as the plan contains the product family demand and supply. When the product family item and members are part of the same plan and the plan is ATP enabled then ATP uses this plan for the inquiry and order scheduling.

Assume the plan you use is an MRP plan. Product family item is PF1 with member items A at 50% and B at 50%. The Item Aggregation bucket in the plan is set to Item for all buckets.

Supply / Demand picture in the plan is the following:

<table>
<thead>
<tr>
<th>Category</th>
<th>Item</th>
<th>Order Type</th>
<th>Date</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>PF1</td>
<td>Forecast</td>
<td>Day X</td>
<td>100</td>
</tr>
<tr>
<td>Supply</td>
<td>PF1</td>
<td>Planned Order</td>
<td>Day X</td>
<td>100</td>
</tr>
<tr>
<td>Demand</td>
<td>A</td>
<td>Product Family/Model/OC Dependent Demand</td>
<td>Day X</td>
<td>50</td>
</tr>
<tr>
<td>Supply</td>
<td>A</td>
<td>Planned Order</td>
<td>Day X</td>
<td>50</td>
</tr>
<tr>
<td>Demand</td>
<td>B</td>
<td>Product Family/Model/OC Dependent Demand</td>
<td>Day X</td>
<td>50</td>
</tr>
<tr>
<td>Supply</td>
<td>B</td>
<td>Planned Order</td>
<td>Day X</td>
<td>50</td>
</tr>
</tbody>
</table>

Availability picture for PF1 is as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Item</th>
<th>Day X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>PF1</td>
<td>100</td>
</tr>
<tr>
<td>Demand</td>
<td>PF1</td>
<td>0</td>
</tr>
<tr>
<td>Net</td>
<td>PF1</td>
<td>100</td>
</tr>
<tr>
<td>Cum</td>
<td>PF1</td>
<td>100</td>
</tr>
</tbody>
</table>
A sales order (1001) for member item B for 60 units on Day X. Oracle Global Order Promising promises the order based on product family item (PF1) availability picture. After scheduling, Supply / Demand picture is the following:

<table>
<thead>
<tr>
<th>Category</th>
<th>Item</th>
<th>Order</th>
<th>Date</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>PF1</td>
<td>Forecast</td>
<td>Day X</td>
<td>100</td>
</tr>
<tr>
<td>Demand</td>
<td>PF1</td>
<td>Sales Order Number 1001</td>
<td>Day X</td>
<td>60</td>
</tr>
<tr>
<td>Supply</td>
<td>PF1</td>
<td>Planned Order</td>
<td>Day X</td>
<td>100</td>
</tr>
<tr>
<td>Demand</td>
<td>B</td>
<td>Product Family/Model/OC Dependent Demand</td>
<td>Day X</td>
<td>50</td>
</tr>
<tr>
<td>Supply</td>
<td>B</td>
<td>Planned Order</td>
<td>Day X</td>
<td>50</td>
</tr>
<tr>
<td>Demand</td>
<td>A</td>
<td>Product Family/Model/OC Dependent Demand</td>
<td>Day X</td>
<td>50</td>
</tr>
<tr>
<td>Supply</td>
<td>A</td>
<td>Planned Order</td>
<td>Day X</td>
<td>50</td>
</tr>
</tbody>
</table>

After you rerun the plan, the Supply / Demand picture shows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Item</th>
<th>Order</th>
<th>Date</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>PF1</td>
<td>Sales Order Number 1001</td>
<td>Day X</td>
<td>60</td>
</tr>
<tr>
<td>Demand</td>
<td>PF1</td>
<td>Forecast</td>
<td>Day X</td>
<td>40</td>
</tr>
<tr>
<td>Supply</td>
<td>PF1</td>
<td>Planned Order</td>
<td>Day X</td>
<td>100</td>
</tr>
<tr>
<td>Demand</td>
<td>B</td>
<td>Sales Order Number 1001</td>
<td>Day X</td>
<td>60</td>
</tr>
<tr>
<td>Supply</td>
<td>B</td>
<td>Planned Order</td>
<td>Day X</td>
<td>60</td>
</tr>
<tr>
<td>Demand</td>
<td>A</td>
<td>Product Family/Model/OC Dependent Demand</td>
<td>Day X</td>
<td>20</td>
</tr>
<tr>
<td>Supply</td>
<td>A</td>
<td>Planned Order</td>
<td>Day X</td>
<td>20</td>
</tr>
<tr>
<td>Demand</td>
<td>B</td>
<td>Product Family/Model/OC Dependent Demand</td>
<td>Day X</td>
<td>20</td>
</tr>
<tr>
<td>Supply</td>
<td>B</td>
<td>Planned Order</td>
<td>Day X</td>
<td>20</td>
</tr>
</tbody>
</table>

**Example 2 Member Item and the Product Family Item in Separate Plans**
This is the scenario where product family item is planned in an MPS plan while members are planned in an MRP plan. MPS plan feeds into MRP plan. The product family item exists in both plans. Oracle Global Order Promising uses the MPS plan for promising.
For example, item A is a MRP planned item and item PF1 is a MPS planned item. You generate a production plan and feed the production plan as a demand schedule to a manufacturing plan. Suppose both the plans are ATP enabled. If you choose to perform ATP using Product family item then the production plan will be used for ATP inquiry and sales order scheduling.

Assume product family item is PF1 with member items A (50%) and B (50%).

The Supply / Demand picture in the MPS plan is the following:

<table>
<thead>
<tr>
<th>Category</th>
<th>Item</th>
<th>Order</th>
<th>Date</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>PF1</td>
<td>Forecast</td>
<td>Day X</td>
<td>100</td>
</tr>
<tr>
<td>Supply</td>
<td>PF1</td>
<td>Planned Order</td>
<td>Day X</td>
<td>100</td>
</tr>
</tbody>
</table>

The Supply / Demand picture in the MRP plan is the following:

<table>
<thead>
<tr>
<th>Category</th>
<th>Item</th>
<th>Order</th>
<th>Date</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>PF1</td>
<td>Forecast</td>
<td>Day X</td>
<td>100</td>
</tr>
<tr>
<td>Supply</td>
<td>PF1</td>
<td>Planned Order</td>
<td>Day X</td>
<td>100</td>
</tr>
<tr>
<td>Demand</td>
<td>A</td>
<td>Product Family/Model/OC Dependent Demand</td>
<td>Day X</td>
<td>50</td>
</tr>
<tr>
<td>Supply</td>
<td>A</td>
<td>Planned Order</td>
<td>Day X</td>
<td>50</td>
</tr>
<tr>
<td>Demand</td>
<td>B</td>
<td>Product Family/Model/OC Dependent Demand</td>
<td>Day X</td>
<td>50</td>
</tr>
<tr>
<td>Supply</td>
<td>B</td>
<td>Planned Order</td>
<td>Day X</td>
<td>50</td>
</tr>
</tbody>
</table>

A sales order (1001) for member item B for 60 units on Day 1. Oracle Global Order Promising is able to promise the order based on product family item (PF1) availability in the MPS plan. After scheduling, Supply / Demand picture is the following:

The Supply / Demand picture in the MPS plan is the following:

<table>
<thead>
<tr>
<th>Category</th>
<th>Item</th>
<th>Order</th>
<th>Date</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>PF1</td>
<td>Forecast</td>
<td>Day X</td>
<td>100</td>
</tr>
<tr>
<td>Supply</td>
<td>PF1</td>
<td>Planned Order</td>
<td>Day X</td>
<td>100</td>
</tr>
<tr>
<td>Demand</td>
<td>PF1</td>
<td>Sales Order 1001</td>
<td>Day X</td>
<td>60</td>
</tr>
</tbody>
</table>
The Supply / Demand picture in the MRP plan is the following:

<table>
<thead>
<tr>
<th>Category</th>
<th>Item</th>
<th>Order</th>
<th>Date</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>PF1</td>
<td>Forecast</td>
<td>Day X</td>
<td>100</td>
</tr>
<tr>
<td>Supply</td>
<td>PF1</td>
<td>Planned Order</td>
<td>Day X</td>
<td>100</td>
</tr>
<tr>
<td>Demand</td>
<td>A</td>
<td>Product Family/Model/OC Dependent Demand</td>
<td>Day X</td>
<td>50</td>
</tr>
<tr>
<td>Supply</td>
<td>A</td>
<td>Planned Order</td>
<td>Day X</td>
<td>50</td>
</tr>
<tr>
<td>Demand</td>
<td>B</td>
<td>Product Family/Model/OC Dependent Demand</td>
<td>Day X</td>
<td>50</td>
</tr>
<tr>
<td>Supply</td>
<td>B</td>
<td>Planned Order</td>
<td>Day X</td>
<td>50</td>
</tr>
</tbody>
</table>

After you rerun the plan, the Supply / Demand picture in the MPS plan is:

<table>
<thead>
<tr>
<th>Category</th>
<th>Item</th>
<th>Order</th>
<th>Date</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>PF1</td>
<td>Forecast</td>
<td>Day X</td>
<td>40</td>
</tr>
<tr>
<td>Supply</td>
<td>PF1</td>
<td>Planned Order</td>
<td>Day X</td>
<td>100</td>
</tr>
<tr>
<td>Demand</td>
<td>PF1</td>
<td>Sales Order 1001</td>
<td>Day X</td>
<td>60</td>
</tr>
</tbody>
</table>

The Supply / Demand picture in the MRP plan is:

<table>
<thead>
<tr>
<th>Category</th>
<th>Item</th>
<th>Order</th>
<th>Date</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>PF1</td>
<td>Sales Order Number 1001</td>
<td>Day X</td>
<td>60</td>
</tr>
<tr>
<td>Demand</td>
<td>PF1</td>
<td>Forecast</td>
<td>Day X</td>
<td>40</td>
</tr>
<tr>
<td>Supply</td>
<td>PF1</td>
<td>Planned Order</td>
<td>Day X</td>
<td>100</td>
</tr>
<tr>
<td>Demand</td>
<td>B</td>
<td>Sales Order Number 1001</td>
<td>Day X</td>
<td>60</td>
</tr>
<tr>
<td>Supply</td>
<td>B</td>
<td>Planned Order</td>
<td>Day X</td>
<td>60</td>
</tr>
<tr>
<td>Demand</td>
<td>A</td>
<td>Product Family/Model/OC Dependent Demand</td>
<td>Day X</td>
<td>20</td>
</tr>
<tr>
<td>Supply</td>
<td>A</td>
<td>Planned Order</td>
<td>Day X</td>
<td>20</td>
</tr>
<tr>
<td>Demand</td>
<td>B</td>
<td>Product Family/Model/OC Dependent Demand</td>
<td>Day X</td>
<td>20</td>
</tr>
<tr>
<td>Supply</td>
<td>B</td>
<td>Planned Order</td>
<td>Day X</td>
<td>20</td>
</tr>
</tbody>
</table>
For detailed explanation on planning logic, see: Planning Logic, *Oracle Advanced Planning and Scheduling User’s Guide*. 
Allocated ATP

Allocated ATP allows you to allocate scarce material among multiple sales channels. Based on your business strategy, you can establish an Allocation Rule which ranks the sales channels. You can time phase the allocation to reflect changes in your monthly or quarterly objectives. During order promising, Oracle Global Order Promising honors the allocation rule and calculates order due dates based on allocated supply.

Oracle Global Order Promising supports two allocation methods for different business needs:

- Allocated ATP based on User-Defined Allocation Percentage
- Allocated ATP based on Demand Priority

In user-defined allocation percentage method, you specify a time phased allocation percentage for your sales channel or customers. The percentage is applied to total supply to yield allocated supply. Oracle Global Order Promising promises orders based on allocated supply. You can designate priorities to the sales channel or customers on the allocation rule. When there is not enough allocated supply from a higher priority sales channel or customer, Oracle Global Order Promising automatically use available supply from lower priority sales channel or customers to promise orders from higher priority sales channels or customers.

In demand priority based allocation method, you prioritize demand such as, forecast and Master Demand Schedule (MDS). Supply is allocated based on the prioritized demand. The resultant supply is used for order promising. In this method you can also designate priority for the sales channels. When there is not enough allocated supply from a higher priority sales channel, Oracle Global Order Promising automatically uses available supply from lower priority sales channel to promise orders from higher priority sales channels.

The following section describes the two allocation methods in detail.

Allocated ATP based on User-Defined Allocation Percentage

In this allocation method, you define specific allocation percentages for your sales channel or customers. The allocation percentage is applied to total supply and resultant allocated supply is used for order promising.

You can define two types of hierarchies to represent your various sales channels. You use demand classes that are single-level and user-defined or, you use the three levels of customer classes:
Customer Class
Customer
Site
You can designate any items you want to allocate.

Business Application
When supply is scarce, a supplier may decide to ration the supply based on some ratio. An example is using the forecast demand ratio. This way you can give every customer some of the supply. You may fine tune the allocation percentage such that for high priority customers you may want to give more and less to lower priority customers. Allocated ATP lets you input the allocation percentage based on your business rules. Different businesses may group demand differently. Some businesses group demand into different sales channels and allocate supply to each sales channel. Others may first group demand into regions and then to customers in each region. Allocated ATP provides two allocation hierarchies to meet different needs.

Setup
After you perform the mandatory and option setup steps described in the Setup chapter, you need to perform the following additional steps to use Allocated ATP.
To enable allocation, the following setup steps must be performed:
1. Set profile options.
2. Define demand class or customer class.
3. Define allocation rule.
4. Assign allocation rule.
5. View the allocation, after the plan runs.

Profile MSC: Enable Allocated ATP
To enable allocation, set the profile option MSC: Enable Allocated ATP to Yes.

Profile MSC: ATP Allocation Method
To set the allocation method you want to use. This profile has two values. For Allocated ATP based on Allocation Percentage, select: User Defined Allocation Percentage.
Profile MSC: Class Hierarchy
This profile determines the type of hierarchy that will be used. There are two values for this profile:

- Demand Class: single level.
- Customer Class: this hierarchy has 3 levels: customer class, customer, and site.

Profile MSC: Enable ATP Workflow
Workflow notifications are automatically triggered and sent to the item planner and sales representative or customer contact when the following happens:

- ATP fails on request date during scheduling, or
- ATP is successful only by stealing allocation from a lower priority demand class.

Define Demand Classes
If you are using demand class hierarchy, setup demand classes to represent the various sales channels. For details, see: Setting up demand classes, Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User’s Guide.

Define Customer Class Hierarchy
If using customer class hierarchy, setup customer classes and assign a customer class to a customer. For details, see: Setting up customer classes, Oracle Receivables User’s Guide.

Define Allocation Rules
Allocation rules must be defined on the destination server. These rules determine how the supply is allocated.

Allocation rules have the following features: effective dates, percentages, and priorities.

- Allocation Effective Dates: you define time-phased allocation percentages. The ATP engine determines which allocation percentage to use based on the dates of the supplies and demands. For on-hand supply, the allocation that is effective today is used. The allocation hierarchy needs to be the same across the entire planning horizon. Consistent hierarchy must be ensured for all items that have a supply chain or BOM relationship.

- Allocation Percentages: you define allocation percentages for each node in the hierarchy. Your supply is allocated to those nodes based on the allocation
percentages. If the total percentages do not add up to 100% on each level, the remaining percentages are assigned to a system generated node called Other.

Allocation Priorities: you define priorities against your allocation rules to be used to steal supply from other nodes if supply is not available. Priorities are assigned to each node on each level, and you only steal from those with lower priority.

Service Level: not used.

To define Allocation Rules:
1. From the Navigator, choose Advanced Supply Chain Planning.
2. Choose ATP. Then Allocation. Finally, select Define Allocation Rule.

The Allocation Rules window appears.
3. Enter name, description, and the effective dates for the rule. For each demand class or node in a customer class hierarchy, assign an allocation percentage and priority.

**Assign Allocation Rules**

Once the rules have been defined, the allocation rules must be assigned so that Oracle Global Order Promising knows which rule to use for each item. You only assign allocation rule to the end items. This refers to the items that have independent demand. You should not assign allocation rule to components or resources. This is because allocation rule is honored after plan run, and thus is only
applicable to end items. Allocation rules can be assigned at the following levels from least specific to most specific:

- Global
- Item Category (those categories that are part of the planning category set)
- Item
- Organization
- Item/Organization

A more specific level can override a more general level assignment. For example, if there is a rule for a particular item and a different rule for the category of that item, then the effective rule will be the item rule.

**To assign Allocation Rules:**

1. From the Navigator, choose Advanced Supply Chain Planning.
2. Choose ATP. Then Allocation. Finally, choose Assign Allocation Rules.

   The Assign Allocation Rule window appears.
3. Choose level in the Assign To column.

4. Choose the correct level. Depending on the level you have chosen, you must fill in the respective column.

5. In the Allocation Rule column, either enter the name of the Allocation Rule or select the rule from the full list.

**Refreshing Allocations**

Oracle Global Order Promising stores information of which item having which allocation rule for fast access during order promising. To do this, a concurrent program Refresh Allocation Hierarchy is launched automatically every time you make or change an allocation assignment. However, if you update an existing allocation rule which has assignment, you need to manually launch this concurrent program. You do this by clicking the Refresh Hierarchy button on the Allocation Rule window.

The refresh allocation hierarchy process must be finished before the changes take effect in ATP result.
View Allocation

Once you define an allocation rule and assign the rule to your item(s), if you already have an ATP plan that contains the item(s), you can view the allocation result. In this workbench, the left-hand side is the tree structure representing your hierarchy. You can choose a node and view the horizontal plan. For instance, a particular site within a customer for customer class hierarchy or a demand class for demand class hierarchy. The horizontal plan gives a picture over time of the total demand, total supply, net ATP, and cumulative ATP for the total and for the particular node that you chose.

In addition, you can change the allocation percentages and priorities for any node directly from the workbench and immediately view the effects. You can do this by selecting any of the nodes and filling in the Define Allocation Rules form.

To view allocations:
1. Choose the Advanced Supply Chain Planner responsibility.
2. Choose ATP. Then Allocation. Finally, View Allocation.
3. Enter Organization. Then enter either the item.

4. Choose an allocation node from the allocation hierarchy.

Data in the View Allocation Workbench
Each allocation node has four row types:

- Supply: this equals total supply for this item in the ATP plan * actual allocation percentage.
Allocated ATP

- Demand: Oracle Global Order Promising regards the following as demand: sales order, planned order demand, WIP job demand, sales order MDS, reservation, safety stock demand, and manual MDS.
- Net: this equals Supply - Demand.
- Cum: after net and backward consumption for any negative net. This row shows the cumulative quantity.

**Note:** Oracle Global Order Promising does not perform forward consumption in percentage based Allocated ATP.

View Total also has four row types:
- Supply: this equals total supply for the item.
- Demand: this equals total demand.
- Net: this equals Supply - Demand.
- Cum: this shows the cumulative quantity after netting, backward and forward consumption.

**ATP Logic**

**Applying Allocation Rule**
For each supply, Oracle Global Order Promising applies the allocation rule that is effective for the date of that supply.

**Allocation Stealing and Forward Scheduling**
For a demand from a demand class, Oracle Global Order Promising first uses its own allocated supply. If there is shortage, it steals supply from lower priority demand classes starting from the next lower priority as defined on the allocation rule. This is often referred to as Backward Stealing. If there is still shortage after stealing, Oracle Global Order Promising performs capable-to-promise to see if more supply can be generated. If there is still shortage after capable-to-promise, then the order is late.

Next, Oracle Global Order Promising determines when the shortage can be satisfied by finding the availability date based on scheduled receipt. During this check, the system only uses the availability from the demand class itself. There is no stealing.
It then performs a forward capable-to-promise to find a date when the shortage can be made. The answer is the better date of the two methods.

Examples

Here are a few examples to illustrate how allocated ATP can be used. The first example is simple, and shows allocated ATP based on percentages. The second and third examples incorporate the priorities, and thus show the stealing functionality. The first two examples use the demand-class hierarchy. The final example shows how ATP works with a customer-class hierarchy.

Example 1  Simple example to illustrate how allocation is calculated

In this case, the supplier is using two demand classes to represent various sales channels. Demand Class b (DCb) contains customers that are more important to this supplier, and thus the supplies wants to guarantee that 60% of the total supply is allocated to this group of demands. The following table shows the allocation rule:

<table>
<thead>
<tr>
<th>Demand Class</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCa</td>
<td>40%</td>
</tr>
<tr>
<td>DCb</td>
<td>60%</td>
</tr>
</tbody>
</table>

The supply and demand picture for this example is shown in the table below. There is one sales order coming from Demand Class a (DCa) for 20. There are two sources of supply: a work order for 25 and a purchase order for 35.

<table>
<thead>
<tr>
<th>Demands and Supplies</th>
<th>Demand Class</th>
<th>Quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand Sales Order</td>
<td>DCa</td>
<td>20</td>
</tr>
<tr>
<td>Supply Work Order</td>
<td>-</td>
<td>25</td>
</tr>
<tr>
<td>Supply Purchase Order</td>
<td>-</td>
<td>35</td>
</tr>
</tbody>
</table>

The overall availability picture is $25 + 35 - 20 = 40$. This is calculated by adding the total supplies and subtracting the already committed demand of 20. If there is no allocation, the availability for any ATP requests from any demand class is 40.

With the allocation rules in place, this supply is rationed to the demand classes based on the predefined percentages.

For Demand Class a (DCa):
Thus, the ATP quantity for this demand class is $4 = 10 + 14 - 20$.

For Demand Class b (DCb):

<table>
<thead>
<tr>
<th>Demands and Supplies</th>
<th>Quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Work Order</td>
<td>$15 = (25 \times 60%)$</td>
</tr>
<tr>
<td>Supply Purchase Order</td>
<td>$21 = (35 \times 60%)$</td>
</tr>
</tbody>
</table>

Thus, the ATP quantity for this demand class is $36 = 15 + 21 - 0$.

Therefore, with the allocation rules, demand class DCb is guaranteed to be allocated 60% of the supply which is 36. Without these rules in place, customers from demand class DCa could keep submitting orders, and when a demand came from DCb, no supply would be available.

**Example 2 Allocation stealing example**

This example illustrates how allocated ATP works with both percentages and priorities. The supply is allocated to the demand classes based on the percentages that are defined within the allocation rules. Yet, if a higher priority demand class still needs more supply, they can steal the necessary supply from the lower priority demand classes.

The Allocation rule is as follows:

<table>
<thead>
<tr>
<th>Demand Class</th>
<th>Priority</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC1</td>
<td>1</td>
<td>30%</td>
</tr>
<tr>
<td>DC2</td>
<td>2</td>
<td>20%</td>
</tr>
<tr>
<td>DC3</td>
<td>3</td>
<td>50%</td>
</tr>
</tbody>
</table>

In this example, the supplier has defined three demand classes. He has assigned certain percentages to these demand classes, but in addition he has ranked the
priorities of these demands. In this scenario, Demand Class c (DCc) has the largest number of customers and thus has been allocated the largest percentage of the available supply. However, Demand Class a (DCa) has more important customers. Thus, they should be allowed to steal the supply from the other demand classes if they want to submit an order.

The Allocation picture is as follows:

<table>
<thead>
<tr>
<th>Demand Class</th>
<th>Row Type</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC1</td>
<td>Supply</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Demand</td>
<td>20</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Net</td>
<td>10</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Cum</td>
<td>10</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>DC2</td>
<td>Supply</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Demand</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Net</td>
<td>10</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Cum</td>
<td>10</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>DC3</td>
<td>Supply</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Demand</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Net</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Cum</td>
<td>20</td>
<td>40</td>
<td>60</td>
</tr>
</tbody>
</table>

Assume that the total supply is 100 per day.

A sales order demand comes in DC2 on Day 2 for quantity 60. Oracle Global Order Promising does the following:

- On Day 2, cumulative availability for DC2 = 30. There is a shortage of 30.
- There is a lower priority demand class DC3 that has cumulative availability of 40 on Day 2. Steal 30 from DC2.
- Return success.

The allocation picture after scheduling the above sales order is:
The above is what you see in View Allocation Workbench. Even though the cumulative availability of DC3 is internally adjusted, it is currently not showing in the user interface.

In other words, the availability for DC3 is the actually the following:

<table>
<thead>
<tr>
<th>Demand Class</th>
<th>Row Type</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC1</td>
<td>Supply</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Demand</td>
<td>20</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Net</td>
<td>10</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Cum</td>
<td>10</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>DC2</td>
<td>Supply</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Demand</td>
<td>10</td>
<td>60</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Net</td>
<td>10</td>
<td>-40</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Cum</td>
<td>0</td>
<td>-30</td>
<td>20</td>
</tr>
<tr>
<td>DC3</td>
<td>Supply</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Demand</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Net</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Cum</td>
<td>20</td>
<td>40</td>
<td>60</td>
</tr>
</tbody>
</table>

DC3 can only promise sales order demand for 10 either on Day 1 or Day 2.

**Example 3  Allocation using Customer Class Hierarchy**

This example illustrates how allocated ATP works with customer class hierarchy. The supply is allocated to the customer classes, customers, and sites based on the percentages that were defined within the allocation rules.
The following diagram illustrates a customer class hierarchy:

**Figure 4–18  Customer Class Hierarchy Example**

The following percentages and priorities have been defined in the allocation rule. The actual percentage is calculated by multiplying the entered percentage by the parent’s allocation percentage. For example, in the computer industry there are 3 customers, Dell, IBM, and other. The percentages for those 3 must add up to 100. The entered percentage for Dell is 40%, and thus the actual percentage of the total that Dell receives is 40% of what the Computer Industry is allocated, and thus 28%.

**Allocation Rule**

The following tables show the allocation rule:

**Customer Class Level**

<table>
<thead>
<tr>
<th>Customer Class</th>
<th>Priority</th>
<th>Percentage</th>
<th>Actual Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Industry</td>
<td>1</td>
<td>70%</td>
<td>70%</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>30%</td>
<td>30%</td>
</tr>
</tbody>
</table>
### Customer Level

<table>
<thead>
<tr>
<th>Customer Class</th>
<th>Customer</th>
<th>Priority</th>
<th>Percentage</th>
<th>Actual Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Industry</td>
<td>Dell</td>
<td>1</td>
<td>40%</td>
<td>28%</td>
</tr>
<tr>
<td>Computer Industry</td>
<td>IBM</td>
<td>2</td>
<td>40%</td>
<td>28%</td>
</tr>
<tr>
<td>Computer Industry</td>
<td>Other</td>
<td>3</td>
<td>20%</td>
<td>14%</td>
</tr>
</tbody>
</table>

### Site Level

<table>
<thead>
<tr>
<th>Customer Class</th>
<th>Customer</th>
<th>Site</th>
<th>Priority</th>
<th>Percentage</th>
<th>Actual Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Industry</td>
<td>Dell</td>
<td>Europe</td>
<td>1</td>
<td>50%</td>
<td>14%</td>
</tr>
<tr>
<td>Computer Industry</td>
<td>Dell</td>
<td>Asia</td>
<td>2</td>
<td>25%</td>
<td>7%</td>
</tr>
<tr>
<td>Computer Industry</td>
<td>Dell</td>
<td>Other</td>
<td>3</td>
<td>25%</td>
<td>7%</td>
</tr>
<tr>
<td>Computer Industry</td>
<td>IBM</td>
<td>Russia</td>
<td>1</td>
<td>50%</td>
<td>14%</td>
</tr>
<tr>
<td>Computer Industry</td>
<td>IBM</td>
<td>China</td>
<td>1</td>
<td>25%</td>
<td>7%</td>
</tr>
<tr>
<td>Computer Industry</td>
<td>IBM</td>
<td>Other</td>
<td>1</td>
<td>25%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Assume 1000 units total supply every day. Allocation picture is:

**Note:** In this example, only a few nodes are selected to show the row types.
Allocated ATP

### Explanation of allocation stealing:

- A demand for Computer Industry-Dell-Europe can steal available supply from all the other nodes.
- A demand for Computer Industry-IBM-Russia can steal available supply only from Computer-Industry-Other or Other.
- A demand for Other cannot steal.

### Allocated ATP Based on Demand Priority

In this allocation method, supply is allocated based on prioritized demand. Oracle Advanced Supply Chain Planning supports this method of allocation by pegging supply based on prioritized demand. Oracle Global Order Promising uses the result.

In this method, Oracle Global Order Promising allows high priority sales channel to steal supply from lower priority sales channel. You define priorities against your allocation rules. These priorities can be used to steal supplies from lower priority nodes if supplies are not available. The allocation rules are assigned globally, to the item category, or to the item. Notifications are sent to you if scheduling fails or if scheduling is only successful by stealing allocation from other nodes.

### Business Application

If you want to protect your high priority customers or sales channels by securing supply based on the forecast demand for those customers, you use this allocation method. In this method, supply is allocated based on prioritized demand. Forecast or Master Demand Schedule for high priority customers or sales channels would
have a higher priority (lower priority number) number associated. Thus supply is allocated to those demand first. When orders from these customers or sales channels comes, they are promised based on allocated supply.

Setup

After you have performed the mandatory and optional setup steps described in the Setup chapter, you need to perform the following additional setup steps:

1. Run the concurrent program Create ATP Partitions. You only need to perform this step once.
2. Set profiles options that are described in the following pages.
3. Define a demand class.
4. Define an allocation rule.
5. Assign an allocation rule.
6. Enter demand by demand class.
7. Run an ATP plan.
8. Optionally, run the concurrent program ATP Post Plan Processing.
9. View the allocation.

Create ATP Partitions
Oracle Global Order Promising uses partitions to segregate data by plan. This improves performance. Run this concurrent program once, before you start using Allocated ATP.

Profile MSC: Enable Allocated ATP
To enable allocation, set the profile option MSC: Enable Allocated ATP to Yes.

Profile MSC: ATP Allocation Method
To set the allocation method you want to use. This profile has two values. For Allocated ATP based on demand priority, select Demand Priority.

Profile MSC: Class Hierarchy
This profile determines the type of hierarchy that will be used. Only Demand Class is supported in this allocation method. Choose Demand Class.
Profile MSC: Enable Allocated ATP Workflow
To enable workflow notifications that are specifically for Allocated ATP, set the profile option MSC: Enable Allocated Workflow to Yes.
Workflow notifications are automatically triggered and sent to the item planner, sales representative, and customer contact when the following happens:

- ATP fails on request date during scheduling, or
- ATP is successful only by stealing allocation from a lower priority demand class.

Define Demand Classes
You need to setup demand classes to represent the various sales channels. For more information, see: Setting up demand classes, Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User’s Guide.

Define Allocation Rules
Allocation rules must be defined on the destination server. These rules tells Oracle Global Order Promising the demand classes you are allocating and their relative priority.

- Effective Dates: you only need to create one date range starting from today. Currently Global Order Promising does not support different allocation hierarchy for different date range.
- Demand Class: specify the demand class that will be allocated.
- Maximum Allocation %, Actual Allocation %: these fields are used by allocation based on user-defined allocation percentage.
- Priority: priority is used for stealing. When a higher priority demand class does not have enough supply to promise an order, it can steal availability supply from lower priority demand classes.
- Service Level: this field is currently not used by Oracle Global Order Promising.

Upon saving a new allocation rule, the system inserts a row with OTHER as the demand class. It is used as a generic bucket for excess supply or supply that is pegging to a demand class that is not on the rule.

To define Allocation Rules:
1. From the Navigator, choose Advanced Supply Chain Planning.
2. Choose ATP. Then Allocation. Finally, Define Allocation Rule.
The Allocation Rules window appears.

**Figure 4–19  Allocation Rules Window**

3. Enter name, description, and the effective dates for the rule. Enter demand class and its priority.

**Assigning Allocation Rules**

Once the rules have been defined, the allocation rules must be assigned so that the Oracle Global Order Promising knows which rule to use for each item. This allocation method is only meaningful for end items. You should only assign allocation rule to those items that have independent demand.
Allocation rules can be defined at the following levels from least specific to most specific:

- Global
- Item Category (those categories that are part of the planning category set)
- Item
- Organization
- Item / Organization

**To assign Allocation Rules:**

1. From the Navigator, choose Advanced Supply Chain Planning.
2. Choose ATP. Then Allocation. Finally, select Assign Allocation Rules.

The Assign Allocation Rules window appears:

**Figure 4–20 Assign Allocation Rules Window**

![Figure 4–20 Assign Allocation Rules Window](image)

3. Choose level in the Assign To column.
4. Choose the correct level. Depending on the level you have chosen, you must fill in the respective column.

5. In the Allocation Rule column, either enter the name of the Allocation Rule or select the rule from the full list.

**Enter Demand by Demand Class**
The premise of using this allocation method is to have prioritize demand by demand class. Whether you are using forecast or Master Demand Schedule, you need to create the demand by demand class and indicate the priority on the demand entries. You enter the priority number in the demand entry flexfield called Priority.

**Run ATP Plan**
You need to identify a particular plan, such as MPS, MRP, or DRP for ATP by checking the Check ATP flag in the Plan Definition window in Oracle Advanced Supply Chain Planning.

It is very important for you to carefully decide the Priority Rule and pegging options. Oracle Global Order Promising uses the output.

For details on priority pegging, see: Pegging, Oracle Advanced Planning and Scheduling User’s Guide.

**ATP Post Plan Processing**
When you launch a plan that has ATP flag checked, the plan run process automatically launch ATP Post Plan Processing at the end of the plan run. This concurrent program analyzes the plan output and summarizes the supply according to item’s allocation rule. Only when this program finishes successfully, you will have a valid availability picture for order promising.

If the plan does not have ATP flag checked, you can manually launch this concurrent program for the plan.

**View Allocation**
Once the ATP Post Plan Processing concurrent program successfully finishes, you can view the allocation result in View Allocation Workbench. In this workbench, the left-hand side is the tree structure representing your demand classes. You can choose a node and view the horizontal plan. The horizontal plan gives a picture over time of the total demand, total supply, net ATP, and cumulative ATP for the total and for the particular node that you chose.
Allocated ATP

To view Allocations:
1. From the Navigator, choose Advanced Supply Chain Planning.
2. Choose ATP. Then Allocation. Finally, View Allocation.
   The View Allocations window appears.

*Figure 4–21 View Allocations Window*

3. Enter Organization. Then enter either the item.
4. Choose an allocation node from the allocation hierarchy.
Data in the View Allocation Workbench

Each allocation node has four row types:

- Supply: this equals total supply that pegs to independent demand for the demand class you are looking at.
- Demand: the demand for the demand class. Oracle Global Order Promising regards the following as demand: sales order, planned order demand, WIP job demand, SO MDS, Reservation, Safety Stock demand, and Manual MDS.
- Net: this equals Supply - Demand.
- Cum: after net, backward and forward consumption for any negative net, this row shows the cumulative quantity.

View Total has four row types:

- Supply: this equals total supply for the item.
- Demand: this equals total demand.
- Net: this equals Supply - Demand.
- Cum: this shows the cumulative quantity after netting, backward and forward consumption.

ATP Logic

ATP Post Plan Processing

The concurrent program uses pegging to identify the supply for a particular demand class.

The logic is as follows, for any item that has allocation rule assigned:

- If the supply pegs to independent demand that has a demand class on the allocation rule, then the supply goes to that demand class.
- If the supply pegs to independent demand that has a demand class not present on the allocation rule, then the supply goes to OTHER bucket.
- If the supply pegs to independent demand that does not have a demand class, then the supply goes to OTHER.
- Excess supply, which includes supply pegged to safety stock demand goes to OTHER.
The due date on the supply order is used to indicate the supply date for order promising.

The following supply is ignored: supply pegged to negative on-hand, supply pegged to shrinkage demand, and supply that Oracle Advanced Supply Chain Planning recommends to cancel.

Independent demand includes external and internal sales orders, forecast, and Master Demand Schedule.

Stealing and Forward Scheduling Logic
For a demand from a demand class, Oracle Global Order Promising first uses its own allocated supply. If there is shortage, it steals supply from lower priority demand classes starting from the next lower priority as defined on the allocation rule. This is often referred to as Backward Stealing. If there is still shortage after stealing, Oracle Global Order Promising performs capable-to-promise to see if more supply can be generated. If there is still shortage after capable-to-promise, then the order is late.

Next, Oracle Global Order Promising determines when the shortage can be satisfied by first finding the availability date based on scheduled receipt. During this check, a high priority demand class steals from a lower priority demand class on a daily basis. This is often referred to as Forward Stealing. It then performs a forward capable-to-promise to find a date when the shortage can be made. The answer is the better date of the two methods.

Examples
The following examples illustrate Allocated ATP based on demand priority.

---

**Note:** The pegging shown below is just an example, and may vary based on factors such as planning priority specified for a sales order or forecast.
Example 4 Demonstrates the allocation and stealing logic
Oracle Advanced Supply Chain Planning Output is the following:

<table>
<thead>
<tr>
<th>Demand Class</th>
<th>Date 1</th>
<th>Date 2</th>
<th>Date 3</th>
<th>Date 4</th>
<th>Date 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>fc11 = 20</td>
<td>fc12 = 20</td>
<td>fc13 = 20</td>
<td>fc14 = 20</td>
<td>fc15 = 20</td>
</tr>
<tr>
<td>DC1 (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DC2 (2)</td>
<td>fc21 = 80</td>
<td>fc22 = 80</td>
<td>fc23 = 80</td>
<td>fc24 = 80</td>
<td>fc25 = 80</td>
</tr>
<tr>
<td>DC3 (3)</td>
<td>fc31 = 100</td>
<td>fc32 = 100</td>
<td>fc33 = 100</td>
<td>fc34 = 100</td>
<td>fc35 = 100</td>
</tr>
<tr>
<td>Supply</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>ASCP Pegging</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>20-fc11</td>
<td>20-fc12</td>
<td>20-fc13</td>
<td>20-fc14</td>
<td>20-fc15</td>
</tr>
<tr>
<td>-</td>
<td>80-fc21</td>
<td>80-fc22</td>
<td>80-fc23</td>
<td>80-fc24</td>
<td>80-fc25</td>
</tr>
<tr>
<td>-</td>
<td>100-fc31</td>
<td>100-fc32</td>
<td>100-fc33</td>
<td>100-fc34</td>
<td>100-fc35</td>
</tr>
</tbody>
</table>

Note: fc11 and others represent the forecast identifier.

Allocation Rule is:
- DC1, Priority 1
- DC2, Priority 2
- OTHER, Priority 3

The ATP Allocation is the following:

<table>
<thead>
<tr>
<th>Demand Class</th>
<th>Date 1</th>
<th>Date 2</th>
<th>Date 3</th>
<th>Date 4</th>
<th>Date 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC1 (1)</td>
<td>Supply</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Demand</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Net</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>DC2 (2)</td>
<td>Supply</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Demand</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Net</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>DC3 (3)</td>
<td>Supply</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Demand</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Net</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
The sales order demand has:

- Demand Class = DC1
- Quantity = 430
- Request Date = Date 2

Assuming no CTP, the ATP Result is Request Date Quantity = 400 and Schedule Date = Date 3.

The Allocation is the following:

<table>
<thead>
<tr>
<th>Demand Class</th>
<th>Date 1</th>
<th>Date 2</th>
<th>Date 3</th>
<th>Date 4</th>
<th>Date 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC1 (1)</td>
<td>Supply</td>
<td>20</td>
<td>20+160+200</td>
<td>20+10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Demand</td>
<td>0</td>
<td>0</td>
<td>-430</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Net</td>
<td>20</td>
<td>380</td>
<td>-400</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Cum</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>DC2 (2)</td>
<td>Supply</td>
<td>80</td>
<td>80+(-160)</td>
<td>80+(-10)</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Demand</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Net</td>
<td>80</td>
<td>-80</td>
<td>70</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Cum</td>
<td>0</td>
<td>0</td>
<td>70</td>
<td>150</td>
</tr>
<tr>
<td>DC3 (3)</td>
<td>Supply</td>
<td>100</td>
<td>100+(-200)</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Demand</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Net</td>
<td>100</td>
<td>-100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Cum</td>
<td>0</td>
<td>0</td>
<td>100</td>
<td>200</td>
</tr>
</tbody>
</table>

Explanation:

- On request date, there are 40 units available from DC1, 160 from DC2, 200 from DC3.
- After stealing, there are 30 units short.
- On Date 3, there are 20 units from DC1. Now the shortage is 10. Oracle Global Order Promising can steal 10 from DC2. Thus schedule date equals Date 3.
- After the order is scheduled for Date3, the demand appears on Date 3 under DC1. On Date 2 (request date), supply for DC2 and DC3 are adjusted to reflect
backward stealing. On Date 3, supply is adjusted for DC2 to reflect forward stealing.

**Example 5  Demonstrates the Allocation Derivation**

This example further illustrates how allocation is derived based on Oracle Advanced Supply Chain Planning pegging and allocation rule. Same input to Oracle Advanced Supply Chain Planning and output from Oracle Advanced Supply Chain Planning as in Example 1.

Allocation Rule is:

- DC1, Priority 1
- OTHER, Priority 2

The ATP Allocation is the following:

<table>
<thead>
<tr>
<th>ATP Allocation</th>
<th>Date 1</th>
<th>Date 2</th>
<th>Date 3</th>
<th>Date 4</th>
<th>Date 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC1 (1)</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>OTHER (2)</td>
<td>180</td>
<td>180</td>
<td>180</td>
<td>180</td>
<td>180</td>
</tr>
</tbody>
</table>

Explanation:

- Since DC2 and DC3 do not appear on the allocation rule, the supplies that peg to DC2’s demand and DC3’s demand go to the OTHER bucket.

**Example 6  Prioritized Demands**

The prioritized demands for two demand classes are fed into Oracle Advanced Supply Chain Planning. However, due to the order modifier, there is excess supply.

The Order Modifier is a Fixed Order Quantity of 250.

The Oracle Advanced Supply Chain Planning Output is:

<table>
<thead>
<tr>
<th>Demand Class</th>
<th>Date 1</th>
<th>Date 2</th>
<th>Date 3</th>
<th>Date 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DC1 (1)</td>
<td>fc11 = 20</td>
<td>fc12 = 20</td>
<td>fc13 = 20</td>
<td></td>
</tr>
<tr>
<td>DC2 (2)</td>
<td>fc21 = 80</td>
<td>fc22 = 80</td>
<td>fc23 = 80</td>
<td></td>
</tr>
<tr>
<td>Supply</td>
<td>250</td>
<td>250</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Allocated ATP

<table>
<thead>
<tr>
<th>Demand Class</th>
<th>Date 1</th>
<th>Date 2</th>
<th>Date 3</th>
<th>Date 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASCP Pegging</td>
<td>20-fc11</td>
<td>50-fc23</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>80-fc21</td>
<td>20-fc14</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20-fc12</td>
<td>80-fc24</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>80-fc22</td>
<td>100-excess</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20-fc13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>30-fc23</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Allocation Rules are:

- DC1, Priority 1
- DC2, Priority 2
- OTHER, Priority 3

The ATP Allocation is:

<table>
<thead>
<tr>
<th>Demand Class</th>
<th>Date 1</th>
<th>Date 2</th>
<th>Date 3</th>
<th>Date 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATP Allocation</td>
<td>DC1 (1)</td>
<td>60</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>DC2 (2)</td>
<td>190</td>
<td>130</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>OTHER (3)</td>
<td>-</td>
<td>100</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>
This chapter provides the explanation of the various capabilities supported when performing ATP based on planning output.

Topics covered in this section include the following:

- **End Item Substitution** on page 5-2
- **Multiple Plans** on page 5-33
- **Improved ATP Performance** on page 5-34
- **Unplanned Items** on page 5-36
- **Online Replan of an ATP Plan** on page 5-37
End Item Substitution

Oracle Global Order Promising supports end item substitution. End item substitution is where an item is substituted when the requested product is not available. Whether substitution occurs and how items are substituted depends on the customer or customer site ordering the item.

Setup

After you complete the mandatory and optional setup steps described in the Setup chapter, you need to perform the following setup steps in order to use End Item Substitution capability:

1. Define item substitution relationship.
2. Set item attribute to establish a window for substitution.
3. Set profile to control the generation of supplies for capable-to-promise.
4. Set profile to control workflow notification when substitution occurs during sales order scheduling.
5. Have an ATP plan that has end item substitution enabled.

Each of these steps are explained in detail in the section that follows.

1. Define Item Substitution Relationship

You use the Item Relationship window in Oracle Inventory to define item substitution relationship.

For detailed instructions, see: Define a Substitution Relationship, Oracle Advanced Planning and Scheduling Implementation and User’s Guide.

Note: Oracle Global Order Promising currently only supports No Substitution or Full Substitution. Partial substitution is not supported. This means a request is not fulfilled by using a partial quantity from the requested item and a partial quantity from substituted item.

2. Set Item Attribute to establish a Window for Substitution

While substitutions are part of regular business process, substitutions done too far ahead of demand might not be appropriate. For example, if you find a substitute supply four weeks ahead of the demand, you may not want to substitute as you
may have a good chance of producing supply for the demanded item in the next three weeks.

A substitution window allows you to limit the time frame for the substitution. You can define the substitution window for an item using item attribute form in Oracle Inventory. The substitution window is effective in the forward direction from every demand. All substitute supplies prior to demand are eligible for substitution. Please note that the substitution window is applicable only for substitution; if you are netting supply and demand from the same item, the substitution window does not apply.

The Item Substitution window is under Item window in the MPS/MRP Planning tab.

Figure 5–1  Item Window

You have the following choices:
End Item Substitution

- Cumulative Manufacturing Lead Time
- Cumulative Total Lead Time
- Total Lead Time
- User-Defined

3. Set Profile to Control the Generation of Supplies
When Oracle Global Order Promising tries to create new supply during its capable-to-promise process, you can control which item Oracle Global Order Promising uses to create new supply. This is helpful when you may not want to create new supply for phased out items.

Profile MSC: Choice of Item for Which to Create Supplies in Substitute Relationship has following values:
- Demanded Item: planned orders are created for the demanded item.
- Highest Level Item: planned orders are created for the highest level item in a substitution chain for the demanded item.
- By Item Attribute: if Create Supply item attribute is Yes, demand is created for the demanded item with the item attribute. If Create Supply is no, demand is created for the nearest item in a substitution chain that has the item attribute.

Note: Create Supply is a checkbox under MPS/MRP Planning tab of the Item window.

Suppose there are three items: A, B and C, where Item B can be substituted for A and Item C can be substituted for B. These two relationships are entered in the Item Relationships form as follows:

<table>
<thead>
<tr>
<th>From Item</th>
<th>To Item</th>
<th>Type</th>
<th>Reciprocal</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>Substitute</td>
<td>Not Checked</td>
</tr>
<tr>
<td>B</td>
<td>C</td>
<td>Substitute</td>
<td>Not Checked</td>
</tr>
</tbody>
</table>

Using typographical notation, we show this as:
- A --> B
- B --> C
We are showing which way the demand is passed from one item to its substitute. An inferred relationship is that C, which can be substituted for B, can also be substituted for A. We can show this as:

- $A \rightarrow C$

Now, we have a substitution chain that we can show as:

- $A \rightarrow B \rightarrow C$

In this chain, we say that C is the highest level item. Companies might define a chain such as this in the case of product phase outs. Items A and B are no longer manufactured and are phased out. If a customer orders A or B, the current item C is shipped when there are no more supplies of A and B. New planned orders are created for C only. For this scenario, you may set the profile MSC: Choice of Items for which to Create Supplies in a Substitute Relationship = Highest Level Item.

4. Set Profile to Control Workflow Notification When Substitution Occurs During Sales Order Scheduling

You need to set profile MSC: Enable ATP Workflow to Yes if you want notification to be sent to the appropriate people when item substitution occurs during sales order scheduling.

5. Have an ATP Plan that has End Item Substitution Enabled

Oracle Global Order Promising enables substitution if the underlying ASCP plan has end item substitution enabled.

For details on how to enable end item substitution in an ASCP plan, see: End-Item Level Substitution, Oracle Advanced Planning and Scheduling Implementation and User's Guide.

Note that you can optionally specify a Substitution Set in an ASCP Plan. If you specify one, Oracle Advanced Supply Chain Planning and Oracle Global Order Promising will only honor those substitution relationships that are associated with the named substitution set.

**ATP Logic**

**Substitution Logic in a Single Organization**

Oracle Global Order Promising uses up the on-hand and scheduled receipts for the requested item and its substitutes prior to the request date. Once ATP logic exhausts
all the possible supplies from demanded and substitute items prior to the request date, it will start looking for scheduled receipts and fresh supplies in the forward direction. While evaluating the existing scheduled receipts, Oracle Global Order Promising develops a consolidated supply picture across requested item and its substitutes. If it is not successful in satisfying the request, then Oracle Global Order Promising tries first to project the availability date, and then to present the earliest date.

Oracle Global Order Promising first evaluates the existing supply by request date for the requested item in the shipping organization. If there is not enough supply for the requested item, then it evaluates existing supply comprising on-hand and scheduled receipts for substitute items one by one. Global Order Promising stops evaluating when it finds enough supply for any substitute item.

If none of the substitute items can meet the requested quantity, Oracle Global Order Promising attempts to create supply based on the profile MSC: Choice of Item for Which to Create Supplies in Substitute Relationship. For example, if the item can be made using additional capacity and components supply. If Oracle Global Order Promising cannot create enough supply for the requested item on the request date, it attempts to create supply for the substitute items one by one for shortage of the substituted items. It stops evaluating when it finds enough supply.

If none of the items can meet the request, Oracle Global Order Promising performs forward scheduling for the requested item, then substitute items. Oracle Global Order Promising recommends the item that can meet the demand the earliest.

**Searching Supply Chain for Substitutes**

Oracle Global Order Promising first evaluates the existing supply by request date for the requested item across the supply chain using breadth-first logic. If there is not enough supply for the requested item, Oracle Global Order Promising evaluates existing supply for substitute items one by one across the supply chain using breadth-first logic. It stops when it finds supply for any substitute item.

If Oracle Global Order Promising needs to suggest supply, it creates supply using existing capable-to-promise logic.

Oracle Global Order Promising uses a plan-level option selection to determine if breadth-first logic needs to be applied. The plan level option is the End Item Substitution checkbox in the Decision Rules tab on the Plan Options window. If you select this checkbox, you get the breadth-first logic for items that have end item substitutions defined.

The diagram below illustrates the breadth-first search concept. Items A and B are two substitute items and they are enabled in different organizations. The search for
existing supply of a substitute proceeds breadth first, i.e., Oracle Global Order Promising searches for items A and B in Org 1, Org 2, Org 3, Org 4, and Org 5. If you have setup your substitution, ATP searches for each item individually. If Org 3 is set to Rank 1 and Org 2 to Rank 2, then ATP follows this path: Org 1, Org 3, Org 2, Org 4, and Org 5 while evaluating existing on-hand and scheduled receipts for both native and substitute supplies across the supply chain.

*Figure 5–2  Breadth-First Search Concept*

It is assumed that both items A and B have the same sourcing rule. If substitution needs to happen in all organizations and all organizations can swap materials freely, you can expect that substitute items are enabled in all relevant organizations and
sourcing rules exist for all substitute items to ship materials to all relevant organizations. If you do not establish sourcing rules, the substitution logic does not make any assumptions about sourcing rules.

**Note:** When end item substitution is not enabled, Oracle Global Order Promising performs depth-first search. In the above example, the order of search will be:

Org 2 -> Org 5 -> Org 3 -> Org 4

### Resolving Ties in the Substitution Chain

Oracle Global Order Promising provides only one item as an outcome of your supply query. There may be a case where you have a tie between the requested item and a substitute item. If both the requested item and a substitute item are available on the same day, Oracle Global Order Promising promises the order with the requested item.

For example, items A, B, and C are three substitute items. You get demand for 10 units of item A. You find 10 units of supply of both item A and item B on Day 3. The result is that Oracle Global Order Promising suggests item A as the requested item.

If there are multiple ties and the requested item is not in the tie, Oracle Global Order Promising suggests the nearest item in the substitution chain. For example, if you do not have any supply for A but you can find supply for both item B and C on the same day, Oracle Global Order Promising suggests item B.

### Substitution in Allocated ATP

Oracle Global Order Promising supports allocation of materials to various segments of your demand. When demand cannot be satisfied using allocated supply, Oracle Global Order Promising first steals any available supply from lower priority sales channels. Then, if there is a shortage after stealing, Oracle Global Order Promising performs an availability check on the substitute item.

**Note:** Currently, Oracle Global Order Promising only supports All or None substitution.

### Examples

The following examples provide illustrations of the ATP logic.
Example 1 Substitution Using Supplies by Request Date

In this example you have three items: A, A1, and A2. A2 is the highest level item in the substitution chain. A can use the A1 or A2 supply, and A1 can use the A2 supply. The following tables show you the supply and demand picture for items in the substitution chain. There are two inquiries for Item A:

1. Day 12 for 50 units
2. Day 35 for 80 units (after you schedule the first demand)

The substitution window width is 5 days for all items.

Item A

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Item</th>
<th>Day 2</th>
<th>Day 5</th>
<th>Day 10</th>
<th>Day 12</th>
<th>Day 15</th>
<th>Day 35</th>
<th>Day 40</th>
<th>Day 45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>A</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Supply</td>
<td>A</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>70</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Item A1

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Item</th>
<th>Day 2</th>
<th>Day 5</th>
<th>Day 10</th>
<th>Day 12</th>
<th>Day 15</th>
<th>Day 35</th>
<th>Day 40</th>
<th>Day 45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>A1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Supply</td>
<td>A1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>

Item A2

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Item</th>
<th>Day 2</th>
<th>Day 5</th>
<th>Day 10</th>
<th>Day 12</th>
<th>Day 15</th>
<th>Day 35</th>
<th>Day 40</th>
<th>Day 45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>A2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Supply</td>
<td>A2</td>
<td>0</td>
<td>35</td>
<td>0</td>
<td>17</td>
<td>0</td>
<td>30</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Demand on Day 12 for item A is satisfied by consuming 50 units of A2. Because Oracle Global Order Promising currently does not support Partial Fulfillment, the demand is fulfilled by using supply from only one item.

The promise date for the first demand is Day 12 with item A2 and an ATP quantity of 50. Oracle Global Order Promising collects substitute supplies only if the supplies are in excess and after satisfying the existing committed native demand. In this example, although there are 35 units of supply on Day 5 for item A2, only 33 units can be used for substitution because it needs to satisfy its own demand for 2 units.
Demand for item A on Day 35 first consumes its own supply of 80 units. Supply from item A1 is not considered because of the substitution window. The promise date for the demand is Day 35 with an ATP quantity of 80. No substitution occurs.

**Example 2  Production Prior to Request Date**

Now, the supply picture changes so that the substitution window is set to 10 days for all items. There are two inquiries for item A: one on Day 12 for 50 units and the other on for 80 units on Day 35 after you schedule the first demand. The profile MSC: Choice of Item for Which To Create Supplies in Substitute Relationship is set to Demanded Item.

**Item A**

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Item</th>
<th>Day 2</th>
<th>Day 5</th>
<th>Day 10</th>
<th>Day 12</th>
<th>Day 15</th>
<th>Day 35</th>
<th>Day 40</th>
<th>Day 45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>A</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Supply</td>
<td>A</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

**Item A1**

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Item</th>
<th>Day 2</th>
<th>Day 5</th>
<th>Day 10</th>
<th>Day 12</th>
<th>Day 15</th>
<th>Day 35</th>
<th>Day 40</th>
<th>Day 45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>A1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Supply</td>
<td>A1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>0</td>
<td>10</td>
<td>65</td>
<td>0</td>
</tr>
</tbody>
</table>

**Item A2**

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Item</th>
<th>Day 2</th>
<th>Day 5</th>
<th>Day 10</th>
<th>Day 12</th>
<th>Day 15</th>
<th>Day 35</th>
<th>Day 40</th>
<th>Day 45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>A2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Supply</td>
<td>A2</td>
<td>0</td>
<td>35</td>
<td>0</td>
<td>17</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>

The first demand of 50 units will be satisfied as item A2 ATP quantity is 50 on Day 12.

The next demand of 80 units can be met in two ways:

- Use substitute supplies from item A1 on Day 12 through Day 40, so the promise date is Day 40, or
Use existing supply of 10 units on Day 5 and try to produce 70 units prior to the request date of Day 35, assuming you have the capacity to produce by Day 35.

Considering these two options, Oracle Global Order Promising recommends an ATP date of Day 35 based on the following supply:

- Planned order for 70 units of item A on Day 35.
- Supply of 10 units of item A on Day 5.

Oracle Global Order Promising suggests new supplies based on the profile MSC: Choice of Item for Which to Create Supplies in Substitute Relationship setting, if the existing supplies for a demanded item or the substitute items cannot meet the request on the request date.

**Example 3: Substitution using Supplies Past Request Date**

There is an ATP query for item A for 20 units on Day 10.

The setup details are:

- The substitution window width is 10 days for all items.
- Substitution between item A and A2 becomes effective starting on Day 15. All of the other substitution definitions are applicable for the entire horizon.
- Infinite Time Fence Date is Day 35.

The profile MSC: Choice of Item for Which to Create Supplies in Substitute Relationship is set to Demanded Item. The following tables show you the supply and demand picture for items in the substitution chain:

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Item</th>
<th>Day 2</th>
<th>Day 5</th>
<th>Day 10</th>
<th>Day 12</th>
<th>Day 15</th>
<th>Day 21</th>
<th>Day 30</th>
<th>Day 45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>A</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Supply</td>
<td>A</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item A1</th>
<th>Day 2</th>
<th>Day 5</th>
<th>Day 10</th>
<th>Day 12</th>
<th>Day 15</th>
<th>Day 21</th>
<th>Day 30</th>
<th>Day 45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>A1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Supply</td>
<td>A1</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>18</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Item A2

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Item</th>
<th>Day 2</th>
<th>Day 5</th>
<th>Day 10</th>
<th>Day 12</th>
<th>Day 15</th>
<th>Day 21</th>
<th>Day 30</th>
<th>Day 45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>A2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Supply</td>
<td>A2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>20</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Oracle Global Order Promising evaluates the substitution relationship effectivity on the ATP request date. Only substitution relationships valid as of the request date are valid for the whole query. Oracle Global Order Promising does not evaluate the substitution effectivity on every day. Thus, A2 is not a valid substitute for A.

By the request date, neither A or A1 has sufficient supply. Since the profile MSC: Choice of Item for Which to Create Supplies in Substitute Relationship is set to Demanded Item, Oracle Global Order Promising only evaluates the possibility of creating new supply for A to meet the shortage of 18 units by the request date.

If you are able to produce 4 units of item A by the request date Day 10, then you can satisfy 6 units out of 20 units by the request date.

So by the request date, you have 6 of A available and 2 of A1 available. Since Oracle Global Order Promising does not support Partial Fulfillment, it looks forward for the earliest date that the remaining shortage of 14 of A is available and the earliest date that the remaining 18 of A1 is available.

**For item A**

- **Using Scheduled Receipts**: the earliest date that the shortage can be fulfilled using scheduled receipts will be Day 35 (the infinite time date).

- **Creating Fresh Supplies**: assume you can create fresh supplies for 14 units of item A on Day 25.

  So the earliest date that the 14 units of A is available is Day 25.
For item A1

Using Scheduled Receipts: the earliest date that the shortage can be fulfilled using scheduled receipts will be Day 15.

Creating Fresh Supplies: since the profile MSC: Choice of Item for Which To Create Supplies in Substitute Relationship is set to Demanded Item, Oracle Global Order Promising will not attempt to create fresh supplies for A1.

So the earliest date that the 18 units of A1 is available is Day 15.

A1 is available earlier than A. Thus, Oracle Global Order Promising recommends A1 with available date of Day 15.

Example 4 Creation of Planned Supplies

There are four items in the substitution chain, items: A1, A2, A3, and A4. The highest level item in this pool is A4. You get a demand for A2, and the profile MSC: Choice of Item for Which to Create Supplies in Substitute Relationship is set to Requested Item. You can evaluate supply availability for A2, A3, and A4 assuming chaining and direction is A1 to A2 to A3 to A4. If you do not find any supply for the requested item, you can generate supply for requested item, which is A2.

If the item you try to produce happens to be a co-product, Oracle Global Order Promising creates supplies for all items in co-product relationships. If your item is not an item in coproduct relationship, it may be possible to produce a substitute item instead of the demanded item, but please note that Oracle Global Order Promising will create supplies for only one item. The exception to this rule is when a requested item is involved in a coproduct relationship. If the profile MSC: Choice of Item for Which to Create Supplies in Substitute Relationship is set to Follow Item Attribute, and the requested item’s Create Supply flag is set to No in the Master Item form, Oracle Global Order Promising generates supplies for the next higher item in the substitution chain.

The following table summarizes this example:

<table>
<thead>
<tr>
<th>Chaining and Direction</th>
<th>Highest Level Item</th>
<th>Requested Item</th>
<th>Profile Option: Choice of Item...</th>
<th>Create Supply Flag</th>
<th>Co-Product?</th>
<th>Action</th>
<th>Generate Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 to A2 to A3 to A4</td>
<td>A4</td>
<td>A2</td>
<td>Demanded Item</td>
<td>Yes</td>
<td>No</td>
<td>Evaluate supply availability for A2, A3, and A4.</td>
<td>Generate supply for requested item.</td>
</tr>
</tbody>
</table>
Example 5 Evaluating Supplies After Request Date

One of the purposes behind substituting is to use up all the possible supplies before creating fresh supplies. This applies to both native supplies and substitute supplies.

In this example, cases 1 to 4 are for a single organization. Case 5 is for a supply chain.

**Case 1**
A can be substituted by B. The substitute window for both items across the supply chain is set to 15 days.

The supply situation is shown in the following table:

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Item</th>
<th>Day 2</th>
<th>Day 5</th>
<th>Day 10</th>
<th>Day 12</th>
<th>Day 15</th>
<th>Day 20</th>
<th>Day 25</th>
<th>Day 45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>A</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Supply</td>
<td>B</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

There is an inquiry for 10 units of item A on Day 12, and the infinite time fence date is set to Day 45.
The first step is to determine the availability by the request date either by requested item or the substitute item. By the request date, you will have 7 units of item A and 10 units of item B.

Therefore, item B is suggested as a substitute because it can fulfill the entire quantity using only the supply from one item. You are not able to look at the ATP details and pegging for item A, but you have access to summary level information for item A. You have also full access to the ATP details and pegging for item B.

**Case 2** The supply situation is shown in the following table:

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Item</th>
<th>Day 2</th>
<th>Day 5</th>
<th>Day 10</th>
<th>Day 12</th>
<th>Day 15</th>
<th>Day 20</th>
<th>Day 25</th>
<th>Day 45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>A</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Supply</td>
<td>B</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

In this example, there is also an inquiry for 10 units of item A on Day 12. The first step is to evaluate the supplies prior to request date. You have 3 units of item A and 8 units of item B. You have to evaluate the possible production prior to the request date.

If you produce 7 units of item A by Day 12 and 2 units of item B by Day 12, both items A and B have a total supply of 10 units by Day 12. Given this scenario, Oracle Global Order Promising promises the order on Day 12 using item A. If you have a choice between the original item and a substitute item, Oracle Global Order Promising promises with the original item.

**Case 3** You have 10 units of existing supply for item B, 5 units of supply for item A and you can produce 5 units of item A by the request date. Oracle Global Order Promising recommends item B because it uses up the existing supplies rather than producing item A.

**Case 4** For this case, the profile MSC: Choice of Item for which to Create Supplies in Substitute Relationship is set to Follow Item Attributes. The assumption is that supplies can be created for both items.

The supply situation is shown in the following table:

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Item</th>
<th>Day 2</th>
<th>Day 5</th>
<th>Day 10</th>
<th>Day 12</th>
<th>Day 15</th>
<th>Day 20</th>
<th>Day 25</th>
<th>Day 45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>A</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Supply</td>
<td>B</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>3</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

ATP Based on Planning Output: Part II 5-15
You have 7 units of item A by request date and 2 units of item B by the request date. Assume you do not have the capacity to produce either item A or B by request date. The availability and production of both A and B is evaluated in the forward direction.

Evaluating scheduled receipts, you can satisfy the requested quantity by using item B by Day 20. If you use the production route, then assume you do not get the deficit produced until Day 40. The request is satisfied by item B by Day 20.

Case 5 The following diagram shows the supply chain for item A and B:
Figure 5–3  Supply Chain for Item A and B

A→B
Org 1

A→B
Org 2

A→B
Org 3

Make at Org 1

Make at Org 3

Make at Org 5

Rank 1

Rank 2

Rank 3
For this example, the profile MSC: Choice of Item for which to Create Supplies in Substitute Relationship is set to Follow Item Attributes. The assumption is that supplies can be created for both items.

Consider the following supply picture as shown in the following tables. The substitution window is set to 15 days for both items A and B. Assume that the lead time to transfer items across all organizations is zero. The request date is Day 10 and the request quantity is 100 units. The infinite time fence date set to Day 26.

Org 1

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Item</th>
<th>Day 2</th>
<th>Day 5</th>
<th>Day 10</th>
<th>Day 12</th>
<th>Day 15</th>
<th>Day 20</th>
<th>Day 25</th>
<th>Day 45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>A</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Supply</td>
<td>B</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

Org 2

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Item</th>
<th>Day 2</th>
<th>Day 5</th>
<th>Day 10</th>
<th>Day 12</th>
<th>Day 15</th>
<th>Day 20</th>
<th>Day 25</th>
<th>Day 45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>A</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>Supply</td>
<td>B</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>15</td>
<td>0</td>
<td>20</td>
</tr>
</tbody>
</table>

Org 3

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Item</th>
<th>Day 2</th>
<th>Day 5</th>
<th>Day 10</th>
<th>Day 12</th>
<th>Day 15</th>
<th>Day 20</th>
<th>Day 25</th>
<th>Day 45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>A</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>48</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Supply</td>
<td>B</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>38</td>
<td>0</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

Org 5

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Item</th>
<th>Day 2</th>
<th>Day 5</th>
<th>Day 10</th>
<th>Day 12</th>
<th>Day 15</th>
<th>Day 20</th>
<th>Day 25</th>
<th>Day 45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>A</td>
<td>0</td>
<td>10</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>63</td>
<td>5</td>
</tr>
<tr>
<td>Supply</td>
<td>B</td>
<td>0</td>
<td>55</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>23</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>

Oracle Global Order Promising evaluates the supplies for items A and B individually by using up all the on-hand and scheduled receipts prior to the request date. Later, it tries to produce the deficit by the request date.
If Oracle Global Order Promising is not successful in satisfying the request, it tries to project the availability date for the requested item as well as its substitutes by choosing the better date of:

1. Using scheduled receipts
2. Creating fresh supplies

Oracle Global Order Promising returns the item that gives the best available date.

**Evaluating Item A Supply**

On-hand + scheduled receipts available on request date:

<table>
<thead>
<tr>
<th>Total</th>
<th>Org 1</th>
<th>Org 2</th>
<th>Org 3</th>
<th>Org 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>5</td>
<td>10</td>
<td>5</td>
<td>15</td>
</tr>
</tbody>
</table>

**Note:** The order of the organization columns in the above table shows the order in which Oracle Global Order Promising looks for supplies.

Creating new supplies on request date:

Assume there is no capacity to create new supplies on request date.

<table>
<thead>
<tr>
<th>Total</th>
<th>Org 5</th>
<th>Org 3</th>
<th>Org 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Note:** The order of the organization columns in the above table shows the order that Oracle Global Order Promising is trying to create new supplies.

There is a shortage of 65 of item A on request date. Oracle Global Order Promising looks forward to project a date where the shortage is available. The earliest date that 65 units are available is Day 15. Remember that in the forward scenario: if there are multiple sources for the supply, then Oracle Global Order Promising uses the source that gives the best available date.
The following explains how Oracle Global Order Promising computes the availability date.

- Org 1: scheduled receipts (Day 26 = infinite time fence)
- Org 1: transfer from Org 2 (Day 21 = the better date of the two sources in Org 2)
  - Org 2: scheduled receipts (Day 26 = infinite time fence)
  - Org 2: transfer from Org 5 (Day 21 = the better date of the two sources in Org 5)
    - Org 5: scheduled receipts (Day 25)
    - Org 5: make (Day 21 = assume there is capacity to make 65 on Day 21)
- Org 1: transfer from Org 3 (Day 15 = the better date of the two sources in Org 3)
  - Org 3: scheduled receipts (Day 26 = infinite time fence)
  - Org 3: make (Day 15 = assume there is capacity to make 65 on Day 15)
- Org 1: make (Day 16 = assume there is capacity to make 65 on Day 16)

Out of the four sources in Org 1, the transfer from Org 3 gives the best available date. Thus for item A, Day 15 is the date the requested quantity is available.

**Evaluating Item B Supply**

On-hand + scheduled receipts available on request date:

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Org 1</th>
<th>Org 2</th>
<th>Org 3</th>
<th>Org 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-hand</td>
<td>57</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>55</td>
</tr>
</tbody>
</table>

**Note:** The order of the organization columns in the above table shows the order in which Oracle Global Order Promising looks for supplies.

Creating new supplies on request date:

Assume there is no capacity to create new supplies on request date.

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Org 5</th>
<th>Org 3</th>
<th>Org 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Org 5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

5-20 Oracle Global Order Promising Implementation and User's Guide
There is a shortage of 43 of item B on request date. Oracle Global Order Promising looks forward to project a date where the shortage is available. The earliest date that 43 units are available is Day 17. Remember that in the forward scenario: if there are multiple sources for the supply, Oracle Global Order Promising uses the source that gives the best available date.

The following explains how Oracle Global Order Promising computes the availability date:

- Org 1: scheduled receipts (Day 26 = infinite time fence)
- Org 1: transfer from Org 2 (Day 21 = the better date of the two sources in Org 2)
  - Org 2: scheduled receipts (Day 26 = infinite time fence)
  - Org 2: transfer from Org 5 (Day 21 = the better date of the two sources in Org 5)
    * Org 5: scheduled receipts (Day 26 = infinite time fence)
    * Org 5: make (Day 21 = assume there is capacity to make 43 on Day 21)
- Org 1: transfer from Org 3 (Day 17 = the better date of the two sources in Org 3)
  - Org 3: scheduled receipts (Day 26 = infinite time fence)
  - Org 3: make (Day 17 = assume there is capacity to make 43 on Day 17)
  - Org 1: make (Day 17 = assume there is capacity to make 43 on Day 17)

Out of the four sources in Org 1, the transfer from Org 3 gives the best available date. Thus for item B, Day 17 is the date the requested quantity is available.

Based on the above calculations, you can meet the requirement either by using item A on Day 15, or item B on Day 17. Oracle Global Order Promising suggests Item A on Day 15 with the following details:

- 35 units of scheduled receipts of item A by the request date.
- 65 units of production of item A in Org 3.

**Note:** The order of the organization columns in the above table shows the order that Oracle Global Order Promising is trying to create new supplies.
Example 6 Allocated ATP With Substitution
This section explains how allocated ATP works if stealing is done ahead of substitution. The allocation method used here is demand priority allocation. In this example, you have two items: A and A1 that are substitutable. You have three demand segments called tiers: T1, T2, and T3. The substitution window is 2 days. The profile MSC: Choice of Item for Which to Create Supplies in Substitute Relationship is set to Follow Item Attributes, and the assumption is that supplies can be created for both items.

Assume that you have demand for 8 units of item A at tier T1 in Day 1. Oracle Global Order Promising steals 5 units from tier T2 and 3 units from tier T3 to satisfy the order. Note that it does not use the substitute available at tier T1. Then you have demand for 20 units at tier T1 on Day 3 for item A1 after satisfying the first request for 8 units.

For item A:
1. There are 3 units of supply across all tiers.
2. Assume that you do not have any capacity to produce item A prior to request date.
3. The deficit is 17 units.
4. As shown in the table above, you have 17 units of supply across all tiers by Day 4. Please note that forward stealing is only available when demand priority allocation is used.
5. Assume that you have the capacity to produce 17 units by Day 7.
6. You can promise the order for Item A by Day 4.

For item A1:

<table>
<thead>
<tr>
<th>Tier</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1-A</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>T1-A1</td>
<td>8</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>T2-A</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>T2-A1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>T3-A</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>T3-A1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Assume that you have demand for 20 units of item A at tier T1 in Day 1. Oracle Global Order Promising steals 5 units from tier T2 and 3 units from tier T3 to satisfy the order. Note that it does not use the substitute available at tier T1. Then you have demand for 20 units at tier T1 on Day 3 for item A1 after satisfying the first request for 8 units.

For item A:
1. There are 3 units of supply across all tiers.
2. Assume that you do not have any capacity to produce item A prior to request date.
3. The deficit is 17 units.
4. As shown in the table above, you have 17 units of supply across all tiers by Day 4. Please note that forward stealing is only available when demand priority allocation is used.
5. Assume that you have the capacity to produce 17 units by Day 7.
6. You can promise the order for Item A by Day 4.

For item A1:
1. There are 13 units of supply by request date.

2. Assume that you do not have any capacity to produce item A1 by the request date.

3. The deficit is 7 units.

4. As shown in the table above, you have no eligible existing supplies for A1 after the request date.

5. Assume you can produce 7 units by Day 7.

Given the analysis above, Oracle Global Order Promising promises the order by Day 4 using item A.

**Example 7 Allocated ATP In a Supply Chain**
Consider a five organization supply chain setup:
Figure 5–4  Five-Organization Supply Chain
The substitution window is 2 days for items A and B. In the following table, you get a request for 50 units of item A in tier T1 at Day 3 in the supply and demand picture in each organization. The infinite time fence date is set to Day 26. Assume there is no intransit lead time. The profile MSC: Choice of Item for which to Create Supplies in Substitute Relationship is set to Follow Item Attributes, and the assumption is that supplies can be created for both items. The profile MSC: Allocation Method is set to Demand Priority.

Org 1

<table>
<thead>
<tr>
<th>Tier</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1-A</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>T1-B</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>T2-A</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>T2-B</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>T3-A</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>T3-B</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

Org 2

<table>
<thead>
<tr>
<th>Tier</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1-A</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td>T1-B</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>T2-A</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>T2-B</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>T3-A</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>T3-B</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

Org 3

<table>
<thead>
<tr>
<th>Tier</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1-A</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td>T1-B</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
By the request date, there are 29 units of Item A available across all tiers in the supply chain.

Assume that you do not have the capacity to produce Item A by the request date.

There is a shortage of 21 of item A on the request date. Oracle Global Order Promising looks forward to project a date where the shortage is available. The earliest date that 21 units are available is Day 5. Remember that in the forward scenario: if there are multiple sources for the supply, Oracle Global Order Promising uses the source that gives the best available date.

The following explains how Oracle Global Order Promising computes the availability date:

- Org 1: scheduled receipts (Day 26 = infinite time fence)
- Org 1: transfer from Org 2 (Day 5 = the better date of the two sources in Org 2)
  - Org 2: scheduled receipts (Day 5 = 36 are available across all tiers in Org 2)
Out of the four sources in Org 1, the transfer from Org 2 gives the best available date. Thus for item A, Day 5 is the date the requested quantity is available.

**Evaluating Item B Supply**

- By the request date, there are 30 units of Item B available across all tiers in the supply chain.
- Assume that you do not have enough capacity to produce Item B by the request date.

There is a shortage of 20 of item B on request date. Oracle Global Order Promising looks forward to project a date where the shortage is available. The earliest date that 20 units are available is Day??. Remember that in the forward scenario: if there are multiple sources for the supply, Oracle Global Order Promising uses the source that gives the best available date.

The following explains how Oracle Global Order Promising computes the availability date:

- Org 1: scheduled receipts (Day 5, 22 are available across all tiers in Org 1)
- Org 1: transfer from Org 2 (Day 5 = the better date of the two sources in Org 2)
  - Org 2: scheduled receipts (Day 5 = 25 are available across all tiers in Org 2)
  - Org 2: transfer from Org 5 (Day 5 = the better date of the two sources in Org 5)
    - Org 5: scheduled receipts (Day 5 = 22 are available across all tiers in Org 5)
    - Org 5: make (Day 12 = assume there is capacity to make 20 on Day 12)
End Item Substitution

- Org 1: transfer from Org 3 (Day 12 = the better date of the two sources in Org 3)
  - Org 3: scheduled receipts (Day 26 = infinite time fence)
  - Org 3: make (Day 12 = assume there is capacity to make 20 on Day 12)
- Org 1: make (Day 9 = assume there is capacity to make 20 on Day 9)

Out of the four sources in Org 1, using scheduled receipts in Org 1 gives the best available date. Thus for item B, Day 5 is the date the requested quantity is available.

Based on the above calculations, you can meet the requirement either by using item A on Day 5, or item B on Day 5. Therefore, Oracle Global Order Promise suggests item A on Day 5, with the following details:

- 29 units of scheduled receipts of item A by the request date across all tiers.
- 21 units of scheduled receipts of item A by Day 5.

**ATP Result**

**Integration with Order Management**

Oracle Global Order Promising allows the calling application to decide when end item substitution can occur. This is done through a parameter in the ATP application program interface.

When an ATP inquiry or ATP scheduling occurs before an order is booked, Oracle Order Management calls Oracle Global Order Promising with end item substitution enabled. After an order is booked, the order is no longer eligible for automatic substitution in subsequent rescheduling activities.

When substitution is enabled and Oracle Global Order Promising recommends a substitute item during scheduling, the requested item is replaced by the substituted item.

For details on how Oracle Order Management displays substitute item, see: Automatic Item Substitution within Order Management, Oracle Order Management User’s Guide.

**Display of the Substituted Item in the ATP Details Window**

You can access the ATP Details window either by selecting Availability within the Oracle Order Management Sales Order Pad or by selecting ATP Details within the Oracle Global Order Promising ATP Criteria window.
When substitution happens, the ATP Details window shows the following information:

*Figure 5–5  ATP Details Window*

When you request 100 units of item A, you see the following details in the ATP Details window provided that Item B is substituted for Item A.

<table>
<thead>
<tr>
<th>Item</th>
<th>Org</th>
<th>UOM</th>
<th>Qty</th>
<th>Ship Date</th>
<th>Available Qty by Request Date</th>
<th>Original Item</th>
<th>Available Qty by ATP Date</th>
<th>Original Item Request Date Qty</th>
<th>Original Item ATP Date</th>
<th>Original Item ATP Date Qty</th>
</tr>
</thead>
</table>

No pegging information available.
Table field descriptions:

- All of the fields except Original Item, Original Item Request Date Qty, Original Item ATP Date, and Original Item ATP Date Qty will be for item B.
- The Original Item column is the requested item.
- The Original Item Request Date Quantity refers to the quantity of the original item available by request date.
- The Original Item ATP Date provides you the date by which the entire requested quantity can be provided using original item.
- The Original Item ATP Date Quantity provides you the quantity that is found on the Original Item ATP Date. The available quantity can be more than the requested quantity.

**ATP Pegging Details**
ATP Pegging shows the supply and demand pegging for the substitute item.

**End Item Substitution Workflow**
When the profile MSC: Enable ATP Workflow is set to Yes, a workflow notification is sent once the substitution occurs at the time of sales order scheduling. The following is a diagram depicting this workflow. The title for the workflow that is generated is Demand Satisfied Using End Item Substitution. This workflow is initiated upon scheduling of sales orders in Oracle Order Management.
Figure 5–6  Demand Satisfied Using End Item Substitution Workflow

The following details are shown in the workflow:

- From Item: the item for which you received the demand; the exception is for this item.
- Order Number: sales order number.
End Item Substitution

- Line Number: sales order line number.
- Original Quantity: requested quantity.
- Substitute Item: the item to which the demand was transferred.
- Organization: shipping organization.
- Substituted Quantity: demand transferred quantity.
Multiple Plans

If you use planning output for ATP, then Oracle Global Order Promising supports the inclusion of multiple plans. To include multiple plans, check the Inventory ATP checkbox for all the plans that ATP needs to use in the plan options form.

As Oracle Global Order Promising moves in its search, it chooses a plan for each item. Each move in a search could be down one level in the Bills of Material in a multi-level search or across the supply chain as per the assignment set. The plan that is picked must be a successfully run plan, and should have a unique combination among item, organization, instance and demand class. If there are multiple occurrences of this set, the plan which has the lowest plan identification number is picked.

There may be situations where one plan is used as the source for another plan. For example, an MPS plan is the source for an MRP run. In this case, Oracle Global Order Promising uses the feeder plan for promising.
Improved ATP Performance

Oracle Global Order Promising response times can be improved by means of a summary approach that stores summary supply and demand information in a separate table. It allows each ATP request to quickly retrieve summarized availability information without computing availability from detailed supply and demand. The end result is the same as using detailed data to an end user. It is highly recommended that you use summarized data.

The summary process is accomplished through the concurrent program ATP Post Plan Processing. The concurrent program is automatically launched at the end of an ATP plan run. You manually run this concurrent program for a non-ATP plan and then enable ATP flag of this plan.

This feature is only supported for non-distributed environments, where the transaction data and Oracle Global Order Promising are on the same database instance. Also, this feature is not applicable if Allocated ATP is enabled.

To enable ATP based on Summary Data:

1. Set the system profile MSC: Enable ATP Summary Mode to Yes.
2. Run ATP Partitions concurrent program. You only need to run this program once before you enable summary mode.

Manually Generating Summary Tables

While the summary tables required to support summary data based order promising are automatically triggered by the planning processes, you can also load the summary data by manually invoking the ATP Post Plan Processing concurrent program. You may want to do this if you do not want to rerun a plan before enabling summary data based order promising.

You can manually generate the Oracle Global Order Promising summary tables from either the Oracle Advanced Supply Chain Planner responsibility or the Oracle Order Management Super User responsibility.

To manually generate the Summary Tables from the Advanced Supply Chain Planner responsibility:

1. Log in using the Advanced Supply Chain Planner responsibility.
2. From the Navigator, select Other and Request.
3. Select the Submit a New Request button.
4. Select Single Request to submit a single concurrent request.
5. Select OK.
   The Submit Request window appears.
6. From the list of values in the Names field, select ATP Post Plan Processing.
7. Select a plan name in the Plan parameter.
8. Select Submit.
Unplanned Items

Once an ATP inquiry is initiated for an item that is not planned, then Oracle Global Order Promising cannot find the item in any plan. It automatically reverts to an ATP inquiry on the basis of collected data. If there is not enough supply, Oracle Global Order Promising performs forward scheduling. It is not be able to perform next level bills of material explosion. For example, Oracle Global Order Promising cannot perform a capable-to-promise check since it does not know which plan to use.

**Note:** Unplanned items refer to items not appearing in the ATP plan. They do not refer to items with the Planning Method item attribute of Not Planned.
Online Replan of an ATP Plan

Oracle Advanced Supply Chain Planning provides online interactive simulation planning that can be run by changing plan inputs and parameters, and rerunning the new, simulated plan. The online planner lets you simulate and replan manual changes to supply and demand records, and quickly see the effect of changes you make in the Planner Workbench.

For details about Online Planning and Replanning, see: Running Net Change Replan Simulations, Oracle Advanced Planning and Scheduling Implementation and User’s Guide.

To run Online Replan for an ATP Plan:
Save and make a copy of your baseline plan before running online replan. Make modifications only to the copy. Otherwise, you lose visibility to your baseline plan.

For details on how to copy a plan, see: User Interface Options, Oracle Advanced Planning and Scheduling Implementation and User’s Guide.

1. Uncheck the ATP checkbox for the copied plan.
2. Select the copied plan in the Planner Workbench window.
3. Choose Plan. Then Start Online Planner.
4. Take note of the concurrent request ID. Then choose OK.
   While the online planner loads the data into memory, you see the Online Planner Status window. When the window informs you the session is ready for planning, close the window to return to the Planner Workbench. Your online planner session is now active.
5. Save the plan.
6. Choose Plan. Then Online Replan.
7. Choose Plan. Then Save actions.
8. Choose Plan. Then Stop Online Planner.
   Note: Do not stop the online planner until all simulations are complete.
9. Start ATP Post Plan Processing, if Allocated ATP is enabled and Allocation Method is Demand Priority.
10. Uncheck the ATP checkbox on the original plan.
11. Check the ATP flag on the copied plan.
For details on running an online plan, see: Running Netchange Replan Simulations, *Oracle Advanced Planning and Scheduling Implementation and User’s Guide*. 
Topics covered in this section include the following:

- ATP Inquiry on page 6-2
ATP Inquiry

ATP Inquiry is typically performed through an application that can place orders or quotes. This type of application makes a call to Oracle Global Order Promising with information such as item, request date, quantity, or shipping warehouse. Oracle Global Order Promising returns availability information such as quantity available on request date or earliest available date (if the request cannot be met on the request date). Then the application decides what specific information to display to the end user.

Oracle Global Order Promising has its own user interface to allow users to perform availability checks. Using this interface, you can obtain the detailed information returned by Oracle Global Order Promising. This section explains this user interface.

The following diagram describes the information flow through the Oracle Global Order Promising windows:

*Figure 6–1 The Selection of Windows*

Each window is explained in detailed in the sections that follow.
ATP Criteria

ATP Criteria lets you enter parameters for the desired ATP check.

To enter ATP Criteria:
1. Choose ATP. Then select ATP Inquiry.
   The ATP Criteria window opens.

Figure 6–2  ATP Criteria Window

The following table contains the fields and options in the ATP Criteria window:

Note: Not all of these fields are required.
### Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pick Sources</td>
<td>This field controls whether Oracle Global Order Promising should use all the possible shipping organizations or only use the organization you specify.</td>
</tr>
<tr>
<td></td>
<td>- Choose No to have Oracle Global Order Promising perform an availability check in the warehouse you specify.</td>
</tr>
<tr>
<td></td>
<td>- Choose Yes to have Oracle Global Order Promising return all the shipping warehouses, so that you can select the specific organizations on which you want Oracle Global Order Promising to perform an availability check. Thus, you can view availability from multiple supply organizations.</td>
</tr>
<tr>
<td></td>
<td>If you choose No, the ATP Details button appears on the lower right corner of the screen.</td>
</tr>
<tr>
<td></td>
<td>If you choose Yes, the Pick Source button appears on the lower right corner.</td>
</tr>
<tr>
<td>Line Set</td>
<td>Choose from Ship Set, Arrival Set, or [Blank].</td>
</tr>
<tr>
<td></td>
<td>- Ship Set indicates that the lines you enter need to be shipped together.</td>
</tr>
<tr>
<td></td>
<td>- Arrival Set indicates that the lines you enter will arrive together at the receiving party.</td>
</tr>
<tr>
<td>Customer</td>
<td>Enter the customer name. If you leave this field blank, the default receiving party is your login organization. Only collected customers appear in this list.</td>
</tr>
<tr>
<td>Site</td>
<td>Enter the customer site.</td>
</tr>
<tr>
<td>Request Date Type</td>
<td>Choose between Ship Date or Arrival Date. This tells Oracle Global Order Promising whether the request date you enter in the Request Date field is meant to be request ship date or request arrival date.</td>
</tr>
<tr>
<td>Assignment Set</td>
<td>This is a view only field. If the ATP Inquiry window is launched at the source or destination instance, this field shows what is in the profile MRP: ATP Assignment Set. If you perform Pick Source, Oracle Global Order Promising uses the sourcing assignment set to search for all possible shipping organizations.</td>
</tr>
<tr>
<td>Demand Class</td>
<td>Choose the demand class from a list of values.</td>
</tr>
<tr>
<td>Org</td>
<td>Specify the shipping organization. If you selected Pick Source as Yes, you do not need to enter a value in this field.</td>
</tr>
<tr>
<td>Item</td>
<td>Specify the item.</td>
</tr>
<tr>
<td>ATP Rule</td>
<td>This is a view only field. It shows the ATP Rule defined for the item or organization.</td>
</tr>
<tr>
<td>UOM</td>
<td>Enter the unit of measure (UOM) for the item. If this UOM is not item’s primary UOM, Oracle Global Order Promising coverts it to the primary UOM for calculations.</td>
</tr>
<tr>
<td>Qty</td>
<td>Enter the request quantity.</td>
</tr>
<tr>
<td>Req Date</td>
<td>Enter the request date. If you leave it blank, Oracle Global Order Promising uses today’s date for the request date.</td>
</tr>
<tr>
<td>Item Description</td>
<td>This is a view only field. It shows the item description.</td>
</tr>
</tbody>
</table>
2. Select ATP Details.

The ATP Details window appears with the ATP details and the pegging tree. The pegging tree shows how the demand is being met.

**ATP Details**

*Figure 6–3  ATP Details Window*

The ATP Details window has two regions:

- Summary Region
- Pegging Region

**Summary Region**

The summary region is a folder form.
The following table describes each field in this window:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>Shows the requested item.</td>
</tr>
<tr>
<td>Quantity</td>
<td>Shows the requested quantity.</td>
</tr>
<tr>
<td>Org</td>
<td>Shows the shipping organization.</td>
</tr>
<tr>
<td>Request Date Qty</td>
<td>Shows the quantity available on the request date.</td>
</tr>
<tr>
<td>Ship Date Qty</td>
<td>Shows the quantity available on the date that the request quantity can be met. The quantity can exceed the requested quantity.</td>
</tr>
<tr>
<td>Arrival Date</td>
<td>Shows the arrival date. Arrival date equals ship date plus transit lead time.</td>
</tr>
<tr>
<td>Request Date</td>
<td>Shows the request date.</td>
</tr>
<tr>
<td>Request Date Type</td>
<td>Shows either Ship Date or Arrival Date, based on the selection.</td>
</tr>
<tr>
<td>UOM</td>
<td>Shows the primary unit of measure of the requested item.</td>
</tr>
<tr>
<td>Group Ship Date</td>
<td>Shows the group ship date for a set, if the request is for a set.</td>
</tr>
<tr>
<td>Group Arrival Date</td>
<td>Shows the group arrival date for a set, if the request is for a set.</td>
</tr>
<tr>
<td>Ship Method</td>
<td>Shows the ship method that is passed from any calling application or default ship method defined for the shipping organization and receiver.</td>
</tr>
<tr>
<td>Shipment Method Description</td>
<td>Shows the description of the ship method.</td>
</tr>
<tr>
<td>Transit Lead Time</td>
<td>Shows the lead time associated with the above ship method.</td>
</tr>
<tr>
<td>Demand Class</td>
<td>Shows the demand class associated with the request.</td>
</tr>
<tr>
<td>Message</td>
<td>Shows any error or warning message.</td>
</tr>
<tr>
<td>Customer</td>
<td>Shows the customer on the request.</td>
</tr>
<tr>
<td>Ship To</td>
<td>Show the ship-to site of the customer.</td>
</tr>
<tr>
<td>Latest Acceptable Date</td>
<td>Shows the date beyond the request date that the ATP request should be considered successful, if the requested quantity can be met.</td>
</tr>
<tr>
<td>Arrival Set</td>
<td>Shows the set identifier passed by any calling application for grouping items in an arrival set.</td>
</tr>
</tbody>
</table>
Pegging Region
ATP Pegging region further explains how Oracle Global Order Promising obtains the ATP results. Pegging is shown for each line in ATP Details: Summary Region.

For ATP Based on Collected Data
Oracle Global Order Promising first checks the availability on the request date. If there is a shortage, then Oracle Global Order Promising finds a date beyond request date when the shortage can be met. The pegging depicts this logic.

For example, a request for item A on Day 10 for quantity of 20 for Org 1. Only a quantity of 5 is available on request date, but the shortage can be met on Day 12.

Pegging shows the following:

- **Line 1:** A - Org 1 Qty 20 On Day 10
- **Line 2:** A - ATP Org 1 Qty 5 On Day 10
- **Line 3:** A - ATP Org 1 Qty 30 on Day 12

Explanation:
- The first line represents the demand.
- The second line represents the supply available on request date.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ship Set</td>
<td>Shows the set identifier passed by any calling application for grouping items in an ship set.</td>
</tr>
<tr>
<td>Line</td>
<td>Shows the order line number passed by any calling application for indication of demand line number.</td>
</tr>
<tr>
<td>Plan Name</td>
<td>Shows the ASCP plan name used for Oracle Global Order Promising, if ATP is based on planning output.</td>
</tr>
<tr>
<td>Original Item</td>
<td>Shows the requested item. The item field shows the substituted item.</td>
</tr>
<tr>
<td>Original Item Request Date</td>
<td>Shows the availability of the requested item on the request date. The Request DateQty field shows the availability of the substituted item on the request date.</td>
</tr>
<tr>
<td>Original Item ATP Date Qty</td>
<td>Shows the earliest date the requested quantity for the requested item is available.</td>
</tr>
<tr>
<td>Original Item ATP Date Qty</td>
<td>Shows the quantity available on the Original Item ATP Date. The available quantity may exceed the requested quantity.</td>
</tr>
<tr>
<td>Status</td>
<td>Not used.</td>
</tr>
</tbody>
</table>
The third line represents the earliest date that the remaining demand can be satisfied. The availability on that date is 30.

**For ATP Based on Planning Output**

When Multi-Level Supply Chain ATP is enabled, the pegging shows how Oracle Global Order Promising searches for supply throughout the supply chain.

**Pegging Example** Supply Chain Bills of Materials (BOM): Item A can either be made in Org1 or transferred from Org2. Making item A is priority 1, as seen with Make(1). Also, Component X can be supplied from either S1 or S2.

**Figure 6–4 Supply Chain BOM**

![Supply Chain BOM Diagram]

Other setup:

- Item A has a 1 day fixed lead time, and no variable lead time.
- Item A has no post-processing lead time.
- Component X has a 1 day post-processing lead time, but no pre-processing lead time.
- S1 does not have processing lead time.
- S2 has a 2 day processing lead time.
- Transfer(2) shows the transfer of item A from Org2 to Org1, which takes a 1 day transfer lead time.

Cumulative Availability based on on-hand plus scheduled receipts is depicted in the following:

Note that D1 = today.
An order for item A with a quantity of 100 on D4 gives the following pegging:

1. (D) A - Org1 Qty 100 on D3
2. (S) A - ATP Org1 Qty 40 on D3
3. (S) A - Make At Org1 Qty 20 on D3
4. (D) X - Org1 Qty 20 on D2
5. (S) X - ATP Org1 Qty 10 on D2
6. (S) X - Buy S1 Qty 0 on D2
7. (D) X - Qty 10 on D1
8. (S) X - ATP Qty 10 on D1
9. (D) Y - Org1 Qty 20 on D2
10. (S) Y - Org1 Qty 30 on D2
11. (D) Z - Org1 Qty 20 on D2
12. (S) Z - Org1 Qty 50 on D2
13. (S) A - Transfer From Org2 Qty 40 on D3
14. (D) A - Org2 Qty 40 on D2
15. (S) A - ATP Org2 Qty 50 on D2

Explanation:

In pegging, different graphical icons are used for supply and demand. In the above representation, the icons are represented by (S) and (D) respectively.
ATP Inquiry

(D) represents the demand line. Demand lines, except the first demand line, indicate the actual demand that can be placed. They do not indicate what is required.

(S) represents the supply line. Supply lines have the following types:
- ATP: supply from on-hand and scheduled receipts.
- Make At: supply can be obtained from a Make At source.
- Transfer From: supply can be obtained from a Transfer From source.
- Buy From: supply can be obtained from a Buy From source.

Line 2: on request date (D3), there are 40 available for A. There is a shortage of 60.

Line 3: Oracle Global Order Promising finds components available to make 20 of A. Lines 4 to 12 explain why.

Line 4: to make A on D3, X is needed on D2 because of the lead time offset. However, only 20 of X can be demanded on D2. Lines 5 and 8 explain why.

Line 5: there are 10 of X available in Org1 on D2.

Line 6: we can obtain 10 units of X from supplier S1 on D2. Lines 7 and 8 explain why.

Line 7: X is needed from S1 on D1 due to a 1 day postprocessing lead time of X. Only 10 units of X can be demanded from S1. Line 8 explains why.

Line 8: on D1, there are only 10 of X available from S1. S2 has a Buy From source and a 2 day processing lead time. There is not enough time to meet demand on D1. Since Oracle Global Order Promising does not use S2, there is no pegging shown for S2.

Line 9: only 20 of X is available. Oracle Global Order Promising looks for 20 of Y. More does not help. On D2, 20 of Y can be demanded. Line 10 explains why.

Line 10: there are 30 of Y available on D2. If there are less Y, Oracle Global Order Promising would readjust X to demand less quantity.

Line 13: since there is still shortage of 40, Oracle Global Order Promising looks for supply at the Transfer From source. 40 of A can be transferred from Org2 on D3. Lines 14 and 15 explain why.

Line 14: demand for A is placed in Org2 on D2 due to a 1 day transfer lead time.

Line 15: there are 50 of A available on D2.
For details on ATP Logic, see: ATP Logic on page 4-23.

To view further details:
1. Select a supply line of the pegging tree.
2. Select Details.

**Note:** To be able to drill down to ATP detail, you must set the profile MRP: Calculate Supply Demand to Yes before you initiate the ATP Inquiry. However, when the profile MRP: Calculate Supply Demand is set to Yes, Oracle Global Order Promising performs extra work to retrieve and retain the detail. This makes ATP performance slower. You should only set this profile to Yes for analysis purpose.

**Supply/Demand**
3. Choose the Supply/Demand tab.

This window shows supply and demand for the selected line of the pegging tree.
For an item, all of the supply and demand up to the item’s infinite time fence appears on the Supply/Demand tab. For a resource, all the supply and demand over the entire ASCP plan horizon appears.

The following table describes each field in this window:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Availability Date</td>
<td>This field is currently not populated.</td>
</tr>
<tr>
<td>Organization Code</td>
<td>This field is currently not populated.</td>
</tr>
<tr>
<td>Demand Class</td>
<td>This field is currently not populated.</td>
</tr>
<tr>
<td>Item/Resource</td>
<td>Indicates the item or resource of the pegging line.</td>
</tr>
<tr>
<td>Type</td>
<td>Indicates if it is an item or resource.</td>
</tr>
<tr>
<td>UOM</td>
<td>Shows the primary unit of measure of the item or resource.</td>
</tr>
</tbody>
</table>
Horizontal ATP

4. Choose the Horizontal ATP tab.

The Horizontal ATP tab shows material or resource availability in a horizontal time scale. It shows total demand, total supply, net available-to-promise, and cumulative available-to-promise.

Figure 6–6 Supply Chain Details Window: Horizontal ATP Tab
For ATP based on collected data: the time horizon equals the item's infinite time fence defined in the ATP rule, or the date of last supply or demand.

For ATP based on planning data: the time horizon equals the item's infinite time fence or the end of the plan horizon (if the infinite time fence is not defined).
**Global Availability**

When you have Pick Source set to Yes and you have selected Pick Source, the ATP Sources and Group Availability window, as seen below, opens. Selecting Pick Source with the Yes setting triggers Oracle Global Order Promising to use sourcing rules to find all the possible shipping organizations.

*Figure 6–7  ATP Sources and Group Availability Window*

The following table describes the fields in this window:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pick</td>
<td>Indicates whether or not the item will be picked.</td>
</tr>
<tr>
<td>Org</td>
<td>Organization short code.</td>
</tr>
<tr>
<td>Supplier</td>
<td>Not currently used.</td>
</tr>
<tr>
<td>Site</td>
<td>Not currently used.</td>
</tr>
<tr>
<td>Ship Method</td>
<td>Shows the default shipping method defined for the shipping organization to the receiving party. Oracle Global Order Promising accepts Ship Method as a parameter in its Calling API. If any calling application calls ATP with a specific Ship Method, Oracle Global Order Promising checks to see if the ship method is defined in Transit Lead Time as a valid ship method between the shipping organization and receiving party. If it is a valid ship method, Oracle Global Order Promising honors it. Otherwise, it uses the default ship method. If there is no default ship method, a 0 lead time if assumed.</td>
</tr>
<tr>
<td>Lead Time</td>
<td>Shows the lead time associated with the ship method.</td>
</tr>
</tbody>
</table>
Once you select or deselect the shipping organizations, then you can retrieve the ATP Details to obtain ATP results for each selected shipping organization.
Topics covered in this section include the following:

- Order Backlog Workbench on page 7-2
Order Backlog Workbench

The Order Backlog Workbench is a powerful graphic tool that enables you to easily manage the existing order lines you wish to reschedule. This workbench is especially useful when a significant issue such as item shortage occurs within your supply chain, manufacturing line, or distribution chain, and you need to react rapidly to reschedule groups of order lines affected by the item shortage.

- Once you have selected orders for scheduling using system processing constraints and user-defined controls, order lines are processed in a simulated scheduling mode and presented for your review.

Note: You must first select and schedule order lines before you can navigate to the Order Backlog Workbench.

During the review process, you can:

- Take actions based on system exceptions or errors resulting from simulated scheduling.
- Update or modify the simulated scheduled dates or source organizations for order lines presented.
- Choose to accept or cancel all simulated order line scheduling information.
- Choose to firm selected order lines for simulated rescheduling.
- Choose to pick and accept a selected order line simulation results.
- View the Oracle Global Order Promising Pegging Detail information.
- Reschedule the order line information presented in the simulated schedule mode again.

Once you are satisfied with your scheduling simulation results, save your changes, and then your new order line scheduling information is updated for selected order lines.

Order Backlog Scheduling Process

1. Define Priority Rules: determine the processing order used when scheduling orders through the scheduler.

2. Define Filter Criteria: enables you to determine order line selection criteria for scheduling within the Order Backlog Workbench.
   a. Simulate Order Scheduling: shows the scheduling simulation results by:
      * Exceptions
      * Order Number
      * Organization / Item
   b. You can choose to:
      * Firm all or selected simulated order lines scheduling results.
      * Pick all or selected simulated order lines scheduling results.
      * Save all scheduling simulation results.
      * Cancel all scheduling simulation results.
      * Modify the simulated order line schedule dates or source organization’s fields, and resimulate scheduling based upon modifications made, performing any of the functions previously listed, until satisfied.

4. Save your work. Once your simulation work is saved, simulated order line schedule dates and sources become the scheduled date and source organization for all order lines selected.
Order Backlog Workbench User Interface
The Order Backlog Workbench consists of three panes within a window:

- Navigator Tree
- Reschedule Lines Results
- Order Line Pegging Information

Figure 7–1  Workbench Window

Navigator Tree
The Navigator Tree controls the display of information for the Reschedule Lines Results and Order Line Pegging panes within the Workbench. Drill down to the different levels within the Exceptions, Orders, or Items tabs to view the order line and pegging information.
Exceptions Tab
The Exceptions tab is the default tab displayed within the Navigation Tree pane upon system display of the Order Backlog Workbench. This tab displays a tree containing the order line exceptions that occurred during simulated scheduling.
Exceptions are grouped and displayed by exception type, and a corresponding number is displayed to the right of each exception tree node to denote the number of occurrences for each of the exception types that occurred during simulated scheduling.

Exception Tree Drill Down Details
+ Exceptions
  + Exception Folder Name
    + Order Number

Orders Tab
The Orders tab displays a folder tree of all orders selected for simulated scheduling. Orders within this folder tree are displayed in the ascending order.

Order Tree Folder Drill Down Details
+ Sales Orders
  + Order Number
    + Independent (Order) Lines

Items Tab
The Items tab displays a folder tree of all items contained within order lines that were selected for simulated scheduling. Items are displayed by an alpha numeric sort of the organization to which they were scheduled against.

Item Tree Folder Drill Down Details
+ Organizations
  + Organization Name
    + Product Families
      + Product Family
  + Categories
+ Item Category Sets
+ Item Category Set code combinations

**Reschedule Lines Results**
The Reschedule Lines Results pane is used to display order line information based upon cursor placement within the Navigator pane.

If the Item field is highlighted in yellow, simulated scheduling encountered an error during processing, and the order line was not modified in any way. Specific scheduling error messages can be seen in the Error column.

The Reschedule Lines Results pane displays the following order line information:

- Pick Checkbox
- Firm Checkbox
- Item
- Order Line Number
- Quantity Ordered
- Order Line UOM
- Ship from Org
- Ship Date (Scheduled Date)
- Scheduled Arrival Date
- Available Quantity
- Group Ship Date
- Group Arrival Date
- Request Date Quantity
- Requested Ship Date
- Requested Arrival Date
- Firm Source Org
- Firm Ship Date
- Firm Arrival Date
- Latest Acceptable Date
Order Line Pegging Information

The Order Line Pegging Information pane displays pegging information based upon the cursor location within the Navigator tree.

**Note:** If there is no information contained within the Pegging Information window based upon the cursor location within Order Backlog Workbench:

- Entity referenced within the Navigator tree is not related to pegging, such as Organization.
- The item or order line that is referenced is not ATP enabled.
- The item or order line does not currently reside in Oracle Global Order Promising collection tables.

If you select a node element within the Order Line Pegging pane and select Details, the Oracle Global Order Promising ATP Details window is displayed.

For more information on the ATP Details window, see: ATP Details on page 6-5.
Selection Criteria for Scheduling with the Order Backlog Workbench

As a prerequisite, you must define at least one Sequencing (Priority) Rule prior to utilizing the Order Backlog Workbench.

**Priority Rules**
The Oracle Advanced Planning Solution utilizes Priority Rules to determine the processing order used when scheduling orders through the scheduler.

- You can choose to define a default scheduling order processing Priority Rule.
- You can choose to disable a Priority Rule.
- Or you can choose to define single or multiple criteria within a priority rule to further define the processing order the scheduler utilizes during line scheduling.

Priority Rules are not instance specific and are defined by selecting specific criteria that determine the order input to the scheduler.

---

**Note:** At least one priority rule must be defined prior to utilizing the Order Backlog Workbench for scheduling.

---

**To define Priority Rules:**

1. Navigate to the Define Priority Rules window.
2. Enter the Name for the Priority Rule.

3. Enter a Description for the Priority Rule.

4. Select the Enabled checkbox to enable the priority rule to be utilized by the scheduler.

5. Choose to establish whether the priority rule will be used as the default priority rule used during scheduling execution.
   Select the Default checkbox to use the priority rule as the default rule.

---

**Note:** If another priority rule has been defined as the Default Priority Rule and you select the Default checkbox, you are presented with a decision box asking if you wish to update the current default priority rule to the rule you are currently modifying. Select Yes to update your default Priority Rule.
6. Select the Priority Rule criteria name in the Criteria Name field. Valid values are:
   - Gross Margin
   - Promise Date
   - Request Date
   - Sales Order and MDS Entities priority
   - Scheduled Date

7. Select the criteria processing order the scheduler will use when scheduling order lines. Enter a numeric value in the Criteria Priority field.

8. Save your work.

---

**Note:** Once a Priority Rule has been successfully saved, you can only update the following information:

- Enabled checkbox
- Default checkbox

You may choose to add additional criteria to the Priority Rule.

---

**To schedule orders using the Order Backlog Workbench:**

1. Navigate to the Order Backlog Workbench.

   The Schedule Orders window appears:

   *Figure 7–3 Schedule Orders Window*

---

7-10 Oracle Global Order Promising Implementation and User’s Guide
2. Determine your order selection with filter criteria for scheduling:
   - Select the Filter Criteria Name and proceed to Step 3, or
   - Select the Filter Criteria Name you wish to modify and select the Create/Edit button, or
   - Select Create/Edit if you wish to enter new filter criteria information.

   The Criteria folder window appears. The window title is MRPFIND.

   Figure 7–4  MRPFIND Window

Create your order selection criteria for scheduling. Order selection is determined by current order line status and the Filter Criteria you define.

   **Note:** Order lines that have a current status of Shipped or Cancelled are not selected for simulated scheduling.

   Order lines whose source is External, for example drop ship order lines, are also not selected for simulated scheduling.

The Schedule Orders window utilizes Oracle Applications Folder technology to save Filter Criteria for reuse. Users can choose to create filter criteria and save it to a
folder, or query an existing folder and modify the Filter Criteria. However, you are not allowed to enter Filter Criteria for scheduling without first saving the criteria to a folder.

a. Either edit the Filter Criteria for the folder selected, or enter new filter criteria. Select the Field name. Valid values are:
   * Task
   * Customer
   * Item Name
   * Order Number
   * Project Number
   * Promise Date
   * Requested Arrival Date
   * Requested Ship Date
   * Scheduled Arrival Date
   * Scheduled Shipped Date
   * Ship from org

b. Select an operator for your criteria. Valid values are:
   * Equals
   * Is Not (Equal)
   * Less Than
   * At Most
   * At Least
   * Greater Than
   * Between
   * Outside
   * Is Empty
   * Is Entered
   * Among
c. Choose to further define your query criteria values by entering limiting values in the From and To fields. Enter values appropriate to the Field Name selected.

For example, if you are interested in displaying order lines that have a scheduled order date two weeks from today, enter the present date in the From field, and a date two weeks from the present date in the To field.

d. Save your work to a folder. From the File menu, select Save As to save your folder. When you save your folder, there are several options available. Once you have saved your folder, close the Criteria window.

For more information on using folders within Oracle Order Management, see: Private Folders, Oracle Order Management User’s Guide.

3. Select the scheduling Priority Rule.

4. Choose whether to overwrite or preserve all existing source organizations for current order line sources during scheduling.
   - Select No to use current order line source information. Use existing sourcing rules and priority rules to determine order line schedule date.
   - Select Yes to overwrite current order line source information. Use any source for your order, based upon sourcing and priority rules for scheduling, and use the modified sourcing information during scheduling to determine order line scheduled date.

   **Note:** If there is no order source specified on the order line, the order source is determined by your Sourcing Rule ranking. Ensure that your profile MRP: ATP Assignment Set is properly defined.

5. Choose to manually sequence the processing order during scheduling for your order lines or allow the system to schedule your order lines based upon the sequencing rule chosen by selecting Manual Sequence.

   **Note:** If you choose to allow the system to process order lines by the Sequencing Rule chosen, proceed to Step e.

Manual Sequence enables a user, based upon query criteria, to schedule, sequence, Firm, or delete order lines selected for rescheduling.
a. Once you select Manual Sequence, the system queries open sales orders based upon filter criteria that contain order lines. Then the system displays the orders based upon the Sequencing Rule selected in the Order Sequencing window.

Figure 7–5  Order Sequencing Window

<table>
<thead>
<tr>
<th>Firm</th>
<th>Seq</th>
<th>Order Number</th>
<th>Line Number</th>
<th>Option Number</th>
<th>Shipment Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>51104</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>51103</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>51103</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>51103</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>51105</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>51107</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>51109</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>51113</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

b. Choose to Firm current order line information: Select the Firm checkbox if you do not want a particular order line processing sequence to be modified when selecting

c. Apply.

For example, suppose you update sequence 1 to sequence 5, sequence 6 to sequence 8, and select the Firm checkbox for sequence 2. Once Apply is selected, the order line associated with sequence 2 remains sequence 2.

If the Firm checkbox for sequence 2 had not been selected, then, based upon your user changes, the order line originally associated with sequence 2 could possibly be changed because of your re-sequencing.
d. Choose to update order processing sequence during reschedule. Select the line you wish to modify, then update the sequence number assigned to the order line.

e. Select Apply. This saves your new order line sequence to be used during rescheduling.

f. Select Schedule to initiate simulated order line scheduling.

While scheduler is running, the user is presented with a Progress window to track the reschedule process.

**Figure 7–6  Progress Window**

The Progress window continually updates the progress of rescheduling concurrent program. The following information is displayed:

- Total Lines #: total order lines selected for scheduling.
- Remaining: total order lines remaining to be scheduled.
- Time Remaining: total time remaining to process order lines currently not scheduled.
- Complete: total order lines current completed scheduling.
- Progress Indicator Bar: an indicator bar that graphically displays the current order lines scheduled as a percentage of the total order lines selected for scheduling.
Once the indicator bar reaches 100% and the Remaining field displays 0, select OK to display scheduling results.

Results are presented within the Order Backlog Workbench.
Scheduling Order Lines with the Order Backlog Workbench

Once the order lines have been scheduled and processed, users are presented with the Order Backlog Workbench, a graphical user interface that enables a user to review, manage, and process simulated order line scheduling results.

**To manage Simulated order line scheduling results:**

1. Review the following reschedule exceptions generated during rescheduling process:
   - Item Shortage
   - Insufficient Margin
   - Modified Source
   - Later Than Old Schedule Date
   - Later than Promise Date
   - Later than Request Date

2. Choose to modify the schedule date and source organization’s fields for order lines prior to selecting the Pick checkbox.

3. Choose to accept current order line scheduling information. Select the Pick checkbox if you wish to schedule the order line.
   
   You must select the Pick checkbox if you wish to accept the simulated scheduling information for each order line. Once you select the Pick checkbox, the Firm checkbox is also enabled.

4. Choose to Firm current order line information.
   
   Select the Firm checkbox if you:
   - Want to accept current simulation scheduling information for an order line.
   - Do not want a particular order line to be modified during any additional simulated rescheduling that may occur within the workbench for the current workbench simulation session.
   
   For details, see: Reschedule Lines Results on page 7-6.

5. Choose to view Oracle Global Order Promising Details. If Oracle Global Order Promising information is available for an item or order line, Details is enabled.
   
   Select Details to be presented with the Oracle Global Order Promising ATP Details window to review supply and demand, and horizontal planning details.
For more information on the ATP Details window, see: ATP Details on page 6-5.

   - You may modify only the Schedule Date and Source Organization fields for an order line.
   - You may choose to Firm an order line or group of order lines, and then process new a new scheduling simulation using the current order line information by selecting Reschedule.
     For details, see: Reschedule Lines Results on page 7-6.

   Once you select Save, all simulated scheduling results for order lines that have the Pick checkbox enabled are committed to the database. The Order Backlog Workbench closes, and the user is presented with the Schedule Orders window.

   ____________________________________________________________________________
   **Note:** Simulated scheduling information for order lines without the Pick checkbox enabled are discarded, irrespective of the Firm checkbox setting.
   ____________________________________________________________________________

   Simulated scheduling information is discarded, order line information is not updated within the database, the Order Backlog Workbench closes, and the user is presented with the Schedule Orders window.

   ____________________________________________________________________________
   **Note**
   ATP in the Order Backlog Workbench is based on the detail supply demand tables, regardless of the profile setting for MSC: Enable ATP Summary Mode.
   ____________________________________________________________________________
Topics covered in this section include the following:

- Troubleshooting on page 8-2
Troubleshooting

This section provides a detailed explanation on Oracle Global Order Promising:

- Troubleshooting
- Debugging
- SQL Queries

Troubleshooting

The following are error messages Oracle Global Order Promising users may receive, and how to troubleshoot these messages.

---

**Note:** The lookup codes are passed from the Oracle Global Order Promising API to the calling module, which displays the error messages to the users.

---

### ATP Based on Collected Data Errors

<table>
<thead>
<tr>
<th>Error Msg</th>
<th>Code</th>
<th>Message Received When...</th>
<th>To Resolve this Message...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Try ATP again later.</td>
<td>130</td>
<td>The complete / target collection or sales order collection is running.</td>
<td>Wait until so_tbl_status in msc_apps_instances is set to Null or 0.</td>
</tr>
<tr>
<td>Summary Concurrent program is running.Try ATP later.</td>
<td>160</td>
<td>The Load Summary Based on Collected Data concurrent program is running in complete refresh mode, and ATP is offline.</td>
<td>Wait until the Load Summary Based on Collected Data concurrent program is completed successfully.</td>
</tr>
<tr>
<td>Invalid ATP rule or No ATP rule defined.</td>
<td>57</td>
<td>A valid ATP rule is not assigned to the item or the organization.</td>
<td>Assign a valid ATP Rule to the item or at the organization level. Run collections to collect the new item definition and organization setup.</td>
</tr>
<tr>
<td>Unable to meet the request quantity.</td>
<td>52</td>
<td>The infinite time fence is not defined in the ATP Rule, and Oracle Global Order Promising cannot find the entire requested quantity within the Manufacturing calendar of the organization.</td>
<td>Define the infinite time fence in the ATP Rule, or ensure that there is sufficient supply for the item within the calendar limits.</td>
</tr>
<tr>
<td>Error Msg</td>
<td>Code</td>
<td>Message Received When...</td>
<td>To Resolve this Message...</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Unable to find a calendar date.</td>
<td>47</td>
<td>The calendar is not assigned to that organization.</td>
<td>Assign the calendar to the organization. Or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>or The order request date is outside of the calendar.</td>
<td>Or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Error in assignment set. Check collections was successful.</td>
<td>Or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The assignment set pointed to by MRP: ATP Assignment Set has not been collected.</td>
<td>If not yet run, run collections to collect the assignment set over to the ATP instance. If you had already run collections, check to see if last collection ran successfully.</td>
</tr>
<tr>
<td>No APS instance defined. Set APS instance and run collections.</td>
<td>135</td>
<td>The instance for Oracle Global Order Promising has not been defined in the Advanced Planning and Scheduling server.</td>
<td>Define the instance to collect the data over to the APS server. For details, see: System Setup on page 2-2.</td>
</tr>
<tr>
<td>ATP has detected an error in source instance setup.</td>
<td>140</td>
<td>The instance for Oracle Global Order Promising has not been setup properly.</td>
<td>Check your system setup. Run the ATP Audit program to validate the setup. For details, see: System Setup on page 2-2.</td>
</tr>
<tr>
<td>Wrong Check ATP setup for product family item and member item.</td>
<td>170</td>
<td>Member items for a product family item have Check ATP set to Material, if the product family item has Check ATP set to Material. However, when the requested member item has Check ATP set to None, this error occurs.</td>
<td>Set the Check ATP attribute to Material for the member item that failed with that product family.</td>
</tr>
<tr>
<td>One of the group elements or mandatory components failed.</td>
<td>180</td>
<td>Lines in a ship or arrival set receive this error when any line in the set has an error. For example, in a three line ship set where one line has the error Plan not Found, then the other two lines get this error message.</td>
<td>Correct the error for the line item that has an error message other than this error message. Then the entire ship or arrival set will not fail.</td>
</tr>
<tr>
<td>ATP has detected invalid objects. Contact your system admin.</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATP processing error.</td>
<td>220</td>
<td>Some ATP packages are invalid.</td>
<td>Contact your database administrator. This is typically related to applying the correct patch.</td>
</tr>
<tr>
<td></td>
<td>23</td>
<td></td>
<td>Contact your system administrator to investigate the problem.</td>
</tr>
</tbody>
</table>
## Troubleshooting

<table>
<thead>
<tr>
<th>Error Msg</th>
<th>Code</th>
<th>Message Received When...</th>
<th>To Resolve this Message...</th>
</tr>
</thead>
<tbody>
<tr>
<td>INV: Capable to Promise must be same at source and destination.</td>
<td>230</td>
<td>The profile INV: Capable to Promise is set differently at the source from at the destination.</td>
<td>Set the profile INV: Capable to Promise to the same value on both the source and destination instances.</td>
</tr>
<tr>
<td>Unable to meet the latest acceptable date.</td>
<td>53</td>
<td>The scheduling fails because the demand cannot be satisfied for the latest acceptable date, but the demand can be satisfied at a later date.</td>
<td>Excess supply is required for this item.</td>
</tr>
<tr>
<td>ATP not applicable.</td>
<td>61</td>
<td>Item is not ATP-able.</td>
<td>No action is needed, unless item is supposed to be ATP-able.</td>
</tr>
<tr>
<td>No Sources.</td>
<td>80</td>
<td>Sourcing is not defined for that customer. Thus, Oracle Global Order Promising cannot select the shipping organization in the ATP Assignment Set.</td>
<td>Define globally, all organization sourcing rules and assign them to the appropriate levels for that customer in the ATP Assignment Set. Note that Bills of Distribution and local sourcing rules are not applicable.</td>
</tr>
<tr>
<td>This item is not collected. Please run Data Collection.</td>
<td>85</td>
<td>An ATP-able item has not been collected.</td>
<td>Run collections to collect the item.</td>
</tr>
<tr>
<td>No Assignment Set.</td>
<td>90</td>
<td>Both the MRP: ATP Assignment Set at source and destination are null.</td>
<td>Define at least one assignment set. You must does this when you need Oracle Global Order Promising to recommend a shipping warehouse.</td>
</tr>
</tbody>
</table>
# ATP Based on Planning Data Errors

<table>
<thead>
<tr>
<th>Error Msg</th>
<th>Code</th>
<th>Message Received When...</th>
<th>To Resolve this Message...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan not found.</td>
<td>120</td>
<td>For Standard Items:</td>
<td>For Standard Items:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- This error is generated only when the plan is running or has errored out.</td>
<td>- The plan that contains the item is running or has errored out. Try ATP after the plan run has completed successfully.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For Multi-Level, Multi-Org ATO Model:</td>
<td>For Multi-Level, Multi-Org ATO Model:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- The plan that contains the model is not ATP-able.</td>
<td>- Make the plan ATP-able and run the Analyze Plan Partitions concurrent program.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- The model is not included in any ATP-able plan.</td>
<td>- Define and run the plan to successful completion.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- The plan is running or has errored out.</td>
<td>- Try ATP after plan has been run successfully.</td>
</tr>
<tr>
<td>Plan not found.</td>
<td>150</td>
<td>If standard items are not found in any ATP-able plan, use collected data to find availability.</td>
<td>No action is needed. If you expect there should be a plan for the item, make sure that plan is ATP-able and has been run successfully.</td>
</tr>
<tr>
<td>Run ATP Post Plan Processing concurrent program.</td>
<td>200</td>
<td>The ATP Post Plan Processing concurrent program has not been run for the ATP-able plan.</td>
<td>Run the ATP Post Plan Processing concurrent program. If you are not using demand priority based Allocated ATP or Summary Based ATP, make sure the related profile is set correctly.</td>
</tr>
<tr>
<td>Summary Concurrent program is running.</td>
<td>160</td>
<td>The ATP Post Plan Processing concurrent program is still running.</td>
<td>Wait until the ATP Post Plan Processing concurrent program is finished running.</td>
</tr>
<tr>
<td>MRP: Default Assignment Set sourcing not in sync with ATP Plan.</td>
<td>240</td>
<td>Only applicable for multi-level, multi-rg ATO models: the sourcing defined for the model in the assignment set assigned to the profile MRP: Default Assignment Set is not the same as the sourcing defined in the assignment set used in the ATP plan.</td>
<td>Only applicable for multi-level, multi-org ATO models: ensure that the ATO model has the same sourcing and is the same in the two assignment sets is used in profile and plan.</td>
</tr>
</tbody>
</table>
## Troubleshooting

<table>
<thead>
<tr>
<th>Error Msg</th>
<th>Code</th>
<th>Message Received When...</th>
<th>To Resolve this Message...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unable to find a calendar date.</td>
<td>47</td>
<td>- The calendar is not assigned to that organization.</td>
<td>Assign the calendar to the organization.</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td>- The order request date is outside of the calendar.</td>
<td>or Extend the length of time on the calendar.</td>
</tr>
<tr>
<td>Error in assignment set.</td>
<td>135</td>
<td>The assignment set pointed to by MRP: ATP Assignment Set has not been collected.</td>
<td>If not yet run, run collections to collect the assignment set over to the ATP instance. If you had already run collections, check to see if last collection ran successfully.</td>
</tr>
<tr>
<td>Check collections was successful.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No APS instance defined.</td>
<td>140</td>
<td>The instance for Oracle Global Order Promising has not been defined in the Advanced Planning and Scheduling server.</td>
<td>Define the instance to collect the data over to the APS server. For details, see: System Setup on page 2-2.</td>
</tr>
<tr>
<td>Set APS instance and run collections.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATP has detected an error in source instance setup.</td>
<td>170</td>
<td>The instance for Oracle Global Order Promising has not been setup properly.</td>
<td>Check your system setup. Run the ATP Audit program to validate the setup. For details, see: System Setup on page 2-2.</td>
</tr>
<tr>
<td>ATP has detected an error in source instance setup.</td>
<td>170</td>
<td>The instance for Oracle Global Order Promising has not been setup properly.</td>
<td>Check your system setup. Run the ATP Audit program to validate the setup. For details, see: System Setup on page 2-2.</td>
</tr>
<tr>
<td>Wrong Check ATP setup for product family item and member item.</td>
<td>180</td>
<td>Member items for a product family item have Check ATP set to Material, if the product family item has Check ATP set to Material. However, when the requested member item has Check ATP set to None, this error occurs.</td>
<td>Set the Check ATP attribute to Material for the member item that failed with that product family.</td>
</tr>
<tr>
<td>One of the group elements or mandatory components failed.</td>
<td>19</td>
<td>Lines in a ship or arrival set receive this error when any line in the set has an error. For example, in a three line ship set where one line has the error Plan not Found, then the other two lines get this error message.</td>
<td>Correct the error for the line item that has an error message other than this error message. Then the entire ship or arrival set will not fail.</td>
</tr>
<tr>
<td>ATP has detected invalid objects. Contact your system admin.</td>
<td>220</td>
<td>Some ATP packages are invalid.</td>
<td>Contact your database administrator. This is typically related to applying the correct patch.</td>
</tr>
<tr>
<td>ATP processing error.</td>
<td>23</td>
<td>-</td>
<td>Contact your system administrator to investigate the problem.</td>
</tr>
</tbody>
</table>
Troubleshooting

### Other Data Errors

<table>
<thead>
<tr>
<th>Error Descriptions</th>
<th>Code</th>
<th>Message Received When...</th>
<th>To Resolve this Message...</th>
</tr>
</thead>
<tbody>
<tr>
<td>INV: Capable to Promise must be same at source and destination.</td>
<td>230</td>
<td>The profile INV: Capable to Promise is set differently at the source from at the destination.</td>
<td>Set the profile INV: Capable to Promise to the same value on both the source and destination instances.</td>
</tr>
<tr>
<td>Unable to meet the latest acceptable date.</td>
<td>53</td>
<td>The scheduling fails because the demand cannot be satisfied for the latest acceptable date, but the demand can be satisfied at a later date.</td>
<td>Excess supply is required for this item.</td>
</tr>
<tr>
<td>ATP not applicable.</td>
<td>61</td>
<td>Item is not ATP-able.</td>
<td>No action is needed, unless item is supposed to be ATP-able.</td>
</tr>
<tr>
<td>No Sources.</td>
<td>80</td>
<td>Sourcing is not defined for that customer. Thus, Oracle Global Order Promising cannot select the shipping organization in the ATP Assignment Set.</td>
<td>Define globally, all organization sourcing rules and assign them to the appropriate levels for that customer in the ATP Assignment Set. Note that Bills of Distribution and local sourcing rules are not applicable.</td>
</tr>
<tr>
<td>This item is not collected. Please run Data Collection.</td>
<td>85</td>
<td>An ATP-able item has not been collected.</td>
<td>Run collections to collect the item.</td>
</tr>
<tr>
<td>No Assignment Set.</td>
<td>90</td>
<td>Both the MRP: ATP Assignment Set at source and destination are null.</td>
<td>Define at least one assignment set. You must does this when you need Oracle Global Order Promising to recommend a shipping warehouse.</td>
</tr>
</tbody>
</table>

**Note:** For both ATP Based on Collected Data and Planning Data tables, each customer has only one table to use.
## Troubleshooting

<table>
<thead>
<tr>
<th>Error</th>
<th>Error Occurs When...</th>
<th>To Resolve this Message...</th>
</tr>
</thead>
</table>
| ATP performance is slow. | - | 1. Set the profile MRP: Calculate Supply Demand to No on both the source and destination.  
2. Set the profile MSC: ATP Debug Mode to No on both the source and destination.  
3. Apply the latest ATP patch. |
| Some past due sales orders, supplies, or demands are not included in the ATP. | - | For ATP based on collected data, check the ATP Rule assigned to the item:  
1. From the collection workbench. This is to verify that the sales orders, supplies, and demands in question are collected over to the destination.  
2. To verify that an ATP Rule exists for the item.  
3. To verify the values for Past Due Days supply and demand attributes in the ATP Rule. If there are any values, ATP only considers the past dues demand and supply for that many days.  
   For example: for a 5 day Past Due Demand, ATP only considers the past due demand that fall under the last 5 working days before the sysdate. To consider all past due demand, these field should be left blank.  
   For ATP based on planned data, check the ATP Rule assigned to the item:  
1. From the collection workbench. This is to verify that the sales orders, supplies, and demands in question are collected over to the destination.  
2. From the planners workbench. This is to verify that the sales orders are included in the plan. If they are not, investigate why the sales orders are not included in the plan. |
### Error | Error Occurs When... | To Resolve this Message...
--- | --- | ---
Some supplies and demands are missing. When a sales order is not present in ATP supply and demand details, and the supply is not present in ATP supply and demand details. | Check if this supply and demand is visible in the Collections Workbench:
- If ATP is based on planning output, check if this supply and demand is in the plan.
- If certain purchase orders or work orders are missing, make sure Planning Manager is up and running if the profile MRP: Consume MPS is set to Yes.
- If the on-hand quantity from a certain subinventory is missing, check if that subinventory is ATP-able when ATP is based on collected data.
If supply or demand records are missing, run the SQL query (for Error 11: some supplies and demands are missing) to determine if collection was successful in bringing the supply and demand from the source to destination.

Subscript Beyond Count. Internal error. | Contact your system administrator to investigate the problem or contact Oracle Support.
## Troubleshooting

<table>
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<tr>
<th>Error</th>
<th>Error Occurs When...</th>
<th>To Resolve this Message...</th>
</tr>
</thead>
</table>
| Delivery Lead Time Not Calculated. | For Lead Time set between the customer location and the source organization's location:  
- The internal location is not created for the customer site.  
- Intransit Lead times are not specified for the Ship method between Orgs Ship From and the above internal location. | For Lead Time set between the customer location and the source organization's location:  
- Create an internal location in the Organization and associate the Customer’s Ship to location with it.  
- Define the Intransit Lead times between the Organization's Ship From and this internal location. Also make sure that one of the available ship methods is selected as the default ship method. |
|       | For lead time set between customer ship-to site location, customer region, or customer zone:  
- The intransit lead time is not defined between the region or zone to which customer ship to location belongs and the source organization’s location. There is no lead time at the region or zone level where the customer’s ship to site falls under a specific region or zone. | For lead time set between customer ship-to site location, customer region, or customer zone:  
- Define the intransit lead time between the region or zone to which the customer ship to site belongs and the source organization’s location. Also make sure that one of the available ship methods is selected as the default ship method. |
Debugging

ATP Debug File
The ATP debug file contains process information that helps facilitate ATP debugging whenever logging a tar or bug. In a Standalone Planning Server Configuration, ATP produces one ATP debug file. In an Integrated Planning Server Configuration, ATP produces one ATP debug file at the source and one ATP debug file at the destination.

To Produce an ATP Debug File for a Standalone Planning Server Configuration:
1. Set the profile MSC: ATP Debug Mode to Debug Only at the user level of the source instance.
2. Run the following query to find the location where the ATP debug file is created:
   
   ```sql
   select ltrim(rtrim(substr(value, instr(value,',',-1,1)+1)))
   from v$parameter where name= 'utl_file_dir'
   ```

   Ensure that there no * values at the end of utl_file_dir value returned by the query. Also ensure that this directory is writable.
3. Run the ATP Inquiry for the item.
4. When the test case is complete, pick latest session file from the location determined in the first step.
5. Upload the debug.

Notes:
- Complete steps 1 to 4 on both the source and destination instance.
- Set profile MSC: ATP Debug Mode back to No at the appropriate site level after generating the debug file. If the profile option is not set back to None, then the ATP performance degrades.
To Produce an ATP Debug File for an Integrated Planning Server Configuration:

1. At the instance where the query is performed, set the profile MSC: ATP Debug Mode to Debug Only at the user level.

2. Run the following query to find the location where the ATP debug file is created:

   ```sql
   select ltrim(rtrim(substr(value, instr(value,',',-1,1)+1)))
   from v$parameter where name= 'utl_file_dir'
   ```

   Ensure that there are no * values at the end of utl_file_dir value returned by the query. Also, ensure that this directory is writable.

3. Run the ATP Inquiry for the item.

4. Pick the latest session file from the location determined in the first step, when the test case is complete.

Debugging Areas

The following are areas that people commonly debug to ensure that the basic setup and ATP calculations are correct.

Oracle Global Order Promising Architecture

- The source table, mrp_ap_apps_instances, must contain one row. The instance_id column must contain the instance id assigned to this source instance on the APS instance.
- The destination table, msc_apps_instances, may contain as many rows as the collected source instances.
- The complete / target collections must be completed at least once before using ATP.
- For ATP based on collected data to work correctly, the collections process must be completed successfully. A value of zero or null in the st_status column of the msc_apps_instance table for the source instance indicates that collections for this source has been run successfully, and ATP can be performed against this instance. If this column contains any other value, then collections is running or collections has errored out.
  
  For details for ATP based on collected data, see: Data Collection on page 2-19.
- For ATP based on planning data to work correctly, collections and the plan run must be completed successfully. Plan_completion_date and data_completion_
date columns in msc_plans table for the plan are populated if the plan has completed successfully. If any of these columns contains a null value, then the plan has errored out. The plan must be relaunched and completed successfully before performing the ATP check against this plan.

**Oracle Global Order Promising Database Links**
- Run the following query to verify the database link at the source:
  ```sql
  Select substr(a2m_dblink, 1, 35), substr(m2a_dblink, 1, 35) from mrp_ap_apps_instances;
  ```
  - a2m_dblink must contain the database link that points from the source to the destination.
  - m2a_dblink must contain the database link that points from the destination to the source.
- Check value of profile MRP: ATP Database Link. The value of the profile option must match with the a2m_dblink found in the above query.
- Run the following query to verify the database link at the destination:
  ```sql
  Select substr(a2m_dblink, 1, 35), substr(m2a_dblink, 1, 35) from msc_apps_instances where instance_code = l_instance_code;
  ```
  - where l_instance_id = instance_id of the source instance;
  - a2m_dblink must contain the database link that points from the source to the destination.
  - m2a_dblink must contain the database link that points from the destination to the source.
SQL Queries

**Note:** Your organization's database administrator should be the person designated to run these SQL Scripts.

A basic understanding of the architecture of Oracle Global Order Promising is helpful. The following are some notes:

- Data Collection is responsible for gathering all the relevant data in the Source Instance from the INV, BOM, PO, OE, MRP, and WIP schemas, and duplicating the data in the MSC schema for ATP and Oracle Advanced Supply Chain Planning purposes.

- Since you can collect data from more than one instance, MSC has its own item numbering system that is seen in MSC_SYSTEM_ITEMs. This means that each item is assigned a new INVENTORY_ITEM_ID in MSC_SYSTEM_ITEMs when it is collected. The Source Inventory Item ID is stored under SR_INVENTORY_ITEM_ID.

- SR_% is used in many common column names to denote a value on the Source Instance.

- Many tables contain the first column PLAN_ID.
  - The PLAN_ID “-1” is reserved for the Collected Data.
  - Positive PLAN_ID numbers are for the ASCP planning data generated when a plan is executed in Oracle Advanced Supply Chain Planning.
  - Some collected data is used regardless of ATP type being executed, and do not need a PLAN_ID. Sourcing rules is an example.

- MSC_PLANS and MSC_PLAN_PARTITIONS contain the setup data for your plans. For example, Collections is PLAN_ID = -1 in MSC_PLANS.

- If you collect data from more than one instance, then the SR_INSTANCE_ID column in the MSC_% tables becomes very important since the data from the two different instances can be exactly the same with the exception of this value.

- The ORGANIZATION_ID does not change in the MSC tables. It is differentiated by the SR_INSTANCE_ID when collecting from more than one instance.
Basic Queries
The basic queries below retrieve item and plan information to start diagnosis of an item problem:

From the Source instance, the following gives you:
- The organization_id for your organization_code
- The inventory_item_id which is the sr_inventory_item_id is MSC_SYSTEM_ITEMS

Select
i.concatenated_segments,
i.inventory_item_id,
i.organization_id
from
mtl_system_items_kfv i,
mtl_parameters p
where
  i.concatenated_segments like '&Item_name'
  and i.organization_id = p.organization_id
  and p.organization_code = '&Organization_code'
  and i.organization_id = p.organization_id;

Use
&Organization_Code = Enter your Org Code when prompted
&Item_name = Enter your Item Name when prompted

The following query gives you:
- The instance_id of your source instance
- The instance_code of your source instance

Select
instance_id, instance_code
from
Troubleshooting

mrp_ap_apps_instances;
From the destination, the two following queries should produce results to allow for most the various variables:

Select
    substr(item_name,1,30) Item_name,
    sr_inventory_item_id,
    inventory_item_id,
    organization_id
from
    msc_system_items
where
    sr_inventory_item_id = &Source_Inventory_item_id
    and organization_id = &Organization_id
    and sr_instance_id = &Instance_ID
    and plan_id = -1;
USE
    &Source_Inventory_item_id = from first query on the source
    &Organization_id = organization_id from the first quest on the source
    &Instance_ID = from the second query of on the source

Data Error SQL Queries
These SQL queries address the ATP Based on Collected Data Errors and the Other Data Errors from the Troubleshooting section.

Error 47: Unable to find a calendar date.
Two possible issues:
1. The calendar is not assigned to the organization.
   Select
       calendar_code,
       calendar_exception_set_id
from msc_trading_partners
where
sr_instance_id = &Instance_id
and sr_tp_id = &Organization_id
and partner_type = 3;
Use
&Instance_id = instance id of the source instance
&Organization_id = organization id of the item
If the above two columns are not populated, then a calendar has not been assigned to the organization. Assign a calendar to the organization and run Data Collections with a Complete Refresh.

2. The request date is outside the date range of the calendar assigned to the organization.
Select
Min(calendar_date),
Max(calendar_date)
from msc_calendar_dates
where
sr_instance_id = &Instance_id
and calendar_code = '&Calendar_code'
and exception_set_id = &Calendar_exception_set_id;
Use
&Instance_id = instance id of the source instance
&Calendar_code = calendar code from query in section a
&Calendar_exception_set_id = calendar exception set id from query in section a
Troubleshooting

Error 57: Invalid ATP Rule or No ATP Rule defined.
Select
\[
\text{nvl(msi.atp_rule_id, tp.default_atp_rule_id) atp_rule_id}
\]
from
\[
\text{msc_system_items msi,}
\text{msc_trading_partners tp}
\]
where
\[
\text{msi.sr_inventory_item_id = &Source_Inventory_item_id}
\text{and msi.sr_instance_id = &Instance_id}
\text{and msi.organization_id = &Organization_id}
\text{and plan_id = -1}
\text{and tp.sr_instance_id = msi.sr_instance_id}
\text{and tp.sr_tp_id = msi.organization_id}
\text{and tp.partner_type = 3;}
\]
Use
\[
&\text{Source_Inventory_item_id = source inventory item id}
&\text{Instance_id = instance id of the source instance}
&\text{Organization_id = organization id of the sourcing organization}
\]

Error Code 85: This item is not collected. Please run Data Collection.
Select
\[
\text{item_name,}
\text{atp_flag,}
\text{atp_components_flag}
\]
from
\[
\text{msc_system_items}
\]
where
\[
\text{sr_inventory_item_id = &Source_Inventory_item_id}
\text{and sr_instance_id = &Instance_id}
\]
and plan_id = -1;

Use

&Source_Inventory_item_id = source inventory item id
&Instance_id = instance id of the source instance
&Organization_id = organization id of the item

---

**Note:** If the above query does not return a row for the organization that you are expecting, then the item has not been collected. Check the item’s setup on the source instance. Run Data Collections with a Complete Refresh or Target Refresh. Then check for the item again.

---

**Error 120: Plan not found.**

Execute the following query:

Select

distinct(plan_id) Plan_id
from

msc_atp_plan_sn;

Then:

Select

plan_id,
from

msc_atp_plan_sn
where

sr_inventory_item_id = &Source_Inventory_item_id
and sr_instance_id = &Instance_id
and organization-id = &Organization_id;

Use

&Source_Inventory_item_id = source inventory item id
&Instance_id = instance id of the source instance
&Organization_id = organization id of the item

**Notes:**
If the above query does not return any data, then:

- The Plan has not been made ATP-able. Check that the Inventory ATP Flag is the plan options is checked.
- The Plan has not run successfully. Then:
  Select
  
  plan_completion_date,
  data_completion_date,
  plan_id
  
  from
  
  msc_plans
  
  where
  
  compile_designator = '&Plan_name';
  
  Use
  
  &Plan_name.
  
  The name of the plan.
  
  If plan is run successfully, then above two date columns should be populated.
- The Plan does not contain the item. Then:
  Select
  
  item_name
  
  from
  
  msc_system_items
  
  where
  
  plan_id = &Plan_id
  
  and sr_inventory_item_id = &Source_Inventory_item_id
  
  and sr_instance_id = &Instance_id
  
  and organization-id = &Organization_id;
Use

&Plan_id = The Plan_id from above
&Source_Inventory_item_id = source inventory item id
&Instance_id = instance id of the source instance
&Organization_id = organization id of the item

**Error 135: Error in assignment set. Check collections was successful.**

Execute the following query on the source instance:

Select

FND_PROFILE.value('MRP_ATP_ASSIGN_SET') from dual;

Then:

Select

assignment_set_id
from

msc_assignment_sets
where

sr_instance_id = &Instance_id
and sr_assignment_set_id = &Assign_set_id;

Use

&Instance_id = instance id of the source instance
&Assign_set_id = assignment set id returned by the first query

**Note:** If the first query returns some data while second query does not return any rows, then the assignment in MRP: ATP Assignment Set has not been collected over. Run Data Collections with a Complete Refresh to collect the data.

If you receive data from the second query, upload the queries and the results. Reference this page number of the document when contacting Oracle Support.
Error 170: ATP has detected an error in source instance setup.
Run the following queries on the source instance:

Select
FND_PROFILE.value('MRP_ATP_DATABASE_LINK') from dual;

Then:
Select
a2m_dblink from mrp_ap_apps_instances;

Note: The values returned by the above queries should be same. If the two values are not same, then instance setup is not correct.

Error 220: ATP has detected invalid objects. Contact your system admin.
The following query provides some of the possible invalid objects in the database:

Select
owner,
object_name,
object_type,
status
from
all_objects
where
status = 'INVALID'
and object_name like 'MSC%'
and object_type != 'UNDEFINED';

Then:
Select
owner,
object_name,
object_type,
```sql
status
from
all_objects
where
    status = 'INVALID'
    and object_name like 'MRP%'
    and object_type != 'UNDEFINED';
```

**Note:** If any objects are owned by APPS_MRC, ignore them. Recompile the rest of invalid objects returned, and report the errors for each object that cannot be recompiled.

**Error 230: INV: Capable To Promise must be same at source and destination.**
Run the following queries on both source and destination:

```sql
Select
    FND_PROFILE.value('INV_CTP') from dual;
```

**Note:** This profile must be the same in both instances and should only be set at the site level.

**Other Data Error: Some past due sales orders, supplies, or demands are not included in the ATP.**
Select

```sql
rule_name,
    past_due_demand_cutoff_fence,
    past_due_supply_cutoff_fence,
    include_sales_orders,
    include_purchase_orders,
    include_discrete_wip_receipts,
```
include_nonstd_wip_receipts,
include_discrete_mps,
include_rep_mps,
include_rep_wip_receipts
from
msc_atp_rules
where
rule_id = &ATP_Rule_id
and sr_instance_id = &Instance_id;
Use
&ATP_Rule_id = rule id determined using query in the section above
&Instance_id = instance id of the source instance

Note: For any supply and demand types that have values returned as 1, ATP only considers the past due demand and supply for that many days. For example: for Past Due Demand Days of 5 days, ATP only considers past due demands that fall under the sysdate of 5 days. To consider all past due demands, these fields should be left blank.

Other Data Error: Some supplies and demands are missing.

Note: The inventory_item_id must be obtained from msc_system_items when querying on msc_sales_orders and msc_supplies, because the Source Inventory_item_id is not used in these tables. For details, see the Basic Queries on page 8-15.

Sales Order Demand Query for ATP based on Collected Data
Select
demand_id,
primary_uom_quantity,
Reservation_quantity,
completed_quantity,
requirement_date,
sales_order_number,
available_to_mrp,
demand_visible
from
msc_sales_orders
where
sr_instance_id = &Instance_id
and organization_id = &Organization_id
and inventory_item_id = &Inventory_item_id;
order by
requirement_date
Use
&Inventory_item_id = inventory item id from msc_system_items
&Instance_id = instance id of the source instance
&Organization_id = organization id of the item

**Supply Query**
Select
inventory_item_id,
order_type,
new_schedule_date,
new_order_quantity
from
msc_supplies
where
sr_instance_id = &Instance_id
and organization_id = &Organization_id
and inventory_item_id = &Inventory_item_id
and plan_id = &plan_id

order by
  new_schedule_date;

Use
  &Inventory_item_id = inventory item id from msc_system_items
  &Instance_id = instance id of the source instance
  &Organization_id = organization id of the item
  &plan_id = -1 when ATP is based on collected data. It is the actual plan, id
if ATP is based on planning output

Notes:

- If a supply is missing, run Data Collections again using a Complete Refresh.
- Verify that the Planning Manager is running if the profile MRP: Consume MPS is set to yes.
- If this is a Purchase Order, the problem may be that the Purchase Order was awaiting approval during the first run of Data Collections.
Topics covered in this appendix include:

- Oracle Global Order Promising Profile Options on page A-2.
- MRP Profile Options on page A-2.
- MSC Profile Options on page A-3.
- INV Profile Options on page A-5.
Oracle Global Order Promising Profile Options

There are several types of profile options used by Oracle Global Order Promising. These types include:

- MRP Profile Options
- MSC Profile Options
- INV Profile Options

The following sections contain tables that list the profile option names, values, and descriptions.

MRP Profile Options

The following table lists and defines the MRP profile options used by Oracle Global Order Promising:

<table>
<thead>
<tr>
<th>Profile Option Name</th>
<th>Valid Values</th>
<th>Default Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRP: ATP Assignment Set</td>
<td>Text</td>
<td>Null</td>
<td>Indicates the assignment set name for use with Oracle Global Order Promising. When set to Null, Oracle Global Order Promising uses the assignment set from profile MSC: ATP Assignment Set from Oracle Advanced Planning Solution instance. Update this profile at site level on the source instance.</td>
</tr>
<tr>
<td>MRP: ATP Database Link</td>
<td>Text</td>
<td>Null</td>
<td>Determines whether distributed Oracle Global Order Promising is used. Set this profile at the source instance. The value should equal the value you entered in the ‘From Source to APS’ of the source instance you defined in the instance form. This is a site level profile.</td>
</tr>
</tbody>
</table>
The following table lists and defines the MSC profile options used by Oracle Global Order Promising:

<table>
<thead>
<tr>
<th>Profile Option Name</th>
<th>Valid Values</th>
<th>Default Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRP: ATP Allocation Method</td>
<td>User-Defined Allocation Percentage, Demand Priority</td>
<td>Null</td>
<td>Determines the allocation method used by ATP. This is a site level profile. Valid values are: User-Defined Allocation Percentage, Demand Priority</td>
</tr>
</tbody>
</table>

MSC Profile Options

The following table lists and defines the MSC profile options used by Oracle Global Order Promising:

<table>
<thead>
<tr>
<th>Profile Option Name</th>
<th>Valid Values</th>
<th>Default Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSC: ATP Allocation Method</td>
<td>User-Defined Allocation Percentage, Demand Priority</td>
<td>Null</td>
<td>Determines the allocation method used by ATP. This is a site level profile. Valid values are: User-Defined Allocation Percentage, Demand Priority</td>
</tr>
</tbody>
</table>
### Oracle Global Order Promising Profile Options

<table>
<thead>
<tr>
<th>Profile Option Name</th>
<th>Valid Values</th>
<th>Default Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSC: ATP Assignment Set</td>
<td>Text</td>
<td>Null</td>
<td>Indicates name of the assignment set for Oracle Global Order Promising to use to identify all the possible shipping organizations. Oracle Global Order Promising uses this assignment set if the profile MRP: ATP Assignment Set is Null on the ERP instance. Users can update it at the site level in the Planning instance.</td>
</tr>
<tr>
<td>MSC: ATP Capacity Allocation</td>
<td>■ Yes</td>
<td>No</td>
<td>Set it to No. You should only set it to Yes under specific instruction from Oracle Applications development.</td>
</tr>
<tr>
<td></td>
<td>■ No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSC: ATP Debug Mode</td>
<td>■ Debug Only</td>
<td>Null</td>
<td>Determines whether to enable debug messages within Oracle Global Order Promising. You can update it at the user level. Valid values are:</td>
</tr>
<tr>
<td></td>
<td>■ Debug and Database Trace</td>
<td></td>
<td>▪ Debug Only: ATP generates a log file for an ATP request.</td>
</tr>
<tr>
<td></td>
<td>■ Database Trace Only</td>
<td></td>
<td>▪ Debug and Database Trace: ATP generates a log file and a database trace file.</td>
</tr>
<tr>
<td></td>
<td>■ None</td>
<td></td>
<td>▪ Database Trace Only: ATP generates a database trace file.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ None: ATP does not generate log file or database trace file.</td>
</tr>
<tr>
<td>MSC: Class Hierarchy</td>
<td>■ Demand Class</td>
<td>Demand Class</td>
<td>Indicates which allocation hierarchy to use. Users can update it at the site level. Valid values are:</td>
</tr>
<tr>
<td></td>
<td>■ Customer Class</td>
<td></td>
<td>▪ Demand Class: User-defined, single-level hierarchy.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ Customer Class: Has three levels: customer class, customer, and site.</td>
</tr>
<tr>
<td>MSC: Enable Allocated ATP</td>
<td>■ Yes</td>
<td>No</td>
<td>Use this profile options to indicate whether allocated order promising is used. Users can update this profile at the site level.</td>
</tr>
<tr>
<td></td>
<td>■ No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSC: Enable ATP Summary Mode</td>
<td>■ Yes</td>
<td>No</td>
<td>Enables the summarization of supply / demand data for performance improvement. This is a site level profile. Valid values are:</td>
</tr>
<tr>
<td></td>
<td>■ No</td>
<td></td>
<td>▪ Yes: Enable ATP Summary Mode.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ No: Disable ATP Summary Mode.</td>
</tr>
</tbody>
</table>
INV Profile Options

The following table lists and defines the INV profile options used by Oracle Global Order Promising:

<table>
<thead>
<tr>
<th>Profile Option Name</th>
<th>Valid Values</th>
<th>Default Value</th>
<th>Description</th>
</tr>
</thead>
</table>
| MSC: Enable ATP Workflow | Yes, No | No | Controls the generation of workflow notifications to send to the planner. This is a site level profile. Valid values are:  
  - Yes: Generate ATP Workflow Notifications.  
  - No: Do not generate ATP Workflow Notifications. |

<table>
<thead>
<tr>
<th>Profile Option Name</th>
<th>Valid Values</th>
<th>Default Value</th>
<th>Description</th>
</tr>
</thead>
</table>
| INV: Capable to Promise | ATP/CTP Based on Planning Output, ATP Based on Collected Data | ATP Based on Collected Data | This is a site level profile. Valid values are:  
  - ATP/CTP Based on Planning Output: set the profile to this value if you want to use the Oracle Advanced Supply Chain Planning output for order promising.  
  - ATP Based on Collected Data: set the profile to this value if you want to use collected data for order promising. |

<table>
<thead>
<tr>
<th>Profile Option Name</th>
<th>Valid Values</th>
<th>Default Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>INV: External ATP</td>
<td>Global ATP Server, None</td>
<td>-</td>
<td>Only applicable for Oracle Global Order Promising for non-Oracle Applications on Release 11i source. Only to be set up only on source instance. Do not set this up for an Oracle Applications Release 11i instance. Set this profile to Global ATP Server if Oracle Global Order Promising is deployed. This is a site level profile.</td>
</tr>
</tbody>
</table>
Application Program Interface

Topics covered in this appendix include:

- Available-To-Promise Application Program Interface on page B-2.
Available-To-Promise Application Program Interface

Description
The Available-To-Promise Application Program Interface (API) is a public API that can be used to calculate material and resource availability across a supply chain. This API accepts information about an item or a group of items, checks the availability for the item or group of items, and returns the availability picture for the item or group of items.

The specification of the ATP API are below:

PROCEDURE Call_ATP (  

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_session_id</td>
<td>IN/OUT NUMBER</td>
<td>This is the session identifier of the user transaction. The session id is passed to ATP API from the calling module.</td>
</tr>
<tr>
<td>p_atp_rec</td>
<td>IN</td>
<td>MRP_ATP_PUB.ATP_Rec_Typ,</td>
</tr>
<tr>
<td>x_atp_rec</td>
<td>OUT</td>
<td>MRP_ATP_PUB.ATP_Rec_Typ,</td>
</tr>
<tr>
<td>x_atp_supply_demand</td>
<td>OUT</td>
<td>MRP_ATP_PUB.ATP_Supply_Demand_Typ,</td>
</tr>
<tr>
<td>x_atp_period</td>
<td>OUT</td>
<td>MRP_ATP_PUB.ATP_Period_Typ,</td>
</tr>
<tr>
<td>x_atp_details</td>
<td>OUT</td>
<td>MRP_ATP_PUB.ATP_Details_Typ,</td>
</tr>
<tr>
<td>x_return_status</td>
<td>OUT</td>
<td>VARCHAR2,</td>
</tr>
<tr>
<td>x_msg_data</td>
<td>OUT</td>
<td>VARCHAR2,</td>
</tr>
<tr>
<td>x_msg_count</td>
<td>OUT</td>
<td>NUMBER</td>
</tr>
</tbody>
</table>

Where:

1. p_session_id: This is the session identifier of the user transaction. The session id is passed to ATP API from the calling module.

2. p_atp_rec: This record of tables contains information about items for which the resource and material availability check needs to be done. This record is explained in detail later in this document.

3. x_atp_rec: This record of table contains the resource and material availability information generated by ATP for items passed to the ATP API in p_atp_rec. This record is explained in detail later in this document.
4. `x_atp_supply_demand`: This record of tables contains information about the supplies and demands ATP considers to check the availability. This record is explained in detail later in this document.

5. `x_atp_period`: This record of tables contains the net supply and demand picture for the items (for the entire time horizon during which availability is checked). This record is explained in detail later in this document.

6. `x_atp_details`: This record of tables is not used by ATP at present.

7. `x_return_status`: This variable contains the overall status of ATP check. There are three possible values for this variable:
   1. `FND_API.G_RET_STS_SUCCESS`: The return value is ‘S’. It means the ATP request was successful.
   2. `FND_API.G_RET_STS_ERROR`: The return value is ‘E’. It means that some error occurred during the ATP check.
   3. `FND_API.G_RET_STS_UNEXP_ERROR`: The return value is ‘U’. It means that an unexpected error occurred during the ATP check.

8. `x_msg_data`: This variable is not used by ATP at present.

9. `x_msg_count`: This variable is not used by ATP at present.

**Nested Tables**

The following nested tables are used for defining data types of members in a record:

<table>
<thead>
<tr>
<th>Col. 1</th>
<th>Col. 2</th>
<th>Col. 3</th>
<th>Col. 4</th>
<th>Col. 5</th>
<th>Col. 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE</td>
<td>number_arr</td>
<td>IS</td>
<td>TABLE</td>
<td>of</td>
<td>number</td>
</tr>
<tr>
<td>TYPE</td>
<td>char1_arr</td>
<td>IS</td>
<td>TABLE</td>
<td>of</td>
<td>varchar2(1)</td>
</tr>
<tr>
<td>TYPE</td>
<td>char3_arr</td>
<td>IS</td>
<td>TABLE</td>
<td>of</td>
<td>varchar2(3);</td>
</tr>
<tr>
<td>TYPE</td>
<td>char7_arr</td>
<td>IS</td>
<td>TABLE</td>
<td>of</td>
<td>varchar2(7);</td>
</tr>
<tr>
<td>TYPE</td>
<td>char10_arr</td>
<td>IS</td>
<td>TABLE</td>
<td>of</td>
<td>varchar2(10);</td>
</tr>
<tr>
<td>TYPE</td>
<td>char15_arr</td>
<td>IS</td>
<td>TABLE</td>
<td>of</td>
<td>varchar2(15);</td>
</tr>
<tr>
<td>TYPE</td>
<td>char20_arr</td>
<td>IS</td>
<td>TABLE</td>
<td>of</td>
<td>varchar2(20);</td>
</tr>
<tr>
<td>TYPE</td>
<td>char30_arr</td>
<td>IS</td>
<td>TABLE</td>
<td>of</td>
<td>varchar2(30);</td>
</tr>
<tr>
<td>TYPE</td>
<td>char40_arr</td>
<td>IS</td>
<td>TABLE</td>
<td>of</td>
<td>varchar2(40);</td>
</tr>
<tr>
<td>TYPE</td>
<td>char80_arr</td>
<td>IS</td>
<td>TABLE</td>
<td>of</td>
<td>varchar2(80);</td>
</tr>
</tbody>
</table>
The specification of the ATP_REC_Typ is show below:

<table>
<thead>
<tr>
<th>Col. 1</th>
<th>Col. 2</th>
<th>Col. 3</th>
<th>Col. 4</th>
<th>Col. 5</th>
<th>Col. 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE char2000_arr</td>
<td>IS</td>
<td>TABLE</td>
<td>of</td>
<td>varchar2(2000);</td>
<td></td>
</tr>
<tr>
<td>TYPE date_arr</td>
<td>IS</td>
<td>TABLE</td>
<td>of</td>
<td>date;</td>
<td></td>
</tr>
</tbody>
</table>

**Description of MRP_ATP_PUB.ATP_Rec_Typ**

The specification of the ATP_REC_Typ is show below:

TYPE ATP_Rec_Typ is RECORD (
<table>
<thead>
<tr>
<th>Col. 1</th>
<th>Col. 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earliest_Acceptable_Date</td>
<td>date_arr,</td>
</tr>
<tr>
<td>Latest_Acceptable_Date</td>
<td>date_arr,</td>
</tr>
<tr>
<td>Delivery_Lead_Time</td>
<td>number_arr,</td>
</tr>
<tr>
<td>Freight_Carrier</td>
<td>char30_arr,</td>
</tr>
<tr>
<td>Ship_Method</td>
<td>char30_arr,</td>
</tr>
<tr>
<td>Demand_Class</td>
<td>char30_arr,</td>
</tr>
<tr>
<td>Ship_Set_Name</td>
<td>char30_arr,</td>
</tr>
<tr>
<td>Arrival_Set_Name</td>
<td>char30_arr,</td>
</tr>
<tr>
<td>Override_Flag</td>
<td>char1_arr,</td>
</tr>
<tr>
<td>Action</td>
<td>number_arr,</td>
</tr>
<tr>
<td>Ship_Date</td>
<td>date_arr,</td>
</tr>
<tr>
<td>Available_Quantity</td>
<td>number_arr,</td>
</tr>
<tr>
<td>Requested_Date_Quantity</td>
<td>number_arr,</td>
</tr>
<tr>
<td>Group_Ship_Date</td>
<td>date_arr,</td>
</tr>
<tr>
<td>Group_Arrival_Date</td>
<td>date_arr,</td>
</tr>
<tr>
<td>Vendor_Id</td>
<td>number_arr,</td>
</tr>
<tr>
<td>Vendor_Name</td>
<td>char80_arr,</td>
</tr>
<tr>
<td>Vendor_Site_Id</td>
<td>-</td>
</tr>
<tr>
<td>Vendor_Site_Name</td>
<td>char80_arr,</td>
</tr>
<tr>
<td>Insert_Flag</td>
<td>number_arr,</td>
</tr>
<tr>
<td>OE_Flag</td>
<td>char1_arr,</td>
</tr>
<tr>
<td>Atp_Lead_Time</td>
<td>number_arr,</td>
</tr>
<tr>
<td>Error_Code</td>
<td>number_arr,</td>
</tr>
<tr>
<td>Message</td>
<td>char2000_arr,</td>
</tr>
<tr>
<td>End_Pegging_Id</td>
<td>number_arr,</td>
</tr>
<tr>
<td>Order_Number</td>
<td>number_arr,</td>
</tr>
<tr>
<td>Old_Source_Organization_Id</td>
<td>number_arr,</td>
</tr>
<tr>
<td>Old_Demand_Class</td>
<td>char30_arr</td>
</tr>
</tbody>
</table>
1. **Row_Id**: The row_id in database for an order. This field is used only in 10.7 and 11.0 versions of the Oracle application. This field is optional for later versions.

2. **Instance_Id**: Instance identifiers of the requesting module. This is mandatory if calling_module is not 724.

3. **Inventory_Item_Id**: Inventory Item ID for which the ATP check needs to be done.

4. **Inventory_Item_Name**: Name of the items. If not provided then ATP populates this field.

5. **Source_Organization_Id**: Shipping Organization ID. If not provided, ATP calculates the shipping organization ID based on sourcing rules.


7. **Organization_Id**: Receiving organization ID.

8. **Identifier**: This field contains Order line ID.

9. **Demand_Source_Header_Id**: Header ID for Order.

10. **Demand_Source_Delivery**: This field along with demand_source_header_id and demand_source_type is used to uniquely identify an order in Oracle Order Management.

11. **Demand_Source_Type**: This field along with demand_source_header_id and demand_source_delivery is used to uniquely identify an order in Oracle Order Management.

12. **Scenario_Id**: This field is for ATP internal use.

13. **Calling_Module**: Module which called ATP.
   1. 724 indicates planning server.
   2. 660 indicates Oracle Order Management.
   3. 708 indicates configurator.
   4. -1 indicates backlog scheduling workbench.

14. **Customer_Id**: ID of the customer for whom the ATP check needs to be done.

15. **Customer_Site_Id**: ID of the receiving customer site.

16. **Destination_Time_Zone**: Time zone of the requesting organization. ATP doesn't support this field at present.
17. Quantity_Ordered: Quantity ordered for the items.
18. Quantity_UOM: Unit of measurement of items ordered.
19. Requested_Ship_Date: Requested ship date for the items.
20. Requested_Arrival_Date: Requested arrival date for the items.
21. Earliest_Acceptable_Date: Earliest acceptable date by which requester is ready to accept the order in case ATP check fails on requested ship or arrival date. This feature is not used by ATP at present.
22. Latest_Acceptable_Date: Latest acceptable date by which requester is ready to accept the order in case the ATP check fails on requested ship or arrival date.
23. Delivery_Lead_Time: Delivery lead time between shipping and receiving organization. If not provided, then ATP calculates the delivery lead time.
24. Freight_Carrier: Freight carrier used for the shipment. This feature is not used by ATP at present.
25. Ship_Method: Ship method to be use for shipping. ATP tries to calculate ship method if ship method and delivery lead time are not provided. If default shipping method is set between source organization and receiving organization/customer, then ATP assigns the default ship method to this field. Otherwise, this field is left empty.
26. Demand_Class: Demand class under which customer or requesting organization falls.
27. Ship_Set_Name: Name of the ship-set. For line items, this field remains empty.
28. Arrival_Set_Name: Name of the arrival-set. For line items, this field remains empty.
29. Override_Flag: This flag indicate ATP to bypass the ATP check and insert demand for the requested items. Possible values are Y and N.
30. Action: Type of Inquiry
   ■ 100 - ATP Inquiry
   ■ 110 - Scheduling
   ■ 120 - Rescheduling
31. Ship_Date: Date on which requested item will be shipped. This field is populated by ATP.
32. **Available_Quantity**: Quantity available on ship date. This field is populated by ATP.

33. **Requested_Date_Quantity**: Quantity available on requested ship/arrival date. This field is populated by ATP.

34. **Group_Ship_Date**: Ship date for whole ship set. This field is populated by ATP in case of ship set.

35. **Group_Arrival_Date**: Arrival date for arrival set. This field is populated by ATP in case or arrival set.

36. **Vendor_Id**: Vendor ID from where item needs to be requested. This field is not used by ATP.

37. **Vendor_Name**: Vendor Name. This field is not used by ATP.

38. **Vendor_Site_Id**: ID of vendor site from where item needs to be requested. This field is not used by ATP.

39. **Vendor_Site_Name**: Vendor site name. This field is not used by ATP.

40. **Insert_Flag**: Flag to indicate if supply/demand and period details are calculated or not.

41. **OE_Flag**: This flag indicates if it is an internal sales order or not. Possible values are Y or N.

42. **Atp_Lead_Time**: ATP Lead Time.

43. **Error_Code**: Error code of the error occurred during ATP check.

   Check MTL_DEMAND_INTERFACE_ERRORS Lookup for complete list of error codes and corresponding error messages.

44. **Message**: Error Message for error occurred during ATP check. This field is not used by ATP.

45. **End_Pegging_Id**: Pegging ID for the ultimate parent. This field is calculated by ATP.

46. **Order_Number**: Order number in Oracle Order Management.

47. **Old_Source_Organization_Id**: This field is used for rescheduling and indicates the ID of the Organization where the item was scheduled initially.

48. **Old_Demand_Class**: This field is used for rescheduling and indicates the demand class under which the item was scheduled initially.
Data Validation for ATP_REC_TYPE

- Either requested_ship_date or requested_arrival_date should be provided. Error will be generated if none or both of these dates are provided.
- If delivery lead time is specified then organization_id and customer_id could be null. If delivery lead time is not specified then at least one of these fields should be populated.
- Instance_ID must be provided if calling_module is 724.
- Inventory_Item_ID field should contain a valid inventory item ID.
- Quantity_ordered field should contain a valid quantity.
- Quantity_UOM should contain a valid unit of measurement value.
- Action field should contain a valid Action type. Please see description of action field for valid values.
- Old_Source_Organization_id and Old_Demand_class should be provided in case of order rescheduling.

Description of MRP_ATP_PUB.ATP_Supply_Demand_Typ

TYPE ATP_Supply_Demand_Typ is RECORD (  

<table>
<thead>
<tr>
<th>Col. 1</th>
<th>Col. 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level</td>
<td>number_arr,</td>
</tr>
<tr>
<td>Identifier</td>
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<tr>
<td>Inventory_Item_Id</td>
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</tr>
<tr>
<td>Request_Item_Id</td>
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</tr>
<tr>
<td>Organization_Id</td>
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</tr>
<tr>
<td>Department_Id</td>
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<tr>
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<td>number_arr,</td>
</tr>
<tr>
<td>Supplier_Id</td>
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<tr>
<td>Supplier_Site_Id</td>
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<tr>
<td>From_Organization_Id</td>
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<tr>
<td>From_Location_Id</td>
<td>number_arr,</td>
</tr>
<tr>
<td>To_Organization_Id</td>
<td>number_arr,</td>
</tr>
</tbody>
</table>

Available-To-Promise Application Program Interface
1. Level: This field indicates the level of supply/demand in pegging.

2. Identifier: A unique identifier to identify a line. In case of Oracle Order Management, this is the order line number.

3. Inventory_Item_Id: Inventory item ID. In the case of ATP product family, this is the Product Family ID.

4. Request_Item_Id: Inventory Item ID.

5. Organization_Id: Organization ID of the organization where supply/demand is placed.

6. Department_Id: Department ID of the department to which the resource belongs.
7. Resource_Id: Resource ID.
8. Supplier_Id: Supplier ID.
9. Supplier_Site_Id: Supplying Site ID.
10. From_Organization_Id: Shipping Organization ID. This field is not used by ATP at present.
11. From_Location_Id: Shipping Location ID. This field is not used by ATP at present.
12. To_Organization_Id: Receiving Organization ID. This field is not used by ATP at present.
13. To_Location_Id: Receiving Location ID. This field is not used by ATP at present.
14. Ship_Method: Ship Method Used. This field is not used by ATP at present.
15. UOM: Unit of Measurement.
16. Disposition_Type: This field is not used by ATP.
17. Disposition_Name: This field contains Order Number.
18. Identifier1: This field contains instance ID.
19. Identifier2: This field is not used by ATP.
20. Identifier3: This field contains the Demand ID in case of demand, and transaction ID in case of supplies for resource or components.
21. Identifier4: This field is not used by ATP.
22. Supply_Demand_Type: Type of supply demand. Possible Values: 1 - Demand and 2 - Supply.
23. Supply_Demand_Source_Type: Type of Supply/Demand.
24. Supply_Demand_Source_Type_Name: This field is not used by ATP at present.
25. Supply_Demand_Date: Date of Supply/Demand.
27. Scenario_Id: This field is not used by ATP at present.
28. Pegging_Id: Pegging ID for the current record.
29. End_Pegging_Id: The Top Parent's pegging ID.
**Description of MRP_ATP_PUB.ATP_Period_Typ**

TYPE ATP_Period_Typ is Record (

<table>
<thead>
<tr>
<th>Col. 1</th>
<th>Col. 2</th>
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<tbody>
<tr>
<td>Level</td>
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<tr>
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<td>Supplier_Id</td>
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<td>Supplier_Site_Id</td>
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</tr>
<tr>
<td>Identifier2</td>
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<td>number_arr,</td>
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<tr>
<td>Pegging_Id</td>
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</tbody>
</table>
1. Level: This field indicates the level of supply/demand in pegging.
2. Identifier: A unique identifier to identify a line. In case of Oracle Order Management, this is the order line number.
3. Inventory_Item_Id: Inventory item ID. In the case of ATP product family, this is the Product Family ID.
4. Request_Item_Id: Inventory Item ID.
5. Organization_Id: Organization ID of the organization where supply/demand is placed.
6. Department_Id: Department ID of the department to which the resource belongs.
7. Resource_Id: Resource ID.
8. Supplier_Id: Supplier ID.
9. Supplier_Site_Id: Supplying site ID.
10. From_Organization_Id: Shipping Organization ID. This field is not used by ATP at present.
11. From_Location_Id: Shipping Location ID. This field is not used by ATP at present.
12. To_Organization_Id: Receiving Organization ID. This field is not used by ATP at present.
13. To_Location_Id: Shipping Organization ID. This field is not used by ATP at present.
14. Ship_Method: Ship Method used. This field is not used by ATP at present.
15. UOM: Unit of Measurement.
16. Total_Supply_Quantity: Total supplies for a period.
17. Total_Demand_Quantity: Total demands for a period.
18. Period_Start_Date: Start date for a period.
19. Period_End_Date: End date for a period.
20. Period_Quantity: Net Supply Demand quantity for that period.
21. Cumulative_Quantity: Cumulative quantity for a period after doing backward consumption, forward consumption and accumulation.
22. Identifier1: This field contains instance id.
23. Identifier2: This field is not used by ATP.
24. Scenario_Id: This field is for ATP internal use.
25. Pegging_Id: Pegging ID for the current record.
26. End_Pegging_Id: Pegging ID of the top parent.

Description of MRP_ATP_PUB.ATP_Details_Typ

TYPE ATP_Details_Typ is RECORD (  
  Col. 1                      Col. 2
  Level                      number_arr,
  Identifier                 number_arr,
  Request_Item_Id            number_arr,
  Request_Item_Name          char40_arr,
  Inventory_Item_Id          number_arr,
  Inventory_Item_Name        char40_arr,
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  Department_Id              number_arr,
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  Resource_Code              char10_arr,
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  Supplier_Site_Id           number_arr,
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<td>Identifier2</td>
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<td>Identifier4</td>
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</tr>
<tr>
<td>Scenario_Id</td>
<td>number_arr</td>
</tr>
</tbody>
</table>

);  

**Note:** ATP_Details_Typ is not used by ATP at present.
Topics in this appendix include:

Windows and Navigation Paths

Refer to the following sources for other window and application information:

- *Oracle Advanced Planning and Scheduling Implementation and User’s Guide*
- *Oracle Application User’s Guide*

The following table lists the navigation path for each window.

**Notes:**

- Brackets surrounding a path indicate a button selection.
- Logon responsibilities other than Advanced Supply Chain Planner are indicated just before the navigation path.

<table>
<thead>
<tr>
<th>Table C–1 Window Names and Navigation Paths</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Window Name</strong></td>
</tr>
<tr>
<td>Allocation Rules</td>
</tr>
<tr>
<td>Assign Allocation Rules</td>
</tr>
<tr>
<td>Assignment Set</td>
</tr>
<tr>
<td>ATP Criteria</td>
</tr>
<tr>
<td>ATP Details</td>
</tr>
<tr>
<td>ATP Rules</td>
</tr>
<tr>
<td>ATP Sources and Group Availability</td>
</tr>
<tr>
<td>Bills of Distribution</td>
</tr>
<tr>
<td>Bills of Material</td>
</tr>
<tr>
<td>Collection Workbench</td>
</tr>
<tr>
<td>Define Priority Rules</td>
</tr>
<tr>
<td>Find Requests</td>
</tr>
<tr>
<td>Horizontal ATP</td>
</tr>
<tr>
<td>Instances</td>
</tr>
<tr>
<td>Window Name</td>
</tr>
<tr>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>Inter-Location Transit Times</td>
</tr>
<tr>
<td>Item</td>
</tr>
<tr>
<td>Launch Purge Program for Collected data</td>
</tr>
<tr>
<td>Launch SCP Plan</td>
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<tr>
<td>MRPFIND</td>
</tr>
<tr>
<td>Order Backlog Workbench</td>
</tr>
<tr>
<td>Order Sequencing</td>
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<tr>
<td>Organizations</td>
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<tr>
<td>Personal Profile Values</td>
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<tr>
<td>Planning Data Collection</td>
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<td>Requests</td>
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<tr>
<td>Resources</td>
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<td>Sales Order Pad</td>
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<tr>
<td>Schedule Orders</td>
</tr>
<tr>
<td>Sourcing Rules</td>
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<tr>
<td>Sourcing Rule/Bill of Distribution Assignments</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Submit Request</td>
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</table>
### Table C–1  Window Names and Navigation Paths

<table>
<thead>
<tr>
<th>Window Name</th>
<th>Navigation Path</th>
</tr>
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<tbody>
<tr>
<td>Supply Chain Planner Workbench</td>
<td>Supply Chain Plan &gt; Workbench</td>
</tr>
<tr>
<td></td>
<td>Supply Chain Plan &gt; View Plan</td>
</tr>
<tr>
<td>Supply/Demand</td>
<td>ATP &gt; ATP Inquiry &gt; [ATP Details] &gt; [Details] &gt; Supply/Demand</td>
</tr>
<tr>
<td>Supply/Demand Details</td>
<td>ATP &gt; ATP Inquiry &gt; [ATP Details] &gt; [Details]</td>
</tr>
<tr>
<td>Transit Times</td>
<td>Setup &gt; Transit Times</td>
</tr>
<tr>
<td>View Allocations</td>
<td>ATP &gt; Allocation &gt; View Allocation</td>
</tr>
<tr>
<td>View Assignment</td>
<td>Sourcing &gt; View Assignments</td>
</tr>
<tr>
<td>View Bill of Distribution</td>
<td>Sourcing &gt; View Bills of Distribution</td>
</tr>
<tr>
<td>View Sourcing Assignment Hierarchy</td>
<td>Sourcing &gt; View Sourcing Hierarchy</td>
</tr>
<tr>
<td>View Sourcing Rule</td>
<td>Sourcing &gt; View Sourcing Rules</td>
</tr>
<tr>
<td>Work Dates</td>
<td>View Work Dates</td>
</tr>
</tbody>
</table>
action message
Output of the MRP process that identifies a type of action to be taken to correct a current or potential material coverage problem.

aggregate resources
The summation of all requirements of multi-department resources across all departments that use it.

allocated ATP
This term is used to describe the ability to allocate scarce supply, whether it’s finished goods, or a key components or resources, to various demand channels. Whether you are performing ATP or CTP, the allocation is being considered for order promising. See Feature Highlight: Allocation.

alternate bill of material
An alternate list of component items you can use to produce an assembly.

alternate resources
Different resource or a group of different resources that can be used instead of primary resource or group of resources in the job operation. Each resource, or group of resources, can form an alternate group. Alternative scheduling is when the primary group can be replaced by an alternate group in the job operation.

alternate routing
An alternate manufacturing process you can use to produce an assembly.
alternate unit of measure
All other units of measure defined for an item, excluding the primary unit of measure.

API
An application programming interface (API) is a published interface to accomplish a business or scientific function. An API defines a contract to its users by guaranteeing a published interface but hides its implementation details.

assemble-to-order (ATO)
An environment where you open a final assembly order to assemble items that customers order. Assemble-to-order is also an item attribute that you can apply to standard, model, and option class items.

assembly
An item that has a bill of material. You can purchase or manufacture an assembly item. See assemble-to-order, bill of material.

assignment hierarchy
You can assign sourcing rules and bills of distribution to a single item in an inventory organization, all items in an inventory organization, categories of items in an inventory organization, a site, and an organization. These assignments have an order of precedence relative to one another.

assignment set
A group of sourcing rules and/or bills of distribution and a description of the items and/or organizations whose replenishment they control.

ATO
See assemble-to-order.

ATO item
See assemble-to-order item.

ATO model
See assemble-to-order model.
ATP (Available to Promise)
ATP (Available to Promise) typically refers to the ability to promise finished goods availability based on a statement of current and planned material supply.

ATP
See available to promise.

available capacity
The amount of capacity available for a resource or production line.

available to promise (ATP)
The quantity of current on-hand stock, outstanding receipts and planned production which has not been committed through a reservation or placing demand. In Oracle Inventory, you define the types of supply and demand that should be included in your ATP calculation.

available-to-promise rule
A set of Yes/No options for various entities that the user enters in Oracle Inventory. The combination of the various entities are used to define what is considered supply and demand when calculating available to promise quantity.

basic ATP
This term is used to describe the task of performing an ATP check against a given organization.

bill of distribution
Specifies a multilevel replenishment network of warehouses, distribution centers, and manufacturing centers (plants).

bill of material
A list of component items associated with a parent item and information about how each item relates to the parent item. Oracle Manufacturing supports standard, model, option class, and planning bills. The item information on a bill depends on the item type and bill type. The most common type of bill is a standard bill of material. A standard bill of material lists the components associated with a product or subassembly. It specifies the required quantity for each component plus other information to control work in process, material planning, and other Oracle Manufacturing functions. Also known as product structures.
bill of resources
A list of each resource and/or production line required to build an assembly, model, or option.

bottleneck resource
A resource whose capacity is less than the demand placed upon it. For example, a bottleneck machine or work center exists where jobs are processed at a slower rate than they are demanded.

calculate ATP
An item attribute the planning process uses to decide when to calculate and print available to promise (ATP) for the item on the Planning Detail Report. The planning process calculates ATP using the following formula:
\[ ATP = \text{Planned production} - \text{committed demand}. \]

calendar type
The period pattern used to define a manufacturing calendar.

capable to deliver
CTD (Capable to Deliver) refers to considering the transportation resources and transportation lead time to meet your customers delivery needs. In this release, only transportation lead time is being considered. Transportation resources will be added in a future release.

capable to promise
CTP (Capable to Promise) refers to the additional ability to determine the availability of component materials and resources to meet unplanned demands.

capacity requirements planning
A time-phased plan comparing required capacity to available capacity, based on a material requirements plan and department/resource information. See routing-based capacity and rate-based capacity.

component
A serviceable item that is a part or feature in another serviceable item. Your customers cannot report service requests against this type of serviceable item directly. You can reference components when you enter service requests against actual end item-type serviceable items, or products. For example, if you define three inventory items, A, B, and C, where A and B are products (end item-type serviceable items) but C is a component (non-end item-type serviceable item) of A,
you can enter service requests against A and B directly, but not against C. When you enter a service request against product A, you can reference C because it is a component of A. *see standard component.*

**component demand**
Demand passed down from a parent assembly to a component.

**component item**
An item associated with a parent item on a bill of material.

**component yield**
The percent of the amount of a component you want to issue to build an assembly that actually becomes part of that assembly. Or, the amount of a component you require to build plus the amount of the component you lose or waste while building an assembly. For example, a yield factor of 0.90 means that only 90% of the usage quantity of the component on a bill actually becomes part of the finished assembly.

**compression days**
The number of days the planning process suggests you compress the order (in other words, reduce the time between the start date and the due date).

**discrete job**
Discrete jobs are used to manufacture assemblies using specific materials and resources within a start and end date. (Also known as work order or assembly order).

**end item**
Any item that can be ordered or sold. *See finished good and product.*

**engineering change order (ECO)**
A record of revisions to one or more items usually released by engineering.

**firm planned order**
An MRP-planned order that is firmed using the Planner Workbench. This allows the planner to firm portions of the material plan without creating discrete jobs or purchase requisitions. Unlike a firm order, a MRP firm planned order does not create a natural time fence for an item.
**forecast**
An estimate of future demand on inventory items. A forecast contains information on the original and current forecast quantities (before and after consumption), the confidence factor, and any specific customer information. You can assign any number of inventory items to the forecast and use the same item in multiple forecasts. For each inventory item you specify any number of forecast entries.

**independent demand**
Demand for an item unrelated to the demand for other items.

**item routing**
A sequence of manufacturing operations that you perform to manufacture an assembly. A routing consists of an item, a series of operations, an operation sequence, and operation effective dates. Edits to an Item Routing do not automatically update a job routing.

**job routing**
A snapshot of an item routing that has been assigned to a job. The routing is current on the day the job was created. Edits to a job routing do not automatically revert to the item routing.

**master demand schedule**
The anticipated ship schedule in terms of rates or discrete quantities, and dates. In ASCP, MDS is used as an input to the enterprise plan.

**material constrained plan**
In this plan, all material constraints that can be specified in the form of a supply schedule from manufacturing plants or by statements of vendor capacity from vendors are considered. When material availability is not a concern, resource availability constraints are used only to generate exceptions arising due to over utilization or under-utilization of resources.

**material and resource constrained plan**
In this plan, you can generate a plan that respects material, resource, and transportation constraints. However, no plan objectives are considered.

**multilevel supply chain ATP/CTP/CTD**
This term is used to describe the task of performing a multilevel BOM availability check including finished goods, components, resource, supplier capacity and
transportation lead time. See Feature Highlight: Multilevel Supply Chain ATP/CTP/CTD
For the rest of the document, we will use Multilevel ATP as a short form for this feature.

**need-by date**
The need-by date for the end item is the demand date. The need-by dates for the dependent demands are calculated based on the lead-time offsets that are associated to the Items and routings used.

- If a constrained plan is run, the planning process will use the planned orders and actual routings for scheduling to derive the suggested due date.
- If an unconstrained plan is run, the suggested due date will simply be the same as the need by date.

Therefore, any differences between the lead time offsets (need by date) and actual manufacturing time (suggested due date) created by the planning process, will show up in the form of multiple exception messages.

**operation data store (ODS)**
It represents all the tables that acts as destination for the collected data from each of the data sources (both Oracle Applications or legacy systems). This acts as the input for the snapshot portion of the planning process.

When we refer to ODS based ATP, we mean ATP based on collected data.

**optimized plan**
In this plan, you can generate an optimized and executable plan based on plan objectives as well as material, resource, and transportation constraints.

**overload**
A condition where required capacity for a resource or production is greater than available capacity.

**pegging**
The capability to identify for a given item the sources of its gross requirements and/or allocations. Pegging can be thought of as active where-used information.

**planned order**
A suggested quantity, release date, and due date that satisfies net item requirements.
**Planner Workbench**

You can use the Planner Workbench to act on recommendations generated by the planning process for a plan. You can implement planned orders as discrete jobs or purchase requisitions, maintain planned orders, reschedule scheduled receipts, and implement repetitive schedules. You can choose all suggestions from an MRP plan, or only those that meet a certain criteria.

**planning data store (PDS)**

It represents all the tables within Oracle ASCP which encompass those in the ODS and other output tables from planning. When we refer to PDS based ATP, we mean ATP based on planning output.

**planning exception set**

An item attribute that the planning process uses to decide when to raise planning exceptions for the item.

**planning horizon**

The amount of time a master schedule extends into the future.

**planning time fence**

A Master Scheduling/MRP item attribute used to determine a future point in time inside which there are certain restrictions on the planning recommendations the planning process can make for the item.

**postprocessing lead time**

The time required to receive a purchased item into inventory from the initial supplier receipt, such as the time required to deliver an order from the receiving dock to its final destination.

**preprocessing lead time**

The time required to place a purchase order or create a discrete job or repetitive schedule that you must add to purchasing or manufacturing lead time to determine total lead time. If you define this time for a repetitive item, the planning process ignores it.

**processing lead time**

The time required to procure or manufacture an item. For manufactured assemblies, processing lead time equals the manufacturing lead time.
**projected available balance**

Quantity on hand projected into the future if scheduled receipts are rescheduled or cancelled, and new planned orders are created as per recommendations made by the planning process. Calculated by the planning process as current and planned supply (nettable quantity on hand + scheduled receipts + planned orders) minus demand (gross requirements). Note that gross requirements for projected available includes derived demand from planned orders. Note also that the planning process uses suggested due dates rather than current due dates to pass down demand to lower level items. See *current projected on hand*.

**projected on hand**

The total quantity on hand plus the total scheduled receipts plus the total planned orders.

**resource constrained plan**

In this option, all resource constraints such as available machine hours, transportation capacity, as well as alternate resources are considered. Alternate bill of materials are considered only when optimized option is selected. Material constraints are used only to generate exceptions arising due to lack of material availability.

**routing**

A sequence of manufacturing operations that you perform to manufacture an assembly. A routing consists of an item, a series of operations, an operation sequence, and operation effective dates.

**safety stock**

Quantity of stock planned to have in inventory to protect against fluctuations in demand and/or supply.

**scheduled receipt**

A discrete job, repetitive schedule, non-standard job, purchase requisition, or purchase order. It is treated as part of available supply during the netting process. Schedule receipt dates and/or quantities are not altered automatically by the MRP system.

**Seiban manufacturing**

A type of manufacturing environment where demand and supply are identified by Seiban numbers to peg supply to demand. This numbering system is widely used in Japan and Korea.
**simultaneous resources**

Two or more resources are scheduled to be working concurrently within a job operation. Each operation contains a scheduled sequence of activities and resources used in the operation. Simultaneity is implemented by having more than one resource used in an operation.

**sourcing rule**

Specifies how to replenish items in an organization, such as purchased items in plants.

**suggested dock date**

The date you expect to receive an order (to arrive on the receiving dock) as suggested by the planning process.

**suggested due date**

The date when scheduled receipts are expected to be received into inventory and become available for use as suggested by the planning process.

The need-by date for the end item is the demand date. The need by dates for the dependent demands are calculated based on the lead-time offsets that are associated to the Items and routings used.

- If a constrained plan is run, the planning process will use the planned orders and actual routings for scheduling to derive the suggested due date.
- If an unconstrained plan is run, the suggested due date will simply be the same as the need by date.

Therefore, any differences between the lead time offsets (need-by date) and actual manufacturing time (suggested due date) created by the planning process, will show up in the form of multiple exception messages.

**suggested order date**

The date that the planning process suggests an order for goods or services is entered. The earliest order date allowed is today and no compression days are allowed.

**suggested start date**

The date you or your suppliers expect to start to manufacture the order as suggested by the planning process.
**Supply Chain ATP**
This term is used to describe the task of performing an ATP check against multiple sourcing organizations for a given customer request. See Feature Highlight: ATP for Multiple Supply Locations.

**Supplier Flex-Fences**
Specifies capacity tolerance percentages that vary over time for each source. This allows you to represent the ability of your supplier to flex capacity upwards based on the amount of advanced notice you provide.

**Time Bucket**
A unit of time used for defining and consuming forecasts. A bucket can be one day, one week, or one period.

**Unconstrained Plan**
In this plan, the system performs traditional MRP type planning and assumes infinite material availability and resource capacity. Statements of material availability and resource capacity are used to generate exceptions. Demand priorities are included during the planning run to determine the appropriate pegging relationships between supply and demand.

**Underload**
A condition where required capacity for a resource or production is less than available capacity.
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