Oracle Fusion Cloud SCM

Using Supply Planning

24A

Oracle Fusion Cloud SCM
Using Supply Planning

24A

F88820-01

Copyright © 2011, 2024, Oracle and/or its affiliates.

Author: B. Mise, D. West, S. Wilkening

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software, software documentation, data (as defined in the Federal Acquisition Regulation), or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs) and Oracle computer documentation or other Oracle data delivered to or accessed by U.S. Government end users are "commercial computer software," "commercial computer software documentation," or "limited rights data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, reproduction, duplication, release, display, disclosure, modification, preparation of derivative works, and/or adaptation of i) Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs), ii) Oracle computer documentation and/or iii) other Oracle data, is subject to the rights and limitations specified in the license contained in the applicable contract. The terms governing the U.S. Government's use of Oracle cloud services are defined by the applicable contract for such services. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle®, Java, and MySQL are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Inside are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Epyc, and the AMD logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

Contents

Get Help i

1 Supply Planning Overview 1

Business Flows for Supply Planning 1
Overview of Supply Chain Planning Work Areas 3
Overview of the Supply Planning Work Area 4
Access Tasks as Quick Actions on a Home Page 5
Manage Page Layouts in Supply Planning 5
Overview of Supply Chain Planning Plan Types 7
Actions to Manage Your Plans 8
Planners for Supply Chain Planning 10
Review Plan Messages 12
Manage Notes in Supply Chain Planning 13
Assign Time Zones to Locations in Supply Chain Planning 15

2 Tables, Graphs, Analysis Sets, Tiles, and Tile Sets 19

Overview of Tables, Graphs, Analysis Sets, Tiles, and Tile Sets 19
Use Advanced Options in the Selector Tool 23
Create an Analysis Set 24
Create a Tile in Supply Chain Planning 24
Set Measure Targets for Use in Tiles 25
Create a Tile Set in Supply Chain Planning 25
Use Table Drilling 26
Use Table Linking 26
Link to External Systems 27
Graph Layout Options 37
Configure Filters for Graphs 38
Set Your Axis Scale 39
Format How Measures Are Displayed in Tables and Graphs 39
Configure Color by Measure to Display in Graphs 40
How You Can Edit Measures at an Aggregate Time Level 42
How Time Periods Are Calculated and Displayed in Tables, Graphs, and the Selector Tool 43

Measure Data in Tables 44

3 Planning Exceptions 49

Exceptions in Plans 49
Exceptions and Exception Sets 54
Predefined Planning Exceptions 57
User-Defined Exceptions 66

4 Planning Analytics 79

Overview of Planning Analytics 79
Configure Planning Analytics 79
Dimensions and Dimensions Catalogs 82
Measure Catalogs 86
Levels and Attributes 87
User-Defined Hierarchies 88

5 Planning Measures 95

Predefined Measures in Supply Chain Planning 95
How You Manage Planning Measures 95
Import Measure Data Into a Planning Table 98
Configure Units for a Measure 99
Configure Currencies for a Measure 100
Configure Conditional Formatting for a Measure 101
View the Audit Trail for a Measure 102
Guidelines for Setting the Calculation Order 102
Manage User-Defined Measures 103

6 Planning Data Collections 111

Overview of Data Collections for Supply Chain Planning 111
Global Entities 112
Data Collection Types for Supply Chain Planning 113
Manage Planning Source Systems for Data Collections 114
How the Order Orchestration and Order Promising Processes Use the Collected Planning Data 116
How You Enable Cross-References of Entities by Data Collections 117
How Planning Processes Collect Different Work Definitions and Item Structures 117
Enable External Data Collection for the Oracle Fusion Source System 119
Collect Planning Data from the Oracle Fusion Source System 120

Load Planning Data from Others and External Source Systems 126
Collections for Oracle Replenishment Planning 152
Collection of Consumption Data for Oracle Replenishment Planning 153
ERP Integrations REST Service 155
Verify Collection Processes 159
Purge Data 161
Aggregate Customer Data 164
View and Refresh Collected Measure Data 168

7 Segmentation 173
Segmentation in Oracle Supply Planning 173
Work with Segment Groups 175
Run Segmentation 179
View the Segmentation Summary 180
Override Segmentation Results 181

8 Supply Plans 185
Manage Supply Plans 185
Define Scope Plan Options 193
Calculate Financial Metrics Using Price Lists 196
Safety Stock Parameters 199
Policy Assignment Sets in Supply Planning 205
Forecast Allocation and Consumption 206
Supply Plan Inputs 212
Supply Plan Options for Organizations and Schedules 225
How You Calculate Safety Stock Based on Multiple Demand Schedules 227
Configure Measure Levels for Demand Schedules 227
Run a Supply Plan or an Integrated Plan 228
Publish Plan Data 231
Supply Planning Concepts 233
Telescoping Time Buckets 245
Modeling a Supply Chain 251
Work with Supply Plans 254
Lead-Time Insights for Purchased Items 269
Downtime Predictions from IoT Production Monitoring 276

9 Analyze Supply Plans 281
Build Plan View 281
Supplies and Demands View 287
Forecast Consumption View 311
Material Plan View 312
Pegging Analysis View 313
Demand Fulfillment View 314
Late Demand Analysis View 317
Lead-Time Insights 319

10 Constraint-Based Supply Planning 323
Overview of Constraint-Based Supply Planning 323
Configure Constraints and Decision Rules 324
Plan Considering Resource Constraints 326
Plan Based on Workday Patterns in a Resource Calendar 327
Plan Considering Material Constraints 328
Plan Considering Process Manufacturing Work Definitions 335
Automatically Evaluate and Select Alternatives to Meet Demand on Time 338
Exceptions in a Constrained Supply Plan 339
Diagnose Planning Issues in Constrained Supply Plans 342
Simulate Changes in a Constrained Supply Plan 348
Safety Stock in a Constrained Supply Plan 352
How Supply Planning Respects Reservations 356

11 Project-Specific Supply Planning 359
Overview of Project-Specific Supply Planning 359
How You Plan Project-Specific Supply 360
Data Collection for Project-Specific Supply Planning 361
Planning Data for Project-Specific Supply Planning 362
Attribute-Based Netting Rules with Project Attributes 367
Manage Attribute-Based Netting Rules with Project Attributes 373
Project Groups 374
Manage Project Groups 374
How You Configure a Project-Specific Supply Plan 375
How Supply Planning Uses Netting Rules 376
Examples of Project Netting 376
Example of Supply Creation 382

Project-Specific Safety Stock Planning 383
Example of Project-Specific Safety Stock Planning 383
Example of Project-Specific Safety Stock Planning with Days of Cover 385
Review Supplies and Demands with Project Pegging 388
Release Project-Specific Supply Recommendations 396
OTBI Analytics for Project-Specific Supply Plans 397
Troubleshoot 398

12 Attribute-Based Planning 401
Overview of Attribute-Based Planning 401
Segment Groups and Criteria 401
Planning Attributes 402
Predefined Measures for Planning Attribute Dimensions 405
Attribute-Based Netting Rules 407
How Supply Planning Uses Attribute-Based Netting Sequences 411
How You Review Attribute-Based Planning Results 412
Release Planned Supplies from the Attribute-Based Transfer Recommendations View 418
How You Simulate Changes to Attribute-Based Planning Results 419

13 Aggregate Production Plans 421
Overview of Aggregate Production Plans 421
Aggregate Production Planning with Segment Groups 421
Aggregate Production Planning with Bills of Resources 422
Manage Aggregate Production Plans 424
Aggregating Production Plan Measures 426
Setting the Default Manufacturing Calendar 427
Publish a Production Plan 427
Receive and Accept a Production Plan 427

14 Archive Plans 429
Overview of Plan Archival 429
Configure Archiving Parameters 430
Overview of Archival for Calculating MAPE Statistics 431
Archival for Calculating MAPE Statistics 432
Delete Archives 433

15 Extract Plan Data 435
Overview of Planning Measure Data Extractions from Plan Output 435
Configure Plan Extract Parameters 436
Files Created by the Plan Extract Process 438
Dimension Data Files Created by the Plan Extract Process 440
Dimension Definition Files Created by the Plan Extract Process 441
Measure Data Files Created by the Plan Extract Process 443
Measure Definition Files Created by the Plan Extract Process 444
Dimension Codes Used by the Plan Extract Process 445
Dimensionality Group Codes Used by the Plan Extract Process 446

16 Supply Network Model 449
How You Maintain Your Supply Network Model 449
Publish Order Forecasts to Suppliers 451
How You Define the Approved Supplier List for Supply Chain Planning 451
Associate Calendars with Supplier Sites 452
Assignment Sets, Sourcing Rules, and Bills of Distribution 452
Create an Assignment Set 456
Specify Catalogs for Assignment Sets 465
Create a Sourcing Rule 465
Export Planning Data to CSV Files 466
Item Attributes and Order Modifiers for Supply Planning 467
Drop Shipment 471
Plan Outside Processing Operations 475
Back-to-Back Fulfillment 477

17 Simulation Sets 479
Simulations in Supply Planning 479
Create a Simulation Set 480
Edit a Simulation Set 480
Edit a Simulation Set from a Spreadsheet 481
Copy Data to Simulation Sets 482
Add Data from Plan Inputs to Simulation Sets 483

18 Troubleshooting 485
Resolve Error MSC-2806379 485

Resolve Error MSC-2806380 486

Get Help

There are a number of ways to learn more about your product and interact with Oracle and other users.

Get Help in the Applications

Use help icons to access help in the application. If you don't see any help icons on your page, click your user image or name in the global header and select Show Help Icons.

Get Support

You can get support at *My Oracle Support*. For accessible support, visit *Oracle Accessibility Learning and Support*.

Get Training

Increase your knowledge of Oracle Cloud by taking courses at *Oracle University*.

Join Our Community

Use *Cloud Customer Connect* to get information from industry experts at Oracle and in the partner community. You can join forums to connect with other customers, post questions, suggest *ideas* for product enhancements, and watch events.

Learn About Accessibility

For information about Oracle's commitment to accessibility, visit the *Oracle Accessibility Program*. Videos included in this guide are provided as a media alternative for text-based topics also available in this guide.

Share Your Feedback

We welcome your feedback about Oracle Applications user assistance. If you need clarification, find an error, or just want to tell us what you found helpful, we'd like to hear from you.

You can email your feedback to *oracle_fusion_applications_help_ww_grp@oracle.com*.

Thanks for helping us improve our user assistance!

1 Supply Planning Overview

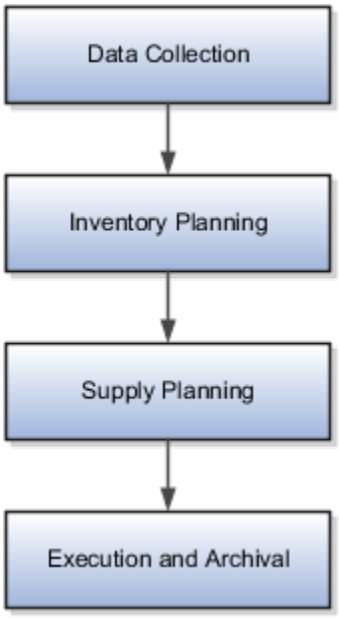
Business Flows for Supply Planning

You use the Supply Planning work area, a modern planning cloud solution, to run business flows to transform demand to supply.

You can perform the following in the Supply Planning work area:

- Process data collection, inventory planning, and supply planning.
- Automate the entire sequence of planning processes or run a subset of the processes.
- Analyze and adjust your data at any stage.

The following figure illustrates the sequence of a supply planning business flow, starting from data collection, inventory planning, supply planning, and ending with execution and archival.



Data Collection

Data collection is the first step of the planning business flow. You can collect data from various Oracle Fusion Cloud Supply Chain & Manufacturing (SCM) applications and use the data in planning applications.

You can collect data that are primarily of three types:

- Master data: Primarily sourced from Oracle Fusion Cloud Supply Chain & Manufacturing (SCM).
- Demand data: Two potential sources of demand data are sales orders that flow from Oracle Fusion Cloud Order Management and the shipment history from Oracle Fusion Cloud Inventory Management.

- Supply data: The supply data are collected from three sources:
    - Oracle Fusion Cloud Inventory Management
    - Oracle Fusion Cloud Manufacturing
    - Oracle Fusion Cloud Purchasing

Apart from collecting data from an Oracle Fusion source system, you can also collect data from an external source system. Use the predefined collection templates (XLSM files) to collect data from an external source system.

Inventory Planning

You can use inventory planning capability to calculate the statistical safety stock based on the volatility of demand and stocking targets. It addresses diverse supply and demand patterns with multiple algorithms based on mean absolute deviation in units (MAD), mean absolute percentage error (MAPE), and arrival rate. You can set the target service levels at any dimension of the hierarchy, which enables you to segment your stocking policies by customer, channel, product family, warehouse, or other factors. You can also set the inventory manually by using mass updates when appropriate. For example, you can set the inventory manually when you launch a new product.

Supply Planning

Using supply planning, you can calculate resource and material requirements based on customer and safety stock requirements, lead times, calendars, availability, and other parameters.

You can generate unconstrained supply plans, meaning that you ignore limited resource or supplier capacity, which provides the following advantages:

- Balances supply and demand and recommends new supplies as needed.
- Recommends when to reschedule or cancel a supply.
- Identifies material shortages, resource overloads, and supplier capacity overloads.
- Identifies when supplies don't have sufficient lead time (lead time compression).
- Plans your entire supply chain, including contract manufacturers.

Supply plans can model outsourced manufacturing and delivery scenarios, including drop ship and back-to-back orders. It also supports hub and spoke planning configurations, such as using an MPS plan as a demand schedule to an MRP plan.

Plan Execution

You can share the order recommendations and save the plan to drive execution.

By default, the supply planning processes are integrated with other Oracle Fusion Cloud SCM applications. During the plan execution, the integration helps in the following:

- Automatically releases planned orders and reschedules of existing supplies.
- Manually releases groups of orders when necessary.
- Manages changes and cancellations.
- Manage back-to-back and drop ship orders.

Planners can set up automatic release rules or release orders manually.

Overview of Supply Chain Planning Work Areas

The Oracle Fusion Cloud Supply Chain Planning solution is composed of products designed for specific supply chain planning business processes and tasks.

You perform these processes and tasks by using work areas. Each of the Oracle Supply Chain Planning products provides access to one or more work areas.

The Supply Chain Planning work areas that you can use are determined by these factors:

- The products that your enterprise has licensed and configured
- The security privileges assigned to your user account

To use the Supply Chain Planning work areas, you must be aware of these points:

- Navigation to work areas
- List of Supply Chain Planning work areas and the products to which they're applicable

Navigation to Work Areas

You can use different paths to navigate to a specific work area including:

- From the Navigator: Click the Navigator icon to see the work areas that you have access to. The Supply Chain Planning work areas are listed within the Supply Chain Planning heading. The work area names are links. Click a specific work area link to access that work area.
- From the Springboard: On your home page you might have one or more springboard icons that represent a group of work areas, such as the group of Supply Chain Planning work areas. Click on the Supply Chain Planning springboard to access a set of icons, each of which represents a specific Supply Chain Planning work area. Click a specific icon to access that work area.

List of Supply Chain Planning Work Areas

The following table lists the Supply Chain Planning work areas and the Oracle Fusion Cloud Supply Chain Planning modules that are applicable to each of the work areas.

Work Area	Modules
Demand Management	Oracle Demand Management
Supply Planning	Oracle Supply Planning
Demand and Supply Planning	Both of these products must be configured: • Oracle Demand Management • Oracle Supply Planning
Planning Central	Oracle Planning Central

Work Area	Modules
Sales and Operations Planning	Oracle Sales and Operations Planning
Backlog Management	Oracle Backlog Management
Production Scheduling	Oracle Production Scheduling
Replenishment Planning	Oracle Replenishment Planning
Plan Inputs	Use the Plan Inputs work area to perform tasks that don't require creating or accessing a plan. This work area can also be opened from other Supply Chain Planning work areas.

Note: If a plan that has been created in the Planning Central work area is opened from either the Supply Planning or the Demand and Supply Planning work area, then that plan will no longer be accessible from the Planning Central work area.

The Global Order Promising work area is bundled within the Oracle Fusion Cloud Order Management solution.

Related Topics

- Overview of the Supply Planning Work Area
- Overview of the Demand Management Work Area
- Overview of the Sales and Operations Planning Work Area
- Overview of the Order Promising Work Area
- Overview of the Replenishment Planning Work Area

Overview of the Supply Planning Work Area

You use the Supply Planning work area to configure, view, and analyze your real world business processes.

You can use the Supply Planning work area to do the following:

- View multiple plans and plan inputs simultaneously.
- Use predefined page layouts or create user-defined page layouts to view plan data tailored for your organization.

To access the Supply Planning work area and open a plan:

1. In the **Navigator**, click the **Supply Planning** work area link.
2. Click the **Plans** drawer, expand Plans.
3. Right-click a plan and select **Open**.

Your plan by default opens in the Edit Plan page. This page consists of two main areas:

- Header

- Configurable pane

Header

The header area contains the page layout information and actionable buttons, such as **Save Layout**, **Change**, **Open**, **Actions**, **Save**, and **Cancel**. Header displays the plans, simulation sets, and plan inputs that are currently opened.

Configurable Pane

You can display the content of your plan in the configurable pane area. You can add multiple panes on the page to display your content. The Page Layout drop-down list in the header area determines the number of panes in your planning interface page.

Access Tasks as Quick Actions on a Home Page

Some tasks that are accessible by using the tasks panel drawer in a supply chain planning work area are also available from the home page as quick actions.

Click the **Show More** link on the home page to display all of the available quick actions for which you have access. You don't have to first navigate to a supply chain planning work area to take an action. For example, use quick actions to create a sourcing rule to purchase components from a new supplier without having to first select a planning work area.

In addition, there are work area-specific preferences that enable you to change your default page layout without having to first launch the work area. These preferences are useful if you configured a content-heavy default page layout that's taking too long to load. In such cases, you can change your default page to a different page layout that opens quicker and then edit the content-heavy page layout to make it perform better.

Here's some additional information about quick actions on a home page:

- You must have the applicable privileges associated with the task to see the task as a quick action on the home page. Each quick action is secured by its related privilege or privileges. For example, if you have the Manage Planning Sourcing privilege, then you should see the Manage Sourcing Rules task in the tasks panel drawer in the work area. You should also see the task as a quick action on the Supply Chain Planning or Order Management (in the case of Global Order Promising) home pages.
- You must have access to the work area to see the associated manage preferences quick actions. For example, you must have access to the Supply Planning work area to see the Edit Supply Planning Preferences quick action.
- You can't navigate to any other UI or open other tabs. When you click a quick access link, the UI opens in the page, but you aren't in a work area.
- You can only return to the Supply Chain Planning home page when you close out of a task that you initiated from the Supply Chain Planning home page.

Manage Page Layouts in Supply Planning

You can create and manage your page layouts. Use the Manage Page Layout action to modify the properties of your existing page layouts.

You access a plan interface page by opening a plan from the Plans section of the Tasks pane in the Supply Planning work area.

This topic discusses how to do the following:

- Create a page layout
- Edit a page layout
- Manage a page layout
- Use the Plan Summary page layout

Create a Page Layout

Page layouts are reusable across plans, simulation sets, and plan inputs. You can create page layouts or copy and then edit a page layout to create page layouts that are tailored to specific business needs.

Follow these steps to create a page layout:

1. In the **Supply Planning** work area, click the **Plans** panel tab.
2. In the Plans panel drawer, expand **Plans** list. Open a plan for which you want to create a page layout.
3. From the Page Layout drop-down list, click **Create**.
4. Specify the following details and click **Save and Close**:
    - Enter a page layout name and description.
    - Select the access level as Public or Private.
        - Select **Public** to make the plan accessible for all users.
        - Select **Private** to restrict the plan accessible to you and to a list of users that you want to provide access.

    This creates an empty pane page layout.
5. Click the **Change** drop-down list and select any layout.

    For example, select a two pane horizontal layout.
6. Click **Open** and select the pane and add the content using the **Open Table, Graph, or Tile Set** dialog.
7. Click **Save** Layout.

Edit a Page Layout

You can edit an existing page layout in two ways:

- Use the **Save** button to save the current page layout as it's currently displayed. For example, you can change the current page layout from a one pane layout to two pane layout. The next time you use this page, the layout appears as a two pane layout.
- You can also change a page layout by using the **Manage** action from the page layout drop-down list.
- You can't edit the predefined page layouts. You can copy and then edit the copy.

Manage a Page Layout

You can use Manage Page Layout to perform the following:

- Edit the page layouts that you created. You can move one pane to other using Manage page layouts. However, if you're using a public page layout, where you aren't the owner, then you can't make changes to the layout. You can only set the layout to your default layout.
- Change the layout that's used as your default layout when you initially open a plan, simulation set, or plan inputs.
- Delete layouts that you created, but are no longer needed.

Use the Plan Summary Layout

Plan Summary is a predefined page layout that contains a set of tiles and high level graphics you can use to review the business value of a plan.

Using the Plan Summary layout, you can do the following:

- Measure the performance of a plan.
- Review plan information through the individual Key Performance Indicators (KPIs).
- Perform plan analysis using the contextual based navigation.
- Copy and configure the components of the Plan Summary page layout for your specific need.

The structure of the Plan Summary layout is a predefined set of tiles, also referred to as infotiles. Using tiles you can view the key metrics of your plan. You can further drill to the predefined analytics using the following tables or graphs:

- Revenue and Margin
- Inventory Turns
- Demand at Risk in thousands
- Rescheduling Exceptions

Overview of Supply Chain Planning Plan Types

When you create a plan, plan type is the first choice that you make. After you run a plan, you can't edit the plan type.

Oracle Fusion Cloud Supply Chain Planning provides these types of plans, which you can create, edit, run, and so on, depending on the work area that you have access to:

Plan Type	Use This Plan Type	Work Areas the Plan Type is Available
Demand Plan	• When you want to perform collaborative and statistical demand forecasting.	Demand and Supply Planning Demand Management Planning Central

Plan Type	Use This Plan Type	Work Areas the Plan Type is Available
	• When you want to use a demand plan as a demand schedule for a supply plan or replenishment plan.	Replenishment Planning
Supply Plan	When you want to generate a supply schedule.	Demand and Supply Planning Planning Central Supply Planning
Demand and Supply Plan	For an integrated demand and supply planning.	Demand and Supply Planning Planning Central
Sales and Operations Plan	For aggregate planning.	Sales and Operations Planning
Backlog Plan	For backlog management.	Backlog Management
Replenishment Plan	For replenishment planning.	Replenishment Planning

Related Topics

- Actions to Manage Your Plans

Actions to Manage Your Plans

The Actions menu on the Manage Plans and the Edit Plan pages are integrated plan management pages for all plan types. When you open the Edit Plan page, note that only the plan name displays in the heading.

Note: Not all action options are available on both the Manage Plans page and the Edit Plan page. For example, the Compare action is only available when you're in an open plan on the Edit Plan page. Also, not all action options are available for all plan types or work areas. For example, the Planning Central work area doesn't include Archive, Compare, or Copy to Simulation Set in the Actions menu.

The following table lists the available options in the Actions menu and the description of each option.

Action	Description
Approve	Initiate and complete the approval process for a plan. When you rerun the plan, the Approved status is removed from the Approval Status column.
Archive	Archive a plan.

Action	Description
Cancel Compare	Cancel the comparison of plan data.
Close	Close a loaded plan from memory. This option isn't available for Demand Plan types.
Compare	Compare plan data with another plan.
Copy to Simulation Set	Open the Copy to Simulation Set dialog box to copy plan data to an existing simulation set. Plan data includes items, resource availability, bill of resources, and so on. This option is available only for Supply Plan and Demand and Supply Plan types.
Create	Open the Create Plan dialog box where you can define the plan options for your new plan. Depending on your plan type, define the scope, demand, safety stock, and supply options. The Safety Stock tab isn't available for Sales and Operations Plan types.
Delete	Delete a plan and its archive versions. This irrevocable action purges the plan from memory and the database.
Duplicate	Create a copy of an existing plan to leverage previously defined plans or to perform what-if simulation analysis. You can decide whether you want to copy only the plan options or copy the plan options including plan data.
Edit Plan Options	Open the Plan Options dialog box where you can edit your plan options. Depending on your plan type, you can change the scope, demand, safety stock, and supply options.
Export	Export the data from the Search Results table on the Manage Plans page to a spreadsheet.
Export Plan Data	Extract all multidimensional plan data from a plan into a set of files for offline reporting and analysis.
Load	Load the plan into memory. This option is available only for Supply Plan, Sales and Operations Plan, and Demand and Supply Plan types.
Manage Tables, Graphs, and Analysis Sets	Open the Manage Tables, Graphs, and Analysis Sets dialog box. You can search for tables, graphs, tiles, tile sets, and analysis sets and manage them.
Open	Open the Edit Plan page for an existing plan. Note that only the plan name displays in the page heading.
Publish Order Forecast	Starts the Publish Order Forecast job. You can publish the order forecast without saving the plan to the database. This option is available in the Actions menu on the Items, Supplies and Demands, and Manage Plans page. This option is available only for Supply Plan, and Demand and Supply Plan types.
Publish Data	Export measure data from a plan based on a pivot table. You can export the data available in planning data measures at any aggregation level based on an existing pivot table to a file in a comma delimited (CSV) file format.
Release	Release the plan from the Supply Chain Planning work area to another plan execution system. This option is available only for Supply Plan, and Demand and Supply Plan types.

Action	Description
	The Release action integrates Supply Chain Planning with other plan execution systems by publishing approved planning recommendations to execution systems. These plan recommendations can be in the form of new planned orders, rescheduled existing supplies, and canceled existing supplies.
Request Approval	Request approval of a plan. This option is available only for Sales and Operations Plan types.
Reset Approval Status	Reset the approval status. This option isn't available for Supply Plan types.
Review Plan Messages	Open the Review Plan Messages tab to review the warning and error messages generated by the planning processes, such as forecast generation and supply plan generation. You can also review the recommendations to address the warning and error conditions.
Run	Run the plan and generate data. When you click Run, the Run Plan dialog box opens. In the Run Plan dialog box, you can select data refresh options, scope options, and demand and supply plan run options to generate planning data.
Save Plan to Database	Save the plan from the memory to the database. The benefit of saving a plan to the database is that you can perform plan analysis without first loading the plan. This option is available only for Supply Plan and Demand and Supply Plan types.
View Status Details	Open the Plan Status Details dialog box to view all of the actions performed by any user for the selected plan. You can also export status details to a spreadsheet.

Related Topics

- Overview of Supply Chain Planning Plan Types

Planners for Supply Chain Planning

How You Define Planners for Supply Chain Planning

Planners are the people in your organization who are responsible for a set of items, their inventory levels, supply and demand, and so forth. For example, some typical titles of planners are Material Planner, Supply Chain Planner, and Demand Planner.

All supply chain planning products use planners. You can define a specific person as a supply chain planner for the Oracle Fusion source system or for any other source system. You can also associate a planner to an item at the organization level.

Use the ScpPlannersImportTemplate.xlsm import template to create the CSV file for the **Load Planning Data from Files** task for planners. You can also use the Manage Planners page to define supply chain planners for each source system. Access the Manage Planners page from a Supply Chain Planning work area. Click the **Tasks** panel drawer and then click the **Manage Planners** link.

For Oracle Fusion source systems, associate the employee identification number with the planner name because Oracle Purchasing requires a valid employee identification number. When a planner releases a planned order, purchasing checks the employee identification number before creating the purchase requisition.

For external source systems, determine if the employee identification number is required when releasing planned orders. If required, use the Manage Planners page to associate the planner with their employee identification number. Or, you can use the ScpPlannersImportTemplate.xlsm template to associate the employee identification number with the planner name.

Use Oracle Product Hub to assign planners at the item-organization level. During data collections, the planning processes collect the planner-item-organization assignment. Planners can then use the planner name to search the data on most of the demand and supply planning pages.

Update Planner Data with New Employee Information

If a planner's employee information (such as employee number, employee name, or email) changes, then that information can be updated in the planners table in several ways.

For external source systems, the collection process looks for the employee number in the data managed by Oracle Fusion Cloud Human Capital Management.

- If the employee number is available in the employee data managed by Oracle Fusion Cloud Human Capital Management, then its respective details (employee name and email) are extracted and populated in the planners table.
- If the employee number isn't available in the employee data managed by Oracle Fusion Cloud Human Capital Management, then the collection process populates the employee number as provided in the comma-separated values (CSV) file in the planners table.

Employee details are updatable only once during the initial collection process. For example, in the first collection run, 123456 is provided for an employee number. If you change the employee number to 100100 on the second collection run, then the latest employee details aren't reflected in the planners table. To change a planner's employee information, you can select a different employee by using the Manage Planners UI or you can mass update planners.

There are two methods to mass update planners. They both involve removing planner data and then collecting the planner data again with any changes.

Method A

1. In one of the Supply Chain Planning work areas, select the **Manage Planners** task.
2. Delete all the planners who need their employee information updated.
3. Collect the planner data again by using the Load Planning Data from Files scheduled process.

Method B

Note: Method B will purge planner data for all planners.

1. In the Scheduled Processes work area, click **Schedule New Process**.
2. In the Schedule New Process dialog box, search for and select the **Purge Data Repository** process.
3. In the Process Details dialog box:
    a. Select the **Source System**.

b. Set **Purge Global Entities** = **Yes**.
c. In the Reference Data tab, move **Planners** to Selected Entities.
d. Click **Submit**.

The scheduled process purges the planner data.

4. Collect the planner data again by using the Load Planning Data from Files scheduled process.

How You Reassign Item Definitions to a Different Planner

When a planner leaves an organization and that planner's items need to be reassigned, there are two ways you can reassign the planner's item definitions.

- Don't change the planner code but instead reassign the existing code to a different employee on the Manage Planners page. In this case, there's no need to change the planner codes for the item.
- Create one or more new planner codes (or use an existing one) and then either:
  - Manually reassign the items to those one or more new planners individually.
  - Use the item mass changes feature in the Product Information Management work area.

Review Plan Messages

In Supply Chain Planning, you can view root causes for technical plan process failures and the recommendations to fix the issues.

After running a plan, open the Review Plan Messages table to review the warning and error messages generated by the planning processes, such as forecast generation and supply plan generation. You can also review the recommendations to address the warning and error conditions. Access the plan messages from either the Manage Plans page or the Edit Plan page.

Plan messages are available for all plan types (for example, Supply Plan or Sales and Operations Plan types) and are accessible from your respective Supply Chain Planning work area. There are three message types:

- Warning: Indicates an issue that can result in a future run plan error if not resolved.
- Error: Indicates a plan failure.
- Recommendation: Indicates a recommendation to resolve a plan failure or how to achieve a better run performance.

If you repeatedly run the plan, the same messages appear on the Review Plan Messages tab for each plan run. The messages will have different process identifiers and submission times.

You can delete plan messages based on the submission date. On the Review Plan Messages tab, click the Purge button. In the Purge Messages dialog box, enter a submission date with one of the operators: Equals, Before, On or before, After, On or after, Between, or Not between.

Use the following steps to open the Review Plan Messages table from the Manage Plans page:

1. From a Supply Chain Planning work area, click the **Task** drawer and select **Manage Plans**.
2. On the Manage Plans page, search for a plan.
3. In the Search Results region, select a plan.

4. Click the **Actions** list and then select **Review Plan Messages** to access the Review Plan Messages tab.

   From the Search Results region, you can export the messages to a Microsoft Excel spreadsheet.

Use the following steps to open the Review Plan Messages table from the Edit Plans page:

1. From a Supply Chain Planning work area, click the **Task** drawer and select **Manage Plans**.
2. On the Manage Plans page, search for a plan.
3. In the Search Results region, select a plan. Next, click the **Actions** list and then select **Open**.
4. On the Edit Plan page, click **Open**.
5. In the Open Table, Graph, or Tile Set dialog box, search for the Review Plan Messages table. Select the table and then click **OK**.
6. On the Review Plan Messages tab, click the **Search** button.
7. In the Search Results region, view the plan messages.

   From the Search Results region, you can export the messages to a Microsoft Excel spreadsheet.

Related Topics

- Actions to Manage Your Plans
- Overview of Supply Chain Planning Plan Types

Manage Notes in Supply Chain Planning

Use Notes in Supply Chain Planning to document and communicate important information about your plan.

You can use notes to provide reasons for any changes made to a plan or to record decisions and assumptions that led to those changes. You can save these notes for future reference or to provide details to other users. Participants in the plan management process can annotate the data with notes to document changes and assumptions.

The notes functionality is available in the Demand Management, Supply Planning, Planning Central, and Sales and Operations work areas. You can create notes for the following:

- Plans
- Planning level members, such as items, organization, and customers
- Planning combinations, such as a specific item-organization-date-measure combination
- Exceptions

When you create a note, you must specify a note type. Note types enable notes to be categorized, which you can use as search criteria. The following lists the predefined note types:

- General
- Assumption
- Decision
- Issue
- Possibility
- Risk
- Reference

- Special

You also specify whether the note is private or public. Private notes are visible only to the user who created the note. Public notes are visible to all the users with whom the object is associated.

From the Demand Management or the Sales and Operations work area, you can access the Notes table to display planning level members for Product hierarchies. You can create a layout to view the Notes table as part of the layout instead of as a dialog box. The Notes table is not available for Supply Planning or Planning Central.

Notes for Plans

You can create notes for plans. When you copy a plan, any notes associated with the plan are copied into the new plan.

To create a note for a plan, do the following:

1. Open the Plan Options page for your plan, and click the **Manage Notes** icon.
2. In the Manage Notes dialog box, click **Actions** > **Create**.
3. In the Create Note dialog box, add your notes.
4. Click **OK**.
5. Click **Save and Close**.

Notes for Planning Level Members

You can associate notes with planning-level members, such as items, organizations, and customers. You can create notes at any level of the hierarchy, such as on an individual item, on a brand, or on a product category.

Notes that you create on planning level members at lower levels in the hierarchy are visible when you open Manage Notes from an aggregate level. Notes that you create on level members aren't plan-specific. This means that a note associated with a level member is visible from any plan that contains that member.

To create a note on a level member, select the level member, and select **Create Note** from the **Actions** menu.

To view, edit, or delete an existing note, select the level member, and select **Manage Notes** from the **Actions** menu.

Notes for Planning Combinations

You can associate notes for the planning combinations, such as a specific item, organization, date, and measure combination. Planning combinations appear as cells within a table.

You can create a note at any level; however, they are only visible at the level at which they are created. For example, if you create a note at a brand, month, and measure combination, you can't view that note at the item, day, and measure level.

If you copy a plan, then any plan-specific notes on planning combinations are also copied.

To create a note for the planning combinations, do the following:

1. Select the cell in the table.
2. Select **Create Note** from the **Actions** menu.
3. Add your notes.
4. Click **Save and Close**.

To view, edit or delete an existing note on a planning combination, do the following:

1. Select the **Note** icon from the table's cell level.
2. Select **Manage Notes** from the **Actions** menu.

Note: If you create a note on a planning combination, and the associated measure is shared across plans, then the note isn't plan-specific. In this case, the note is visible across all plans. If you create a note on a planning combination, and the associated measure isn't shared across plans, then the note is plan-specific. In this case, the note is visible within the plan in which you created it.

Notes for Exceptions

You can associate notes with exceptions. Notes on exceptions persist across plan runs. If an exception still exists after a plan is run again, then any notes associated with the exception are retained. When an exception is resolved, the exception is removed from the application. In that case, any notes associated with the exception are also removed.

To create notes for an exception, do the following:

1. Click the **Note** icon on the table row of the exception.
2. Add your notes.
3. Click **Save and Close**.

Assign Time Zones to Locations in Supply Chain Planning

You can view supplies and demands in your Supply Chain Planning work area based on the time zone of the organization, customer site, or supplier site.

In addition, you can calculate precise in-transit time because supply chain planning considers the time zone difference between the source and destination locations.

The following points discuss in detail how you can collect time zone details and view orders depending on the locations' time zone:

- Update Time Zones Using Data Collections
- Assign Time Zones in Supply Network Model
- Calculate In-Transit Time
- View Time Zones in Supplies and Demands
- Release to Execution

Update Time Zones Using Data Collections

Use data collections to update organizations, customer site, or supplier site time zones. You can update the time zone in one of following three ways:

- Collect the organization's time zone from an Oracle Fusion source system.
- Collect time zones from an external source system using the organization, customer, and supplier import templates.
- Update the time zone on Customers and Suppliers tabs of the Maintain Supply Network Model page.

If you are collecting from an Oracle Fusion source system, then you can update the organization's time zone using the data collections method only. You cannot manually update the organization's time zone using the Maintain Supply Network Model page in your Supply Chain Planning work area.

Assign Time Zones in Supply Network Model

Before collecting time zones or converting time zones to a local time, you must first assign time zones to organizations, customer sites, and supplier sites. A new time zone field is available on the Organizations, Customers, and Suppliers tab of the Maintain Supply Network Model page in your Supply Chain Planning work area.

You cannot collect customer site and supplier site time zones from an Oracle Fusion source system. To update the customer site or supplier site time zone, use one of the following options:

- Use the customer or supplier import template to update the customer site or supplier site time zone. You can also use this template if you are collecting from an external source system.
- Update the customer site and supplier site time zones directly in the Maintain Supply Network Model page.

When you recollect new customer and supplier data from an Oracle Fusion source system, the existing customer site and supplier site time zone information is preserved. If you do not collect or update the customer site or supplier site time zone, then planning calculations assume that the customer site or supplier site is located in the same time zone as the organization that is associated with the demand or supply.

When you collect the supplies and demands, collections automatically convert the associated dates from the database server time zone (Coordinated Universal Time or UTC) to the local time zone based on where the event takes place. In addition, when you collect shipments and booking history from the Oracle Fusion source system for use in the Demand Management or the Demand and Supply Planning work area, collections converts the historical data from the database server time zone (UTC) to the associated organization's time zone.

Calculate In-Transit Time

When calculating in-transit times, supply chain planning considers the time zone difference between the shipping and receiving locations. The following example shows how supply chain planning calculates the in-transit time. In this example, the customer site is located in Sydney (UTC+10) and the shipping organization is in Sacramento, California (UTC-8).

1. When planning collects a sales order with a requested arrival date of 25-March-2018, 21:00 (UTC) on the database server, the requested arrival date is offset to the customer site's time zone. The customer site's time zone is Sydney time zone (UTC+10 hours). The requested arrival date becomes 26-March-2018, 7:00 in plan inputs (Sydney time zone).
2. When you run the plan with the Refresh with current data option, the sales order is included in the plan and supply chain planning uses this date to calculate the scheduled ship date.
3. Consider the in-transit time for the selected shipping method (Air Freight) is 36 hours. Supply chain planning first calculates the scheduled ship date as 25-March-2018, 19:00 hours (Sydney time) and then converts the date to the Sacramento time. The product is shipped from Sacramento. The time zone difference is applied to the scheduled ship date by subtracting 18 hours. The scheduled ship date becomes 25-March-2018, 1:00 Sacramento time, which is used to generate the pegged supplies.
4. After completing the calculations, supply chain planning moves all the dates to the end of the day. All dates have the time stamp of 23:59:00. The time stamp is not available on the UI, but you can query the time stamp from the planning database.

Supply chain planning makes similar in-transit calculations when shipping supplies from a supplier site to an organization, or when transferring product from one organization to another.

View Time Zones in Supplies and Demands

On the Supplies and Demands page, use the following three columns to view supplies and demands in relation to the time zone:

- Organization Time Zone
- Source Time Zone
- Destination Time Zone

The columns aren't included in any predefined table layout. Create a user-defined table layout and include these columns in your table.

To display supply and demand measure values within a table such as Material Plan or Build Plan, supply chain planning assigns the measure value to the day based on the organization's local time zone. The supply and demand measure value is not assigned to a date based on a common time zone.

Release to Execution

When you release orders that are marked for release to Oracle Fusion Cloud execution system, the release action offsets the date from the location's time zone to the database server time zone (UTC).

For example, when you release a planned make order, supply chain planning converts the need-by date from the organization's time zone to UTC.

2 Tables, Graphs, Analysis Sets, Tiles, and Tile Sets

Overview of Tables, Graphs, Analysis Sets, Tiles, and Tile Sets

You can configure the entities for tables, graphs, analysis sets, tiles (also referred to as infotiles), or tile sets by using the Selector Tool.

You can also create and manage groups on the Selector Tool page and associate your tables and graphs with the group. Navigate to the Selector Tool from an open plan or from the **Actions** menu on a table or graph toolbar.

To create a table, graph, analysis set, tile set, or tile, open the Selector Tool:

1. From an open plan, click **Actions** and then select **Manage Tables, Graphs, and Analysis Sets**.
2. In the Manage Tables, Graphs, and Analysis Sets dialog box, click **Actions** and then select **Create**.
3. Select one of the following to open the Selector Tool:
    - Table
    - Graph
    - Analysis Set
    - Tile Set
    - Tile
4. Depending on your selection, the Selector Tool dialog box opens with the following tabs:

Tab	Table	Graph	Analysis Set	Tile
Measures	Yes	Yes	Yes	Yes
Hierarchies	Yes	Yes	No	Yes
Members	Yes	Yes	Yes	Yes
Measure Filters	Yes	Yes	No	Yes
Layout	Yes	Yes	No	Yes
Comparison Options	Yes	Yes	No	No

Tab	Table	Graph	Analysis Set	Tile
Details	No	No	Yes	No

Note: In the Selector Tool, the member values displayed are based on what's configured in the **Member Identifier to Display** column on the Configure Planning Analytics page, Levels and Attributes tab. For example, for item, you can configure your tables and graphs to show the item description instead of the item name, which is what also appears when you're in the Selector Tool.

Measures

Use the Measures tab to select measures for a table or graph by moving measures from the Available Measures pane to the Selected Measures pane. The measures that you select determine the content of the other tabs. The dimensions of the measures determine the dimensions available on the Hierarchies tab and the dimension members on the Members tab. For example, if a measure has the Product, Organization, and Time dimensions, those dimensions and their hierarchies are visible on the other tabs. You can display the available measures by measure group or alphabetically by using the **Tree View** or **List View** icon.

A measure is usually a named time series of values that represent the following at a particular intersection of the Customer, Organization, Product, Supplier, and Resource dimensions:

- Historical performance (Bookings History). This measure isn't applicable for supply planning.
- Future projections (Shipments Forecast)
- A key performance indicator (KPI), such as Gross Margin Percentage, or a derived calculation, such as Projected Available Balance

The planning process aggregates measure data from lower levels to higher levels or computes KPIs and derives calculations from other values at the same level as needed. The planning process can also allocate or spread updates made at an aggregate level to the affected cells at lower levels. Measures can be expressed in different units of measure, such as inches, dollars, kilos, or liters. Depending on the context, you can display, update, or compare measures that are in different units. The planning process can convert values among different currencies (for monetary values).

When plans are archived, you can retrieve measures from the archived time periods and show them on a plan table. See the *View Planning Measures from Archived Time Periods* topic to learn more. However, for Demand and Supply Plans, the Demand History Buckets option determines whether the archived period is shown or not.

Note: Text-based measures aren't supported in graphs and aren't displayed in the Available Measures pane on the Measures tab of the Selector Tool during the configuration of graphs.

Hierarchies

Use the Hierarchies tab to select the dimensions, hierarchies, and levels to include or exclude in the table or graph.

For each dimension, select the hierarchies and levels that you want to include in the graph or table. Checking the box in the **Display** column includes that dimension in the table or graph. Expand the dimension to view the available hierarchies. Expand the hierarchy to view the levels of the hierarchy. Checking a level includes it in the table or graph. If multiple levels are checked, the top level is displayed in the table or graph by default. Each level in the table or graph can be expanded until all checked levels are visible. The **Show Unassociated** check box determines whether the measure

values that aren't associated with a specific dimension in the table or graph are hidden or displayed. For example, a table could include Shipments Forecast and Net Resource Availability. Shipments Forecast has product, organization, and time as dimensions. Net Resource Availability has resource, organization, and time as dimensions. With the check box selected, the Resource column displays the word Unassociated when you view Shipments Forecast rows.

For a demand plan that uses a hybrid time hierarchy, only the hierarchy that was selected as the planning calendar on the Scope tab on the Plan Options page is displayed for the Time dimension along with the other, corresponding hybrid time hierarchies that were created when the Create Hybrid Time Hierarchies scheduled process was run.

You can select the levels of only one hybrid time hierarchy.

Members

You use the Members tab to manually select dimension members by moving members from the Available Members pane to the Selected Members pane. If no selections are made on this tab for a dimension, the graph or table displays the dimension starting at the top level checked on the Hierarchies tab. For example, if you selected the Gregorian Calendar hierarchy with Quarter and Month on the Hierarchies tab, the graph or table displays all quarters; each quarter has an icon to drill to its months.

Measure Filters

Use the Measure Filters tab to filter results based on measure values across dimension member combinations that meet the criteria that you specify. You can filter your measure data to return only multidimensional combinations that meet the measure criteria for selected dimensions of the measure.

> **Note:** The measures listed are those that are of data type number, currency, or percent that aren't dimensioned by time. Measures that are time dimensioned and of data types date and text are excluded from the list. If the table contains any configure-to-order (CTO) measures, then the Measure Filters tab is disabled.

When you create or edit a table or graph, make your selections on the Measures, Hierarchies, and Members tabs. Next, on the Measure Filters tab, specify the measure criteria to apply across combinations of your dimension selections, such as Item and Customer. The table or graph displays only the combinations that meet your specified measure criteria.

You can compare measures to fixed values or to other measures, and you can apply multiple measure conditions:

- Multiple AND conditions are allowed
- Multiple OR conditions are allowed
- Combinations of AND and OR conditions aren't allowed.

You can apply the measure filters in a table or graph to a linked table or graph in the Manage Links dialog box. On the To Table, Graph, or Layout tab, select the **Include measure filters** check box. This check box is enabled after you select the **Pass user-specified parameters** check box.

Layout

Use the Layout tab to format tables, graphs, or tiles. The following are the key layout options for tables, graphs, and tiles:

- Tables: Use table layout options to drag and drop dimensions to change the table layout and configure drill settings.
- Graphs: Use the graph layout options to select the graph type and the formatting options for the graph type that you select. In the Filters section, you can specify the filter criteria that you want displayed in the graph.

- Tiles: Use the tile layout options to select the graph type and add tables and graphs to the content area of the tile you're creating.

Comparison Options

The Comparison Options tab is applicable only for tables and graphs. On the Comparison Options tab, you can compare your current plan with an archived version or an alternate plan. Use this tab to compare how specific measures have varied over time. The Comparison Options tab contains three sections: Waterfall Analysis, Trend Analysis, and Plan Comparison.

Note: The Comparison Options tab isn't available in the Oracle Planning Central work area.

- In the Waterfall Analysis section, you can compare selected measures in a table or a graph with an archived plan.

  Select the **Use MAPE calculations** check box if you have scheduled your plan archival process. Mean absolute percentage error (MAPE) calculations use the system administrator archive and not an on-demand archive.

  In the **Measure Archives to Use** list, select one or more archives to reference. The number of weeks refers to how long ago the archive was created. The planning process uses the following logic for when to use an archive:

  - Match the exact dates. If multiple versions of an archive are within the waterfall time frame, use the closest, most current version.
  - If no match is found on the exact date, use the match closest inside the range, which is +3/-3 days of a selected weekly waterfall time frame, or +15/-15 days for a monthly archive.
  - If no match is found within +3/-3 days of a selected weekly waterfall time frame, or +15/-15 days for a monthly archive, then nothing is returned.

  For example, if you select **4 weeks ago**, the planning process searches for the archive 4 weeks prior to today's date, for instance, March 6. If your archives are stored at the month level and nothing is found on February 5, the planning process searches for the most recent archive within +15/-15 days.
- In the Trend Analysis section, you can provide the number of archives that you want to reference. The planning process selects the latest archives. For example, you have five archives, where number five is the latest archive and you have selected 3 in the **Number of Previous Versions to Include** field. The planning process selects archive number five, four, and three for the comparison. The difference between Waterfall Analysis and Trend Analysis is that in Waterfall Analysis you can choose an archive created within each selected time frame that you want to compare. In Trend Analysis, you can select the number of archives that you want to compare, and only the latest archives are used for comparison.
- The Plan Comparison section pertains to both archived plans and alternate plans that you consider for comparison. You can select the type of difference to display in tables or graphs for comparison. For example, you can choose to view the difference in percentage or absolute percentage.

Related Topics

- Use Advanced Options in the Selector Tool
- Use Table Drilling
- Create a Tile in Supply Chain Planning
- Create a Tile Set in Supply Chain Planning
- How You Use Levels and Attributes in Supply Chain Planning

Use Advanced Options in the Selector Tool

You can use the Advanced Filter dialog box to filter data and select specific members that fulfill some criteria.

Click the **Advanced Filter** icon on the Members tab to open the Advanced Filter dialog box. You can use the following filter criteria tools:

- **Levels**: Select by level. Select the members in a level such as Customer Site for the Customer dimension, or Period for the Time dimension.
- **Family**: Select parent or child of a dimension member. Select members based on a parent or child relationship, such as selecting the Days in a Week.
- **Attributes**: Select based on name. For example, select members based on items whose name contains Economy.
- **Measure Criteria**: Select based on meeting measure criteria. Select members that meet the criteria, such as Products for which the gross margin is greater than a particular value.
- **Time Range**: Select a range of dates. Select time periods based on a range, a start date, or today's date.

The advanced filter criteria tools are used in conjunction with action keywords to refine selections. The following four actions determine how to apply the criteria:

- **Replace with**: Replace the current selection, if any, with members meeting the criteria.
- **Add**: Add members meeting the criteria to the current selection.
- **Keep**: Keep only the members in the current selection that meet the criteria.
- **Remove**: Remove the members from the current selection that meet the criteria.

You can apply filter criteria tools sequentially to refine your selection. For example, select all the items for a category, and then keep the top 10 items based on sales.

Click the **Show Results** button to see the filtered list of members based on the criteria. Removed members are shown below the filtered list. You have the option of accepting the results or resetting to the previous members.

When you accept the results, the criteria used to retrieve the accepted members appear in the Criteria Steps section on the tab. These criteria are evaluated when the table or graph is displayed. You can remove criteria steps.

> **Note:** Ensure that the criteria steps defined for each dimension are needed and relevant. Remove all unwanted or unnecessary criteria steps so that your table or graph displays the correct information.

- To remove a step, click the **Remove** icon in a row.
- To view the result of removing a criteria, click **Show Criteria Change**.
- To accept the Show Criteria Change results, click **Accept** and then **OK**.
- To make the change permanent, click **Save** or **Save and Close**.
- To view the results without making the change permanent, click **Apply** and **Close**.

Related Topics

- Overview of Tables, Graphs, Analysis Sets, Tiles, and Tile Sets

Create an Analysis Set

An analysis set is a named set of criteria that can contain selected measures, dimension members, or both measures and dimension members.

Use the **Apply Analysis Set** and **Save as Analysis Set** buttons to apply previously made selections or to save the selections made in the Selector Tool.

Applying an existing analysis set to a table or graph is a quick way to select the measures and dimension members that you frequently use.

You have the option to save measures and dimension members. You can save the dimension members as a list or as a script. For example, you can select the top 10 items based on sales for January. If saved as a list, the same 10 items would always be displayed in the table or graph, regardless of the current month. However, as sales data changes over time, you would want to see the top items in the current month in your table or graph. To accomplish this, save the dimension members in a script that would evaluate the criteria whenever the table or graph is displayed.

Related Topics

- Overview of Tables, Graphs, Analysis Sets, Tiles, and Tile Sets

Create a Tile in Supply Chain Planning

A tile is a component used to present a graphical summary of the data. A tile is also referred to as an infotile in Oracle Fusion Cloud Supply Chain Planning.

Each tile has one or more related tables or graphs with predefined drill-to actions to display additional information about that key performance indicator (KPI).

To create a tile:

1. In a Supply Chain Planning work area, open a plan.
2. Click **Actions** > **Manage Tables, Graphs, and Analysis Sets**.
3. In the Manage Tables, Graphs, and Analysis Sets dialog box, in the Search Results region, click **Actions** and then select **Create** > **Tile**.
4. In the Selector Tool - Create Tile dialog box, on the Measures tab, select the required measures and move them from the Available Measures pane to the Selected Measures pane.
5. On the Hierarchies tab, select the dimensions, hierarchies, and levels to include or exclude in the tile.
6. On the Members tab, select the required dimension members and move them from the Available Members pane to the Selected Members pane. If you don't select a dimension member, the tile displays the dimension starting at the top level selected in the Hierarchies tab.
7. On the Layout tab, do the following:
    - Select the graph type for the infotile.
    - Expand the **Content Area** panel, and then click the **Add Row** button. You can add up to four tables or graphs to display them in the content area for that tile.
8. Click **Save and Close**.

Related Topics

- Overview of Tables, Graphs, Analysis Sets, Tiles, and Tile Sets
- Create a Tile Set in Supply Chain Planning

Set Measure Targets for Use in Tiles

You can enter or update goals for a measure to track performance against the goals. Set targets by editing a measure and updating the measure goal. When the plan summary displays the measure, the goal or target for that measure is visible.

You can define goals only for measures that are of data type currency, number, or percent.

For global goals, you can provide a low range or a high range. The ranges are displayed on the user interface when you view a measure in comparison with its goal. Global goals are measure level parameters and aren't defined specifically for a data population.

To enter or update measure target goals, follow these steps:

1. Open the Manage Planning Measures page:
    a. In a Supply Chain Planning work area, open a plan.
    b. On the Edit Plan page, click the Tasks panel tab.
    c. In the Tasks panel drawer, click the Manage Planning Measures link.
2. On the Manage Planning Measures page, select the measure and click the Edit icon.
3. On the Edit Measure page, navigate to the Advanced tab, Goals subtab.
4. In the Goals subtab, select whether low values or high values are better.

    For example, high values are better for Gross Margin, but low values are better for Demand at Risk.
5. In the Global Goals section, provide a low range or a high range.
6. Click Save and Close.

Create a Tile Set in Supply Chain Planning

You can create a tile set to group individual tiles.

Tiles are also referred to as infotiles in Oracle Supply Chain Planning. Creating tile sets can be useful in cases where you want to track various metrics on a single page. You can add tile sets to a pane in a page layout.

> **Tip:** Before you create a tile set, check whether you need to create the tiles that you will be adding to the tile set.

To create a tile set:

1. In a Supply Chain Planning work area, open a plan.
2. Click **Actions** > **Manage Table, Graphs, and Analysis Sets**.
3. On the Search table toolbar, from the **Actions** menu, select **Create** > **Tile Set**.
4. In the Selector Tool - Create Tile Set dialog box, specify these details:

- Enter a name and description for the tile set.
- Select a group for the tile set.

5. From the Available Tiles pane, select the tiles to include in the tile set and move them to the Selected Tiles pane.
6. Click **Save and Close**.

Related Topics

- Create a Tile in Supply Chain Planning

Use Table Drilling

After you create a table, use drilling in the table to expand and collapse the levels within the hierarchy by which you can view different levels of aggregation.

When viewing a table or graph, the dimensions and hierarchies selected on the Hierarchies tab are visible. The top selected level is visible; use drilling to view lower levels.

To drill across hierarchies or dimensions, the levels must be adjacent. Drilling is automatically available for the levels within the predefined hierarchies, but you can also configure drill pairs to drill across hierarchies or dimensions.

To display a table showing Final Shipments History with the ability to drill from customer to item, the columns Customer and Item must be adjacent:

1. On the Layout tab, use the **View** menu to select **Configure Drill Settings**.
2. Click the **Add Row** icon to add a new drill pair.
3. In the **Drill From** column, select Customer. In the **Drill To** column, select Item.

With this configuration, you can view the shipments history values by item for each customer in the table.

Note: Drilling is only active between the adjacent levels in the table.

Related Topics

- Overview of Tables, Graphs, Analysis Sets, Tiles, and Tile Sets
- Use Advanced Options in the Selector Tool
- Use Table Linking

Use Table Linking

You can link a table or graph to another table or graph or a page layout by selecting Manage Links from the Actions menu on the toolbar.

The links enable you to pass the context of a table or graph to another table or graph or a page layout.

In the Manage Links dialog box, you can use these tabs:

- To Table, Graph, or Page Layout: Create a link to another table or graph or to a page layout.

- From Table or Graph: Link to the open table or graph from another table or graph.

Use the **Add Row** icon to add a link.

- Enable dynamic linking: Select this check box to enable dynamic linking. If selected, then the target table or graph is refreshed when the selections in the source table or graph change.
- Pass highlighted selections and selected members: If you select this option, then whatever you highlight in the current table or graph is passed as the context along with the filters in the Selector Tool to the target table, graph, or page layout.
- Pass user-specified parameters: If you select this option, then you can select the level and context of the source table or graph to pass as link parameters to the target table, graph, or page layout.
- Include measure filters: Select this check box to apply measure filters that you defined on the Measure Filters tab in the Selector Tool to a linked table or graph. This check box is enabled:
    - After you select the **Pass user-specified parameters** option.
    - If the From Table contains measure filters.

> **Note:** If you're linking a summary table that lists configure-to-order (CTO) items to a detail table that lists the CTO items along with their option classes and options, select the **Pass highlighted selections and selected members** option.

After you define the link, use the Drill icon on the toolbar to drill to the linked table, graph, or page layout.

Related Topics

- Overview of Tables, Graphs, Analysis Sets, Tiles, and Tile Sets
- Use Advanced Options in the Selector Tool
- Use Table Drilling

Link to External Systems

Overview of Linking to External Systems with Context

You can link a table or graph in your Oracle Fusion Cloud Supply Chain Planning module to supporting information in an external system to gain a deep understanding of your data and aid your decision making.

> **Note:** You can create links to external systems from only pivot tables and not regular tables.

When you're analyzing data in a table or graph in the Demand Management, Demand and Supply Planning, Planning Central, Replenishment Planning, Sales and Operations Planning, or Supply Planning work area, you might need to view additional information that resides in an external system. Using this functionality, you can link your table or graph to an object in the external system. For example, you can link your table or graph to a predefined or user-defined analysis or report in Oracle Transactional Business Intelligence (OTBI), Oracle Analytics Cloud, or Oracle Analytics Publisher.

While specifying the link, you can pass dimensions, levels, and level members in your table or graph along with the link so that it opens the external system object with the context of the data in your table or graph. You can also pass the plan name or ID along with the link to restrict the displayed data in OTBI, Analytics Cloud, or Analytics Publisher.

How You Set Up Links to External Systems

To set up links to an external system, you must do the following:

1. Set up the application integration for the external system.
2. Configure a table or graph with a link to the external system.

Additional Points About Links to External Systems

Note these additional points about links to external systems:

- Any link that you create from a table or graph to an external system is tied to that table or graph and your user credentials.

  When you log on to an Oracle Supply Chain Planning module, you can use the link in the table or graph from all plans that include the table or graph. Others with the required role and privileges can also use the link in the table or graph from all plans that include the table or graph.

  However, you can edit or delete the link only if you created it.
- During data migration, when you export a table that contains a link to an external system and subsequently import the table, the link is available in the table.
- When you duplicate the table or graph, you can choose to include the links to the external system in the copy.

Related Topics

- Structure of a Link to an External System
- Set Up the Application Integration for an External System
- Create a Link to an External System
- Use a Link to an External System

Structure of a Link to an External System

This topic explains the structure of a link to an external system from a table or graph in an Oracle Fusion Cloud Supply Chain Planning module. The topic also provides examples of such links.

A link to an external system consists of these parts:

- Base URL: You supply this part of the link in the **Full URL** field on the Create Application Integration page. The link must include the host information and can also include the port details. This part is displayed in the **Base URL** field in the Create Link to External System dialog box and can't be modified.

  For example, the base URL could be as follows: https://...oracle.com

- Page or report path: You supply this part of the link in the **Page Path** field in the Create Link to External System dialog box. This path is appended to the base URL and contains details about the page or report in the external system to which you're creating the link.

  Along with the page path, you can also pass the name or ID of the Oracle Supply Chain Planning plan you're in to restrict the displayed information in the linked, predefined or user-defined analysis or report in Oracle Transactional Business Intelligence (OTBI), Oracle Analytics Cloud, or Oracle Analytics Publisher.

  An example of the report path without the plan context is as follows: /analytics/saw.dll?Dashboard&PortalPath=%2Fshared%2FCustom%2FSCP%2FSalesOrders_Booking_Rpt%2FSO_Bookings_Rpt4&Page=page%201&Action=Navigate, where SO_Bookings_Rpt4 is the name of the report.

  An example of the report path with the plan context is as follows: /analytics/saw.dll?Dashboard&PortalPath=%2Fshared%2FCustom%2FSCP%2FPL_OTBI_report2%2FDM_Plan_Details&Page=page%201&Action=Navigate&col3=%22Plan%22.%22Plan%20Name%22&val3=#PlanName#

  You must provide the plan context only when the page or report in the external system has a filter for the plan context, and you want to review the information by plans. For example, a link to an external web page doesn't require plan context.
- Linking parameters: You supply this part of the link in the Linking Parameters section on the To External System tab in the Manage Links dialog box. The linking parameters contain details about the dimensions, levels, and level members in the table or graph. This information is appended to a combination of a base URL and page or report path and opens the external system object with the context of the data in your table or graph.

  For example, the linking parameters could be as follows: "Distributed Order Orchestration - Fulfillment Lines Real Time"."Order Header Detail"."Ordered Date"&op1=bet&val1=timestamp '#StartDate# 00:00:00' timestamp '#EndDate# 23:59:00'

  After the link is encoded, when it's accessed from a table or graph, and the runtime values for the contextual parameters are passed, the linking parameters would look as follows: &col1=%22Distributed%20Order%20Orchestration%20-%20Fulfillment%20Lines%20Real%20Time%22.%22Order%20Header%20Detail%22.%22Ordered%20Date%22&op1=bet&val1=%22timestamp%20%272022-06-01%2000%3A00%3A00%27%22+%22timestamp%20%272022-06-30%2000%3A00%3A00%27%22

The resulting, concatenated link opens the external system object with the context of the selected data in your table or graph.

Example of a Link to an OTBI or Analytics Cloud Report or Analysis

You must meet these requirements while creating a link from a table or graph to a report or analysis in OTBI or Analytics Cloud:

- In the **Parameter** field on the To External System tab in the Manage Links dialog box, enter the names in the col<number> format. For example, the parameter names could be col1, col2, col3, and so on.
- In the **Value** field on the To External System tab, enter the names for the subject areas and columns to which you're passing tokens, and enclose this information in quotation marks.

  Then, enter the tokens in the val<number> =<token name> format. The token names mustn't be within double quotation marks.

  If required, include operators, which you must preface in the op<number> format (for example, op2=bet).

This example depicts how the linking parameters would look before the link is encoded:

col1="Submitted Date (Booked Date) - UTC"."Submitted Date"&val1=timestamp '#MemberName# 00:00:00'

col2="Fulfillment Line Details"."Demand Class Meaning"&val2=#MemberName#

col3="Product"."Product Number"&val3=#MemberName#

col4="Planning Date 1"."Period Start Date"&op4=bet&val4=#StartDate# #EndDate#

After the link is encoded, the linking parameters would look as follows: &col1=%22Submitted+Date+%28Booked +Date%29+-+UTC%22.%22Submitted+Date%22&val1=%22timestamp+%27<date from selection context> +00%3A00%3A00%27%22&col2=%22Fulfillment+Line+Details%22.%22Demand+Class+Meaning%22&val2= %22<member name from selection context>%22&col3=%22Product%22.%22Product+Number%22&val3= %22<member name from selection context>%22&col4=%22Planning%20Date%201%22.%22Period%20Start%20Date %22&op4=bet&val4=%22<start date from selection context>%22+%22<end date from selection context>%22

Note: Ensure that the numbers for the parameter, value, and operator names are the same for a combination of a parameter and value.

Example of a Link to an Analytics Publisher Report

You must meet these requirements while creating a link from a table or graph to a report in Analytics Publisher:

- In the **Parameter** field on the To External System tab in the Manage Links dialog box, enter the access parameters for Analytics Publisher.

  Some examples of access parameters are as follows:

  - _paramsp_itemname
  - _paramsp_fromdate
  - _paramsp_todate
  - _paramsp_customer

- In the **Value** field on the To External System tab, enter the token names.

  Match the access parameters for Analytics Publisher to the available token names for links to external systems.

This example depicts how the linking parameters would look before the link is encoded:

_paramsp_itemname=#MemberName#

_paramsp_fromdate=#StartDate#

_paramsp_todate=#EndDate#

_paramsp_customer=#MemberName#

After the link is encoded, the linking parameters would look as follows: &_paramsp_itemname=<member name from selection context>&_paramsp_fromdate=<start date from selection context>&_paramsp_todate=<end date from selection context>&_paramsp_customer=<member name from selection context>

Related Topics

- Overview of Linking to External Systems with Context
- Set Up the Application Integration for an External System
- Create a Link to an External System
- Use a Link to an External System

Set Up the Application Integration for an External System

You must specify the application integration for an external system before you can link to it from a table or graph in your Oracle Fusion Cloud Supply Chain Planning module. You must have administrator privileges to perform this procedure.

1. In the Setup and Maintenance work area, on the Tasks panel tab, select **Manage Setup Content**.
   The Manage Setup Content page opens.
2. Under Topology Definition, select **Manage Integration of Additional Applications.**
   The Manage Integration of Additional Applications page opens.
3. Click **Actions** > **Create**.
   The Create Application Integration page opens.
4. In **Application Name**, enter the name of the external system.

   > **Note:** The name must start with "SCP_EXT_LINK_". Otherwise, you can't select the application integration in the **Application Name** field in the Create Link to External System dialog box.

5. In **Full URL**, enter the base portion of the URL to the external system. The URL must include the host information and can also include the port details. The page path and linking parameters are appended as context to this URL.
   For example, you can enter "https://...oracle.com" in the field.
   When you create the link for the table or graph, this URL is displayed in the **Base URL** field in the Create Link to External System dialog box and can't be modified. The information you specify in the **Page Path** field in the dialog box and on the To External System tab in the Manage Links dialog box is appended to this base URL.
6. In **Partner Name**, enter any value you require.
7. In **Security Policy**, ensure that **None** is selected.
8. Click **Save and Close**.

Related Topics

- Overview of Linking to External Systems with Context
- Structure of a Link to an External System
- Edit the Application Integration for an External System
- Create a Link to an External System

Edit the Application Integration for an External System

You can edit or delete the application integration for an external system to which you're linking tables or graphs from your Oracle Fusion Cloud Supply Chain Planning module. You must have administrator privileges to perform this procedure.

1. In the Setup and Maintenance work area, on the Tasks panel tab, select **Manage Setup Content**.
   The Manage Setup Content page opens.
2. Under Topology Definition, select **Manage Integration of Additional Applications**.
   The Manage Integration of Additional Applications page opens.
3. Search for your application integration, and select it.
4. Do one of the following:
   - To edit the application integration, follow these steps:
     i. Click **Actions** > **Edit**.

        The Edit Application Integration page opens.

        You can't edit the application and partner names.
     ii. Edit the value in the **Full URL** field.

        The URL must include the host information and can also include the port details.
     iii. In **Security Policy**, ensure that **None** is selected.
     iv. Click **Save and Close**.
   - To delete the application integration, follow these steps:
     i. Click **Actions** > **Delete**.

        A dialog box is displayed.
     ii. Click **Yes**.

What to do next

After editing or deleting the application integration, you must modify the external links that use the application integration. Otherwise, the external links won't work.

Related Topics

- Overview of Linking to External Systems with Context
- Structure of a Link to an External System
- Set Up the Application Integration for an External System
- Create a Link to an External System
- Edit a Link to an External System

Create a Link to an External System

After specifying an external system's application integration, you can create a link to the system from a table or graph in your Oracle Fusion Cloud Supply Chain Planning module by supplying the page path and linking parameters.

> **Tip:** To create a link to a page or report in an external system, examine the target URL. Then, enter the required information for the base URL, page or report path, and linking parameters so that the rendered link meets the external system's requirements. Use supported tokens instead of actual values in the linking parameters to pass contextual values during runtime.

1. In your table or graph in the Demand Management, Demand and Supply Planning, Planning Central, Replenishment Planning, Sales and Operations Planning, or Supply Planning work area, click **Actions** > **Manage Links**.
   The Manage Links dialog box opens.

   > **Note:** You can create links to external systems from only pivot tables and not regular tables.

2. On the To External System tab, click the **Create** icon.
   The Create Link to External System dialog box opens.
3. In **Name**, enter a unique name for the combination of the application integration and page path for which you're creating the link.
   This name is displayed when you click **Actions** > **Drill To** > **External Links** in the table or graph.
4. In **Description**, enter the link description.
5. In **Application Name**, select the application integration that was previously specified on the Create Application Integration page.
   The base URL that you entered on the page is displayed in the **Base URL** field and can't be changed.

   > **Tip:** You can reuse the same application integration in links to external systems so long as you don't need to change the base URL.

6. In **Page Path**, enter the path to the page or report in the external system.
   To restrict the displayed data to the current plan in the linked, predefined or user-defined analysis or report in Oracle Transactional Business Intelligence (OTBI), Oracle Analytics Cloud, or Oracle Analytics Publisher, specify these tokens:
   - #PlanName#: Append this token to the page path to pass the name of the current plan in the Oracle Supply Chain Planning work area.
   - #PlanId#: Append this token to the page path to pass the ID of the current plan in the Oracle Supply Chain Planning work area.

   Ensure that the path doesn't contain the host or port details because they're derived from the application integration.
7. Click **OK**.
   The link is displayed on the To External System tab in the Manage Links dialog box.
8. With the link name selected, in the Linking Parameters section, click the **Add Row** icon.
   A blank row appears in the Linking Parameters section.
   You can save the link only when it has at least one valid combination of a parameter and value.
9. In **Dimension**, select a dimension that you want to pass along with the link to the external system.
   The available dimensions are those selected for the table or graph on the Hierarchies tab in the Selector Tool.
   The **Level** field becomes available.

   If you selected the Time dimension, the **Date Format** field is enabled.
10. Select a level that you want to pass along with the link to the external system.
    The available levels are those selected for the table or graph on the Hierarchies tab in the Selector Tool.

11. In **Parameter**, enter a unique name for the parameter through which you want to pass the dimension, level, and value to the external system page or report.

    Ensure that the name meets the external system's nomenclature rules for parameters.
12. In **Value**, enter a token for passing the selected level member in the table or graph. The information in this field should be in the decoded format for URLs.

    You can specify these tokens:
    - #MemberName#: Use this token to pass the member name. For example, the token can contain the name of the item, organization, customer, week, or month.
    - #MemberId#: Use this token to pass the internal ID of the member.
    - #StartDate#: Use this token to pass the start date of the time bucket for your selection in the table or graph.
    - #EndDate#: Use this token to pass the end date of the time bucket for your selection in the table or graph.

    When you use the link, the tokens are replaced by the actual values for your selection in the table or graph.
13. In **Date Format**, select the format in which the value for the Time dimension must be passed to the external system page or report.
14. Configure additional parameters by repeating Steps 8 through 13.
15. Click **Save and Close**.

    The link is added to the External Links group that's available when you click **Actions** > **Drill To** > **External Links** for the table or graph.

Related Topics
- Overview of Linking to External Systems with Context
- Structure of a Link to an External System
- Edit a Link to an External System
- Set Up the Application Integration for an External System

Edit a Link to an External System

You can edit or delete a link to an external system from a report or graph in your Oracle Fusion Cloud Supply Chain Planning module.

Before you start

You can edit or delete the link only if you created it.

Here's what to do

1. In your table or graph in the Demand Management, Demand or Supply Planning, Planning Central, Replenishment Planning, Sales and Operations Planning, or Supply Planning work area, click **Actions** > **Manage Links**.

   The Manage Links dialog box opens.
2. On the To External System tab, select the link that you want to edit.

   The linking parameters for the link are displayed.

3. To edit the link, follow these steps:
    a. Click the **Edit** icon on the toolbar above the link name.

       The Edit Link to External System dialog box opens.
    b. Change the name, description, application integration, and page path.

       Ensure that the link name is unique.

       The value in the **Base URL** field is populated according to the selected application integration and can't be changed.

       Ensure that the page path doesn't contain the host or port details because they're derived from the application integration.
    c. Click **OK**.
4. To edit the linking parameters, follow these steps:
    - To add a parameter, click the **Add Row** icon for the linking parameters.

      In the new row that appears, specify the dimension, level, parameter name, value, and date format.

      Ensure that the parameter name is unique.
    - To modify a parameter, click it, and change the values for the dimension, level, parameter name, value, and date format.

      Ensure that the parameter name is unique.
    - To delete a parameter, select it, and click the **Delete** icon for the linking parameters.

      You can delete the parameter only if at least one valid combination of a parameter and value remains for the link.
5. To delete the link, follow these steps:
    a. Click the **Delete** icon on the toolbar above the link name.
    b. Click **Yes** in the displayed dialog box.
6. Click **Save and Close**.

Related Topics

- Overview of Linking to External Systems with Context
- Structure of a Link to an External System
- Create a Link to an External System
- Set Up the Application Integration for an External System

Use a Link to an External System

This topic explains how you can use a link to an external system from a table or graph in your Oracle Fusion Cloud Supply Chain Planning module.

Prerequisites for Using Links to an External System

You can use the link to an external system if these conditions are met:

- You must have the privileges to view the data in the external system.

  Otherwise, you can't view the data in the external system when you click the link.
- The application integration for the external link must exist.
- You can open the link only if it has at least one valid combination of a parameter and value.

  After the link is configured, if the underlying table or graph is edited, and dimensions are removed, the affected combinations of parameters and values are automatically deleted. Consequently, the link might become invalid.
- You must select a cell, column, or row of the table or an area of the graph before clicking the link.
- You must select values for the levels that have been configured in the link.

  Otherwise, an error message is displayed.

  > **Tip:** To identify the required levels, examine the configuration of the link on the To External System tab in the Manage Links dialog box.

- You must select a value that's associated with or assigned to a level and then click the link.
- You can select multiple values only if they're contiguous.

1. In the Demand Management, Demand and Supply Planning, Planning Central, Replenishment Planning, Sales and Operations Planning, or Supply Planning work area, open your table or graph.
2. Make a selection.
3. Click **Actions** > **Drill To** > **External Links**, and select a link.
   The external link opens on a new tab of your web browser.

What to do next

Note these additional points while using links to external systems:

- Every time you click the link to the external system, it opens on a new tab of your web browser.
- After clicking the link, if you change the selection in your table or graph, the data on the page or report in the external system isn't refreshed.

  You must click the link anew to view the external system data on a new tab of your web browser according to the changed context in your table or graph.

Related Topics

- Overview of Linking to External Systems with Context
- Structure of a Link to an External System
- Set Up the Application Integration for an External System
- Create a Link to an External System

Graph Layout Options

The graph layout option is available in the Selector Tool dialog box, on the Layout tab when you create or edit a graph using the Manage Tables, Graphs, and Analysis Sets option.

In the Graph Layout Options section, you can define the type of graph and configure layouts and the dimension of axes. In the Filters section you can specify the filter criteria that you want displayed in the graph.

The layout options vary according to the type of graph. For example, a bar graph has X and Y-axis layout options whereas a Pie chart doesn't have any X or Y axis. General Options is common for all layout options and includes generic information for a graph such as title, font, and position of the graph. You can also preview a graph from the Layout tab before you save the graph. In the preview mode, you can format measures, change the layout, and modify the drill settings.

The following types of graphs are available:

- X and Y axes graphs
  - Vertical bar
  - Horizontal bar
  - Line graph
- X and Y axes graphs with additional parameters
  - Area graph
  - Combination graph
  - Bubble graph
- Pie graph
- Sunburst graph and Treemap graph
- Funnel graph and Radar graph
- Gauge graph

For graphs with an X, Y, or dual Y axes, you can select up to three entities in total: measures are mandatory, and you can select one or two dimension hierarchies. A dual Y-axis graph requires the measures on the Y axis. You must select one measure for the Y2 axis in the Y2 -Axis panel. Axis title and tick label rotation options are available for all axes. Tick label options are also available for the X-axis. For example, skip a certain number of labels for legibility. The Formatting panel contains visual effect options for the graph, such as 2 dimension or 3 dimension, and bar or line style.

Here's additional information about some of the graphs:

Graph Type	Comments
Combination	A Combination graph includes an area, bar, and line. The measures represented by each of these options are specified in the Formatting panel.
Bubble	A Bubble graph requires selections for the bubble component of the graph in addition to the X and Y axes options. Select the hierarchy and the bubble sizing measure in the Bubble panel.

Graph Type	Comments
Sunburst	A Sunburst graph is comprised of rings. Select the number of rings to display. Each ring represents a level of the hierarchy. The rings are divided into sectors for each member of the level. The size and color of the sector is determined by the measures selected for those options.
Treemap	A Treemap graph is comprised of rectangles. Select the depth of the rectangles for a hierarchy. The rectangles for a level of the hierarchy are nested within the parent level rectangle. The size and color of the rectangles are determined by the measures selected for those options.
Funnel and Radar	Funnel and Radar graphs require only a hierarchy and measure selection.
Gauge	Gauge graphs, which are used in infotiles, require measures with goals defined.

Related Topics

- Overview of Tables, Graphs, Analysis Sets, Tiles, and Tile Sets

Configure Filters for Graphs

You can configure graphs that specify filter criteria that enables you to page through data in the graph by one or more hierarchy levels. For example, you might want to filter for product category when analyzing your plan.

After you analyze one product category, you can select another product category to review from the filter bar above the graph. Specify the filter criteria in the Selector Tool dialog box, Layout tab, Filters section.

The hierarchy levels that you selected on the Hierarchies tab are available to select as filters. You can select one or more levels of a hierarchy for a filter. However, if you also selected the hierarchy for the X-axis or Y-axis, then you can't select all of the hierarchy levels for filters. At least one hierarchy level must be used for the X-axis or Y-axis.

The members of the levels that you select are used to filter the data shown in your graph. You can select the level member value of interest from a set of values in the filter bar above the graph.

Let's work through an example of setting up filters for a graph:

1. In the Selector Tool dialog box, on the Hierarchies tab, select the **Time**, **Product**, **Organization**, and **Customer** dimensions.

   All levels are selected by default. The levels that you select for the dimensions become visible in the Filters section.
2. On the Layout tab, in the X-Axis section, select **Gregorian Calendar**.
3. In the Y-Axis section select the **Product** hierarchy and **Measures**.
4. In the Filters section, select to filter on **Quarter** and **Zone**.
5. Click **Apply and Close**.

When you display the graph, you can see the Quarter and Zone filters above the graph. Months are on the X-Axis and items are on the Y-Axis. The months shown are determined by the selected quarter, based on the Gregorian calendar. So, for Quarter 1, the graph displays January, February, and March on the X-Axis. Levels not selected on the axes or in the Filters section, such as Organization, aren't included in the graph.

For the X-axis and Y-axis, if one or more levels are selected on the Hierarchies tab, such as Year, Quarter, and Month, the graph displays with the highest level. You can drill to lower levels that aren't selected in the Filters section.

> **Note:** Filters for graphs are similar to filters for tables. However, you can't drag and drop filters onto the X-axis or Y-axis of the graph.

Set Your Axis Scale

Use Axis Scale Options to refine your scale.

- Axis Scale Options applies to the Y axis and Y2 axis and you can use it only for bar, line, area, or combination graphs.
- Minimum is the starting point of the axis.
- Maximum is the ending point of the axis.
- Increment is the increase in values between maximum and minimum.

Specify the behavior.

- **Automatic**. Promising automatically adjusts the scale for the Y axis and the Y2 axis.
- **Manual**. You have to manually specify the scale for the Y axis and the Y2 axis.

Assume you set Minimum to 3, Maximum to 10, and Increment to 2. The graph will display 3 as the lowest value, 10 as the highest value, and 5, 7, and 9 as incremental values for the Y axis or the Y2 axis.

Format How Measures Are Displayed in Tables and Graphs

You can make measure formatting changes to tables and graphs to reflect your individual preferences or requirements for how you want the tables or graphs to display.

For example, you can override the name of a measure and its measure of unit. When you format measures in a planning table or graph, your measure formatting can't be overridden by another user. Any formatting changes done by other users, including the owner of the table or graph, don't take precedence over your changes. To make user-specific measure formatting changes, open a table or graph and select **View** > **Format Measures** to open the Format Measures dialog box.

If you're the owner of the table or graph, then your formatting changes are visible to you and to other users who haven't defined their own formatting. These changes can include overriding the measure label, applying conditional formatting, or changing the unit of measure that you want displayed in your table or graph. Formatting changes made by others won't impact your specific measure formatting.

If you're not the owner of the table or graph, then any measure formatting you define takes precedence over the owner's measure formatting and is visible only to you. For example, if you change decimal positions to 0 (zero) for all measures in a table, you're the only user that sees those changes. When you save your measure formatting, you'll no

longer see future formatting changes made by the table or graph owner. For example, if you save measure formatting and then the table owner adds conditional formatting on a measure, you won't see that conditional formatting.

Use the **Reset to Default** button in the Format Measures dialog box to remove your user-specific measure formatting.

- If you're the owner of the table or graph, then your measure formatting is removed. Any measure formatting by non-owners won't be impacted.
- If you're not the owner of the table or graph, then all of your measure formatting is removed. The table or graph displays all existing measure formatting saved by the owner of the table or graph.

If you duplicate a measure, the duplicated measure is added as the last measure in the table. For example, you can duplicate a measure with a different currency or unit of measure. If you're the owner of the table, the duplicated measure is visible to you and to other users who haven't defined their own formatting. If you're not the owner of the table, the duplicated measure is visible only to you. You can reorder the duplicated measures, but you must save your layout to preserve the measure order.

You can make user-specific measure formatting changes in the following work areas:

- Demand Management
- Demand and Supply Planning
- Planning Central
- Replenishment Planning
- Sales and Operations Planning
- Supply Planning

Configure Color by Measure to Display in Graphs

You can configure the color by measure and then use that color for every graph that the measure appears in. For example, always show Final Shipments Forecast in blue and Final Sales Forecast in green.

This functionality is helpful when viewing a specific measure in several graphs in one layout. You can also specify the color to display for a measurein a specific graph.

The configure color by measure to display in graphs functionality is available in the following Supply Chain Planning work areas:

- Demand Management
- Demand and Supply Planning
- Planning Central
- Replenishment Planning
- Sales and Operations Planning
- Supply Planning

Configure Color by Measure for All Graphs

When you configure graphs, you can have a consistent color for a specific measure in your graphs. For example, you have multiple graphs that display the forecast. You can quickly identify the forecast measure by using the same color for the measure in all of your graphs.

To configure a graph color for a specific measure to use in all graphs, select the graph color for the measure in the Edit Measure dialog box.

1. In a Supply Chain Planning work area, click the **Tasks** panel tab.
2. In the Tasks panel drawer, click the **Manage Planning Measures** link in the Configuration section.
3. On the Manage Planning Measures page, select a measure, click Actions, and then select Edit.
4. In the Edit Measure dialog box, click the Advanced tab.
5. In the Properties subtab, click the **Graph Color** drop down arrow and select a color to use for the measure in all graphs.

Configure Color by Measure for a Specific Graph

You can configure a color for a measure in a specific graph, which overrides the color configured for the measure in the Edit Measure dialog box.

To configure a graph color for a specific measure for a specific graph, select the graph color for the measure in the Format Measures dialog box.

1. In an open table or graph, click View and then select Format Measures.
2. In the Format Measures dialog box, in the **Graph Color** column, click the drop down arrow and select a color to use.

Automatically Assign Graph Color

If a graph color is already configured for a measure for all graphs, but you want the graph color assigned automatically for that measure for a specific graph, then select the Assign Graph Color Automatically check box on the Format Measures page.

1. In an open table or graph, click View and then select Format Measures.
2. In the Format Measures dialog box, in the **Assign Graph Color Automatically** column, click the check box in the row for the measure.

Tips and Considerations for Assigning Graph Colors to Measures

The following is additional information about the configure color by measure to display in graphs functionality:

- Duplicate Colors: You might have a situation where you have two measures with the same color in a graph. If the color you configure for a measure is the same color as one of the colors automatically assigned to a measure in a specific graph, then you must select a different color for the measure you're configuring.
- Predefined measures: By default, predefined measures initially don't have a graph color selected on the Manage Planning Measures page. In this case, when used in a graph the planning process automatically assigns a color for the measure.
- Bar, line, and radar graphs: Only measures located in the Y-axis display the graph color settings. This is only in case the measures aren't combined with one or more hierarchies in the Y-axis. Automatically-assigned colors are used in this case.
- Plan Comparison: When comparing plans, the configured measure color in the graph is honored only for the measure itself. The measures that represent the compared plans get an automatically-assigned color, selected randomly by the planning process.
- Archive Plan: When archiving a plan and using Waterfall Analysis or Trend Analysis graphs, the configured measure color is honored only for the measure itself. The measures that represent the archive get an automatically-assigned color, selected randomly by the planning process.

- Export and Import: When exporting and importing measure settings from one environment to another, the export and import keeps the graph color settings in Manage Planning Measures and Format Measures.
- Graph Types: The graph color functionality isn't available for the following graph types:
    - Pie
    - Sunburst
    - Treemap
    - Gauge
    - Funnel
    - Bubble

Related Topics

- How You Manage Planning Measures
- Predefined Measures in Supply Chain Planning

How You Can Edit Measures at an Aggregate Time Level

This topic explains how you can edit measures at an aggregate time level in tables in demand, demand and supply, replenishment, sales and operations, and supply plans.

You can edit a measure with an edit range that's set to only the future at an aggregate time level in only those table cells that don't contain time periods for the past. For example, if the current date is Wednesday, August 11, 2021, and you're viewing the data at a weekly level, you can't edit the forecast for the week starting August 09 or any aggregate level such as the year 2021. Instead, you can edit the forecasts for the days of August 11 and later as well as the weeks starting August 16 and later.

You can edit a measure with an edit range that's set to only the history at an aggregate time level in only those table cells that don't contain time periods for the future. For example, if the current date is Wednesday, August 11, 2021, and you're viewing the data at a weekly level, you can't edit the history for the year 2021. Instead, you can edit the history for the days before August 11 and the weeks starting August 02 and earlier.

The same behavior applies when you summarize data across time in tables. For example, the Adjusted Shipments Forecast measure has an edit range that's set to only the future. If you summarize the measure by time in a table, the summarized value is editable only if all the included values are editable. If the current month is August 2021, you can't edit the summary for 2021, but you can edit the summary for 2022.

The same behavior also applies to plans with aggregate planning time levels. For example, if the planning time level is week, and the current month is August 2021, you can't edit measures at aggregate time levels such as quarter and year if the underlying weeks aren't editable. Instead, you can view the data at the weekly level to update the values for editable weeks.

The edit ranges of measures are enforced at the Hybrid time level in demand plans. For example, for the week starting Monday, December 31, 2029, there are two Hybrid time level members, one starting on Monday, December 31, 2029, and the other starting on Tuesday, January 01, 2030. If the forecasting time level is set to week, and the plan is run on Wednesday, January 02, the forecast would begin on Monday, December 31. But, the first Hybrid time level member is

before the plan run date and considered as history. Therefore, any measure with an edit range that's set to the future, such as Adjusted Shipments Forecast, isn't editable for the first Hybrid time level member.

Thus, data integrity is ensured because you can't make changes to the values of measures outside of their configured edit ranges.

How Time Periods Are Calculated and Displayed in Tables, Graphs, and the Selector Tool

This topic explains how time periods are calculated and displayed in tables, graphs, and the Selector Tool in the Demand Management, Demand and Supply Planning, Planning Central, Replenishment Planning, and Sales and Operations Planning work areas.

Settings That Affect the Calculation and Display of Time Periods

The following settings affect the calculation and display of time periods in tables and graphs for a demand, demand and supply, replenishment planning, or sales and operations plan:

- The value in the **Demand History Days** field in the Demand: Advanced Options dialog box that you open from the Demand tab on the Plan Options page
- The selection on the Time Range tab of the Advanced Filter dialog box that's available on the Members tab in the Selector Tool
- The selected members for the Time dimension on the Members tab in the Selector Tool
- Shared measures

The following settings affect the calculation and display of available members for the Time dimension on the Members tab in the Selector Tool for the plan:

- The value in the **Demand History Days** field
- The planning horizon

The default value for the **Demand History Days** field is 182 days.

> **Note:** If data isn't available, blank rows are displayed for the time periods included in tables and graphs. Also, the amount of historical data that's considered for the forecast depends on the value in the **Historical Buckets** field on the Demand tab on the Plan Options page.

How Time Periods Are Calculated and Displayed

Time periods are calculated and displayed in a table or graph as follows:

- If you select members of the Time dimension on the Members tab in the Selector Tool, they're displayed in the table or graph.
- If you don't select members of the Time dimension on the Members tab in the Selector Tool, time periods are displayed as follows:

- If the table or graph has shared measures, time periods are displayed for the combination of the demand history days and planning horizon.
- If the table or graph doesn't have shared measures, time periods are displayed for the planning horizon.

The display of available members for the Time dimension on the Members tab in the Selector Tool is for the combination of the demand history days and planning horizon.

Related Topics

- Overview of Tables, Graphs, Analysis Sets, Tiles, and Tile Sets

Measure Data in Tables

How You Can Edit Measure Data

While working in one of the Supply Chain Planning work areas, you might be editing measure data in a table.

The following table provides a list of some features you can use when doing so, and where each feature is located:

Feature	Location
Configure Summaries	View menu
Data Calculation Options	Table toolbar
Lock and Unlock Cells	If at least one summary is configured: Action menu, table toolbar, right-click in cell

Related Topics

- Manage Data Calculations When Editing Measure Data in a Supply Chain Planning Table
- How You Lock Cells While Editing Measure Data or Allocating Values in a Table

Copy and Paste Values in Tables

Use the Copy and Paste options in the Actions menu for a table to copy cell values and paste them in editable cells. You can also copy values from one table to another within the same plan.

Pasting overwrites any existing values, and any measures that are dependent on the overwritten measures are recalculated.

If your data is in an external application such as Microsoft Excel, you can use the following procedure to copy and paste your data:

1. Copy your data from the external application.
2. In your work area table, click the first editable cell from which you want the data to be pasted, and select **Actions** > **Paste from Clipboard**. The Paste from Clipboard dialog box opens.
3. Press Ctrl+V to paste your content in the dialog box. You can further edit your data in the dialog box.
4. Click **Paste and Close**. The copied content is pasted into the editable cells of the table.

Alternatively, you can export your table data to Microsoft Excel using the **Export** icon, work with your data in that application, copy your data, and bring it back into your table by using the **Paste from Clipboard** option. To copy data between plans, export the table data to Microsoft Excel from one plan, and use the **Paste from Clipboard** option to copy data into the other plan.

> **Note:** You can paste values in only those cells that fall within your plan horizon. The number and orientation of the cells from which data is copied and the cells into which data is pasted must match. Only numeric data can be copied and pasted. Non-editable cells that are within a range of editable cells are skipped when data is pasted, and a warning is displayed to this effect.

Related Topics

- How can I highlight editable cells in a table?

Manage Data Calculation Options When Editing Measure Data in a Table

When you are working in a Supply Chain Planning work area, you might be editing measure data in tables that include dependent measures.

You can use the **Data Calculation Options** menu to determine when calculations are performed. You access the **Data Calculation Options** menu from the table toolbar for the table you are editing.

The Data Calculation Options choices are:

- Enable Automatic Calculations
- Calculate Now

Enable Automatic Calculations

When you edit data with this option selected, each time you edit a value, calculations are performed for any applicable summaries or other measures that include an expression. The Enable Automatic Calculations choice is the default selection.

Calculate Now

To choose when calculations are performed, you must first deselect Enable Automatic Calculations. When you make edits with the Enable Automatic Calculations choice deselected, you must click the Calculate Now choice when you want calculations to be performed. Calculations will be performed for all edits made since the last time calculations were performed.

If you save a table after making edits, any needed calculations will be performed, but you must refresh the table to see the results.

How You Lock Cells While Editing Measure Data or Allocating Values in a Table

When you are working in a Supply Chain Planning work area, you might be editing measure data in a table.

When you have locked cells, edits, including those that spread allocations to other cells, do not change locked cells.

Note: You must configure at least one summary to enable the **Lock** and **Unlock** actions.

Lock cells by performing one of the following:

- Click the Lock action in the Actions menu.
- Click the Lock icon on the table toolbar.
- Right-click in an editable cell.

Related Topics

- How do I enable the Lock and Unlock actions for a table while editing measure data in a Supply Chain Planning table?
- Can I unlock all cells at once while editing measure data in a Supply Chain Planning table?

How do I enable the Lock and Unlock actions for a table when editing measure data in a table?

Configure at least one summary to enable the Lock and Unlock actions. Use the View menu for the table to configure summaries.

Can I unlock all cells at once when editing measure data in a table?

Yes, you can unlock all cells at once by using the Unlock All action from the Actions menu. This action is available in the Actions menu only if you have configured summaries.

How can I highlight editable cells in a table?

In the View menu for a table, select Highlight Editable Cells to provide a background color for cells that contain editable measures.

Do note that any conditional formatting that has been applied to an editable measure or a table takes precedence over the highlight color. You can choose to save your page layout with this setting.

3 Planning Exceptions

Exceptions in Plans

Overview of Plan Exceptions

Exceptions are a key element to evaluate and improve your plan in Oracle Fusion Cloud Supply Chain Planning.

After you run a plan, view the exceptions to understand the quality of the plan and to get visibility of key problem areas. You can focus on key exceptions to understand their root causes. From the exceptions tables, you can drill down to other plan views for more details into the problem areas. After taking actions to resolve exceptions, run the plan again to evaluate whether the plan is now acceptable.

Oracle provides several predefined exceptions that the Oracle Supply Chain Planning processes compute after you run a plan. View these exceptions to identify problem areas in the plan that might need your attention. To view a list of the exceptions, open your plan and then open the Exceptions table.

The exception types and their calculation logic are predefined. However, to ensure that only significant deviations are highlighted, you can edit the conditions under which the exceptions are generated. You control which exceptions to calculate for a plan by specifying an exception set on the Plan Options page. View the metrics associated with exceptions, such as by count or by quantity, in tables or graphs at different hierarchical levels.

You can also create user-defined exceptions based on specific conditions in the supply chain that you want to identify. Base these user-defined exceptions on your business requirements and focus on specific areas to improve your supply chain planning capabilities. Use the Configure Exception task to create a user-defined exception.

> **Note:** You can't create user-defined exceptions in the Planning Central work area. Also, there are no predefined exceptions for Replenishment Planning.

Plan Exception Types

From within your plan, you can open the Exceptions table to view the exceptions grouped within the following folders:

Exception Folder	Accessible from these work areas:
Demand Planning Exceptions	Demand Management Planning Central Sales and Operations Planning
Replenishment Planning Exceptions	Replenishment Planning (user-defined exceptions only)
Sales and Operations Planning Exceptions	Sales and Operations Planning
Supply Planning Exceptions	Supply Planning

Exception Folder	Accessible from these work areas:
	Planning Central
Views for Multiple Exceptions	Supply Planning Planning Central

Exception Categories

There are two categories of exceptions:

- Measure-based exceptions
- Order-based exceptions

Oracle provides several predefined exceptions for most Supply Chain Planning modules. You can also create user-defined exceptions from most Supply Chain Planning work areas. The following table lists the Supply Chain Planning modules, the type of exception, whether the product has predefined exceptions, and whether you can create user-defined exceptions.

Module	Type of Exception	Predefined Exceptions	User-Defined Exceptions
Oracle Demand Management	Measure-based exceptions	Yes	Yes
Oracle Planning Central	Measure-based exceptions	Yes	No
Oracle Replenishment Planning	Measure-based exceptions	No	Yes
Oracle Sales and Operations Planning	Measure-based exceptions	Yes	Yes
Oracle Supply Planning (constrained and unconstrained)	Order-based exceptions Measure-based exceptions	Yes	Yes

View Exceptions for Your Plan

When you open the exceptions table, the number of exception records generated are shown after the exception name, in parentheses. Clicking the exception name displays a table with details of the exception. From the Exceptions tab, you can:

- Search for exceptions for a specific item and organization within a specified date range
- Search for measure-based exceptions based on various attributes such as Planner, Planner Description, Catalog, and Category. If a measure-based exception is created at the category level, categories specific to the catalog selected in the hierarchy parameter appear in search results. If a measure-based exception is created at the Item level, then you can filter the records based on Item, Catalog, and Category Level attributes. If a measure-based exception is created with no product dimension, then you can filter the records based on other attributes except Item and Category level

- Save the search criteria for future searches
- Export the table to a spreadsheet, rearrange columns, and perform other standard table actions on the table

Predefined views within the Views for Multiple Exceptions folder enable you to view all exceptions for an item, resource, or supplier within the same table. The folder is available only in the Supply Planning and Planning Central work areas.

From tables that show exception data, you can navigate in context to other plan data. This navigation capability is useful when, for example, you view exceptions for an item and you also want to see its supply or resource availability.

Related Topics

- How You Edit Exceptions
- Configure Exception Thresholds
- Overview of Exceptions and Exception Sets
- Overview of Predefined Planning Exceptions
- Overview of User-Defined Exceptions

Configure Exception Thresholds

You can control the number of exceptions that your plan generates by changing the levels at which an exception is computed and its threshold value. A higher threshold value typically results in fewer exceptions.

To configure exception thresholds, do the following:

1. From a Supply Chain Planning work area, select the **Configure Exceptions** task.
2. On the Configure Exceptions page, select an exception.
3. Click **Actions** and then select **Edit**.

Demand planning, replenishment planning, and sales and operations planning exceptions are measure-based exceptions. A base measure forms the foundation for these exceptions.

In the Planning Central work area, you can't change the base measure, but you can edit the level at which the exception is computed and its threshold value.

Most supply planning exception calculations are for a specific order and aren't associated with a base measure. For these types of exceptions, select the fact associated with the exception and modify the condition that specifies when to generate the exception. Think of a fact as an attribute of the exception. Typical facts are quantity and value.

Related Topics

- How You Edit Exceptions
- Overview of Plan Exceptions
- Overview of User-Defined Exceptions

Create Tables and Graphs for Exceptions

Create a table or graph for plan exceptions based on their measures, such as number of exceptions generated and the quantity associated with the exception.

Create a Table for Exceptions

1. In a Supply Chain Planning work area, open a plan.
2. Click the **Actions** button and select **Manage Tables, Graphs, and Analysis Sets** from the list.
3. In the Manage Tables, Graphs, Analysis Sets dialog box, click **Actions**. Next, select **Create** and then select **Table**.
4. On the Create Table page, do the following:
    - Enter a name for your table.
    - Select a group.
    - Enter a description.
    - Select the type of access (public or private).
5. On the Measures tab, do the following:
    a. In the Available Measures section, expand the Overall Plan Health folder.
    The Overall Plan Health folder contains the measures associated with exceptions.
    b. Select the exception facts that you want to view in the table.
6. On the Hierarchies tab, include the Exception Type hierarchy.
7. On the Members tab, select the exception types to display in the table.
8. Click **Save and Close**.

Create a Graph for Exceptions

1. In a Supply Chain Planning work area, open a plan.
2. Click the **Actions** button and select **Manage Tables, Graphs, and Analysis Sets** from the list.
3. In the Manage Tables, Graphs, Analysis Sets dialog box, click **Actions**. Next, select **Create** and then select **Graph**.
4. On the Create Graph page, do the following:
    - Enter a name for your graph.
    - Select a group.
    - Enter a description.
    - Select the type of access (public or private).
5. On the Measures tab, do the following:
    a. In the Available Measures section, expand the Overall Plan Health folder.
    The Overall Plan Health folder contains the measures associated with exceptions.
    b. Select the exception facts that you want to view in the graph.
6. On the Hierarchies tab, include the Exception Type hierarchy.
7. On the Members tab, select the exception types to display in the graph.
8. On the Layout tab, do the following:
    a. In the Graph Layout Options section, select a type of graph.
    b. Configure your graph in the horizontal panels below the Graph Layout Options.
    The horizontal panels below the Graph Layout Options section vary, depending on the type of graph that you select. For example, if you select Pie Graph for your graph type, the horizontal panels include General Options, Pie Slice, and Formatting.

9. Click **Save and Close**.

Related Topics

- How You Edit Exceptions
- Overview of Tables, Graphs, Analysis Sets, Tiles, and Tile Sets
- Overview of Plan Exceptions

How Exceptions are Calculated in Supply Plans That Use Telescoping Time Buckets

When you use telescoping buckets in your supply plan, the planning process handles exception messages based on what you specify for Planning Time Buckets in plan options.

This table explains how the planning process calculates exceptions when you use time buckets larger than days.

Exception Type	Calculation Logic
• Orders To Be Rescheduled In • Orders To Be Rescheduled Out	The planning process generates reschedule exceptions only if the supply orders get rescheduled across planning time buckets. Any reschedules of the order due dates within a planning time bucket doesn't trigger reschedule exceptions.
• Late Supply Pegged to Sales Order • Late Supply Pegged to Forecast • Late Replenishment for Sales Order • Late Replenishment for Forecast	The planning process generates late supply or late replenishment exceptions only if the supply and demand dates are in different planning time buckets. For example, a sales order suggested due date is in the middle of a week. The suggested due date of the supply is the last working day of the week. In this case, the planning process doesn't generate a Late Supply Pegged to Sales Order or Late Replenishment for Sales Order exception. However, suppose you have a sales order suggested due date in the middle of a week. The suggested due date of the supply is the first working day of the following week. In this case, the planning process generates an exception.
• Items with a Shortage • Items Below Safety Stock	The planning process creates an exception only if the available quantity is less than the required quantity at the planning time bucket level. The planning process evaluates item shortages by using the projected available balance on the last day of the planning time bucket. The planning process ignores daily fluctuations within a planning time bucket.
• Items with Excess Inventory	The planning process creates an exception only if the available quantity is greater than the required quantity at the planning time bucket level. The planning process evaluates item excesses by using the projected available balance on the last day of the planning time bucket. The planning process ignores daily fluctuations within a planning time bucket.
• Resource Overloaded • Supplier Capacity Overloaded	The planning process creates an exception only if the available capacity is less than the required capacity at the planning time bucket level.

Exception Type	Calculation Logic
	For example, in a weekly bucket, a resource can have some overloads within the week on a few days. As long as the available capacity at the week level is more than the required capacity, the planning process doesn't generate a resource overload exception. The planning process ignores daily fluctuations within a planning time bucket.

Exceptions and Exception Sets

Overview of Exceptions and Exception Sets

On the Configure Exceptions page, you can select an exception and edit the thresholds for reporting. You can configure only those exceptions that are relevant to your Supply Chain Planning work area.

On the Configure Exception Sets page, you can restrict the exceptions that are computed as part of the plan run. You can also control the organizations, item categories, time period, and so on for which to compute exceptions.

A defined exception set is associated with a plan. The plan evaluates the exceptions using the filters associated with the exception set. Select the exception set to use during the plan run on the Plan Options page, Scope tab.

Related Topics

- How You Edit Exceptions
- Configure Exception Sets
- Set Filters on Planning Dimensions for Exceptions
- Define Scope Plan Options
- Overview of User-Defined Exceptions

How You Edit Exceptions

To edit exception parameters, select an exception on the Configure Exceptions page. You can configure only those exceptions that are relevant to your Supply Chain Planning work area.

In the Edit Exception dialog box, there is an area for General Properties and Exception Detail. Depending on the Supply Chain Planning work area that you're in, you can see the following tabs in the Exception Detail section:

- Demand Management work area: Level, Threshold, and Notification
- Planning Central work area: Level and Threshold
- Replenishment Planning work area: Level, Threshold, and Notification
- Sales and Operations work area: Level, Threshold, and Notification
- Supply Planning work area: Level, Threshold, and Notification

You can edit Level and Threshold only for those exceptions whose basis is Measure. For exceptions whose basis is Order, you can edit only the Threshold.

Level Tab

On the Level tab, the dimensions for the exception are derived from the base measure. You can edit the default values for hierarchy and level. You can also enable and disable each of the available dimensions to control the level that the exception is evaluated at.

> **Note:** Ensure that the selected hierarchy is in the dimension catalog for the plan. The Configure Exceptions task is outside of the plan context. It's possible to select a product hierarchy that's not used in the plan's dimension catalog, in which case the plan exceptions output won't display data for items.

Threshold Tab

On the Threshold tab, the base measure used in the exception is compared to either a value or another measure. If the threshold is specified in terms of a value, the value is interpreted in terms of the data type of the base measure. To ensure that exceptions return meaningful values, set the threshold to an appropriately high or low value.

Notifications Tab

On the Notification tab, set up notification rules for exceptions. Configure exceptions to trigger notifications to specific users or roles. In the Details section specify the entity and condition for notifications. Notifications are automatically sent at the end of the plan run.

Related Topics

- Configure Exception Sets
- Set Filters on Planning Dimensions for Exceptions
- Overview of Predefined Planning Exceptions
- Overview of User-Defined Exceptions
- Overview of Plan Exceptions

Configure Exception Sets

Use the Configure Exception Sets page to create, modify, or copy an exception set.

The set of exceptions and their scope that's calculated by the plan is configured on the Create or Edit Exception Set page. When creating an exception set, you must first specify the exceptions to include in the set, which can include user-defined exceptions. User-defined exceptions aren't available in Planning Central.

The exception set also enables you to restrict the generation of exceptions for specific organizations, categories, suppliers, and customers. You can then point to the exception set on the Plan Options page for a plan.

When you create a constrained supply plan in Supply Planning, the Exception Set plan option defaults to the Constrained Supply Planning Default exception set.

Use the following steps to configure exception sets:

1. In a Supply Chain Planning work area, click the Tasks panel drawer and click **Configure Exception Sets**.

2. On the Configure Exception Sets page, select an existing exception set. Next, click **Actions** and select **Duplicate**.
3. In the Create Exception Sets dialog box:
    a. Expand the group of exceptions in the Available Exceptions section. For example, expand Supply Planning Exceptions.
    b. Select the exception from the Available Exceptions section and move it to the Selected Exceptions section.
4. Click **Save and Close** to return to your plan.

Note: To generate exceptions, you must include the exception set in the plan options for your plan.

Related Topics

- How You Edit Exceptions
- Set Filters on Planning Dimensions for Exceptions
- Overview of Plan Exceptions
- Overview of Predefined Planning Exceptions
- Overview of User-Defined Exceptions

Set Filters on Planning Dimensions for Exceptions

After selecting available exceptions for an exception set to use in a plan, you can add filters on some of the key planning dimensions. The levels on which you can define filters are organizations, categories, suppliers, and customers.

On the Configure Exception Sets page, Filters tab, select one or more organizations, suppliers, categories, and customers in each of the tables for which to generate exceptions. If you don't specify a filter for a level, you will generate exceptions for all records in that level. For example, if you don't specify an organization, exceptions will be generated for all planning organizations when you run the plan. If any of the organizations, categories, suppliers, or customers in the exception set aren't available in the plan, they will be ignored.

In the **Exception Cutoff Days** field, specify the number of calendar days, starting from the plan start date, from which to generate the exceptions. If this field is blank, exceptions will be generated for the full planning horizon.

Related Topics

- Configure Exception Sets
- How You Edit Exceptions
- Overview of Plan Exceptions

Predefined Planning Exceptions

Overview of Predefined Planning Exceptions

The planning process computes several predefined exceptions after you run a plan.

View these exceptions to obtain quick visibility of problem areas in the plan that might need your attention. To view a list of the exceptions, from a Supply Chain Planning work area, open a plan and then open the Exceptions table.

The Exceptions table is grouped into different folders, depending on the plan type:

- Demand Planning Exceptions
- Sales and Operations Planning Exceptions
- Supply Planning Exceptions
- Views for Multiple Exceptions: View exceptions for an item, resource, or supplier within the same table. (This folder is available only in the Supply Planning and Planning Central work areas.)

Note: There are no predefined exceptions for Replenishment Planning, only user-defined exceptions that reside in the Replenishment Planning Exceptions folder.

Related Topics

- Overview of Plan Exceptions
- How You Edit Exceptions
- Predefined Supply Planning Exceptions
- Predefined Demand Planning Exceptions
- Predefined Sales and Operations Planning Exceptions

Predefined Supply Planning Exceptions

The basis for all predefined supply planning exceptions is Order. The following table lists the predefined supply planning exception reports, their descriptions, and if the exception is available for constrained and unconstrained supply plans.

Supply Planning Exception Name	Description	Calculation	Constrained	Unconstrained	Exception Set
Demand Quantity Not Satisfied	No supply is available. The planning process finds demand pegged to supplies and the supply quantities are less than the demand quantity. The planning process issues this exception for demands	When Pegged Quantity < Order Quantity for all supply orders pegged to a demand order For order types of Sales order, Forecast, and Manual demand.	No	Yes	Default

Supply Planning Exception Name	Description	Calculation	Constrained	Unconstrained	Exception Set
	at all levels of the supply chain bill of materials. This exception typically occurs due to inconsistent setups. For example, a configured item can't be sourced because too many option-specific exclusions prevent any source from being used.				
Demand at Risk Due to Insufficient Lead Time	A demand is pegged to a supply that's scheduled with insufficient lead times. The sales order or forecast is planned on time even though the lead time required to meet it on time is insufficient. The exception then traverses up the supply chain and determines all of the supplies that would be short on lead time if the demand were to be met on time. The planning process reports one exception for every supply that doesn't have sufficient lead time.	All three of these conditions must be met before the planning process generates the exception: • Contributes to Demand Lateness = YES • Reschedule Days for existing supply is less than 0 (Reschedule in Recommendations • Firm Status is set to Not Firm (For order types of Sales order, Forecast, and Manual demand.)	Yes	Yes	Default Constrained Supply Planning Default
Demand at Risk Due to Resource Shortage	A demand is pegged to a resource with a resource overload exception. The sales order or forecast is still planned on time even in the absence of resource availability. This exception details the end demands that are at risk because they're pegged against suppliers with insufficient capacity.	When Resource Availability < Resource Requirements (For order types of Sales order, Forecast, and Manual demand)	Yes	Yes	Default Constrained Supply Planning Default Default Constrained Supply Planning Default
Demand at Risk Due to Supplier Capacity Shortage	A demand is pegged to a supply where the supplier capacity is constrained. The sales order or forecast is	When Supplier Capacity Availability < Supplier Capacity Required	Yes	Yes	Default Constrained Supply Planning Default

Supply Planning Exception Name	Description	Calculation	Constrained	Unconstrained	Exception Set
	still planned on time even in the absence of supplier capacity. This exception details the end demands that are at risk because they're pegged against suppliers with insufficient capacity.	(For order types of Sales order and Forecast)			
Items Below Safety Stock	The projected available balance for a planning bucket is below the specified safety stock level for the planning bucket. If the exception extends over several days, the planning process reports one exception with the start and end dates to reflect the duration. If the magnitude of the exception worsens, the planning process creates a new exception.	When Projected Available Balance < Safety Stock in a bucket for an item, organization	No	Yes	Default
Items with Excess Inventory	The projected available balance is higher than the safety stock level.	When Projected Available Balance > Safety Stock in a bucket for an item, organization	No	Yes	Default
Items with Expired Lots	The planning process detects a potential expired lot. A potential expired lot: • Has a lot expiration date during the planning horizon. • isn't pegged to a demand that results in its use before its lot expiration date. This exception occurs against items under full lot control. The calculation for lot expiration date is Lot Receipt Date + Shelf Life Days.	When order attribute Order Type = Expired lot	No	Yes	Default

Supply Planning Exception Name	Description	Calculation	Constrained	Unconstrained	Exception Set
	In addition to reporting this exception, the planning process plans for you to flush the inventory on its lot expiration date. This process prevents you from using the lot after its lot expiration date to satisfy demands.				
Items with a Shortage	The item has negative on hand at the end of the day. If the exception extends over several days, the planning process reports one exception with the start and end dates to reflect the duration. If the magnitude of the exception worsens, the planning process creates a new exception.	When Projected Available Balance < 0 in a bucket for an item, organization	No	Yes	Default
Items with a Shortage in a Project Task	The item has negative on hand at the end of the day for an item in a project task. If the exception extends over several days, the planning process reports one exception with the start and end dates to reflect the duration. If the magnitude of the exception worsens, the planning process creates a new exception.	When Projected Available Balance < 0 in a bucket for an item, project task, organization	No	Yes	Default
Late Replenishment for Forecast	The planning process detects that the supplies for a forecast are due later than the forecast's due date. This exception typically occurs because planning time fences are enabled.	When order attribute Days Late > 0 (For order type of Forecast)	No	Yes	Default
Late Replenishment for Sales Order	The planning process detects that the	When order attribute Days Late > 0	No	Yes	Default

Supply Planning Exception Name	Description	Calculation	Constrained	Unconstrained	Exception Set
	supplies for a sales order line are due later than the sales order line's scheduled date. This exception typically occurs because planning time fences are enabled or when a reserved supply is firmed late.	(For order type of Sales Order)			
Late Supply Pegged for Forecast	The planning process detects supplies that peg against independent forecast demand that's satisfied late. Through this exception, you can quickly detect which supplies are pegged against a late forecast.	When component supply attribute Days Late > 0 **Note:** For Manual Demand, the Late Supply Pegged to Forecast is also generated when the Days Late > 0 (For order types of Forecast and Manual Demand)	Yes	Yes	Default Constrained Supply Planning Default
Late Supply Pegged for Forecast	The planning process detects supplies that peg against independent forecast demand that's satisfied late. Through this exception, you can quickly detect which supplies are pegged against a late forecast.	When component supply attribute Days Late > 0 **Note:** For Manual Demand, the Late Supply Pegged to Forecast is also generated when the Days Late > 0 (For order types of Forecast and Manual Demand)	Yes	Yes	Default Constrained Supply Planning Default
Late Supply Pegged for Forecast	The planning process detects supplies that peg against independent forecast demand that's	When component supply attribute Days Late > 0	Yes	Yes	Default Constrained Supply Planning Default

Supply Planning Exception Name	Description	Calculation	Constrained	Unconstrained	Exception Set
	satisfied late. Through this exception, you can quickly detect which supplies are pegged against a late forecast.	**Note:** For Manual Demand, the Late Supply Pegged to Forecast is also generated when the Days Late > 0 (For order types of Forecast and Manual Demand)			
Late Supply Pegged to Sales Order	The planning process detects supplies that peg sales order demand that's satisfied late. Through this exception, you can quickly detect which supplies are pegged against a late sales order.	When component supply attribute Days Late > 0 (For order type of Sales Order)	Yes	Yes	Default
Late Supply Pegged to Sales Order	The planning process detects supplies that peg sales order demand that's satisfied late. Through this exception, you can quickly detect which supplies are pegged against a late sales order.	When component supply attribute Days Late > 0 (For order type of Sales order)	Yes	Yes	Constrained Supply Planning Default
Order Sourced from Alternate Facility	The order is sourced from an alternate facility due to the material, resource, or lead time constraints.	When order attribute Alternate Facility Used = True	Yes	No	Default Constrained Supply Planning Default
Order Sourced from Alternate Supplier	The order is sourced from an alternate supplier (Rank 2 supplier and higher) due to the supplier capacity constraints.	When order attribute Alternate Supplier Used = True	Yes	No	Constrained Supply Planning Default
Orders To Be Canceled	The planning process detects a supply order that's not firm for which you don't need to satisfy demand or safety stock requirements. The planning process:	When order attribute Disposition Status Type = Canceled (Not Displayed)	Yes	Yes	Default Constrained Supply Planning Default

Supply Planning Exception Name	Description	Calculation	Constrained	Unconstrained	Exception Set
	• Suggests that you cancel the supply order. • Continues to plan lower item structure levels as if you accepted the suggestion.				
Orders To Be Rescheduled In	The planning process detects a supply order that's not firm with an original due date that's later than the suggested due date. The planning process: • Suggests that you reschedule the supply order to an earlier date. • Continues to plan lower item structure levels as if you accepted the suggestion.	When order attributes Rescheduled Days < 0, and Old Due Date > 0	Yes	Yes	Default Constrained Supply Planning Default
Orders To Be Rescheduled Out	The planning process detects a supply order that's not firm with an original due date that's earlier than the suggested due date. The planning process: • Suggests that you reschedule the supply order to a later date. • Continues to plan lower item structure levels as if you accepted the suggestion.	When order attribute Rescheduled Days > 0	Yes	Yes	Default Constrained Supply Planning Default
Orders with Insufficient Lead Time	The planning process detects that a supply order must be completed in less time than its minimum processing time to meet demand. If the planning process plans the order according to its lead time, it would start before the	All three of these conditions must be met before the planning process generates the exception: • Compression Days is greater than zero	Yes	Yes	Default Constrained Supply Planning Default

Supply Planning Exception Name	Description	Calculation	Constrained	Unconstrained	Exception Set
	planning horizon start date. To report compression days, the planning process calculates the order start date by using the item lead times and backward scheduling. The planning process considers all calendars associated with the supply chain model.	• Reschedule Days for existing supply is less than 0 (Reschedule in Recommendations • Firm Status is set to Not Firm (For supply order types)			
Past Due Orders	The planning process detects purchase orders, transfers, or work orders that have order due dates before the plan horizon start date.	When order attributes: Days Past Due > 0 Old Due Date isn't NULL (Old Due Date for planned order is NULL) Action = Is not Canceled (For supply order types)	No	Yes	Default
Past Due Sales Orders	The planning process detects the scheduled date of the sales order is earlier than the plan horizon start date.	When order attribute Days Past Due > 0 (For order type of Sales order)	No	Yes	Default
Planned Order Uses Alternate Work Definition	The planned order has used an alternate work definition due to the material, resource, or lead time constraints.	TBD	No	Yes	Constrained Supply Planning Default
Planned Order Uses Alternate Resource	The planned order has used an alternate resource due to the capacity constraints.	When order attribute Alternate Resource Used = True	Yes	Yes	Default Constrained Supply Planning Default
Planned Order Uses Substitute Component	The order has used a substitute component. The scenarios where this exception is generated are: • The primary component lead time is long, which causes	When order attribute Substitute Component Used = True	Yes	Yes	Default Constrained Supply Planning Default

Supply Planning Exception Name	Description	Calculation	Constrained	Unconstrained	Exception Set
	demand lateness (Lead Time Constraint). • The supplier capacity of the primary component isn't sufficient, which causes lateness (Supplier Capacity Constant). • The resource capacity for making the primary component isn't sufficient, which causes lateness (Resource Constraint). • The Create Supply plan option is set to No for the primary component and there's enough on hand or capacity available on the substitute component.				
Resource Overloaded	Exception occurs when, in a planning time bucket, the resource required capacity is more than the resource available capacity. In unconstrained plans, resources can be overloaded to meet demand requirements on time. If the exception extends over several days, the exception displays the start and end dates to reflect the duration of the exception. If the magnitude of the exception worsens, the planning process reports a new exception.	When Resource Utilization Percentage > 100 in a bucket for a resource, organization	Yes	Yes	Default Constrained Supply Planning Default

Supply Planning Exception Name	Description	Calculation	Constrained	Unconstrained	Exception Set
Supplier Capacity Overloaded	Exception occurs when, in a planning time bucket, the supplier required capacity is more than the supplier available capacity. If the exception extends over several days, the exception displays the start and end dates to reflect the duration of the exception. If the magnitude of the exception worsens, the planning process reports a new exception.	When Supplier Capacity Utilization Percentage > 100 in a bucket for an item, supplier site	Yes	Yes	Default Constrained Supply Planning Default

User-Defined Exceptions

Overview of User-Defined Exceptions

You can create your own exceptions to improve supply planning capabilities using specific conditions in the supply chain.

Use the Configure Exception task to create a user-defined exception.

You can create and use exceptions for these modules:

Module	Exception Type
Oracle Demand Management	Measure-based exceptions
Oracle Replenishment Planning	Measure-based exceptions
Oracle Sales and Operations Planning	Measure-based exceptions
Supply Planning (constrained and unconstrained)	Order-based exceptions Measure-based exceptions

Note: User-defined exceptions aren't available for Oracle Planning Central.

For user-defined exceptions that are measure based, the measure forms the foundation for that exception. After you select a measure, you can specify the dimension hierarchy and level for that measure, and the threshold value or measure to generate the exception. You can create an exception based on the following thresholds:

- Value: Set the value and the specific operation, such as less than, equal, and larger than, against the base measure.
- Measure: Select the measure based on your business requirement and select the specific operation that meets the condition against the base measure.

For example, you can create a date-type, measure-based exception such as launch date or discontinuation date. You then can set the threshold value with date and select a date-type measure from the Measure parameter.

Consider the Forecast Start Date before Launch Date date-type exception. You can define the parameters as:

- Base Measure = Forecast Start Date
- Operation = Before (Available values for date type exceptions are: After, Before, Equals, On or after, and On or before)
- Threshold Measure = Product Launch Date

Related Topics

- Configure Measure-Based Exceptions

Configure Order-Based Exceptions for Constrained Supply Plans

You can configure order-based exceptions as user-defined exceptions for constrained supply plans. In this topic, we discuss the predefined order-based exceptions that are available for unconstrained supply plans, but aren't available as predefined exceptions for constrained supply plans.

Configure Exceptions That Are Order Based

Use these general steps to configure exceptions for constrained supply plans that are order based.

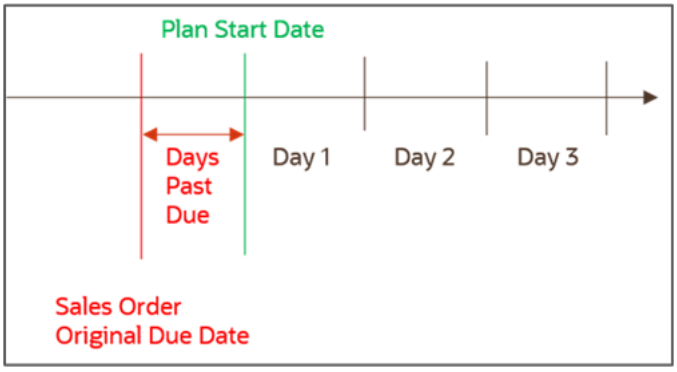
1. Open a constrained supply plan and access the Supplies and Demands table.
2. In the Search section, click the **Advanced** button.
3. Click the **Add Fields** button and select an order attribute from the list of values.
4. Define a condition and value for the order attribute.
5. To save the search, click the **Save** button.
    a. In the Create Save Search dialog box, enter a name.
    b. Click **OK**.
6. In the Supplies and Demands table, click **Search**.

    The Supplies and Demands table displays the records that conform to the defined condition.

The following sections provide specific details for some user-defined exceptions that you can configure for constrained supply plans.

Past Due Sales Orders

In an unconstrained supply plan, the planning process generates the Past Due Sales Orders exception when it detects that the scheduled date of the sales order is earlier than the plan horizon start date. A past due sales order line is a sales order line with a scheduled date earlier than the plan horizon start date.



To see demand where quantity isn't met in your constrained supply plan, follow these steps:

1. Open the Supplies and Demands table.
2. In the Search section, click the **Advanced** button.
3. Click the **Add Fields** button and select **Days Past Due**.
4. In the Order Type field:
    a. Set the operation to **Equals**
    b. For the value, select **Sales order**
5. In the Days Past Due field:
    a. Set the operation to **Greater than**
    b. Set the value to **0** (zero)
6. Click the **Search** button.

    All past due sales orders appear in the Search Results section in the Supplies and Demands table.

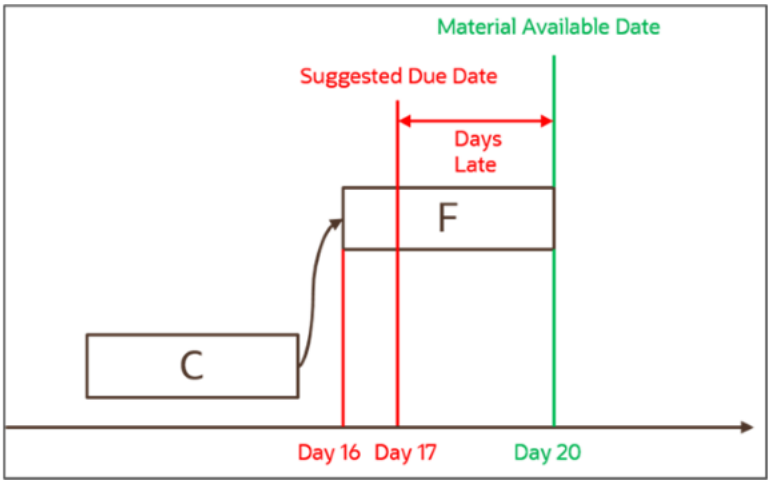
Late Replenishment for Forecast

The planning process generates the Late Replenishment for Forecast exception when it detects supplies that peg against independent forecast demand that's satisfied late. Through this exception, you can quickly detect which supplies are pegged against a late forecast.

A sales order becomes past due when it hasn't been satisfied by the time you run the plan. In other words, the Original Due Date of the sales order falls before the Plan Start Date. This exception usually occurs because of a material constraint, resource constraint, or a planning time fence.

Let's work through an example to see all late replenishments for forecasts in your constrained supply plan using the following criteria:

- Component C feeds end item F.
- There's a forecast for end item F with a due date of Day 17.
- Due to manufacturing constraints, the component is available on Day 16. As a result, the Material Available Date for end item F is Day 20.



In this example, the availability of material is late with respect to the due date. As a result, the planning process generates a Late Replenishment for Forecast exception for end item F.

To see all late replenishments for forecasts in your constrained supply plan, follow these steps:

1. Open the Supplies and Demands table.
2. In the Search section, click the **Advanced** button.
3. Click the **Add Fields** button and select **Days Late**.
4. In the Order Type field:
    a. Set the operation to **Equals**
    b. For the value, select **Forecast**
5. In the Days Late field:
    a. Set the operation to **Greater than**
    b. Set the value to **0** (zero)
6. Click the **Search** button.

    All late replenishments for forecasts appear in the Supplies and Demands table.

Late Replenishment for Sales Orders

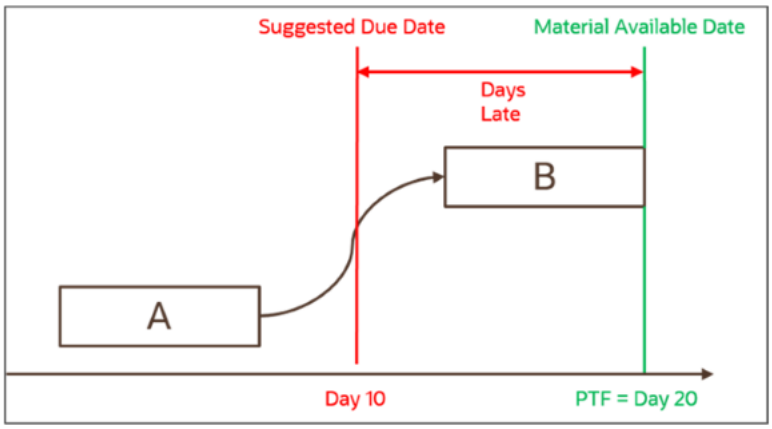
The planning process generates a Late Replenishment for Sales Order exception when it detects that the supplies for a sales order line are due later than the sales order line's scheduled date. In other words, the Material Available Date is after its Suggested Due Date. This exception typically occurs due to any of these issues:

- There's a resource constraint
- Planning time fences are enabled
- A reserved supply is firmed late

Let's work through an example to see all late replenishments for sales orders in your constrained supply plan using the following criteria:

- Component A feeds end item B
- End item B planning time fence is Day 20
- There's a sales order for end item B with a due date of Day 10

- Due to the item B planning time fence, item B can't be planned before Day 20. As a result, the Material Available Date for the end item B is Day 20.



In this example, the availability of material is late with respect to the due date. As a result, a Late Replenishment for Sales Order exception is generated for the end item B.

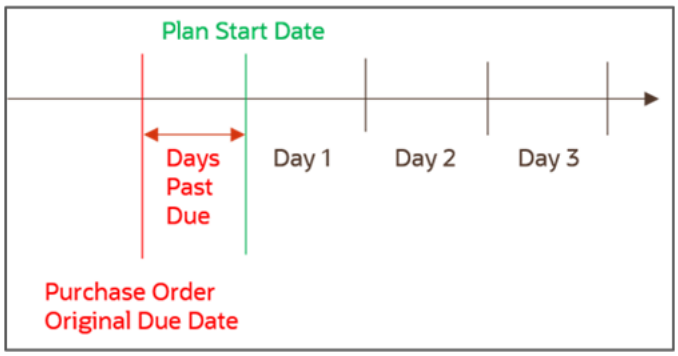
To see all late replenishment for sales orders in your constrained supply plan, follow these steps:

1. Open the Supplies and Demands table.
2. In the Search section, click the **Advanced** button.
3. Click the **Add Fields** button and select **Days Late**.
4. In the Order Type field:
    a. Set the operation to **Equals**
    b. For the value, select **Sales order**
5. In the Days Late field:
    a. Set the operation to **Greater than**
    b. Set the value to **0** (zero)
6. Click the **Search** button.

    All late replenishments for sales orders appear in the Supplies and Demands table.

Past Due Orders

The planning process generates the Past Due Orders exception when it detects purchase orders, transfer orders, or work orders that have order due dates before the plan horizon start date. If the order is firm, the planning process retains the order's firmed duration as it schedules all of its operations beyond the planning horizon start date. For supply orders that aren't firm, the planning process also issues an Orders to be rescheduled out exception message.



The calculation for the Days Past Due exception is:

Plan Start Date - Order Original Due Date, when Plan Start Date is after the Order Original Due Date

To see past due orders in a constrained supply plan, follow these steps:

1. Open the Supplies and Demands table.
2. In the Search section, click the **Advanced** button.
3. Click the **Add Fields** button to add the following attributes to the search section:
    - Old Due Date
    - Days Past Due
    - Action
4. Set the operations and values for the following fields in the Search section:

Field	Operation	Value	Note
Order Type	Equals	All supplies	N/A
Old Due Date	Is not	NULL	Planned order is NULL
Days Past Due	Greater than	0 (zero)	N/A
Action	Is not	Canceled	You must select all values except Cancel

5. Click the **Search** button.

    All past due orders are displayed in the Supplies and Demands table.

Items with Expired Lots

The planning process generates an Items with Expired Lots exception when it detects a potential expired lot. Item lots can satisfy demands before their expiration dates. A potential expired lot:

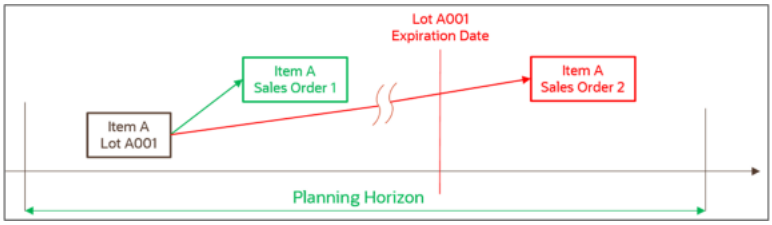
- Has a lot expiration date during the planning horizon.
- Isn't pegged to a demand that results in its use before its lot expiration date.

This exception occurs against items under full lot control.

In addition to reporting this exception, the planning process plans for you to flush the inventory on its lot expiration date. This process prevents you from using the lot after its lot expiration date to satisfy demands.

The calculation for Items with Expired Lots is: Lot Receipt Date + Shelf Life Days

In the following example, lot A001 of item A can only satisfy sales order 1 with a due date before the lot A001 expiration date.



To see all items with expired lots in your constrained supply plan, follow these steps:

1. Open the Supplies and Demands table.
2. In the Order Type field in the Search section:
    a. Set the operation to **Equals**
    b. For the value, select **Expired lot**
3. Click the **Search** button.

    All items with expired lots appear in the Search Results section in the Supplies and Demands table.

Demand Quantity Not Satisfied

The planning process generates a Demand Quantity Not Satisfied exception when there isn't enough supply available. The planning process finds demand pegged to supplies and the supply quantities are less than the demand quantity. The planning process issues this exception for demands at all levels of the supply chain bill of materials.

This exception typically occurs due to inconsistent setups. For example, a configured item can't be sourced because too many option-specific exclusions prevent any source from being used.

To see demand where quantity isn't met in your constrained supply plan, follow these steps:

1. Open the Supplies and Demands table.
2. In the search section, click the **Advanced** button.
3. Click the **Add Fields** button and select **Unmet Demand Quantity**.
4. In the Unmet Demand Quantity field:
    a. Set the operation to **Greater than**.
    b. Set the value to **0** (zero).
5. Click the **Search** button.

    All demand quantities that aren't satisfied appear in the Search section in the Supplies and Demands table.

Configure Measure-Based Exceptions

This topic covers how to configure measure-based exceptions in Supply Planning, Sales and Operations Planning, Demand Management, and Replenishment Planning.

You can create measure-based exceptions where the measure forms the foundation for that exception. After you select a measure, you can specify the dimension hierarchy and level for that measure, and the threshold value or measure to generate the exception. For example, you can create an exception to identify resource overloads when the resource utilization percentage is greater than 110%.

Configure Exceptions That Are Measure Based

Use the following general steps to configure a user-defined exception that's measure based.

1. In a Supply Chain Planning work area, click the Tasks panel drawer and click **Configure Exceptions**.
2. On the Configure Exceptions page, click **Actions** and then select **Create**.
3. In the Create Exception dialog box, General Properties section, specify or enter information for the following fields:
    a. Exception
    b. Display Name
    c. Exception Group
    d. Base Measure
4. In the Exception Detail section, on the Level tab, select the dimension and its corresponding hierarchy and level to use for your exception

    What you select for levels determines the combination at which the exception condition is evaluated. For example, if you select levels Item and Organization, then the exception criteria is evaluated for each unique combination of Item and Organization.

    > **Note:** Configure Exceptions is a task defined outside of plan context. When configuring exceptions for measure-based plans, ensure the selected hierarchy is in the plan's dimension catalog in plan options. Otherwise item level exceptions might be blank after running a plan.

5. On the Threshold tab:
    a. Select an operation.
    b. Define a threshold for the base measure, which can be defined based on a value or another measure.
6. On the Notification tab, define the notification attributes.
7. When done, click **Save and Close**.

Exception Detail Section

In the Create Exception dialog box, the Level tab in the Exception Detail section is populated based on the base measure. The Level tab consists of dimension, hierarchy, and level.

For example, for the user-defined exception Fill Rate Shortfall Percentage, the details are populated based on the base measure Fill Rate Shortfall Percentage. As defined on the Threshold tab, the planning process generates this exception when the Fill Rate Shortfall percentage is greater than 10%.

For this exception, the populated dimensions are Organization and Product. You can select dimensions and their corresponding hierarchy and levels. In this example for the Product dimension, you can select either Item or Category as the level.

If you select the Item level, the planning process generates this exception for any item with the Fill Rate Shortfall Percentage of greater than 10% as defined in the Threshold tab. This case enables you to analyze the plan output in more detail. At the same time, the number of exceptions could be large enough that analyzing each exception might not be possible.

On the other hand, if you select the Category level, the planning process generates this exception for any category with the Fill Rate Shortfall Percentage of greater than 10%. In this case, the number of exceptions is lower than the item level scenario. But, potentially some issues that exists at the item level aren't visible since the planning process generates an exception only when the specified criterion holds at the category level.

Related Topics

- Overview of User-Defined Exceptions
- Overview of Plan Exceptions

Configure Measure-Based Exceptions for Constrained Supply Plans

This topic covers predefined measure-based exceptions that are available in unconstrained Supply Planning but aren't available as predefined exceptions in constraint-based Oracle Supply Planning. You can configure these exceptions as user-defined exceptions in constraint-based Supply Planning.

Items Below Safety Stock

The planning process generates the Items Below Safety Stock exception when the projected available balance for a planning bucket is below the specified safety stock level for the planning bucket. Safety stock is maintained to mitigate risk of stockouts caused by uncertainties in supply and demand. When the projected material balance drops below the safety stock level, you have a potential stockout. You can increase your supply orders by creating new purchase orders or rescheduling existing ones to bring the material balance above the safety stock level.

Use these steps to configure an Items Below Safety Stock exception for a constrained supply plan.

1. Navigate to the Tasks panel. In the Configuration section, click the **Configure Exceptions** link.
2. On the Manage Planning Measures page, click **Actions** and then select **Create**.
3. In the Create Exceptions dialog box, in the General Properties section, enter or select the following:

Parameter	Value
Exception	Items Below Safety Stock
Display Name	Items Below Safety Stock
Exception Group	Supply Planning Exceptions
Base Measure	Projected Available Balance

4. On the Level tab, specify the dimension and its corresponding hierarchy and level.
5. On the Threshold tab, define the threshold for the base measure as Projected Available Balance Less than Safety Stock.
    - In the Operation field, select **Less than**
    - In the Threshold field, select **Measure** and then select **Safety Stock** from the list of values.
6. Click **Save and Close**.

Items with a Shortage

The planning process generates the Items with a Shortage exception when the item has a negative on hand at the end of the day. The items with a shortage refers to the situation when the projected material balance suggests that there is less than zero of the item or items in question. You can rectify this situation by increasing your supply orders, such as creating new purchase orders or rescheduling existing ones. In addition you can analyze your forecast demand to determine whether the forecasts are too optimistic and they can be lowered to remove the shortages.

Use these steps to configure an Items with a Shortage exception for a constrained supply plan.

1. Navigate to the Tasks panel. In the Configuration section, click the **Configure Exceptions** link.
2. On the Manage Planning Measures page, click **Actions** and then select **Create**.
3. In the Create Exceptions dialog box, in the General Properties section, enter or select the following:

Parameter	Value
Exception	Items with a Shortage
Display Name	Items with a Shortage
Exception Group	Supply Planning Exceptions
Base Measure	Projected Available Balance

4. On the Level tab, specify the dimension and its corresponding hierarchy and level.
5. On the Threshold tab, define the threshold for the base measure as Projected Available Balance Less than Safety Stock.
    - In the Operation field, select **Less than**
    - In the Threshold field, select **Value** and then enter **0** (zero) in the value field.
6. Click **Save and Close**.

Items with Excess Inventory

The planning process generates the Items with Excess Inventory exception when the projected available balance for a planning bucket is higher than the specified safety stock level for the planning bucket. The excess inventory is a product that hasn't yet been sold and exceeds the projected consumer demand for that product.

The Items with Excess Inventory exception usually represents some type of mismanagement of stock demand due to factors such as over-buying, inaccurate projections, canceled orders, a bad economy, unforeseen weather changes, unpredictable consumer demand, or late or early delivery of goods.

Use these steps to configure an Items with Excess Inventory exception for a constrained supply plan.

1. Navigate to the Tasks panel. In the Configuration section, click the **Configure Exceptions** link.
2. On the Manage Planning Measures page, click **Actions** and then select **Create**.

3. In the Create Exceptions dialog box, in the General Properties section, enter or select the following:

Parameter	Value
Exception	Items with Excess Inventory
Display Name	Items with Excess Inventory
Exception Group	Supply Planning Exceptions
Base Measure	Projected Available Balance

4. On the Level tab, specify the dimension and its corresponding hierarchy and level.
5. On the Threshold tab, define the threshold for the base measure as Projected Available Balance Less than Safety Stock.
    - In the Operation field, select **Greater than**
    - In the Threshold field, select **Measure** and then select **Safety Stock** from the list of values.
6. Click **Save and Close**.

Configure Exceptions Based on User-Defined Measures

You might have a scenario where you need to define a user-defined measure and then configure an exception based on that measure.

For example, you want to identify the items that have demands with a risk of not being satisfied, and the value of these demands are 10 percent more than their quarterly revenue.

Step 1: Configure a User-Defined Measure

In our example, the first step is to define a user-defined measure that represents the percentage value of demands at risk. This percentage can be calculated as follows:

Demand at Risk Value Percentage = (Demand at Risk Value / Revenue) x 100

Use the following steps to configure a user-defined measure.

1. Navigate to the Tasks panel. In the Configuration section, click the **Manage Planning Measures** link.
2. On the Manage Planning Measures page, click **Actions** and then select **Create**.
3. In the Create Measure dialog box, enter or select the following:

Parameter	Value
Measure	Demand at Risk Value Percentage

Parameter	Value
Description	Enter a description
Data Type	Percent
Enable in Work Area	Supply Planning
Measure Groups	Overall Plan Health

4. On the Aggregation and Disaggregation tab in the Dimension Parameters section, select the **Customer** and **Demand Class** dimensions.
5. On the Expression tab, Functions subtab, define the Demand at Risk Value Percentage equation:

   Safe_Division (Demand at Risk Value, Revenue, null) * 100.
6. Click **Save and Close**.

Step 2: Configure a User-Defined Exception

The next step is to configure a user-defined exception using Demand at Risk Value Percentage as the base measure.

1. Navigate to the Tasks panel. In the Configuration section, click the **Configure Exceptions** link.
2. On the Manage Planning Measures page, click **Actions** and then select **Create**.
3. In the Create Exceptions dialog box, in the General Properties section, enter or select the following:

Parameter	Value
Exception	Demand at Risk Value over 10 Percent of Revenue
Display Name	Demand at Risk Value over 10 Percent of Revenue
Exception Group	Supply Planning Exceptions
Base Measure	Demand at Risk Value Percentage

4. In the Exception Detail section, on the Level tab, specify the dimension and its corresponding hierarchy and level.
5. On the Threshold tab, define the threshold for the base measure as Demand at Risk Value Percentage Greater than 10%:

Parameter	Value
Base Measure	Demand at Risk Value Percentage

Parameter	Value
Description	Demand at Risk Value Percentage
Operation	Greater than
Threshold Value	10%

6. Click **Save and Close**.

Calculate User-Defined, Measure-Based Exceptions

After you modify, add, or delete one or more user-defined, measure-based exceptions in your plan's exception set, you can recalculate these exceptions independent of running the plan. These calculations are based on the current definitions of the exceptions and include any changes since the plan was last run.

This calculation is based on the current definition of exceptions that includes any changes since the plan was last run. By default, the process calculates all exceptions in the plan exception set. You can change the exception set parameters of the process to calculate a subset of those exceptions.

Note: The Calculate Measure-Based Exception process doesn't recalculate predefined order-based exceptions.

The Calculate Measure-Based Exception process is available from the Supply Planning, Demand Planning, Replenishment Planning, and Sales & Operations Planning work areas.
You can recalculate user-defined, measure-based exceptions from these pages:

- Scheduled processes: By default, scheduled process recalculates all exceptions in the exception set. However, you can also recalculate exceptions of a subset by changing the exception set parameters.
- Actions menu on the header of the open plan
- Actions menu on Manage Plans page

Note: The Calculate Measure Based Exception process and Plan Run process cannot run simultaneously for the same plan.

4 Planning Analytics

Overview of Planning Analytics

Configuring planning dimensions and hierarchies on the Configure Planning Analytics page is a key setup to use the analytics in Supply Chain Planning work areas.

It has a unified dimensional hierarchy for various uses. Depending on your security privilege, you can also open the Configure Planning Analytics page from the Setup and Maintenance work area by selecting the following:

- **Offering**: Supply Chain Planning
- **Functional Area**: Supply Chain Planning Configuration
- **Task**: Configure Planning Analytics

To run plans successfully, you must complete the following Configure Planning Analytics tasks:

- Set Up Dimension Catalogs
- Set Up Measure Catalogs
- Set Up Levels and Attributes

You can use the default hierarchies for most of the dimensions.

If the default product catalog named Product is not collected, then you must select at least one product hierarchy. If a default product catalog is collected, then the predefined Product hierarchy is selected as a product hierarchy by default. You can optionally add or change the product hierarchy. You must include at least one product hierarchy when creating a dimension catalog.

On the Configure Planning Analytics page, Levels and Attributes tab, you can configure your planning table and graphs to display descriptions instead of codes for the following entities: Items, Organizations, Resource, Work Center, and Work Area.

Related Topics

- Considerations for Setting Up Dimension Catalogs
- Configure Planning Analytics
- How You Use Dimensions and Dimension Catalogs in Supply Chain Planning
- How You Use Levels and Attributes in Supply Chain Planning
- Can I modify the default dimension catalog?

Configure Planning Analytics

To run plans successfully, you must set up dimensions and dimension catalogs, measure catalogs, and levels and attributes.

You can open the Configure Planning Analytics task from one of the Supply Chain Planning work areas. Depending on your security privilege, you can also open the Configure Planning Analytics page from the Setup and Maintenance work area.

> **Note:** Default Catalog is the name of the predefined dimension catalog. It contains predefined hierarchies. Oracle recommends that you make a copy of the Default Catalog if changes are required, instead of editing the default catalog.

To configure planning analytics:

1. In the Navigator, click one of the Supply Chain Planning work areas or click the Setup and Maintenance work area.
    - If you clicked one of the Supply Chain Planning work areas, do the following:
        i. Click the Tasks panel tab.
        ii. In the Tasks panel drawer, click the **Configure Planning Analytics** link.
    - If you clicked the Setup and Maintenance work area, select the following:
        - **Offering**: Supply Chain Planning
        - **Functional Area**: Supply Chain Planning Configuration
        - **Task**: Configure Planning Analytics
2. On the Configure Planning Analytics page, Dimension Catalogs tab, do the following:
    a. Create a dimension catalog using the **Add Row** button, or duplicate the default dimension catalog using the **Duplicate** button.
    b. Specify what hierarchies to use in the dimension catalog by moving hierarchies from the Available pane to the Selected pane.
    c. Assign the dimension catalog to a plan that will use the set of hierarchies for analysis during the plan creation from Manage Plans.
3. Each Supply Chain Planning work area has a default measure catalog. Create a new measure catalog to add or remove measures.
    a. Use the **Add Row** button to create a new catalog or use the **Duplicate** button to duplicate an existing catalog.
    b. Specify the measures for the catalog by moving the measures from the Available pane to the Selected pane.
    c. Assign the measure catalog to a plan that will use the set of measures during the plan creation from Manage Plans.

    After you create and define a measure catalog, you can select the measure catalog for a plan from the Edit Plan Options page.
4. Click the Levels and Attributes tab and select the desired dimension and hierarchy.
    a. In the **Dimension** list, select a dimension.
    b. Optionally, in the **Hierarchy** list, select a hierarchy.
    c. Click the **Search** icon button.
    d. To change how the level name appears in pivot tables and graphs, select the row and enter the level name in the **Level Name to Display** field.

        > **Note:** You can't edit the Level Name to Display field for the lowest level of the hierarchy.

e. To display a particular member identifier in your tables and graphs, select a dimension (Product, Organization, or Resource) and level, and then select a value in the **Member Identifier to Display** column:

Dimension	Level	Member Identifier to Display Options
Product	Item	Item Name, Item Description, Item Name and Description, or Item Description and Name
Organization	Organization	Organization Name or Organization Code
Resource	Resource	Resource Code, Resource Name, or Resource Description
Resource	Work Center	Work Center Code, Work Center Name, or Work Center Description
Resource	Work Area	Work Area Code, Work Area Name, or Work Area Description
Resource	Organization	Organization Name or Organization Code
Time	Quarter	Quarter Name or Start Date The display name you configured on this page appears for quarter name on the Fiscal, Manufacturing, and Hybrid calendars.
Time	Month	Month Name or Start Date The display name you configured on this page appears for month name on the Fiscal, Manufacturing, and Hybrid calendars.

> **Tip:** The organization level in the Organization dimension and the organization level in the Resource dimension are separate settings. Oracle recommends that you set them to use the same identifier.

f. To add an attribute for the lowest level of the hierarchy, click the **Edit Page** button in the Attributes column.

   i. In the Manage Attribute List dialog box, click the **Add Row** button.
   ii. In the Attribute list, select an attribute.
   iii. In the Attribute Label text box, enter a label name and click **OK**.

5. On the Configure Analytics page, click the **Save and Close** button.

Related Topics

- How You Use Dimensions and Dimension Catalogs in Supply Chain Planning
- Considerations for Setting Up Dimension Catalogs
- How You Use Levels and Attributes in Supply Chain Planning
- Overview of Planning Analytics
- How You Use Measure Catalogs in Supply Chain Planning

Dimensions and Dimensions Catalogs

How You Use Dimensions and Dimension Catalogs in Supply Chain Planning

Oracle Fusion Cloud Supply Chain Planning has hierarchy levels by which you can view, compare, and analyze demands and supplies of your products over various dimensions, such as geography and organizations.

Oracle Supply Chain Planning uses a single set of dimensions and hierarchies to drive aggregation context for demand planning, supply planning, embedded analytics, and management analytics.

Oracle Supply Chain Planning provides predefined planning dimensions. Each of those dimensions has a predefined hierarchy. When you implement the Oracle Supply Chain Planning offering, you must decide which dimensions and hierarchies to use for demand and supply analysis.

Each dimension catalog has a collection of hierarchies in different dimensions that is enabled for use in the plan options. By default, all predefined hierarchies are available in Planning Analytics. You can disable certain dimensions that are not relevant for your plans. For example:

- If you are only using demand plans, then supplier, resource, and order type dimensions may not be relevant
- If you are using sales and operations plans, then the order type dimension is not relevant

The following hierarchies are predefined in Oracle Supply Chain Planning:

- Customer
- Demand Class
- Exception Type
- Order Type
- Organization
- Plan
- Product
- Resource
- Supplier
- Source
- Time

Access the Configure Planning Analytics page from a Supply Chain Planning work area. Depending on your security privilege, you can also open the Configure Planning Analytics page from the Setup and Maintenance work area.

- To access the Configure Planning Analytics page from a Supply Chain Planning work area:
  a. Click the Tasks panel tab.
  b. In the Tasks panel drawer, click the **Configure Planning Analytics** link
- To access the Configure Planning Analytics page from the Setup and Maintenance work area, select the following:
  - **Offering**: Oracle Supply Chain Planning
  - **Functional Area**: Supply Chain Planning Configuration
  - **Task**: Configure Planning Analytics

In the Dimension Catalogs tab, several hierarchies are available in various dimensions. You can specify which hierarchy to use in a particular dimension catalog. For example, you can select an organization type hierarchy, a product type hierarchy, or a customer hierarchy to use in plans for analysis. After you define a dimension catalog, you can assign it to a plan that will use the set of hierarchies for analysis.

You can select one of your dimension catalogs to be used as the default dimension catalog in plans. If you do not select a default catalog, the predefined catalog named Default Catalog is used.

Related Topics

- Considerations for Setting Up Dimension Catalogs
- How can I use dimensions in Supply Chain Planning?
- Overview of Planning Analytics
- What's a dimension in Supply Chain Planning?
- Why You Disable or Enable Dimensions for Supply Plan Measures

Considerations for Setting Up Dimension Catalogs

Oracle Fusion Cloud Supply Chain Planning provides predefined planning dimensions and each of those dimensions have predefined hierarchies. The predefined hierarchies are included in the default dimension catalog and are available in all plans.

Hierarchy Selections for the Product Dimension

A predefined product hierarchy is included in the default dimension. The default product hierarchy has three fixed levels: Item, Category 1, and Category 2. Other product hierarchies (other item catalogs in Oracle Product Model that are collected into Supply Chain Planning work areas) can be optionally enabled as user-defined product hierarchies.

For Oracle Sales and Operations Planning, the Lifecycle Phase attribute is also included in the default dimension.

By default, Product Model's planning functional area catalog is collected into the product hierarchy. For the collection to run successfully, you must create the planning functional area catalog in Product Model with the following attributes:

- Controlled at = Master-Level (not Org-Level)
- Allow hierarchy of categories = No

- Default category must be selected
- Allow multiple item category assignments = Not selected
- Catalog Content = Items at Leaf Level

If this catalog is not set up with these attributes, the planning functional area catalog is not collected and the Product hierarchy will not be populated. This will result in the forecasting engine not being able to use the product aggregation and some of the predefined tables and graphs will not work correctly.

Hierarchy Selections for the Organization Dimension

Enterprise is the default organization hierarchy and has three fixed levels: Organization, Business Unit, and Legal Entity. This default organization is defined in Oracle Fusion Cloud HCM and you can only modify it there. Optionally, you can enable other Organization hierarchies (based on regions, one per country).

Hierarchy Selections for the Customer Dimension

The default Customer hierarchy has three fixed levels: Customer site, Customer, and Customer Class. This default customer hierarchy is defined in the trading community model and you can only modify it there.

Hierarchy Selections for the Resource Dimension

The default Resource hierarchy has four fixed levels: Resource, Work Center, Work Area, and Organization. This default resource hierarchy is defined in Oracle Manufacturing and you can't modify it.

Hierarchy Selections for the Supplier Dimension

The default Supplier hierarchy has two fixed levels: Supplier Site and Supplier.

Hierarchy Selections for the Exception Type, Order Type, and Source Dimensions

Predefined Exception Type, Order Type, and Source dimensions are included in the Default dimension catalog. Each has only a single hierarchy with a single level.

Hierarchy Selections for the Time Dimension

In the Time dimension, Gregorian calendar is the only predefined hierarchy. All other hierarchies can be optionally included as user-defined hierarchies. These include workday calendars of inventory organizations collected from Oracle Fusion Cloud Supply Chain & Manufacturing and fiscal calendars from Oracle Fusion Cloud Financial Management.

Related Topics

- How You Use Dimensions and Dimension Catalogs in Supply Chain Planning
- How can I use dimensions in Supply Chain Planning?
- Can I modify the default dimension catalog?
- Overview of Planning Analytics
- Why You Disable or Enable Dimensions for Supply Plan Measures

What's a dimension in Supply Chain Planning?

A dimension is a structure that organizes data. It categorizes data to enable you to answer business questions. Commonly used dimensions are customers, products, and time.

Related Topics

- Configure Planning Analytics
- How can I use dimensions in Supply Chain Planning?
- How You Use Dimensions and Dimension Catalogs in Supply Chain Planning
- Considerations for Setting Up Dimension Catalogs

How can I use dimensions in Supply Chain Planning?

Oracle Fusion Cloud Supply Chain Planning applications come with predefined hierarchies in the Product dimension.

These predefined hierarchies are part of the Dimension catalog structure in Oracle Product Model. Integrations with Oracle E-Business Suite and third-party systems where the product dimensions can still be maintained and uploaded for use by the Oracle Supply Chain Planning applications is supported.

Related Topics

- How You Use Dimensions and Dimension Catalogs in Supply Chain Planning
- Considerations for Setting Up Dimension Catalogs
- What's a dimension in Supply Chain Planning?

What's a dimension catalog in Supply Chain Planning?

In Oracle Fusion Cloud Supply Chain Planning, a dimension catalog is a selected list of dimensions enabled for use in plans.

In Oracle Supply Chain Planning, a dimension catalog is a selected list of hierarchies in different dimensions that is enabled for use in plans. The Default dimension catalog appears by default, but can be changed to another dimension catalog that has been defined.

Related Topics

- Can I modify the default dimension catalog?
- What's a dimension in Supply Chain Planning?
- Considerations for Setting Up Dimension Catalogs
- How You Use Dimensions and Dimension Catalogs in Supply Chain Planning

Can I modify the default dimension catalog?

Yes, you can modify the Oracle Fusion Cloud Supply Chain Planning default dimension catalog. However, if you want to make any changes, Oracle recommends that you create a duplicate of the default dimension catalog.

Related Topics

- How You Use Dimensions and Dimension Catalogs in Supply Chain Planning
- Considerations for Setting Up Dimension Catalogs
- What's a dimension catalog in Supply Chain Planning?

Measure Catalogs

How You Use Measure Catalogs in Supply Chain Planning

The measure catalog is similar to the dimension catalog.

Each measure catalog has a collection of measures that you can enable for use in plans in one of the Supply Chain Planning work areas. While Oracle provides predefined measures, you can also create measures in some work areas and add them to a measure catalog.

On the Configure Planning Analytics page, Measure Catalogs tab, you can create a measure catalog and add or remove measures from a measure catalog.

The predefined measure catalog is the default. When you create a new plan, the measure catalog that is used is based on the catalog check box located on the Measure Catalogs tab. For example, the catalog check box in the:

- Planning Central work area is **Planning Central Catalog**
- Sales and Operations Planning work area is **Sales and Operations Planning Catalog**
- Demand Management work area is **Demand Management Catalog**
- Supply Planning work area is **Supply Planning Catalog**

If you change the default catalog later, the plan continues to use the same measure catalog that it was created with.

Related Topics

- Can I modify the default measure catalog?

Can I modify the default measure catalog?

No. Although you cannot modify the default measure catalog, you can create a measure catalog, modify the list of measures, and assign it to plans on the Plan Options page.

Related Topics

- How You Use Measure Catalogs in Supply Chain Planning

Levels and Attributes

How You Use Levels and Attributes in Supply Chain Planning

On the Levels and Attributes tab, you can enable certain item attributes (standard fields or flexfields) and organization attributes (standard fields) to be available in Planning Analytics as filters.

For example, you can enable PLANNER_CODE to use in an analysis to group metrics and measures by that particular attribute.

You can create a display name to use in the various pivot tables and graph configurations. For example, if the predefined level name is Product Category 2, you can enter a display name of Laptops. You can also configure which identifier to display in tables and graphs for selected hierarchies. For example, you can choose to display item name or item description in your tables and graphs.

Displaying Descriptions in Tables and Graphs

You can analyze planning data in planning tables and graphs by using the description fields of selected entities in hierarchies, such as items and organizations. You can use the description fields when their primary identifier is a difficult to understand alphanumeric code.

For each dimension level (Item, Organization, Resource, Work Center, or Work Area) you can select only one member identifier option to display in a planning table or graph. To see a list of the Member Identifier to Display options, refer to the Configure Planning Analytics topic in this guide.

> **Tip:** The organization level in the Organization dimension and the organization level in the Resource dimension are separate settings. Oracle recommends that you set them to use the same identifier.

Changing a member identifier can impact the advanced criteria in tables and graphs. If you use an advanced filter criteria in a table or graph, then the criteria will be compared to the new member identifier, which can affect the search results. The change to the member identifier can result in different or no members meeting the filter criteria. For example, many names might start with AB, but no descriptions start with AB. After you make this change, you should verify that any advanced filter criteria used are still valid.

> **Note:** In the Selector Tool, the member values displayed are based on what's configured in the Member Identifier to Display column on the Configure Planning Analytics page, Levels and Attributes tab. For example, for item, you can configure your tables and graphs to show item description instead of item name, which is what also appears when you're in the Selector Tool.

Related Topics

- Overview of Planning Analytics
- Configure Planning Analytics

User-Defined Hierarchies

Overview of User-Defined Hierarchies

You can create and update user-defined hierarchies for your demand, demand and supply, sales and operations, or supply plan using the file-based data import (FBDI) template named Supply Chain Planning User-Defined Hierarchy (ScpUser-DefinedHierarchyImportTemplate.xlsm).

You can do the following using the import template:

- Create a user-defined hierarchy for these dimensions:
  - Customer
  - Demand Class
  - End Demand Organization
  - End Demand Product
  - Organization
  - Product
  - Resource
  - Sales Organization
  - Supplier
- Add members to or remove members from an existing level in the user-defined hierarchy.
- Modify the user-defined hierarchy by adding or deleting levels.
- Delete the user-defined hierarchy.

Note: After creating your user-defined hierarchy, you can't rename its levels and level members.

Related Topics

- Create a User-Defined Hierarchy
- Add or Remove Members
- Add or Delete Levels
- Delete a User-Defined Hierarchy

Create a User-Defined Hierarchy

You can't create a user-defined hierarchy with only the lowest level.

To create the user-defined hierarchy, do these steps:

1. In the Supply Chain Planning User-Defined Hierarchy import template (ScpUser-DefinedHierarchyImportTemplate.xlsm), enter the structure of the user-defined hierarchy on the User-DefinedHierarchyMaster_ worksheet.

   The lowest level for each supported dimension is LEVEL_0, and the name for this level is predefined and can't be changed. The highest-possible level is LEVEL_10.

   If the hierarchy is for the Product dimension, you can enter **Yes** in the **Default Indicator** column to enable the hierarchy by default in the Selector Tool.

2. Enter the details of the level members on the User-DefinedHierarchyDetail_ worksheet.
3. Generate the .csv files for the import template, and compress them into a single file.
4. Click **Navigator** > **Tools** > **File Import and Export**, and import the compressed file.
5. In the Scheduled Processes work area, run the **Load Planning Data from Flat Files** scheduled process.
   a. In the Process Details dialog box, in **Source System**, select the source system.
   b. In **Collection Type**, select **Net change**.
   c. In **Data File**, select the compressed file.
   d. Ignore the fields for organization group collection because this functionality isn't relevant to user-defined hierarchies.
6. Click **Submit**.

   The user-defined hierarchy is created.

7. Add the user-defined hierarchy to the dimension catalog that's used by your plan.

   > **Note:** If you've created your demand, demand and supply, or supply plan in the Planning Central work area, add the hierarchy to the Default Catalog, which is the only dimension catalog that can be used in plans that are created in this work area.

8. Run your plan with the **Refresh with current data** option selected on the Parameters tab in the Run Plan dialog box.

   Select other options as required.

9. Modify your selections on the Hierarchies and Members tabs in the Selector Tool for the affected tables and graphs.

Related Topics

- Overview of User-Defined Hierarchies
- Overview of Tables, Graphs, Analysis Sets, Tiles, and Tile Sets

Add or Remove Members

You can add members to or remove members from any level of your user-defined hierarchy.

Note these points about adding members to or deleting members from your user-defined hierarchy:

- At the lowest level (LEVEL_0), you can add only those members that have already been collected from your Oracle Fusion Cloud Application or third-party source system. When you delete members at the lowest level of

your user-defined hierarchy, the deletion is restricted to the user-defined hierarchy, and the members continue to exist in your source system.

If you're only adding or deleting members at Level_0, you must run the **Load Planning Data from Flat Files** scheduled process in the Net change mode.

In the Supply Chain Planning User-Defined Hierarchy import template (ScpUser-DefinedHierarchyImportTemplate.xlsm), you don't need to enter anything on the User-DefinedHierarchyMaster_ worksheet or generate the .csv file for this worksheet. On the User-DefinedHierarchyDetail_ worksheet, you can enter **Yes** in the **Delete Indicator** column for the members you're going to delete.

- If you're only adding members to an intermediate level or the top level of your user-defined hierarchy, you must run the **Load Planning Data from Flat Files** scheduled process in the Net change mode.

  In the Supply Chain Planning User-Defined Hierarchy import template, you don't need to enter anything on the User-DefinedHierarchyMaster_ worksheet or generate the .csv file for this worksheet. On the User-DefinedHierarchyDetail_ worksheet, you need to enter only the details for the new members. If required, for the new members at intermediate levels, you can also enter child members at lower levels.

- If you're only deleting members from an intermediate level or the top level of your user-defined hierarchy, you must run the **Load Planning Data from Flat Files** scheduled process in the Targeted mode. Effectively, you're going to delete and recreate the user-defined hierarchy.

  In the Supply Chain Planning User-Defined Hierarchy import template, you must enter all the levels on the User-DefinedHierarchyMaster_ worksheet and all the level members on the User-DefinedHierarchyDetail_ worksheet and generate the .csv files for both worksheets.

  You must also delete all members for which you're deleting the parent member. Otherwise, you'll have orphaned members in your user-defined hierarchy. You can delete the members by not including the applicable rows on the User-DefinedHierarchyDetail_ worksheet instead of entering **Yes** in the **Delete Indicator** column.

To add members to or remove members from levels of the user-defined hierarchy, do these steps:

1. If you previously imported measure values using the Supply Chain Planning Measures import template (ScpMeasuresImportTemplate.xlsm) for existing members that you're going to delete, delete the measure data for these members using the same import template.

   On the Measures_ worksheet, for the values that you want to delete, enter **Yes** in the **Delete Indicator** column.

2. Generate the .csv file for the import template, and compress it.
3. Click **Navigator** > **Tools** > **File Import and Export**, and import the compressed file.
4. In the Scheduled Processes work area, run the **Load Planning Data from Flat Files** scheduled process.
   a. In the Process Details dialog box, in **Source System**, select the source system.
   b. In **Collection Type**, select **Net change**.
   c. In **Data File**, select the compressed file.
   d. Ignore the fields for organization group collection because this functionality isn't relevant to user-defined hierarchies.
   e. Click **Submit**.

      Data is removed for the level members that you're going to delete.

5. In the Supply Chain Planning User-Defined Hierarchy import template, enter information as required on the User-DefinedHierarchyMaster_ and User-DefinedHierarchyDetail_ worksheets.
6. Generate the .csv files for the import template, and compress them into a single file.

7. Click **Navigator** > **Tools** > **File Import and Export**, and import the compressed file.
8. In the Scheduled Processes work area, run the **Load Planning Data from Flat Files** scheduled process.
    a. In the Process Details dialog box, in **Source System**, select the source system.
    b. In **Collection Type**, make the required selection.
    c. In **Data File**, select the compressed file.
    d. Ignore the fields for organization group collection because this functionality isn't relevant to user-defined hierarchies.
    e. Click **Submit**.

    The members are created or deleted.
9. Run your plan with the **Refresh with current data** option selected on the Parameters tab in the Run Plan dialog box.

    Select other options as required.
10. Add members to or remove members from the Selected Members pane on the Members tab in the Selector Tool for the affected tables and graphs.

Related Topics

- Overview of User-Defined Hierarchies
- Overview of Tables, Graphs, Analysis Sets, Tiles, and Tile Sets

Add or Delete Levels

If you want to make changes to the levels of an existing user-defined hierarchy, then you must delete and recreate the entire hierarchy using the Targeted collection type for the **Load Planning Data from Flat Files** scheduled process.

You can't delete the lowest level (LEVEL_0) of the user-defined hierarchy.

> **Note:** Oracle doesn't recommend deleting a level from the user-defined hierarchy if you've loaded or stored data at that level because level deletion also requires data removal.

To modify the user-defined hierarchy by adding or deleting levels, do these steps:

1. If your measures are storing data for a level that you're going to delete, delete the level data in these measures using the Supply Chain Planning Measures import template (ScpMeasuresImportTemplate.xlsm).

    On the Measures_ worksheet, for the values that you want to delete, enter **Yes** in the **Delete Indicator** column.

    If you previously imported measure values for an existing level that's going to move up or down in your user-defined hierarchy, you don't have to reimport measure values for that level because the IDs for the level and level members remain unchanged.
2. Generate the .csv file for the import template, and compress it.
3. Click **Navigator** > **Tools** > **File Import and Export**, and import the compressed file.

4. In the Scheduled Processes work area, run the **Load Planning Data from Flat Files** scheduled process.
    a. In the Process Details dialog box, in **Source System**, select the source system.
    b. In **Collection Type**, select **Net change**.
    c. In **Data File**, select the compressed file.
    d. Ignore the fields for organization group collection because this functionality isn't relevant to user-defined hierarchies.
5. Click **Submit**.

   Measure values are deleted.

6. In the Supply Chain Planning User-Defined Hierarchy import template (ScpUser-DefinedHierarchyImportTemplate.xlsm), enter the levels that must be added or deleted on the User-DefinedHierarchyMaster_ worksheet.

   Consider an example in which your user-defined hierarchy structure for the Organization dimension is Organization (LEVEL_0), District (LEVEL_1), and Region (LEVEL_2):

    - If you want to add a level called State that's at the highest level, you should enter Organization (LEVEL_0), District (LEVEL_1), Region (LEVEL_2), and State (LEVEL_3).
    - If you want to add a level called Borough that's in between Organization and District, you should enter Organization (LEVEL_0), Borough (LEVEL_1), District (LEVEL_2), and Region (LEVEL_3).
    - If you want to delete the District level, you should enter Organization (LEVEL_0) and Region (LEVEL_1).

   If the hierarchy is for the Product dimension, you can enter **Yes** in the **Default Indicator** column to enable the hierarchy by default in the Selector Tool.

   You don't need to enter anything on the User-DefinedHierarchyDetail_ worksheet for the deleted levels. For the new and modified (existing) levels, you must enter the all the level members on the User-DefinedHierarchyDetail_ worksheet.

7. Generate the .csv files for the import template, and compress them into a single file.
8. Click **Navigator** > **Tools** > **File Import and Export**, and import the compressed file.
9. In the Scheduled Processes work area, run the **Load Planning Data from Flat Files** scheduled process.
    a. In the Process Details dialog box, in **Source System**, select the source system.
    b. In **Collection Type**, select **Targeted**.
    c. In **Data File**, select the compressed file.
    d. Ignore the fields for organization group collection because this functionality isn't relevant to user-defined hierarchies.
10. Click **Submit**.

    The user-defined hierarchy is deleted and recreated.

11. Using the Supply Chain Planning Measures import template, import measure values for newly added levels if you need to.
12. Generate the .csv file for the import template, and compress it.
13. Click **Navigator** > **Tools** > **File Import and Export**, and import the compressed file.
14. In the Scheduled Processes work area, run the **Load Planning Data from Flat Files** scheduled process.
    a. In the Process Details dialog box, in **Source System**, select the source system.
    b. In **Collection Type**, select **Net change**.
    c. In **Data File**, select the compressed file.
    d. Ignore the fields for organization group collection because this functionality isn't relevant to user-defined hierarchies.

15. Click **Submit**.

    Measure values are populated.

16. Run your plan with the **Refresh with current data** option selected on the Parameters tab in the Run Plan dialog box.

    Select other options as required.

17. Modify your selections on the Hierarchies and Members tabs in the Selector Tool for the affected tables and graphs.

Related Topics

- Overview of User-Defined Hierarchies
- Overview of Tables, Graphs, Analysis Sets, Tiles, and Tile Sets

Delete a User-Defined Hierarchy

This topic explains how you can delete a user-defined hierarchy.

Across your user-defined hierarchies, the IDs of the lowest levels and their members are the same. You can't delete the lowest levels, their members, and the measure data that's associated with these members. These members are shared across your user-defined hierarchies.
The intermediate levels and top level of your user-defined hierarchy are specific to it. These levels and their members have unique IDs and aren't shared. When you delete the user-defined hierarchy, the intermediate levels and top level and their members are deleted.

To delete a user-defined hierarchy, do these steps:

1. If your measures are storing data for an intermediate level or the top level that you're going to delete, delete the data in these measures, and reload them at an existing level of a different user-defined hierarchy using the Supply Chain Planning Measures import template (ScpMeasuresImportTemplate.xlsm).

   On the Measures_ worksheet, make the changes that you require.

2. Generate the .csv file for the import template, and compress it.
3. Click **Navigator** > **Tools** > **File Import and Export**, and import the compressed file.
4. In the Scheduled Processes work area, run the **Load Planning Data from Flat Files** scheduled process.
   a. In the Process Details dialog box, in **Source System**, select the source system.
   b. In **Collection Type**, select **Net change**.
   c. In **Data File**, select the compressed file.
   d. Ignore the fields for organization group collection because this functionality isn't relevant to user-defined hierarchies.
5. Click **Submit**.

   Measure values are deleted or populated.

6. In the Supply Chain Planning User-Defined Hierarchy import template (ScpUser-DefinedHierarchyImportTemplate.xlsm), on the User-DefinedHierarchyMaster_ worksheet, enter the name and level names of the user-defined hierarchy that you want to delete.

   Enter **Yes** in the **Delete Indicator** column.

   You don't need to enter anything on the User-DefinedHierarchyDetail_ worksheet or generate the .csv file for this worksheet.

7. Generate the .csv file for the import template, and compress it.
8. Click **Navigator** > **Tools** > **File Import and Export**, and import the compressed file.
9. In the Scheduled Processes work area, run the **Load Planning Data from Flat Files** scheduled process.
   a. In the Process Details dialog box, in **Source System**, select the source system.
   b. In **Collection Type**, select **Net change**.
   c. In **Data File**, select the compressed file.
   d. Ignore the fields for organization group collection because this functionality isn't relevant to user-defined hierarchies.
10. Click **Submit**.

    The user-defined hierarchy is deleted from dimension catalogs that it exists in.

    Note: The user-defined hierarchy is still available in tables and graphs that are using it.

11. Run your plan with the **Refresh with current data** option selected on the Parameters tab in the Run Plan dialog box.

    Select other options as required.

    The user-defined hierarchy is removed from the tables and graphs of the plan.

12. Modify your selections on the Hierarchies and Members tabs in the Selector Tool for the affected tables and graphs.

Related Topics

- Overview of User-Defined Hierarchies
- Overview of Tables, Graphs, Analysis Sets, Tiles, and Tile Sets

5 Planning Measures

Predefined Measures in Supply Chain Planning

When you use one of the Supply Chain Planning work areas, you have access to many predefined measures.

To review the details of each predefined measure, use the following:

- The Manage Planning Measures task
- A spreadsheet available at My Oracle Support

The Manage Planning Measures Task

On the Manage Planning Measures page, select a measure, and then select edit. You can review the details of the measure on the Edit Measure page even if you can't make changes to the measure.

A Spreadsheet Available at My Oracle Support

Use Doc ID 2374816.1, Oracle Supply Chain Planning Cloud: List of Predefined Measures.

The List of Predefined Measures spreadsheet contains only the core measure attributes. You can use the Edit Measures page to view all the attributes associated with a particular measure.

How You Manage Planning Measures

Use the Manage Planning Measures task to review Supply Chain Planning measures.

You can edit several measures, but some measures you can only view. You use the pivot table to view the data you edited at different aggregations. The results of the edits are stored based on definitions of a measure.

This topic discusses how you can perform these tasks:

- Update the definition of a measure
- Update aggregation parameters
- Update disaggregation parameters
- Edit data of a measure

Update the Definition of a Measure

To update the definition of a measure:

1. In a Supply Chain Planning work area, click the Tasks panel tab.
2. In the Tasks panel, click the **Manage Planning Measures** link.
3. Expand a measure group and scroll manually or use the search option to find all measures that match the search criteria.
4. Select the measure that you want to modify and then click the **Edit** icon.

> **Note:** Look for a check mark next to **Allow editing** at the top of the measure definition controls to confirm that the measure is editable.

5. Click the **Aggregation and Disaggregation** tab to view measure definitions.

   The dimensions, hierarchies, and levels at which data persists vary from measure to measure. For the dimensions with a check mark, the measure is defined on the current dimension. For these dimensions, each measure is defined on a single hierarchy as listed on the dialog box.
6. Click **Save and Close**.

Update Aggregation Parameters

Aggregation parameters control the way in which data of a measure is aggregated from the storage level to a table, graph, or infotile. Calculation Order enables you to chose between the following options:

- **Calculate and Aggregate**: Calculates the measure's expression at the lowest data level and then aggregate up.
- **Aggregate and Calculate**: Aggregates all measures referenced in the measure's expression and then calculate the expression.

Update Disaggregation Parameters

The disaggregation methodology is driven by the definitions of the disaggregation parameters. Disaggregation for definitions that include time can be different from disaggregation for definitions that don't include time. For noneditable measures there are no configuration in the disaggregation parameters.

Here are the four different allocation methods:

- **Same**: Indicates that all lower-level entries into which the data is being saved will receive the same value. Service level would be a good measure to use Same Value settings as the percentage being entered should not be allocated between different items and organizations.
- **Equal**: Spreads the edited value among the lower level entries into which data is being saved. Each entry receives an equal share of the update. This could commonly be seen on the time dimension, where data may be updated for a week or month, but there is no guidance on how it should be allocated to the common storage level of days. It is typically set to the time dimension to equal value to support equal allocation between the days.
- **Self**: Uses a measure's own pre-calculated values to allocate the data to the dimension member combinations.

  For example, item-organization. The weights for each combination are calculated and stored for the measure during plan run. These weights are used to allocate the data. For example, the forecasts for P1-Org1 and P2-Org1 are 40 and 60 respectively. Therefore, the weights used for allocation would be 40% for P1-Org1 and 60% for P2-Org1.
- **Measure**: Uses values of a different measure to allocate.

Edit Data of a Measure

To edit the data of a measure, open a table containing the measure, double-click the cell where the data is to be entered and then enter the data. In a table, editable and noneditable cells look similar. However, when you double-click a cell of an editable measure, the cell enables you to enter values.

Copy Data from One Measure to Another

In a Supply Chain Planning table, you can update the value of one measure by using values from another measure. In several cases, a measure can have other related measures that enable you to override the value of a base measure. For example, Sales Forecast is one of those measures:

- Sales Forecast: Base measure.
- Adjusted Sales Forecast: You can override what's in Sales Forecast.
- Final Sales Forecast: The planning process takes the Adjusted Sales Forecast, if there is one, or uses the Sales Forecast. The planning process uses the Final Sales Forecast, which takes into account any manual adjustments that you made.

You can specify the data source whose values you want to copy to the selected range of cells in the target measure. Using a table containing the three measures listed in our previous example, select a range of cells associated with the Adjusted Sales Forecast measure, click Actions and then select Edit. In the Edit Measures dialog box, use the Sales Forecast measure as the source measure for Adjusted Sales Forecast and increase it by 10 percent. If your Sales Forecast is 200, then Adjusted Sales Forecast now reflects 220.

For a measure to appear in the list of values for Source Measure in the Edit Measures dialog box, the measure must be included in the table. The measure must also conform to the same dimensions as the measure you're editing.

When editing a measure's value at an aggregate level, the value is allocated down to the lowest level. For example, when editing weekly data, the value will be allocated down to the day.

You can also edit multiple measures at a time; however, you can't have circular references. In the following example, Measure3 is used as a source measure for Measure1. But, Measure3 is also being edited at the same time to increase the measure by 10 percent.

Measure	Source Measure	Action	Value
Measure1	Measure3	Increase by percentage	10
Measure2	Measure2	Increase by percentage	10
Measure3	Measure3	Increase by percentage	10

In this scenario, the planning engine won't know which value of the source measure to use: the original Measure3 value, or the value of Measure3 after increasing it by 10 percent. To avoid circular references, you must handle these edits separately.

Related Topics

- Configure Units for a Measure
- Configure Currencies for a Measure
- Configure Conditional Formatting for a Measure
- Configure Color by Measure to Display in Graphs

Import Measure Data Into a Planning Table

When working with large volumes of data, you can export data from a planning pivot table to Microsoft Excel.

After you export the data, you can edit and make adjustments to any planning measure in the spreadsheet. When you're done making changes offline in the spreadsheet, you can then import the updated planning data back into the same table. To initiate the Upload Planning Table Data scheduled process, click the **Import** icon on the toolbar in the opened table and then select the spreadsheet.

The spreadsheet that you import must have the same structure and format as the planning table. The imported spreadsheet can be at any level of aggregation, as long as the levels match all of the levels displayed in the table. After you select the file to import, the Upload Planning Table Data scheduled process updates the table in the background in batch mode. While the import process uploads data in the background, you can work on other supply chain planning tasks. When the upload process completes, the **Import** icon in the table displays a green check mark for the planner who uploaded the data.

> **Note:** To see the uploaded data in your planning table, refresh the table after the Upload Planning Table Data scheduled process completes.

Importing data into planning tables is available for all pivot tables in Supply Planning, Sales and Operations Planning, Demand Management, Replenishment Planning, and Planning Central. Importing data isn't available for non-pivot views like standard grids or other views such as the Build Plan table.

Tips for Importing Measure Data

Here are some tips to successfully import data from a spreadsheet into a planning table:

- The imported file must be a Microsoft Excel file with the .xlsx file extension.
- The import process only updates editable measures.
- The imported file must have the exact same format at the planning table. This includes the following:
    - The uploaded file and the target table must contain the same number of rows and columns.
    - The levels specified in the spreadsheet must match. The level names, such as Item or Organization, don't have to appear as the header columns, but the columns and rows that represent the level must match.
    - The members in each of the level rows and columns must be identical and in the same order. No member can be omitted and new members can't be added.
    - The measures column must have the same measures as the planning table for all combinations.
- The imported file must have the exact member combinations and their order listed in the column and row headers of the table. All member names, such as item names and time periods, must be present in the same order in the file being imported even if there are no updates for those combinations. Typically, you can achieve the required order by exporting the table, making the edits offline, and then using the same file for import.
- All date values must be in the correct date format.
- If you update data directly in a table when the update process is still in progress, your updates can be overwritten if they're for the same combination and measure.

- If multiple users import files into the same table, the import process that finishes last overrides the others. For planning tables that need frequent updates by multiple users, Oracle recommends that you create different tables with appropriate filters.

Additional Information about the Import Process

Here's some additional information about importing data into planning tables:

- Tables with page filters aren't enabled for import. To use the table for import, remove the page filter or use member filters in the table configuration. Filters specified as member filters in the table configuration are respected.
- The import process evaluates and imports only the first worksheet in the workbook. If the workbook contains other worksheets, the import process ignores them.
- The worksheet can contain native Excel comments and conditional formatting. The import process ignores these comments and conditional formatting.
- If a cell has a formula based on another cell, the import process evaluates the formula and uses the result. The other cell can be in the same worksheet or a different worksheet in the same workbook.
- The import process uses the data security rules assigned to the planner doing the import.

Configure Units for a Measure

You can view a measure in several units of measure (UOM) and currencies side by side without needing separate measures. By converting a single measure into various values and currencies, you get superior data consistency and don't require recalculation and data synchronization.

In addition, sometimes different products and organizations have data that's loaded externally using different units of measure. For example, vitamins sold in Europe may be shipped in bottles, while in Asia the quantities are by pill count. By defining units, you enable these values to be converted into a cohesive value, which can be aggregated in a seamless manner.

To configure units for a measure:

1. In a Supply Chain Planning work area, click the **Tasks** panel tab.
2. In the **Tasks** panel, click **Manage Planning Measures**.
3. Locate the measure for which you want to configure units and click **Edit**.
4. On the **Advanced** tab, select the **Properties** tab.
5. Select **UOM** from the list as the default value for the **Base Units of Measure**.
   The base units of measure define the default unit of measure to which displayed data is converted. It is editable only for numeric measures, which don't have product and organization-based levels. For measures that have product and organization, the definition comes from the data source. When using the measure, you must attempt to select only the relevant UOM entries for the measure to streamline the user process.
6. Select the relevant units of measure from the **Display Unit of Measure**.
   You completed defining the unit of measure. You can view the measure using a specific table or graph.

Note: To show the same measure with different unit of measures, you can create a copy from the original measure. Rename the duplicated measure to use another unit of measure of your choice. You can show the same measure as both numbers and currencies.

To override the default unit of measure:

1. Open a table and select **View**, **Format Measures** to find the measure.
2. Click the measure you want to modify and select the value from the **Unit of Measure** list.
3. Click **Save and Close**.

Related Topics

- How You Manage Planning Measures

Configure Currencies for a Measure

You can view a measure in several units of measure and currencies side by side without having separate measures. By converting a single measure into various values and currencies, you get superior data consistency and don't require recalculation and data synchronization.

To configure currencies for a measure:

1. In a Supply Chain Planning work area, click the **Tasks** panel tab.
2. In the Tasks panel, click the **Manage Planning Measures** link.
3. Locate the measure for which you want to configure currencies and click **Edit**.
4. On the **Advanced** tab, select the **Properties** tab.
5. Select **Currency** from the list as the default value for the **Base Currency**.

   The base currency defines the default currency to which displayed data is converted and is editable only for currency type measures.
6. Select the relevant currencies from the Display Currency.

   You completed defining the currencies for a measure. You can view the measure using a specific table or graph. The currency value is editable only if the measure type is Currency. For numeric measures, you can change the type from Number to Currency. Select the currency that you want to use in this instance of the measure.

> **Note:** To show the same measure with different currencies, you can create a copy from the original measure. Rename the duplicated measure to use another unit of measure of your choice. You can show the same measure as both numbers and currencies.

To override the default currency:

1. Open a table and select **View**, **Format Measures** to find the measure.
2. Click the measure you want to modify and select the value from the **Currency** list.
3. Click **Save and Close**.

Related Topics

- How You Manage Planning Measures

Configure Conditional Formatting for a Measure

Use conditional formatting to change the background color of a cell when a specific condition occurs.

Conditional formatting is useful to draw the attention of the user for information that requires action. You define conditions for an individual measure. A measure can have one or more formats applied. The condition is evaluated at the table level using the configured units and currencies. Two tables with different units of measure or currencies defined can have different cells trigger the conditional formats.

To configure global conditions:

1. In a Supply Chain Planning work area, click the **Tasks** panel tab.
2. In the Tasks panel, click the **Manage Planning Measures** link.
3. Locate the measure for which you want to apply conditions and click **Edit**.
4. On the **Advanced** tab, select the **Conditional Formatting** tab.
5. Click the **+** icon to add a row and complete the information.

Field Name	Description
Measure	Locate the measure you want to use to evaluate. Conditional format for a measure can be based on another measure.
Condition	Compares the selected measure to a value or another measure
Compare to Measure	Measure to which the selected measure is compared
Value	When the **Compare to Measure** is empty, this value is used to compare the selected measure
Color	Defines the color for the cell background when the condition is met

6. Click **Save and Close**.

To configure local overrides to conditions:

1. Open a table and select **View**, **Format Measures**.
2. Locate the measure that you want to modify and then select the **Use Override Conditional Formatting** check box.
3. The Conditional Formatting section appears. Select a new conditional format to use in your table.
4. For only the Build Plan table accessed through a Supply Planning work area, the Conditional Formatting section also includes the **Apply** and **Name** columns.

   In the **Apply** column, select whether you want the conditional formatting to be highlighted in your Build Plan table all the time or only when you select it from the Highlight Exceptions drop-down list.

   For example, if you set up a conditional format named Resource Overload and select **When selected**, Resource Overload appears in the Highlight Exceptions drop-down list in your Build Plan.
5. Click **Save and Close**.

Related Topics

- How You Manage Planning Measures

View the Audit Trail for a Measure

Use the Audit Trail of Measure Updates table to view the audit trail for a measure.

The table displays details of changes made to measure values for auditing purposes. You can view the audit trail for all measure types, such as numeric, date, and string.

The Audit Trail of Measure Updates table is available for Demand Plan, Supply Plan, Demand and Supply Plan, and Sales and Operations Plan types. You can access the audit trail from your respective Supply Chain Planning work area.

Only editable measures that are part of the plan's measure catalog appear in the Audit Trail of Measure Updates table.

> **Note:** Only the user who updated the measure can view the previous value and new value in the audit row. Other users, who have permissions to view the audit trail, must open the Audit Trail Details page to view the details.

The security permissions are set according to the job roles on a measure group or on a specific hierarchies, such as Item, Organization, Customer or Supplier. For additional details, open the Administer Planning Security page from the task drawer of the Plan Inputs work area.

Use the following steps to view the audit trail for a measure:

1. From a Supply Chain Planning work area, click the **Open** button and then select a pane.
2. In the Open Table, Graph, or Tile Set dialog box, search for the Audit Trail of Measure Updates table. Select the table and then click **OK**.
3. On the Audit Trail of Measure Updates tab, type a specific measure name and click **Search**.

   You can click the Search button without typing any search criteria to display all the measures that have the audit trails.
4. In the Search Results region, you can view the audit trails for a measure, which includes the following information:
   - Measure Name: Name of the measure on which the updates were made.
   - Last Updated Date: Date and time when updates were made to the measure.
   - Updated By: Name of the user who made the updates.
   - Previous Value: Previous value for the measure.
   - New Value: New value for the measure.
   - Details: When you click **Details**, the Audit Trail Details page opens. You can review additional details, such as levels, members, filtered levels, and filtered members.

Guidelines for Setting the Calculation Order

How you set the calculation order for a measure affects its computation of data.

On the Aggregation and Disaggregation tab on the Create Measure page, in Aggregation Parameters, you can select **Calculate then aggregate** or **Aggregate then calculate** in the **Calculation Order** field. If you make an incorrect selection in this field, the measure value won't be correct.

Note these guidelines for setting the calculation order of the measure:

- When the measure's calculation order is Calculate then aggregate, all dependent measures must also use the same order.

  Dependent measures are all the measures (and their dependent measures, in turn) that are used in the main measure's expression.
- On the Expression tab, your selection of the calculation order along with your use of the Lag and Lead functions can affect the calculation of data.

  The Lag and Lead functions have two parameters. The first parameter contains the measure the function is applied to. The second parameter contains the number of time buckets.

  When you use the Calculate then aggregate order, the second parameter is interpreted as being in days. For example, Lag(Bookings History Average, 10) returns the value of the Bookings History Average measure from 10 days prior to the time period of the table cell.

  When you use the Aggregate then calculate order, the second parameter is interpreted as being in the time level that the measure data is displayed at in the table. For example, in a table that displays monthly time buckets, Lead(Consensus Forecast MAD, 6) returns the value of the Consensus Forecast MAD measure 6 months after the month of the table cell.

  If you've configured the table so that time buckets can be expanded or collapsed, then the time buckets can be interpreted at different levels. For example, if you've configured the table to display both quarterly and monthly time buckets and can expand a quarter to see the underlying months, Lag(Shipments History, 2) returns the value of the Shipments History measure from 2 quarters prior to the cell being reviewed if the quarters are collapsed or 2 months prior to the cell being reviewed if the quarters are expanded.

Manage User-Defined Measures

Create Measures and Assign to a Measure Catalog

In addition to reviewing measures, you use the Manage Planning Measure task to create, edit, duplicate, and delete measures. You can also create measure groups and add predefined and user-defined measures in them.

This topic discusses the following:

- Creating measures
- Assigning measures to a measure catalog

Create Measures

If you have the required privileges, you can create measures if the predefined ones don't meet your requirements. The measures that you create have the same features and functionality as predefined measures.

To create a measure:

1. In a Supply Chain Planning work area link, click the **Tasks** panel tab.

   You can create measures from one of the following work areas: Demand Management, Replenishment Planning, Supply Planning, Sales and Operations Planning, Demand and Supply Planning, or Plan Inputs.
2. In the Tasks panel, click the **Manage Planning Measures** link.
3. Click **Create** from the Actions menu.
   a. On the Create Measure page, enter a measure name and description.
   b. Select a measure group.
   c. Select a data type.
   d. Select the **Allow editing** check box if you want the measure to be editable in a pivot table.
   e. Select **Edit Range** to enable the Edit Lock tab, which controls the editable status of the measure

      The Edit Range value determines the time range over which the measure is editable. The available values are: History, Future, History and Future.
   f. On the Aggregation and Disaggregation tab, define the dimension parameters. Select the dimensions, hierarchy, and hierarchy level within the dimension to store the measure data. When a dimension and hierarchy are selected, the default setting for the Stored Level is the lowest level of the dimension's hierarchy. You can modify the level to store by selecting the hierarchy from the list and setting the stored level parameter within that hierarchy.

      - Aggregation Parameters: The Aggregation parameters control the way a measure's data is aggregated. You have two options:
        - Calculate and aggregate: Calculate and Aggregate calculates the measure's expression at the lowest data level and then aggregate up.
        - Aggregate then calculate: Aggregate and Calculate aggregates all measures referenced in this measure's expression and then calculate the expression.

      In the Time Dimension field, select the aggregation function that controls how data is aggregated for the time dimension. The Other Dimensions fields are the same as the Time dimension fields. These options control how the data is aggregated across all the dimensions except for time. The Weighted By field is enabled only if you select Weighted Average as the aggregation parameter for either Time or Other Dimensions. It enables you to select the measure to drive the weighted average calculation.

      The aggregation types include: Sum, Average, Weighted Average, Minimum, Maximum, Count, Latest, Median, Variance, and Standard Deviation.
      - Disaggregation Parameters: The Disaggregation Parameters control how changes to the data at an aggregated level are allocated down for storage. This is used when data changes are made in a pivot table, but also when made by the demand forecast. The weights for each combination, such as item-organization, are calculated and stored for the measure during plan run. These weights are used to allocate the data. For example, the forecasts for P1-Org1 and P2-Org1 are 40 and 60 respectively. Therefore, the weights used for allocation would be 40% for P1-Org1 and 60% for P2-Org1.

        The parameters for the Disaggregation Type field are: By Measure, By Self, Equal, and Same Value. The default parameter is Equal.

        The Disaggregation Basis field is enabled only if you select the Disaggregation Type as By Measure. Select the measure to use as the disaggregation basis from the list of measures.

The Secondary Basis field is enabled only if you have selected the Disaggregation Type field as By Measure or By Self. The values for Secondary Basis are Booking History Average or Shipment History Average.

The Secondary Basis measure is selected in case the basis measure has no value. You can select only measures that contain pre-calculated proportions as a secondary basis. That is, they're calculated during plan run.

g. On the Expression tab, define any new expressions for a measure. You create an expression when you have to show any value other than its stored information. The expression provides a flexible framework for an extensive variety of calculations and information. An expression for a measure references other measures, operators, and numbers.

   For example, to create a user defined measure that shows archived time periods, you need to use an archive expression. See the *View Planning Measures from Archived Time Periods* topic to learn more.

   In the Expressions subtabs:

   - The Functions tab lists the available functions, a description, an example of the function's use.
   - The Measures tab lists the available measures, their descriptions, and data type. The Insert button inserts the highlighted measure into the expression building area where functions or arithmetic operations can be specified.
   - The Attribute tab lists the attributes available for the Product dimension at Item level. The description and data type of the attribute is shown in the description pane.

   After you complete the expression, use the Validate button to ensure the syntax is correct. An error or succeeded messaged is displayed.

h. On the Edit Lock tab, you can define a new expression similar to the measure expression. The difference is rather than evaluating and displaying the expression result, the expression result is used to control or refine the editable status of the measure. If the expression evaluates as true, the measure is locked from editing. The expression is evaluated every time the table is run, and may change as relevant measures or attributes are modified.

i. On the Advanced tab, click the **Properties** tab and review the following parameters:

   - If you select the **Shared measure** check box, then the measure is shared across plans. By default, the parameter isn't selected, and the measure is plan-specific.

     > **Note:** You can share measures across only demand plans with the day planning time level or across demand and supply plans. In such plans, shared measures are common, and the entries you make in one plan apply to other plans. For plans of other types, even if you select the check box, the measures are plan-specific.

   - If you select the **Refresh with current data** check box, then the current measure value needs a placeholder to store the result in the application. For example, a noneditable measure where the data is imported from a legacy or other application. Selecting this check box allocates a space to store the measure by the defined dimensions.
   - Conversion Type enables you to define the valid Unit of Measure (UOM) and Currency conversions that are available for a measure in a table.

     Base Units of Measure defines the default unit of measure used to convert displayed data. The field is editable only for Numeric measures, which don't have Product and Organization-based levels (for measures that have product and organization, the definition comes from the data source).

Select any relevant units of measure, which may be useful in a table, graph, or tile. Only the UOMs that you select are available for selection in a table or graph.

Base currency defines the default currency to which displayed data are converted. The field is editable for only Currency type measures.

You use Price lists to convert quantities into values, which are then converted to a currency.

- **Data Lookup** value enables you to identify a data lookup source that displays the measure as a list of value. The source attributes have 3 options: None (Default), Level, and List.
    - If Source=Level, you must identify the level and the attribute to display in the measure list.
    - If Source=List, then you can create and maintain the list of values. You can either add or remove members in this list.

j. On the Advanced tab, click the **Goals** tab to define if low or high values are better for measure goals.
k. On the Advanced tab, click the **Conditional Formatting** tab to define conditional formatting settings for the measure.

4. Click **Save and Close**.

Assign Measures to a Measure Catalog

To use the user-defined measure in your plan, add the new measure to the plan's measure catalog. Navigate to Configure Planning Analytics, find the plan's measure catalog on the Measures Catalog tab. In the Available Measures pane, search for the new user-defined measure, and add it to the Selected Measures. After you perform a plan run you can create a table or use an existing table, and add your new measure to the table.

Related Topics

- Configure Global Goals for Measures
- Duplicate, Edit, and Delete Measures
- Create Measure Groups

Duplicate, Edit, and Delete Measures

You can duplicate, edit, or delete user-defined measures using the Manage Planning Measures task, which is available in the Tasks drawer.

To duplicate the measure: Select a measure from the list of measures, select the **Action** menu on the toolbar, and then click **Duplicate**. Duplicating the existing measure gives you a starting point for creating a new measure definition. When you duplicate a measure the default name is Copy of <original measure name>. Other definitions of the duplicated measure remain the same as the original measure.

To edit the measure: Select a measure from the list of measures, select **Actions** menu, and then click **Edit**. Editing a measure enables you to select an existing measure and edit its attributes.

To delete the measure: Select a measure from the list of measures, select **Actions** menu, and then **Delete**. A complete list of all objects including tables and measure groups are be displayed to ensure you are aware of impacts of deleting a measure.

Related Topics

- Create Measure Groups
- Configure Global Goals for Measures

Create Measure Groups

Use Manage Planning Measures task to create a measure group. Measure groups are created to group measures together that you need frequently. Depending on your business need you can create measure groups and associate measures with appropriate groups.

To create a measure group:

1. In the Navigator, click a Supply Chain Planning work area link.
2. Click the Tasks panel tab.
3. In the Tasks panel drawer, select the **Manage Planning Measures** link.
4. Select **Create Group** from the **Actions** menu.
    - Enter a name and description.
    - From the Available Measures pane you can select measures and move them to the Selected Measures pane.
5. Click **Save and Close**.

Related Topics

- Create Measures and Assign to a Measure Catalog
- Duplicate, Edit, and Delete Measures

Configure Global Goals for Measures

You can define global goals for a measure using the Goals tab when you create or edit a measure. On the Create Measure page, click the Advanced tab and then select the Goals tab to configure global goals.

Define if low or high values are better. For example, a high value is good for revenue; a low value is good for expenses.

For global goals, you can provide a low range or a high range.

Goals option is available only for measures of type Currency, Number, and Percent. Using Global Goals, you can first define if low or high values are better for a measure. The ranges are displayed on the page when you are viewing a measure in comparison with its goal, for example, in an infotile. Global goals are measure level parameters and are not defined specifically for a subset of the data. For example, you cannot have a goal of 1000 for one organization and 50000 for another.

Related Topics

- Create Measures and Assign to a Measure Catalog
- Duplicate, Edit, and Delete Measures

View Planning Measures for Archived Time Periods

For certain planning measures such as net forecast, planners find it useful to see the past data, compare it with the trending data, and predict the estimates for the future. When older plans are archived, the past data of the planning measures from the archived time periods can be retrieved and shown in a plan. The planners can use it for estimating the future trend.

To let your planners see the planning measures for the archived time periods for a plan, you need to:

1. Create user-defined measures for an archived time period.
2. Set a past duration within the archived period for your supply plan.
3. Show the measures from the past duration in your plan table.

Create a User-Defined Measure for an Archived Time Period

When you create a user-defined measure for an archived time period, you need to add an archive expression in the Expressions tab. See the *Create Measures and Assign to a Measure Catalog* topic in the Using Supply Planning guide to learn how to create user-defined measures.

Here's a sample archive expression that you can use when creating user-defined measures for archived data:

```
Archive (measure name, version number, Version,
 Adhoc)
```

Let's say you're creating measures for net forecast, planned orders, and sales orders. The example archive expressions for the measures are:

- Archive (Net Forecast,1,"Version","Ad hoc")
- Archive (Planned Orders,1,"Version","Ad hoc")
- Archive (Sales Orders,1,"Version","Ad hoc")

After you create the measures, add them to your plan's measure catalog. See the *Create Measures and Assign to a Measure Catalog* topic in the Using Supply Planning guide to learn how to assign measures to a catalog.

Set a Duration Within the Archived Period for a Supply Plan

In your supply plan, you need to set the duration in days within the archived period to see the archived measures. Here's how you set it:

1. Go to **Actions** and select **Edit Plan Options**.
2. On the Supply tab, Click **Select Advanced Options**.
3. On the General tab, below General Parameters, enter the number of days for the **Days in the Past for Measure Display** field.
4. Click **Done**.

Show the Measures from Past Days on the Plan Table

Till now, you have created user-defined measures with an archived expression and added them to a plan's measure catalog. You have determined the duration within the archived period for which you want to show your measures.

Next, you need to show the measures in a plan table. See the *Overview of Tables Graphs Analysis Sets Tiles and Tile Sets* topic in the Using Supply Planning guide to learn more.

After you have enabled displaying the measures in a plan table, change the view settings to see the past days. This setting is especially for the archived measures. Here's how you do that:

1. Open a plan and create a plan table or use an existing one.
2. Select the archived measures that you want to show in the table.
3. On the Table view, Click **View**, and select the **Show Past Days** check box. The table shows measures for the selected duration within the archived time periods of the plan.

Related Topics

- Create Measures and Assign to a Measure Catalog

6 Planning Data Collections

Overview of Data Collections for Supply Chain Planning

To run plans from one of the Supply Chain Planning work areas, you must collect data into a planning data repository. Order promising and order management processes also use the planning data repository to promise and manage orders.

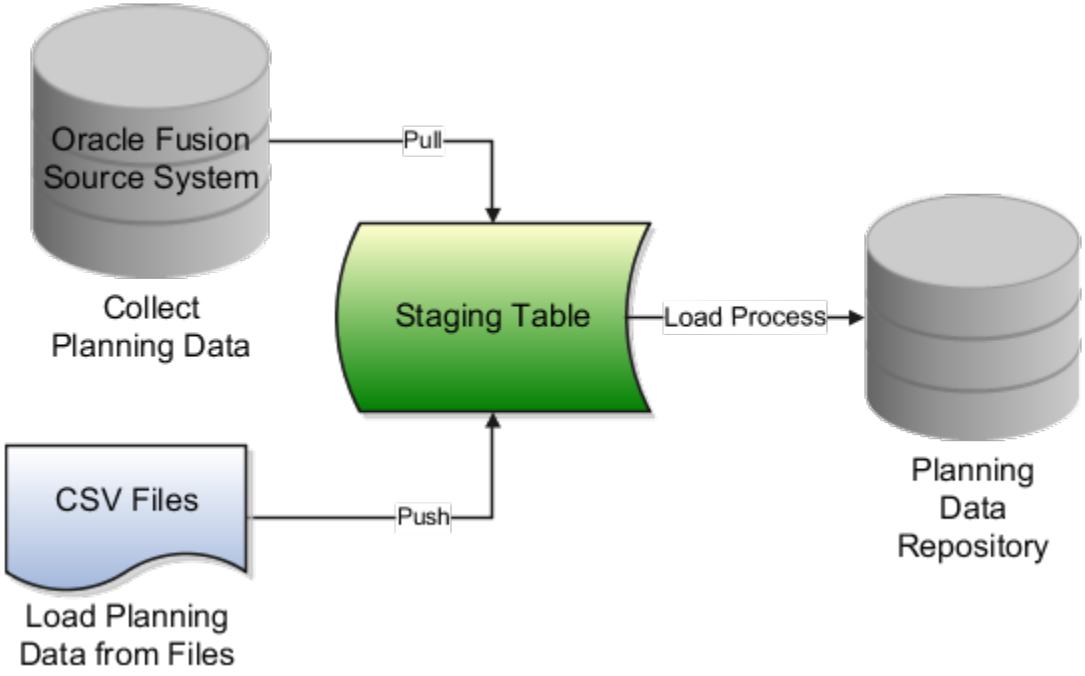
To collect data into the planning data repository, you can perform these tasks from one of the Supply Chain Planning work areas:

- Collect Planning Data: Use this task when you collect data from the Oracle Fusion source system.
- Load Planning Data from Files: Use this task when you collect data from a completely external source system.

Depending on your security privileges, you may need to manually add these tasks. In the Setup and Maintenance work area, use the following:

- Offering: Supply Chain Planning
- Functional Area: Supply Chain Planning Configuration
- Task: Collect Planning Data

The following figure illustrates the collections processes that you can use to populate the planning data repository.



Collect Planning Data

There are two steps involved in the data collection process. The Collect Planning Data process first pulls data from the Oracle Fusion source system into staging tables. The process then loads data from the staging tables into the planning data repository.

On the Collect Planning Data page, use the following tabs to select what data you want to collect:

- Reference Data
- Demand Planning Data
- Supply Planning Data

Most of the reference data are global entities. Global entities are common for all source systems. For example, Units of Measure (UOM) is common for all source systems. The supply planning and demand planning data are transactional data. Most of the transactional data are local entities. Local entities are specific to each source system. For example, On-hand Quantity is specific for each source system.

You can also select collection filters to further refine what data you want to collect. You can save your selections to collection templates.

Load Planning Data from Files

Use this option to populate the planning data repository using CSV files:

To load the planning data from files, follow these steps:

1. Create the CSV files. To create the CSV files, you can use a predefined set of Microsoft Excel files as import templates.
2. Import the CSV files. From the navigator, click **File Import and Export**, and create a new import. Specify scm/planningDataLoader/Import for the account.
3. Submit the Load Planning Data from Files process. When you submit the process, the process first pushes the data from the CSV files into the staging tables. The process then loads the data from the staging tables into the planning data repository.

Related Topics

- How do I update existing setup data?

Global Entities

Within data collections, Oracle Fusion Cloud Supply Chain Planning refers to certain business entities as global entities.

Global entities are specific for each instance and are common for all source systems. They are common without regard to whether they are collected from the Oracle Fusion source system or collected from an external source system using the file-based data import (FBDI) method.

When collecting data for a global entity, the planning data repository stores only one record for each instance of the global entity. The data collections process removes the source system reference from the global entity and stores the data in the data repository. If the data collections process collects the same instance of a global entity from more than one source system, the data repository stores the value from the last collection.

For example, the following scenario describes the collection method of the global entity called units of measure (UOM) from three source systems, namely source system A, B, and C respectively.

- Source system A has an instance of UOM. During the collection of UOMs from source system A, the kilogram UOM is collected. This is the first time the kilogram UOM is collected. The data collections process creates a kilogram record in the data repository.
- Source system B does not have any instances of UOM. During the collection of UOMs from source system B, the data collections process does not collect the kilogram value. Since there was no record for the kilogram UOM in source system B, the data collections process does not change the kilogram record in the data repository. The record of the kilogram value from source system A is still valid.
- Source system C has an instance of UOM. During the collection of UOMs from source system C, the kilogram UOM is again collected. The data collections process registers the kilogram record in the data repository to match the values from source system C.

Note: When you use the FBDI collection method, the global entity files require a source system. The collections framework validates that the source system matches each record's source system. A source system identifier marks each data record.

In Supply Chain Planning, the following entities are classified as global entities:

- Order Orchestration Reference Objects
- Units of Measure and UOM Conversions
- Demand Classes
- Currency and Currency Conversion Class
- Shipping Methods (Carrier, Mode of Transport, Service Level)
- Customer and Customer Site
- Suppliers and Supplier Sites
- Regions and Zones
- Approved Supplier List
- Supplier Capacity
- Planners

Data Collection Types for Supply Chain Planning

When you collect planning data, one of the parameters you specify for the Collect Planning Data task is the Collection Type parameter.

You can select this task from any of your Supply Chain Planning work areas. For the Collection Type parameter, you can select one of the following values:

- *Targeted*: Choose the Targeted collection type when you want to collect a significant volume of source system data. Typically, you use the Targeted collection type in scenarios such as bulk upload of transaction data, instance upgrade, and change in collection filters.
- *Net change*: Choose the Net change collection type when you want to collect changed data and new records since the last successful collection cycle.

- *Automatic selection*: Choose the Automatic collection type when you want the planning process to decide and automatically select an appropriate collection type for each of the entities.

Targeted

You use the Targeted collection type when you want to perform a complete refresh of the data in the data repository. In this mode, the planning process deletes the existing data for the selected entities from the data repository. Next, if subsequently collected from the source, the data for the selected entities replaces the deleted data.

Note: For the following data collection entities, you can use only the Targeted collection type: Item Costs, Resource Availability, Fiscal Calendars, and all Shipment and Booking History data.

Net change

When you use the Net Change collection type, you collect data incrementally. The Net Change collection type collects only changed or new data. Collecting data using the Net Change collection type is usually faster than using the Targeted collection type. You typically use the Net Change collection type when you have previously performed a Targeted collection, and now you want to keep your planning data current with your execution system data. You cannot select the demand planning data when the collection type is Net Change.

Automatic selection

You use the Automatic collection type when you are not sure which collection type to select and you want the planning process to decide the collection type for each entity. The planning process evaluates each entity on multiple factors, such as the last collected date for an entity, and decides whether to perform a Targeted or a Net Change collection for the entity. You can manually select the entities that you want to collect or you can use one of the predefined templates to select your entities. If you select one of the predefined templates, you can't make any changes in the Reference Data, Demand Planning Data, and Supply Planning Data tabs.

Manage Planning Source Systems for Data Collections

To populate the planning data repository, also known as the order orchestration and planning data repository, you collect data from the Oracle Fusion source system.

On the Manage Planning Source Systems page in one of the Supply Chain Planning work areas, enable organizations for collections. Depending on your security privilege, you can also enable organizations from the Setup and Maintenance work area.

Go to the Setup and Maintenance work area, then go to the task:

- Offering: Supply Chain Planning
- Functional Area: Supply Chain Planning Configuration
- Task: Manage Planning Source Systems

The Oracle Fusion Source System

The Oracle Fusion source system is included as a source system for data collection. Supply chain planning, order orchestration, and order promising processes use data that are stored in the planning data repository. You ensure the Collections Allowed check box is enabled and manage which organizations you enable for collections.

To open the Manage Trading Community Source Systems page, navigate to the Setup and Maintenance work area and use the following:

- Offering: Supply Chain Planning
- Functional Area: Supply Chain Planning Configuration
- Task: Manage Trading Community Source System

External Source Systems

You can also allow collections for external source systems if you will be loading planning data from files for Oracle Fusion Global Order Promising. You must first define the external source system on the Manage Trading Community Source Systems.

There are two types of external source systems: Others and External.

Version External

The version External source system indicates that the source system is not connected to any other Oracle Fusion Cloud Applications Suite. This source system is not integrated with the Product Information Management work area, Oracle Trading Community Model, and Oracle Order Management. The external source system is also referred as a completely external source system. You cannot enable any other source system settings that are related to other Oracle Fusion applications. You can select the Collections allowed check box now or later depending on when you want to start collecting data. This enables the source system for data collections using the file-based import process.

Version Others

The version Others source system indicates that the source system is connected to other Oracle Fusion Applications Suite. This source system is integrated for the Product Information Management work area, Oracle Trading Community Model, and Oracle Fusion Cloud Order Management. The following conditions are applicable when the external source is Others.

- External system data for Items, Item Structures, and Catalogs is uploaded to the Product Information Management work area
- External system data for Customers, Customer Sites, Regions and Zones is uploaded to Oracle Oracle Trading Community Model
- External system data for Sales Orders is uploaded to Oracle Fusion Cloud Order Management

For more information on types of data that can be collected for each source system, see the Import Templates Used to Create CSV Files for Supply Chain Planning topic.

Organizations Enabled for Data Collections

The process for enabling organizations varies depending on the version of the source system.

To enable organizations for data collections when the source system version is **Oracle Fusion**, perform the following steps:

1. Click the Manage Organization List button for your Oracle Fusion source system.
2. Click the Refresh Organization List button to update the organizations list.

   When adding organizations to the Oracle Fusion source system to be collected into planning, you must click the **Refresh Organization List** button and then enable the organizations for collections.

3. Select the Enable for Collections check box for the organizations from which you want to collect data.

Tip: When performing collections during your initial setup, collect order orchestration reference objects from the predefined Oracle Fusion source system, and consider collecting organizations. After enabling organizations for collection, collect organizations first. You can confirm the collection results on the Supply Network Model page.

To enable organizations for data collections when the source system version is **External** (completely external source system), upload organizations using the file-based import process. The organizations are automatically enabled for collections.

To enable organizations for data collections when the source system version is **Others**, perform the following steps:

1. Define an organization as an item-organization in the product data model.
2. Upload the organization using the file-based import process and associate the organization with **Others** source system.

Related Topics

- Import Templates Used to Create CSV Files for Supply Chain Planning
- Considerations for Enabling Organizations for Data Collections
- Define Flexfield Mappings

How the Order Orchestration and Order Promising Processes Use the Collected Planning Data

You perform data collections to populate the planning data repository. In addition to being used by Supply Chain Planning processes, the collected data is used by Oracle Order Management order orchestration processes and by Oracle Global Order Promising processes.

Data Collections

You must perform data collections to populate the planning data repository, also called the order orchestration and planning data repository, with data from the Oracle source system or from a completely external source system. When you load data from an external source system, use the XLSM files to organize your data in the required format and then convert the data into CSV files. You can then upload the CSV files to the planning data repository.

Order Orchestration

Order orchestration processes use some reference data directly from the planning data repository. You must perform data collections for the order orchestration reference entities even if you are not using the Supply Chain Planning work areas.

Note: Before collecting data from your Oracle source system, you must define at least one organization for the source system. After you have set up at least one organization, you must update the organization list on the Manage Planning Source Systems page and then enable at least one of the organizations for collections. If you have not enabled any organization, then the collections process ends with an error.

Order Promising

The Global Order Promising processes use an in-memory copy of the data from the planning data repository. When order orchestration processes send a scheduling request or a check availability request to Oracle Global Order Promising, the order promising processes use the data stored in main memory to determine the response to send back to order orchestration. You must refresh the Global Order Promising data store after every collections so that the main memory always reflect the current.

Related Topics

- Collect Data for Global Order Promising

How You Enable Cross-References of Entities by Data Collections

Cross-references enable you to locate the correct source value for each cross-referenced entity. When you enable entities for cross-referencing, data collection pays attention to the cross-references that you have set up for certain values.

To enable cross-referencing of entities, click the Manage Planning Data Collection Processes task from your supply chain planning work area. Select the source system from the list, and then enable the available entities that you want to cross-reference during data collections.

You can view the cross-referenced data for each entity on the Cross-Reference Relationships for Collected Data page in the Plan Inputs work area.

How Planning Processes Collect Different Work Definitions and Item Structures

You may be concerned that the work definition and item structure data in your supply chain planning work area does not match with what was defined in Oracle Manufacturing.

You may be concerned that the work definition and item structure data in your supply chain planning work area does not match with what was defined in Oracle Fusion Cloud Manufacturing.

You don't need to worry. The planning application collects and uses data based on how the work definitions and item structures are defined and associated in the manufacturing source system.

Work Definitions and Item Structures in the Source System

The work definition is a primary source of data for the planning application. The planning process uses the work definition of make order items to determine component and resource requirements. In case the work definition is not defined, the planning process uses the defined item structure, but to plan for components only. If a work definition is defined and no item structure is associated to it, then you can manually add ad hoc components to it. If an item structure is associated to it, you can still add ad hoc components to the work definition, alongside the components in

the item structure. Remember that while a work definition can be associated with only one item structure, one item structure can be associated with several work definitions within the parent item.

Work Definitions and Item Structures in the Planning Data Repository

In the manufacturing source system, the work definitions and item structures for an item can be defined and associated in different ways. The following table lists the most common source system combinations and how the collections and run plan processes proceed accordingly:

Oracle Manufacturing Definition	Item Structure Name and Work Definition Name in the Planning Data Repository	Planning Collections Processes
Only item structure is defined for an item. No work definition is defined.	Item structure name exists, no work definition name	The planning process collects the item structure information but does not collect information for routing, operations, or item resources. The planning process uses item structure to plan components and does not plan resources.
Only work definition is defined for an item. No item structure is defined.	Work definition name exists, no item structure name	The planning process collects the work definition information to populate the item structure and routing information. The planning process populates the component information and operation sequence number in the item structure based on the ad hoc components and operation assignment available in the work definition. The planning process uses the work definition information to plan both components and resources.
Both item structure and work definition are defined for the item.	Both work definition name and item structure name exist	The planning process uses the components that are associated with the work definition to plan. The planning process does not consider any components of item structure that are not associated with the work definition. You can override the item structure component usage within the work definition. The planning process collects component attributes (such as component effectivity) from the item structure if the components are associated with the work definition. The planning process uses the work definition to plan resources.
Both item structure and work definition are defined for the item, but the work definition does not refer to the item structure. Ad hoc components are assigned to the work definition operations.	Work definition name exists, no item structure name	The planning process collects the components from the work definition and not from the item structure in the Oracle Fusion Product Information Management solution. The process plans components based on work definition operation assignments and plans resources based on the work definition.

Enable External Data Collection for the Oracle Fusion Source System

Enable external data collection if you want to load transactional data from external systems. Typically, you do this if some of your supply chain processes are managed in external applications. You load the transactional data from these applications using file-based data imports (FBDI).

You can use external data sources for these functional areas: Inventory and Materials Management, Procurement, Order Management, and Manufacturing. When you enable external data collection for a functional area, be aware of these restrictions:

- You can't use configure-to-order, drop shipment, and back-to-back fulfillment.
- The entities associated with the functional area are no longer available for Oracle Fusion source collection. For example, if you enable Order Management, the Sales Orders entity won't be available on the Collect Planning Data page for you to select for Oracle Fusion source collection.

This table lists the entities for each functional area.

Functional Area	Entities
Inventory and Materials Management	On-hand Quantity and Transfer Orders
Procurement	Purchase Orders and Requisitions
Order Management	Sales Orders and Reservations
Manufacturing	Work Order Supplies, Resource Availability, Resources, Work Definitions, and Item Structures

Enable External Data Collection

Use these steps to enable external data collection:

1. Select the **Manage Planning Source Systems** task in the Tasks panel from any Supply Planning work area page. Or use this task in the Setup and Maintenance work area:
    - Offering: Supply Chain Planning
    - Functional Area: Supply Chain Planning Configuration
    - Task: Manage Planning Source Systems
2. In the list of source systems, select the row that has Oracle Fusion in the **Version** column.
3. In the Actions menu, click **Select Data Sources**.
4. Select the **Enable External Data** check box, and then select the functional areas that you want to source transactional entities for.

Note: Every time you enable or disable external data collection, you must run a targeted data collection to ensure complete refresh of data in the data repository.

Related Topics

- How You Load Planning Data from Files

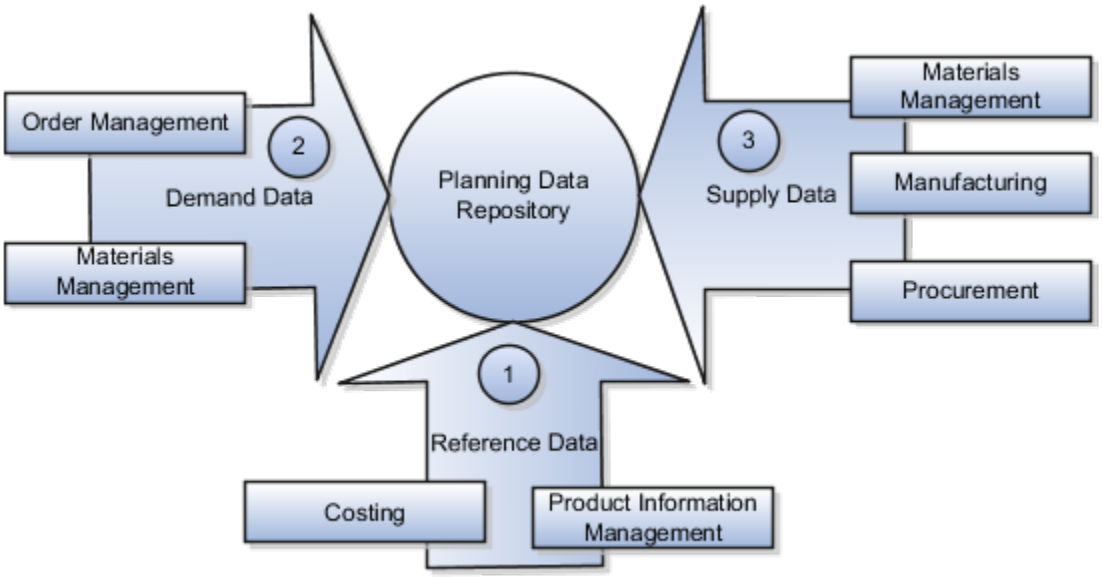
Collect Planning Data from the Oracle Fusion Source System

How You Collect Different Data Types for Supply Chain Planning

When you collect data, you collect data from three categories: reference data, demand data, and supply data. On the Collect Planning Data page there is a tab for each of these categories.

The collected data are stored in the planning data repository.

The following figure illustrates the three categories of data that you collect from the Oracle Fusion source system to the planning data repository.



Explanation of Callouts

1. Reference data is primarily sourced from Oracle Fusion Cloud SCM
2. Demand data comes from Oracle Fusion Cloud Order Management and Oracle Fusion Cloud Inventory Management
3. Supply data is sourced from Oracle Inventory Management, Oracle Fusion Cloud Manufacturing, and Oracle Fusion Cloud Purchasing

Reference Data

The collection process begins with reference data, which is primarily sourced from Oracle Fusion Cloud SCM. You collect the data collection entities, such as basic item, resource, organization, customers and suppliers, and calendar data.

> **Note:** Oracle Sales and Operations Planning uses the Bill of Resources entity to link the make items with their associated components and resource requirements. For more information on collecting Bill of Resources from an external source system, see the Loading Planning Data from Files section.

You also use Oracle Fusion Cloud Supply Chain Planning to collect the following items:

- Item structures: To explode item-level demand into component demands and supplies.
- Work Definitions: To assign the component and resource requirements for make items.
- Units of measure: To align plan data and to convert plans from one set of units to another.
- Costs: To review plans in financial terms and evaluate the financial impact of planning decisions.

Demand Data

You collect demand data from two potential sources:

- Sales orders that flow from Oracle Fusion Cloud Order Management: You can use this as the basis of the demand forecast, while current orders can consume the demand in near-term forecast time buckets.
- Shipment history from Oracle Fusion Cloud Inventory Management: You can use this to generate a shipments forecast.

Supply Data

You collect supply data from three sources:

- Oracle Inventory Management: This provides data related to on hand inventory, reservations, material transfers, in-transit supplies, and receipts.
- Oracle Manufacturing: This provides work in process status and any manufacturing work orders.
- Oracle Purchasing: This provides purchase requisitions and purchase orders.

Related Topics

- How You Load Planning Data from Files
- Run the Load Planning Data from Files Process
- Import Templates Used to Create CSV Files for Supply Chain Planning

Collection Filters and Collection Templates

You use collection filters and collection templates when you need to collect some common set of entities repeatedly.

The collection filters and collection templates are located on the Collect Planning Data page. To open the Collect Planning Data page, click the Collect Planning Data task from one of the Supply Chain Planning work areas.

Depending on your security privileges, you can also open the Collect Planning Data page from the Setup and Maintenance work area. In the Setup and Maintenance work area, use the following:

- Offering: Supply Chain Planning
- Functional Area: Supply Chain Planning Configuration
- Task: Collect Planning Data

Collection Filters

Use collection filters to improve the performance and efficiency of the collections process, and to avoid accumulation of irrelevant data in the planning data repository. You can use several filter criteria while performing collections, such as by employing catalogs, order types, and price lists. You can also use date-based filters for collecting shipment and booking history information.

Enabling Collection Filters

To enable collection filters, you must first run the schedule process called Load Filter Names for Planning Data Collection from the Scheduled Processes work area. When you run the scheduled process, the filters get enabled in the Collect Planning Data page. Then, you can apply the filters from the next collection.

Collection Templates

Use collection templates when you want to collect a set of data repeatedly over a period. You can select either one of the predefined templates that serves your specific need, or you can create your own template and save it for future use.

When you select a predefined template from the list, the Collection Type field is defaulted to **Automatic selection** and you cannot edit the field. Also, when you select a predefined template, the Select Collection Filters field is disabled.

You can create a collection template on the Collect Planning Data page by selecting the data collection entities and saving the template for future use. For example, if you frequently collect certain supply planning transactional entities, such as On Hand, Purchase Orders, and Purchase Requisitions, then save these entities as a collection template. It reduces the overhead of selecting the same entities for subsequent collection cycles.

If the template file contains any error during the upload process, rectify the issue found in the log file and upload the template file again.

Collect Data Using the Targeted Collection Type

To perform a complete refresh of the data repository used by the Supply Chain Planning products, run a targeted collection.

You can run the targeted collection immediately or you can schedule the process to run later. Demand planning data can only be collected by using the Targeted collection type.

> **Note:** Before collecting demand planning data, you must successfully run the **Load Filter Names for Planning Data Collection** scheduled process.

Perform the following steps to collect reference data, demand planning data, and supply planning data using the Targeted collection type.

1. Access the Collect Planning Data page from a Supply Planning work area or the Setup and Maintenance work area.

- If you are in one of the Supply chain Planning work areas:
    i. Click the Tasks panel tab.
    ii. In the Tasks panel drawer, click the **Collect Planning Data** link.
- If you are in the Setup and Maintenance work area, then select the following:
    - Offering: Supply Chain Planning
    - Functional Area: Supply Chain Planning Configuration
    - Task: Collect Planning Data

2. On the Collect Planning Data page, complete the following steps.
    - On the Parameters tab:
        i. Select your source system.
        ii. For the collection type, select Targeted.

            Demand planning data can only be collected by using the Targeted collection type.
        iii. Click **Select Collection Filters** to select the collection filters.
    - On the Reference Data subtab, move the required reference entities to the Selected Entities area.
    - On the Demand Planning Data subtab, set options to collect the historical demand data in the planning data repository. The planning process uses the historical demand data for statistical forecasting.
        - **Collection Time Frame Options**: You can specify a fixed or rolling date range for which to collect data.

            The **Fixed Date Range** option enables you to collect history data within a fixed date range that you specify.

            The **Rolling Date Range** option enables you to collect the history data for the number of days that you specify. For example, if you forecast weekly, specify **7** in the **Number of Days to Collect** field to collect the demand history data once per week. The data collections collect the demand history data for the latest week.

            Select **Roll off time periods automatically** to truncate the history data by the number of days that you specify in the **Number of days to keep** field each time you run collections for the demand history data. For example, if you prefer to forecast each week based on the history data of 52 weeks, select the **Roll off time periods automatically** check box and specify **Number of days to keep** as 364 days. This setting ensures that as you collect data every week, you keep the most recent history of 52 weeks and automatically purge history data older than 52 weeks.
        - **History Measures and Attributes**: Select your shipments history and bookings history measures.
        - **Collection for ETO Items**: Select **Collect history from associated base models** to collect bookings and shipments history for Engineer to Order (ETO) items from the associated base models. When you don't select this option, the history is collected from the standard ETO items.

- **History Data Options**: To collect only specific order types, select from the **Order Types to Include** list of values. By default, all order types are included.

  Select **Organization - Consumption Inventory Transactions to Include** to collect consumption inventory transactions at the organization level. You can collect only the transfer orders inventory transactions or all consumption inventory transactions.

  Select **Subinventory - Consumption Inventory Transactions to Include** to collect consumption inventory transactions at the subinventory level. You can collect only the transfer orders inventory transactions or all consumption inventory transactions for the organizations that you enabled for subinventory planning.

  Select the **Collect amount data for history** check box to collect amount data.
- **Additional Options**: Select additional options for collections.

  Collect Price Lists: Collect the price lists specified in the collections filter for price lists, or collect all price lists if no filter is specified.

  Collect Configure to Order Data: If you selected history measures and attributes, then select the relevant check boxes to collect shipment history options and booking history options.

  Sales Organization Hierarchy: Select **Enable sales organization hierarchy collection** to collect one or more sales hierarchies.

- On the Supply Planning Data subtab:

  i. Move the required supply entities to the Selected Entities area.
  ii. If you collect resource availability, then select a date range type: **Fixed** or **Relative to collection run date**.

  If you selected **Fixed**, then provide a start date and an end date for collecting resource availability.

  If you selected **Relative to collection run date**, then enter a number of days in the **Collection Window in Days** field. The number that you enter determines a collection window in days to collect resource availability based on a rolling time window. That rolling time window adjusts itself, based on the date that you run collections. For example, if you specify 90, then resource availability is collected for the next 90 days each time from the date of the collection run.

  > **Note:** You can save your date range type selection for resource availability collection as a collection template to use later.

  iii. You can collect the existing data for the resource availability.
  iv. You can also regenerate the resource availability data and then collect the data. If you select the **Regenerate data, and then collect** option, the collections process runs the **Update Resource Availability Job** scheduled process first and then collects the resource availability data.

3. (Optional) Click the Schedule tab and set collections to run as soon as possible or schedule to run at a different time.
4. Click **Submit** to start the collections process.
5. Monitor the collection status using the Scheduled Processes page.
6. Review the collected data in the Plan Inputs work area.

Related Topics

- Verify the Load Planning Data from Files Process
- Review Data in the Planning Data Repository
- Set Up Forecast Consumption for Transfer Orders

Collect Data Using the Net Change Collection Type

You can collect data from the Oracle Fusion source system by running the net change collection or by scheduling to run the process later.

Before running a Net Change collection, you must run a Targeted collection for the selected entities. After the first Targeted collection, you can run Net Change collections.

Perform the following procedure to collect reference data and supply planning data using the net change collection type:

1. If you are in one of the Supply Chain Planning work areas, then click the Tasks panel tab. In the Tasks panel drawer, click the **Collect Planning Data** task. If you are in the Setup and Maintenance work area, then use the following:
    - Offering: Supply Chain Planning
    - Functional Area: Supply Chain Planning Configuration
    - Task: Collect Planning Data
2. Complete the following parameters for the Collect Planning Data process:
    a. Select your source system.
    b. Select the collection type as Net change.

    > **Note:** You cannot make any changes to the filter criteria and demand planning data in the net change collection type.

    c. In the **Reference Data** tab, move the required reference entities to the Selected Entities area.
    d. In the **Supplies Planning Data** tab, move the required supply entities to the Selected Entities area.
3. (Optional) Click the **Schedule** tab and set collections to run as soon as possible or schedule to run at a different time.
4. Click **Submit** to initiate the collections process.
5. Monitor the collection status using the Scheduled Processes page.
6. Review the collected data in the Plan Inputs work area.

Related Topics

- Verify the Load Planning Data from Files Process
- Review Data in the Planning Data Repository
- How do I update existing setup data?

Enable Organization Group Collection for the Net Change Collection Type

You can use organization groups to limit the net change data collection from a source system to specific organizations.

Using organization groups for collection also eliminates the chances of data overlap when multiple instances of net change collections are run at a time. Planners can run collections for their organizations without waiting for each other.

Let's take a simple example where your organization considers only the D1 and D2 distribution centers in your source system for shipments to your customers. In such a case, you can create an organization group, assign D1 and D2 to the organization group, and collect net change data specifically for this group.

> **Note:** Before you begin, ensure that you have your organization groups created. A supply planner creates and manages organization groups using the Manage Organization Groups button on the Maintain Supply Network Model page.

Do these to collect net change data for an organization group.

1. Access the Collect Planning Data page or Load Planning Data from Files page from a Supply Planning work area.
2. Select the source system. Organization groups are managed within the source systems.
3. Select the Net Change collection type. You can select an organization group for data collection only when the collection type is Net Change.
4. Enable the organization group collection, and then select an organization group.
5. Perform the net change data collection. Refer to the *Collect Data Using Net Change Collection Type* topic in this chapter for instructions.

> **Note:** After selecting your organization group and other data collection entities, you can also save your selections as a template. Refer to the *Collection Filters and Collection Templates* topic in this chapter for additional information.

Related Topics

- Collect Data Using the Net Change Collection Type
- Collection Filters and Collection Templates
- How You Maintain Your Supply Network Model

Load Planning Data from Others and External Source Systems

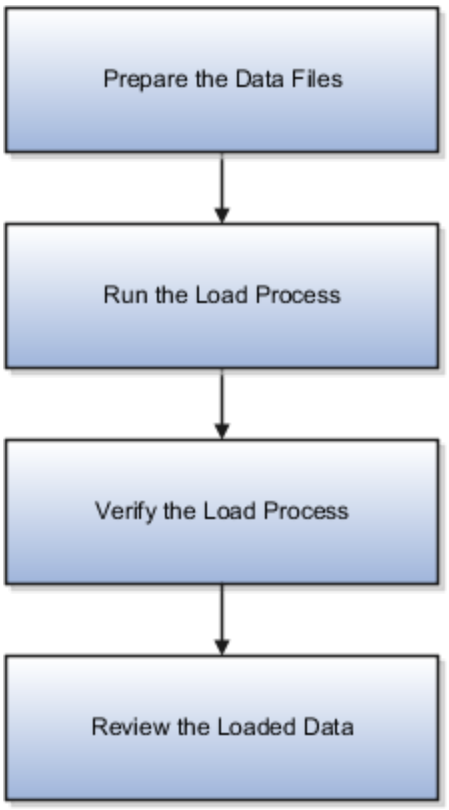
How You Load Planning Data from Files

You upload data using CSV files for specific business objects using the targeted or net change method.

Note: To create the CSV files, you can use a set of Microsoft Excel template files that are provided for this purpose. You can download the templates from the File-Based Data Import (FBDI) for SCM guide in the Oracle Help Center.

You use the targeted mode when you want to refresh data for selected entities in the planning data repository. You use the net change mode to collect data incrementally. The net change collections mode collects only the changed or new data. Data collection using the net change mode is fast compared to the targeted mode. The net change mode is used to retain planning data to current with that of the executing system.

The following figure illustrates the process of collecting data from files.



To load planning data from files, you perform the following steps:

1. Create CSV files using Microsoft Excel template
2. Run the process to load planning data from files
3. Verify the load planning data process
4. Review the loaded data

Related Topics

- Create CSV Files to Load Planning Data
- Import Templates Used to Create CSV Files for Supply Chain Planning
- Run the Load Planning Data from Files Process
- Verify the Load Planning Data from Files Process
- Review Data in the Planning Data Repository

Create CSV Files to Load Planning Data

To perform the Load Planning Data from Files task in one of the Supply Chain Planning work areas or Setup and Maintenance work area, you must prepare the data you want to load.

You must create the necessary CSV files used to create files for import. This procedure explains how to create CSV files to prepare planning data for loading.

1. Locate the applicable file import templates (XLSM files) in the following guide: File-Based Data Import (FBDI) for SCM. Extract the templates to a local space.

   For additional information about creating and importing CSV files, see the following section in the Implementing Common Features for SCM guide: External Integration chapter, External Data Integration Services for Oracle Cloud section.
2. Open the template file for the entity you are preparing and complete the file import template worksheet.

   You must enable the macros in the template file before generating the CSV file.

   > **CAUTION:** For the cells that contain dates, ensure that the data is set to the correct format in the data type. For example, date must be set to YYYY/MM/DD.
3. After you finish preparing the data in the worksheet, generate the CSV file. The Generate CSV File button is located in the Instructions and CSV Generation worksheet of the workbook.
4. When you save the generated CSV file, you must use the suggested name of the entity. You can add underscore and add additional characters to the file name. For example, you can name the CSV file as ShipmentHistory_abc.csv and you can name the file as LoadingCSV.zip.
5. Compress the CSV file into a zipped file format using a compression utility. You can provide any name to the zipped file.

   > **Note:** You can include multiple CSV files in a single compressed file for a source system. The load process uploads them in a sequential order. Select the CSV files and compress them directly. Do not compress the parent folder that contains the files.

   This completes the preparation of a file that you will upload to collect planning data.

Related Topics

- How You Load Planning Data from Files
- Run the Load Planning Data from Files Process

Data Collection Sequence

This topic explores the sequence that you should follow for data collection.

Data collection involves collecting entities in a predefined sequence. The collected entities form the basis for supply planning calculations. To have accurate data, you must ensure to collect the entities in a proper sequence. You cannot collect some entities without collecting their precursor entities. The data collection sequence is very crucial when you collect data from an external source system using CSV files.

If you run targeted collections for all entities, you can ignore the sequence for collections because targeted collections automate the collection sequence for all entities within a single collections request. If you collect many entities in a single request, collections will process them according to the sequences shown in this topic. If you collect only a few entities, then you must be aware of the collections sequence information. For example, you should not collect work orders before you collect items or resources.

To make the workflow simple, the collection sequence is divided into two parts - Part A and Part B. The collection entities in Part B are dependent on the collection entities in Part A. You must collect the entities in Part A before you collect the entities in Part B. Also, the collection entities are grouped together for easier presentation. The data groups in Part A are:

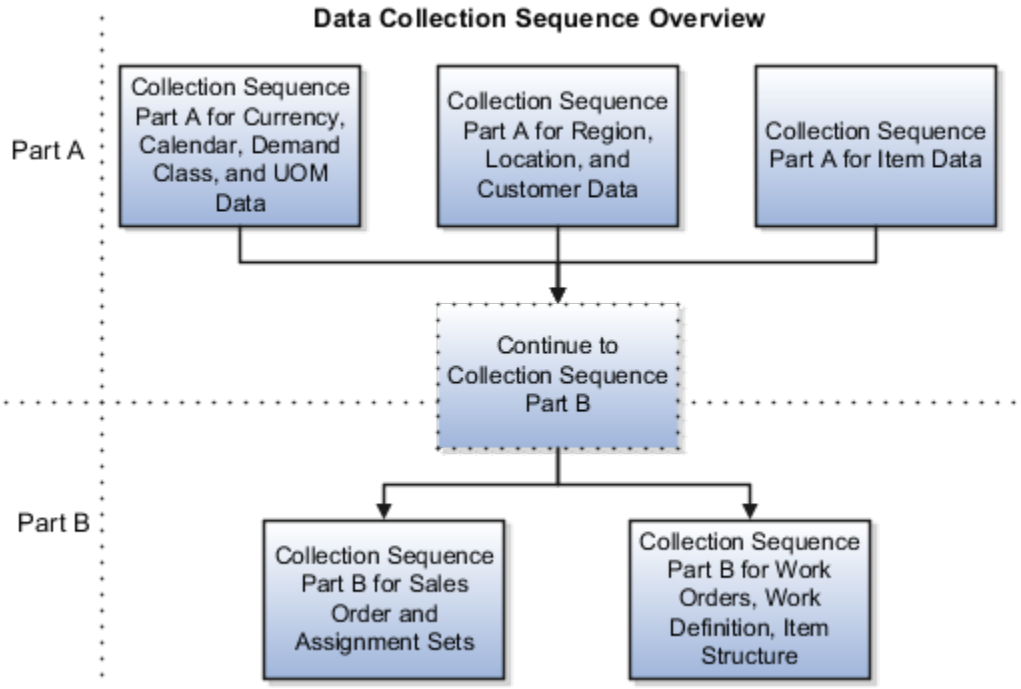
- Collections Sequence Part A for Item Data
- Collections Sequence Part A for Region, Location, and Customer Data
- Collections Sequence Part A for Currency, Calendar, Demand Class, and UOM Data

The data groups in Part B are:

- Collections Sequence Part B for Sales Order and Assignment Sets
- Collection Sequence Part B for Work Orders, Work Definition, and Item Structure

Every collection sequence in Part A starts with defining a source system where the collected data will reside. If you are collecting data to the same source system, you define the source system only once. Then, use the same source system to collect all the entities.

The following figure provides an overview of the data collection sequence. The overview shows how Part A and Part B fit together to form a complete data collection flow.

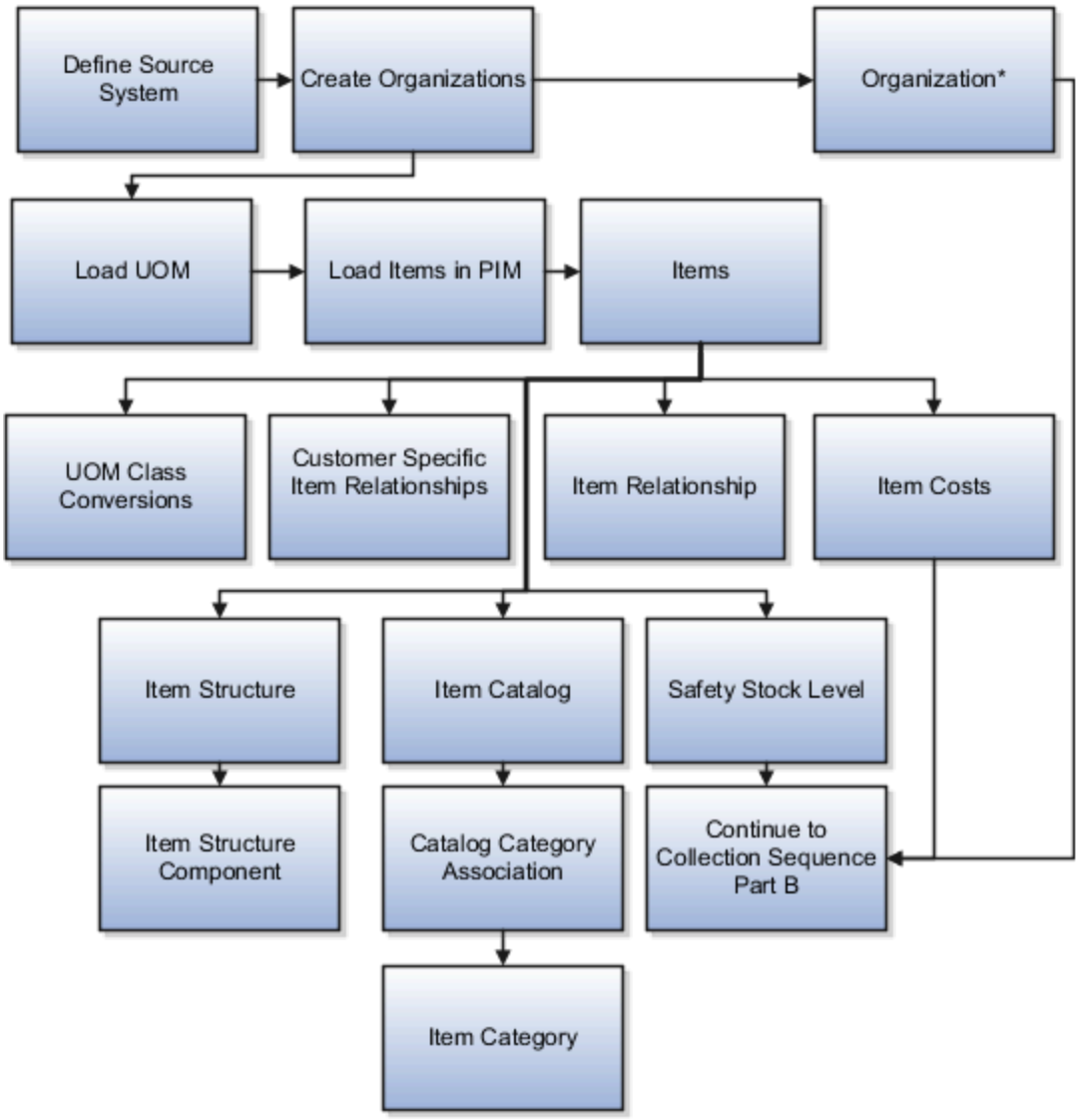


Collections Sequence Part A for Item Data

The following image shows the collections sequence to follow while collecting Item data from external source systems. This image represents only half of the entities for collecting Item data.

Note: The Organization entity is marked with an asterisk because you can collect other entities such as Planner, Item Cost, Subinventory, Carrier, Calendar Assignment, Supplier, and Supplier Site after collecting Organization. For more information on the collection sequence for these entities, see the Collections Sequence Part A for Currency, Calendar, Demand Class, and UOM Data figure. Refer to the entities that are collected after Organization. Also, ensure that you collect Location before collecting Supplier Site.

Collection Sequence Part A for Item Data

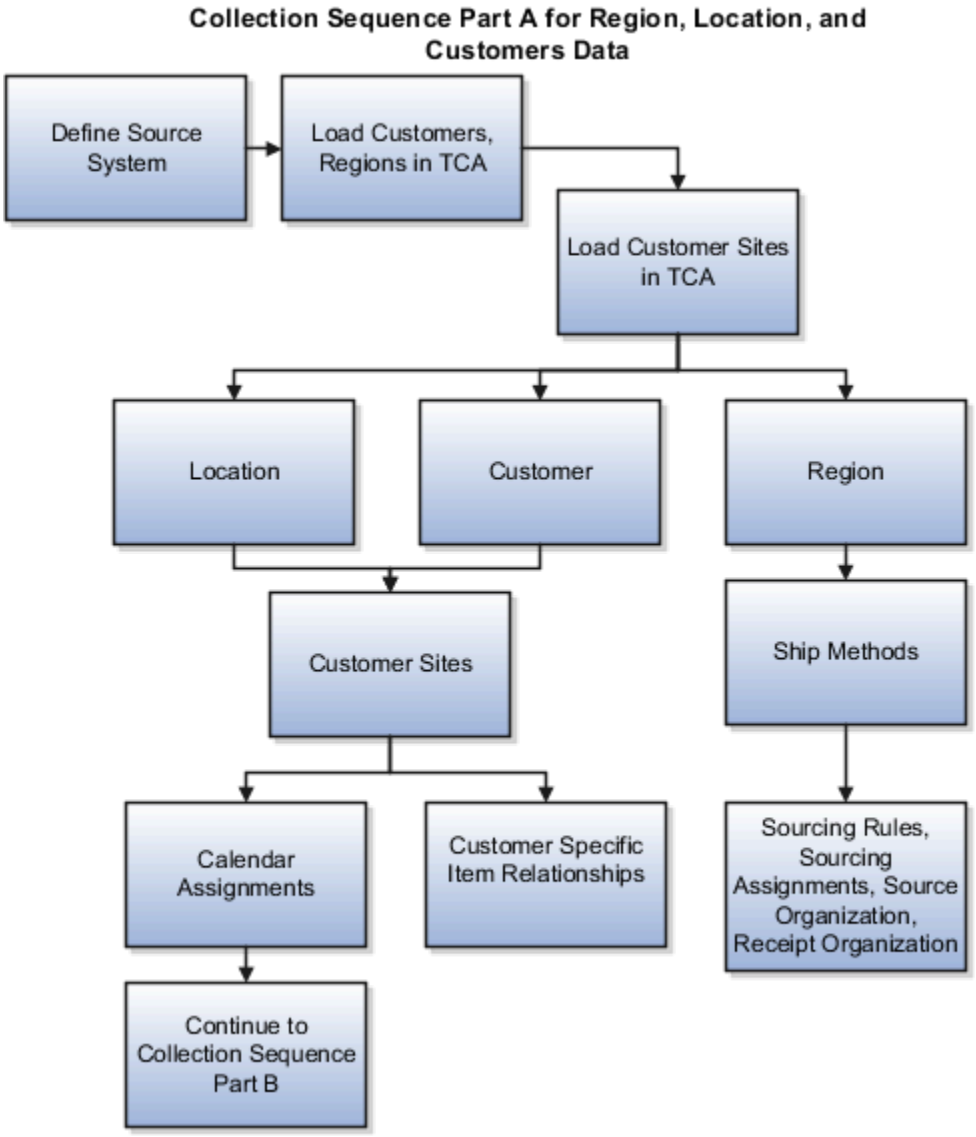


When you collect the data described here, continue to the collection sequence Part B described in the following subsections.

- Collection Sequence Part B for Sales and Order and Assignment Sets
- Collection Sequence Part B for Work Orders, Work Definition, and Item Structure

Collections Sequence Part A for Region, Location, and Customer Data

The following image shows the collections sequence to follow while collecting Regions and Customers data from external source systems. This image represents only half of the entities for Item data.



When you collect the data described here, continue to the collection sequence Part B described in the following subsections.

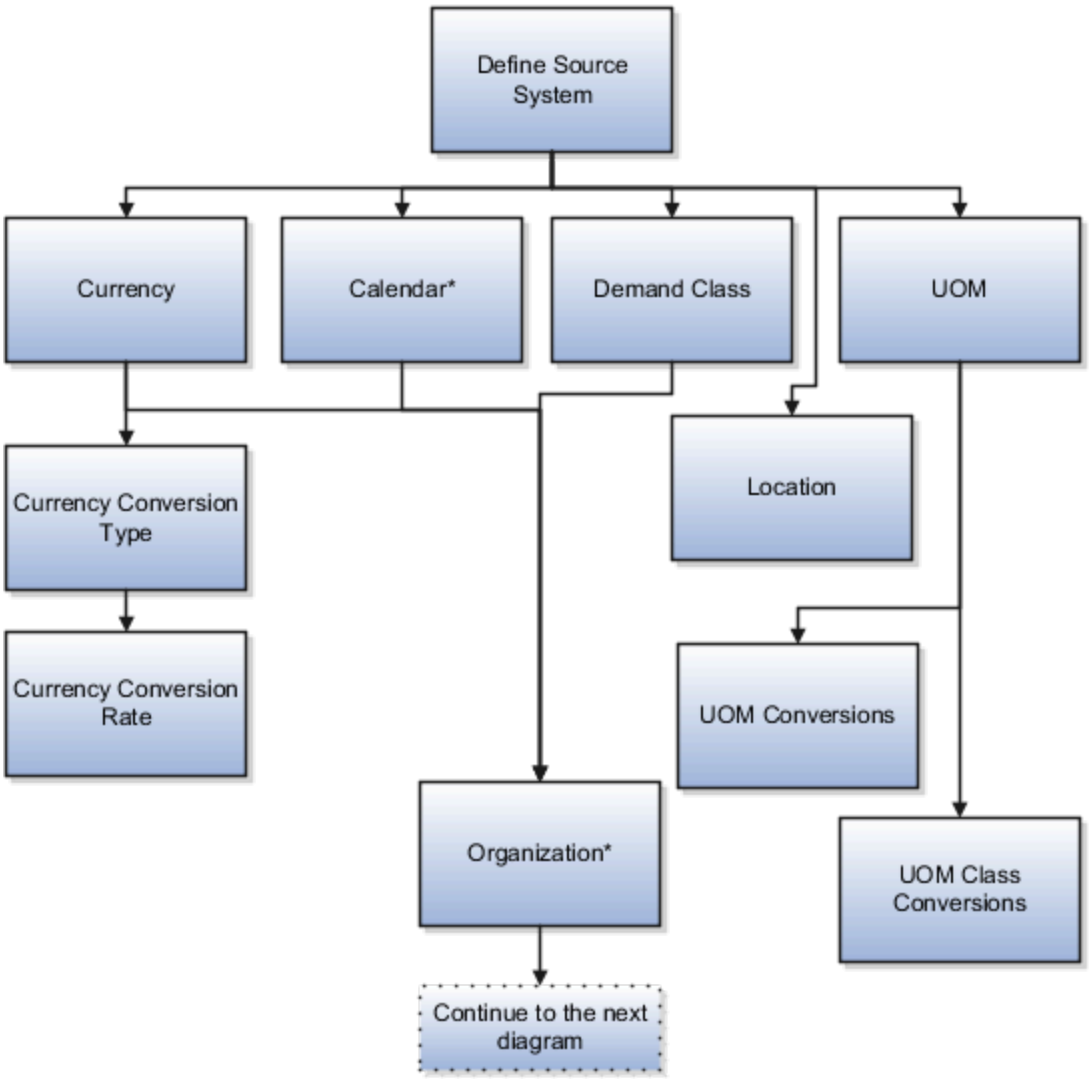
- Collection Sequence Part B for Sales and Order and Assignment Sets
- Collection Sequence Part B for Work Orders, Work Definition, and Item Structure

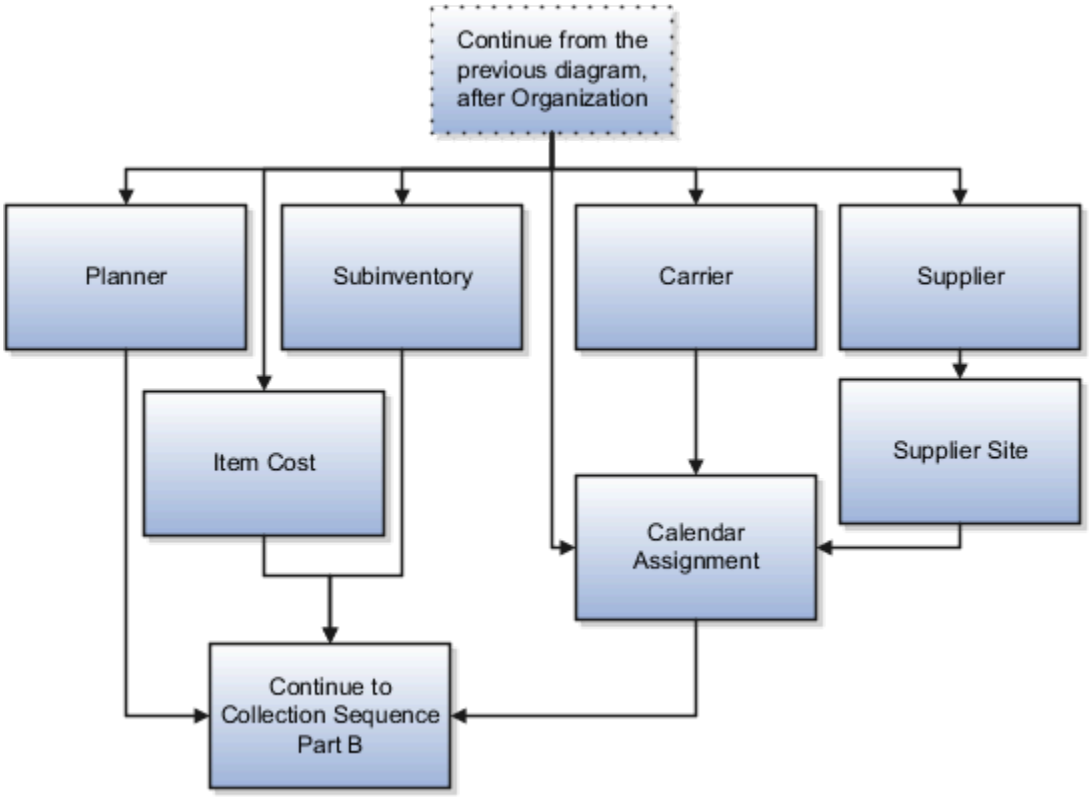
Collections Sequence Part A for Currency, Calendar, Demand Class, and UOM Data

The following image shows the collections sequence to follow while collecting Currency, Calendar, Demand Class, and UOM data from external source systems. Also, ensure that you collect Location before collecting Supplier Site.

Note: The Calendar entity is marked with an asterisk because there are other entities that are associated with Calendar that you must collect in a sequence. To collect other entities associated with Calendar, see the Calendar Upload Sequence figure.

Collection Sequence Part A for Currency, Calendar, Demand Class and UOM Data



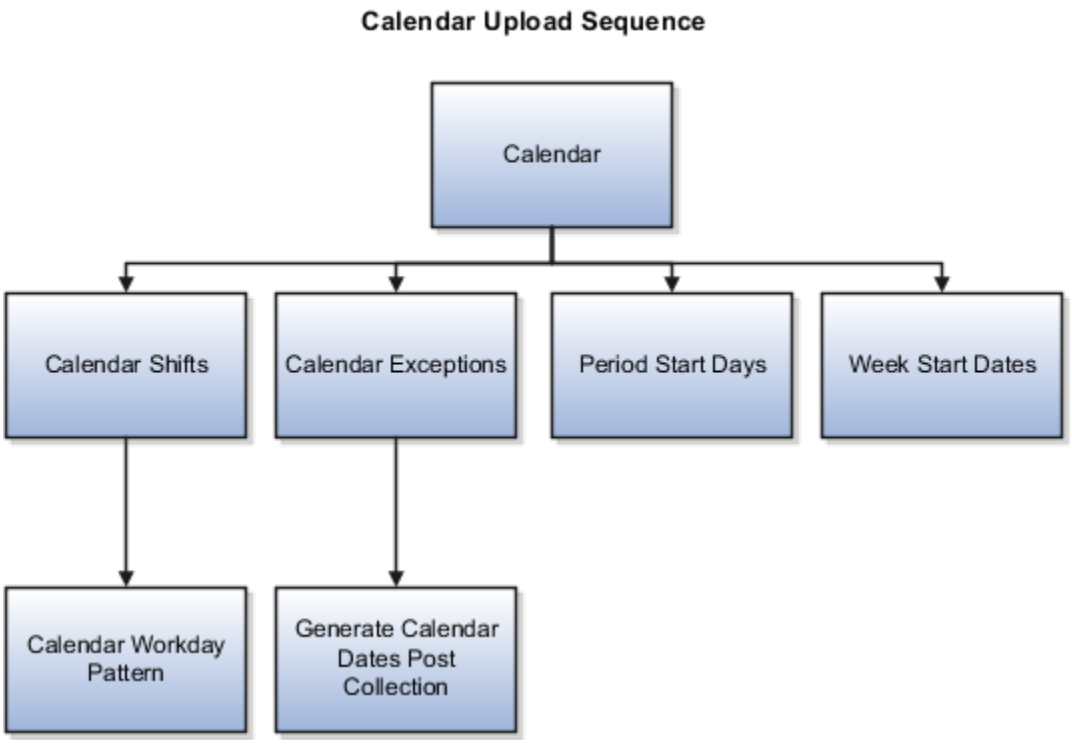


When you collect the data described here, continue to the collection sequence Part B described in the following subsections.

- Collection Sequence Part B for Sales and Order and Assignment Sets
- Collection Sequence Part B for Work Orders, Work Definition, and Item Structure

Collection Sequence for Calendar Data

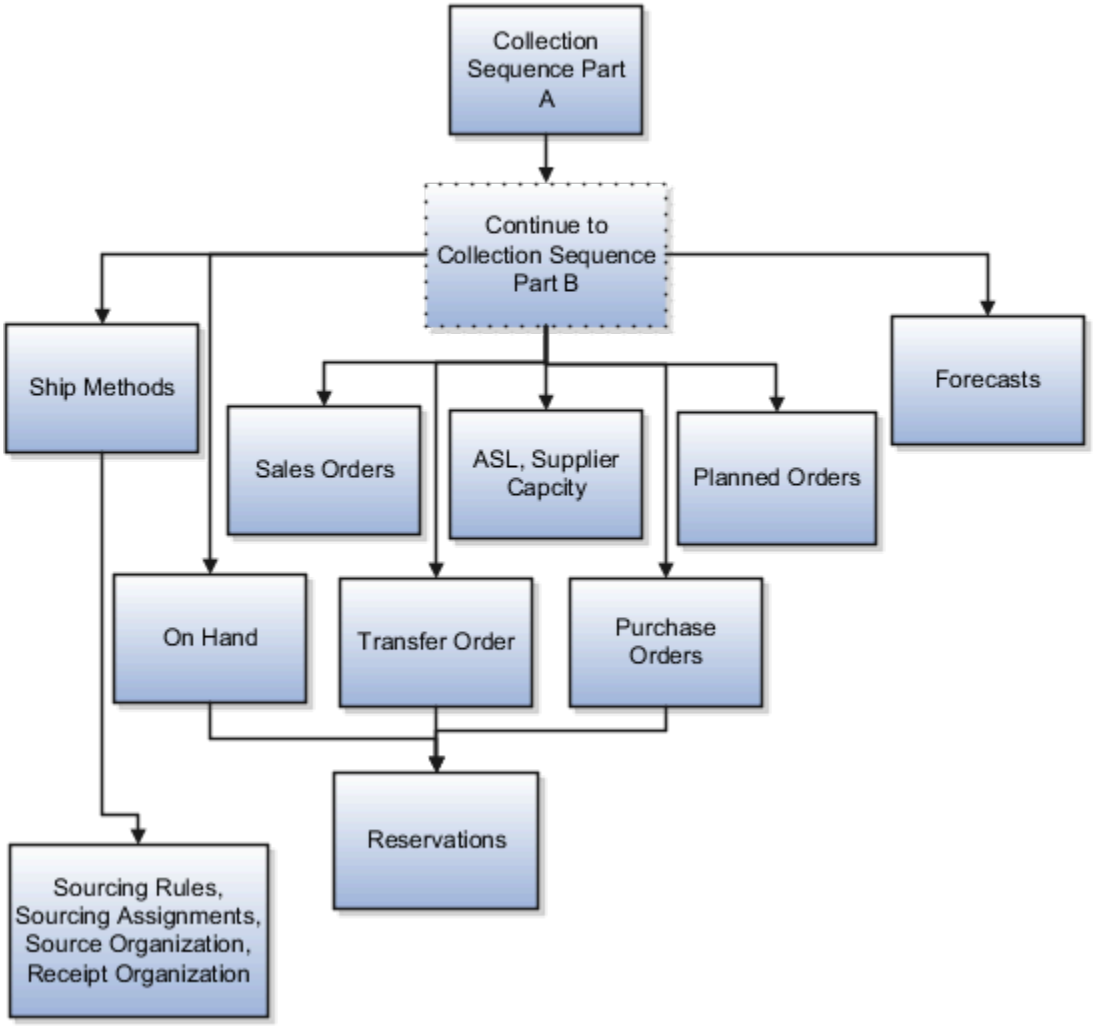
The following image shows the collections sequence to follow for collecting the Calendar data. Calendar data is a part of the data collection in Part A. You collect the Calendar data in the following subsection: Collection Sequence Part A for Currency, Calendar, Demand Class, and UOM Data.



Collections Sequence Part B for Sales Order and Assignment Sets

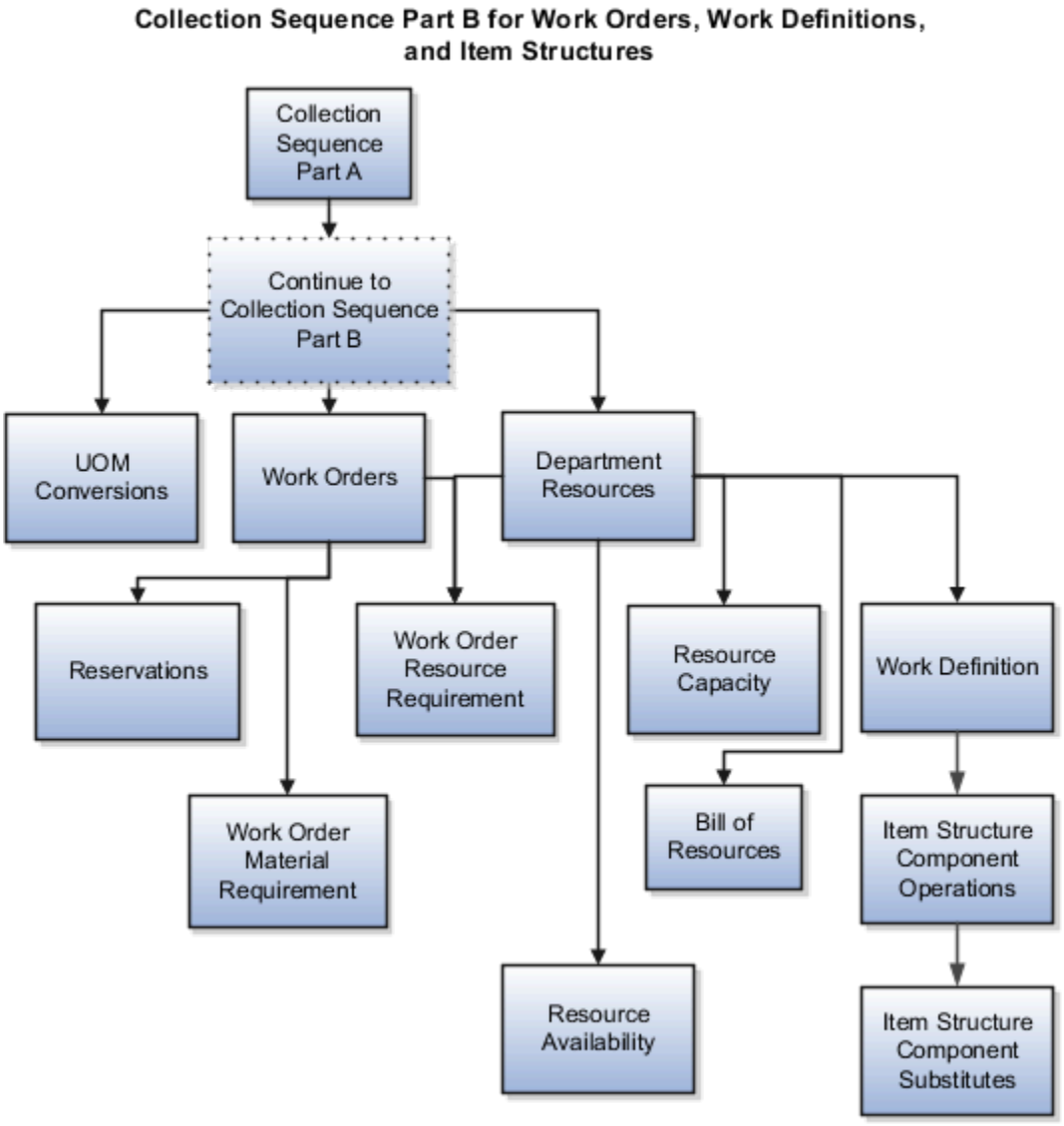
The following image shows the collections sequence to follow while collecting Sales Order and Assignment Sets data from external source systems. The data entities in Part B are dependent on Part A. So, you must collect entities listed in Part A before you collect the entities in Part B.

Collections Sequence Part B for Sales Orders and Assignments Sets



Collection Sequence Part B for Work Orders, Work Definition, and Item Structures

The following image shows the collections sequence to follow while collecting Work Orders, Work Definition, and Item Structure data from external source systems. The data entities in Part B are dependent on Part A. So, you must collect entities listed in Part A before you collect the entities in Part B.



Templates Used to Create CSV Files

You can use the Microsoft Excel templates (XLSM files) to prepare the data for the supported collection entities.

The templates are listed in the following guide: File-Based Data Import (FBDI) for SCM. Extract the templates to a local drive, enter appropriate data as described in the template, and generate CSV files. Compress the CSV files to a zipped file format and upload the .zip file to the Universal Content Manager using the File Import and Export utility. The data is then loaded from the Universal Content Manager to the planning data repository.

Collect Data from the Oracle Fusion Source

The following table lists the collections entities that can be loaded into the planning data repository for the Oracle Fusion source. The Collection Entity column provides the name of the entities for which you can collect the data. The XLSM File Name column provides the template name that you will download for the respective collection entity. Download the XLSM template from the File-Based Data Import (FBDI) for SCM guide. The Link in Data Import Guide

column provides the name of the topic in the FBDI guide from where you will download the template. For example, to collect data for the Item Costs collection entity, refer to the Item Cost Import topic in the FBDI guide.

Collections Entity	Link in Data Import Guide	XLSM File Name
Item Costs	Supply Chain Planning Item Cost	ScpItemCostImportTemplate.xlsm
Customer Specific Item Relationships	Supply Chain Planning Item Substitute	ScpItemSubstituteImportTemplate.xlsm
Planners	Supply Chain Planning Planners	ScpPlannersImportTemplate.xlsm
Item Suppliers	Supply Chain Planning Approved Supplier List	ScpApprovedSupplierListImportTemplate.xlsm
Demand Classes	Supply Chain Planning Demand Classes	ScpDemandClassImportTemplate.xlsm
Allocation Assignments and Allocation Rules	Supply Chain Planning Planning Allocation Rules	ScpPlanningAllocationRulesImportTemplate.xlsm
ATP Assignments and ATP Rules	Supply Chain Planning Available-to-Promise Rules	ScpATPRulesImportTemplate.xlsm
Supply Update Rules	Supply Chain Planning Real Time Supply Updates	ScpRealTimeSupplyUpdatesImportTemplate.xlsm
Measures	Supply Chain Planning Measures	ScpMeasuresImportTemplate.xlsm **Note:** You must use separate CSV files to collect measure data for measures with different dimensional granularity.
Booking History	Supply Chain Planning Bookings History	ScpBookingHistoryImportTemplate.xlsm
Option Booking History	Supply Chain Planning Option Bookings History	ScpOptionBookingHistoryImportTemplate.xlsm
Shipment History	Supply Chain Planning Shipments History	ScpShipmentHistoryImportTemplate.xlsm
Option Shipment History	Supply Chain Planning Option Shipments History	ScpOptionShipmentHistoryImportTemplate.xlsm
Price Lists	Supply Chain Planning Price List	ScpPriceListImportTemplate.xlsm
Causal Factors	Supply Chain Planning Causal Factors	ScpCausalFactorsImportTemplate.xlsm
Forecast Measures	Supply Chain Planning Forecast Measures	ScpForecastMeasureImportTemplate.xlsm

Collections Entity	Link in Data Import Guide	XLSM File Name
		Note: This template has been superseded by the generic template ScpMeasuresImportTemplate.xlsm, but will continue to be supported. Future enhancements will be made only to the generic measures template.
Fiscal Calendars	Supply Chain Planning Fiscal Calendars	ScpFiscalCalendarImportTemplate.xlsm
Forecasts	Supply Chain Planning External Forecasts	ScpExternalForecastImportTemplate.xlsm
Safety Stock Levels	Supply Chain Planning Safety Stock Levels	ScpSafetyStockLevelImportTemplate.xlsm
Supplier Capacity	Supply Chain Planning Approved Supplier Capacity	ScpApprovedSupplierCapacityImportTemplate.xlsm
Planned Order Supplies	Supply Chain Planning Planned Order Supply	ScpPlannedOrderSupplyImportTemplate.xlsm **Note:** This template is only used to load planned order supply to Global Order Promising.
Sourcing Rule and Assignments	Supply Chain Planning Sourcing Rules	ScpSourcingImportTemplate.xlsm
Cross-Reference Mapping Information	Supply Chain Planning Cross-Reference Data	ScpCrossReferenceDataImportTemplate.xlsm

Collect Data from External Source - Version Others

The following table lists the collections entities that can be loaded into the planning data repository from an external source, where the version is Others. The Collection Entity column provides the name of the entities for which you can collect the data. The XLSM File Name column provides the template name that you will download for the respective collection entity. Download the XLSM template from the File-Based Data Import (FBDI) for SCM guide. The Link in Data Import Guide column provides the name of the topic in the FBDI guide from where you will download the template. For example, to collect data for the Items and Item Costs collection entities, refer to the Item Cost Import topic in the FBDI guide.

Collections Entity	Link in Data Import Guide	XLSM File Name
Item Costs	Supply Chain Planning Item Cost	ScpItemCostImportTemplate.xlsm
Customer Specific Item Relationships	Supply Chain Planning Item Substitute	ScpItemSubstituteImportTemplate.xlsm
Planners	Supply Chain Planning Planners	ScpPlannersImportTemplate.xlsm

Collections Entity	Link in Data Import Guide	XLSM File Name
Organizations (Warehouses) and Organization Site (Including Organization Site - Internal Location Mapping)	Supply Chain Planning Organizations	ScpOrganizationImportTemplate.xlsm
Subinventories	Supply Chain Planning Subinventories	ScpSubInventoryImportTemplate.xlsm
Suppliers and Supplier Sites	Supply Chain Planning Suppliers	ScpPlanningSupplierImportTemplate.xlsm
Item Suppliers	Supply Chain Planning Approved Supplier List	ScpApprovedSupplierListImportTemplate.xlsm
Interlocation Shipping Networks	Supply Chain Planning Interlocation Shipping Methods	ScpInterLocationShipMethodsImportTemplate.xlsm
Currencies, Currency Conversion Types, and Currency Conversion Rates	Supply Chain Planning Currencies	ScpCurrencyImportTemplate.xlsm
Units of Measure, Units of Measure Conversions, and Units of Measure Class Conversions	Supply Chain Planning Units of Measure	ScpUOMImportTemplate.xlsm
Calendars, Calendar Exceptions, Calendar Shifts, Week Start Dates, Period Start Dates, and Calendar Shift Workday Pattern	Supply Chain Planning Calendars	ScpCalendarImportTemplate.xlsm
Calendar Associations	Supply Chain Planning Calendar Assignments	ScpCalendarAssignmentsImportTemplate.xlsm
Demand Classes	Supply Chain Planning Demand Classes	ScpDemandClassImportTemplate.xlsm
Ship Mode of Transport, Ship Class of Service, and Carrier	Supply Chain Planning Carriers	ScpCarrierImportTemplate.xlsm
Allocation Assignments and Allocation Rules	Supply Chain Planning Planning Allocation Rules	ScpPlanningAllocationRulesImportTemplate.xlsm
ATP Assignments and ATP Rules	Supply Chain Planning Available-to-Promise Rules	ScpATPRulesImportTemplate.xlsm
Supply Update Rule	Supply Chain Planning Real Time Supply Updates	ScpRealTimeSupplyUpdatesImportTemplate.xlsm
Freight Terms, FOB Points, Invoicing and Accounting Rules, Shipment Priorities, Payment Terms, Return Reason, Tax Classification Code, Tax Exemption Reason, Sales Credit Type, Activity Type, Document Categories, Payment Methods, and Receipt Methods	Supply Chain Planning Order Orchestration	ScpOrderOrchestrationImportTemplate.xlsm

Collections Entity	Link in Data Import Guide	XLSM File Name
Measures	Supply Chain Planning Measures	ScpMeasuresImportTemplate.xlsm **Note:** You must use separate CSV files to collect measure data for measures with different dimensional granularity.
Booking History	Supply Chain Planning Bookings History	ScpBookingHistoryImportTemplate.xlsm
Option Booking History	Supply Chain Planning Option Bookings History	ScpOptionBookingHistoryImportTemplate.xlsm
Shipment History	Supply Chain Planning Shipments History	ScpShipmentHistoryImportTemplate.xlsm
Option Shipment History	Supply Chain Planning Option Shipments History	ScpOptionShipmentHistoryImportTemplate.xlsm
Price Lists	Supply Chain Planning Price Lists	ScpPriceListImportTemplate.xlsm
Causal Factors	Supply Chain Planning Causal Factors	ScpCausalFactorsImportTemplate.xlsm
Forecasts Measures	Supply Chain Planning Forecast Measures	ScpForecastMeasureImportTemplate.xlsm **Note:** This template has been superseded by the generic template ScpMeasuresImportTemplate.xlsm, but will continue to be supported. Future enhancements will be made only to the generic measures template.
Fiscal Calendars	Supply Chain Planning Fiscal Calendars	ScpFiscalCalendarImportTemplate.xlsm
Forecasts	Supply Chain Planning External Forecast	ScpExternalForecastImportTemplate.xlsm
User-Defined Hierarchies	Supply Chain Planning User-Defined Hierarchies	ScpUser-DefinedHierarchyImportTemplate.xlsm
Safety Stock Levels	Supply Chain Planning Safety Stock Levels	ScpSafetyStockLevelImportTemplate.xlsm
Supply Reservations to Sales Orders	Supply Chain Planning Reservations	ScpReservationImportTemplate.xlsm
On Hand	Supply Chain Planning Supply On Hand	ScpOnhandImportTemplate.xlsm

Collections Entity	Link in Data Import Guide	XLSM File Name
Purchase Orders, Purchase Requisitions, PO in Receiving, and In Transits	Supply Chain Planning Purchase Order Requisitions	ScpPurchaseOrderRequisitionImportTemplate.xlsm
Transfer Orders	Supply Chain Planning Transfer Orders	ScpTransferOrderImportTemplate.xlsm
Supplier Capacity	Supply Chain Planning Approved Supplier Capacity	ScpApprovedSupplierCapacityImportTemplate.xlsm
Resources and Resource Shifts	Supply Chain Planning Resources	ScpResourcesImportTemplate.xlsm
Resource Availability	Supply Chain Planning Resource Availability	ScpResourceAvailabilityImportTemplate.xlsm
Work Definition (Including mapping between Item Structures and Work Definitions), Work Definition Operations, and Work Definition Operation Resources	Supply Chain Planning Routings	ScpRoutingsImportTemplate.xlsm
Work Order Supply	Supply Chain Planning Work Order Supplies	ScpWorkOrderSuppliesImportTemplate.xlsm
Work Order Material Requirements	Supply Chain Planning Work Order Component Demands	ScpWIPComponentDemandsImportTemplate.xlsm
Work Order Resource Requirements	Supply Chain Planning Work Order Operation Resources	ScpWIPOperationResourceImportTemplate.xlsm
Planned Order Supplies	Supply Chain Planning Planned Order Supply	ScpPlannedOrderSupplyImportTemplate.xlsm **Note:** This template is only used to load planned order supply to Global Order Promising.
Sourcing Rule and Assignments	Supply Chain Planning Sourcing Rules	ScpSourcingImportTemplate.xlsm
Cross Reference Mapping Information	Supply Chain Planning Cross-Reference Data	ScpCrossReferenceDataImportTemplate.xlsm
Key Customer Options	Supply Chain Planning Key Customer Options	ScpKeyCustomerOptionsImportTemplate.xlsm

Collect Data from External Source - Version External

The following table lists the collections entities that can be loaded into the planning data repository from an external source, where the version is External. The Collection Entity column provides the name of the entities for which you can collect the data. The XLSM File Name column provides the template name that you will download for the respective collection entity. Download the XLSM template from the File-Based Data Import (FBDI) for SCM guide. The Link in Data Import Guide column provides the name of the topic in the File-Based Data Import (FBDI) for SCM guide from where you will download the template. For example, to collect data for the Items and Item Costs collection entities, refer to the

Item Cost Import topic in the File-Based Data Import (FBDI) for SCM guide. All the planning-related entity names are prefixed with Supply Chain Planning in the FBDI guide.

Collection Entities	Link in FBDI Guide	XLSM File Name
Items	Supply Chain Planning Items	ScpItemImportTemplate.xlsm
Item Costs	Supply Chain Planning Item Cost	ScpItemCostImportTemplate.xlsm
Item Relationships	Supply Chain Planning Item Substitute	ScpItemSubstituteImportTemplate.xlsm
Catalogs, Categories, and Item Categories	Supply Chain Planning Catalogs	ScpCatalogImportTemplate.xlsm.xlsm
Item Structures	Supply Chain Planning Item Structures	ScpBillofMaterialImportTemplate.xlsm
Bill of Resources	Supply Chain Planning Bill of Resources	ScpBillOfResourcesImportTemplate.xlsm
Planners	Supply Chain Planning Planners	ScpPlannersImportTemplate.xlsm
Customers and Customer Sites	Supply Chain Planning Customers	ScpCustomerImportTemplate.xlsm
Regions	Supply Chain Planning Regions	ScpRegionsImportTemplate.xlsm
Zones	Supply Chain Planning Zones	ScpZonesImportTemplate.xlsm
Region-Zone Mapping	Supply Chain Planning Region Zone Mappings	ScpRegionZoneMappingImportTemplate.xlsm
Locations and Region-Location Mapping	Supply Chain Planning Locations	ScpLocationsImportTemplate.xlsm
Organizations and Organization Sites	Supply Chain Planning Organizations	ScpOrganizationImportTemplate.xlsm
Subinventories	Supply Chain Planning Subinventories	ScpSubInventoryImportTemplate.xlsm
Suppliers and Supplier Sites	Supply Chain Planning Suppliers	ScpSupplierImportTemplate.xlsm
Item Suppliers (Approved Supplier List)	Supply Chain Planning Approved Supplier List	ScpApprovedSupplierListImportTemplate.xlsm
Interlocation Shipping Networks and Transit Times	Supply Chain Planning Interlocation Shipping Methods	ScpInterLocationShipMethodsImportTemplate.xlsm
Currencies and Currency Conversions	Supply Chain Planning Currencies	ScpCurrencyImportTemplate.xlsm
Units of Measure, Units of Measure Conversions, and Units of Measure Class Conversions	Supply Chain Planning Units of Measure	ScpUOMImportTemplate.xlsm

Collection Entities	Link in FBDI Guide	XLSM File Name
Calendars, Calendar Exceptions, Shifts, Shift Workday Pattern, Week Start Dates, and Period Start Dates	Supply Chain Planning Calendars	ScpCalendarImportTemplate.xlsm
Calendar Associations	Supply Chain Planning Calendar Assignments	ScpCalendarAssignmentsImportTemplate.xlsm
Demand Classes	Supply Chain Planning Demand Classes	ScpDemandClassImportTemplate.xlsm
Carrier, Ship Mode of Transport, and Ship Class of Service	Supply Chain Planning Carriers	ScpCarrierImportTemplate.xlsm
GOP Allocation Rules and Rule Assignments	Supply Chain Planning Planning Allocation Rules	ScpPlanningAllocationRulesImportTemplate.xlsm
GOP ATP Rules and Rule Assignments	Supply Chain Planning Available-to-Promise Rules	ScpATPRulesImportTemplate.xlsm
GOP Supply Update Rules	Supply Chain Planning Real Time Supply Updates	ScpRealTimeSupplyUpdatesImportTemplate.xlsm
Order Orchestration Reference Objects: Freight Terms, FOB Points, Invoicing and Accounting Rules, Shipment Priorities, Payment Terms, Return Reason, Tax Classification Code, Tax Exemption Reason, Sales Credit Type, Activity Type, Document Categories, Payment Methods, and Receipt Methods	Supply Chain Planning Order Orchestration	ScpOrderOrchestrationImportTemplate.xlsm
Cross Reference Mapping Information	Supply Chain Planning Cross-Reference Data	ScpCrossReferenceDataImportTemplate.xlsm
Measures	Supply Chain Planning Measures	ScpMeasuresImportTemplate.xlsm **Note:** You must use separate CSV files to collect measure data for measures with different dimensional granularity.
Booking History	Supply Chain Planning Bookings History	ScpBookingHistoryImportTemplate.xlsm
Option Booking History	Supply Chain Planning Option Bookings History	ScpOptionBookingHistoryImportTemplate.xlsm
Shipment History	Supply Chain Planning Shipments History	ScpShipmentHistoryImportTemplate.xlsm
Option Shipment History	Supply Chain Planning Option Shipments History	ScpOptionShipmentHistoryImportTemplate.xlsm

Collection Entities	Link in FBDI Guide	XLSM File Name
Price Lists	Supply Chain Planning Price Lists	ScpPriceListImportTemplate.xlsm
Causal Factors	Supply Chain Planning Causal Factors	ScpCausalFactorsImportTemplate.xlsm
Forecast Measures	Supply Chain Planning Forecast Measures	ScpForecastMeasureImportTemplate.xlsm **Note:** This template has been superseded by the generic template ScpMeasuresImportTemplate.xlsm, but will continue to be supported. Future enhancements will be made only to the generic measures template.
Fiscal Calendars	Supply Chain Planning Fiscal Calendars	ScpFiscalCalendarImportTemplate.xlsm
Measures, Sales and Operations Planning Backlog, Inventory, and Production History	Supply Chain Planning Measures	ScpMeasuresImportTemplate.xlsm **Note:** You must use separate CSV files to collect measure data for measures with different dimensional granularity.
User-Defined Hierarchies	Supply Chain Planning User-Defined Hierarchies	ScpUser-DefinedHierarchyImportTemplate.xlsm
Forecasts	Supply Chain Planning External Forecasts	ScpExternalForecastImportTemplate.xlsm
Sales Orders	Supply Chain Planning Sales Orders	ScpSalesOrderImportTemplate.xlsm
Safety Stock Levels	Supply Chain Planning Safety Stock Levels	ScpSafetyStockLevelImportTemplate.xlsm
Supply Reservations to Sales Orders	Supply Chain Planning Reservations	ScpReservationImportTemplate.xlsm
On Hand	Supply Chain Planning Supply On Hand	ScpOnhandImportTemplate.xlsm
Purchase Orders, Purchase Requisitions, PO in Receiving, In Transits	Supply Chain Planning Purchase Order Requisitions	ScpPurchaseOrderRequisitionImportTemplate.xlsm
Transfer Orders (including expense type transfers)	Supply Chain Planning Transfer Orders	ScpTransferOrderImportTemplate.xlsm

Collection Entities	Link in FBDI Guide	XLSM File Name
Supplier Capacity	Supply Chain Planning Approved Supplier Capacity	ScpApprovedSupplierCapacityImportTemplate.xlsm
Resources, Resource Shifts	Supply Chain Planning Resources	ScpResourceImportTemplate.xlsm
Resource Availability	Supply Chain Planning Resource Availability	ScpResourceAvailabilityImportTemplate.xlsm
Work Definition (including mapping between Item Structures and Work Definitions), Work Definition Operations, Work Definition Operation Resources	Supply Chain Planning Routings	ScpRoutingsImportTemplate.xlsm
Work Order Supply	Supply Chain Planning Work Order Supplies	ScpWorkOrderSuppliesImportTemplate.xlsm
Work Order Material Requirements	Supply Chain Planning Work Order Component Demands	ScpWIPComponentDemandsImportTemplate.xlsm
Work Order Resource Requirements	Supply Chain Planning Work Order Operation Resources	ScpWIPOperationResourceImportTemplate.xlsm
Planned Order Supplies	Supply Chain Planning Planned Order Supply	ScpPlannedOrderSupplyImportTemplate.xlsm **Note:** This template is only used to load planned order supply to Global Order Promising.
Sourcing Rule and Assignments	Supply Chain Planning Sourcing Rules	ScpSourcingImportTemplate.xlsm
Key Customer Options	Supply Chain Planning Key Customer Options	ScpKeyCustomerOptionsImportTemplate.xlsm

Related Topics

- Run the Load Planning Data from Files Process

Run the Load Planning Data from Files Process

To load planning data from files, first you must prepare the data you want to load.

To prepare the data, download the relevant XLSM template, update the XLSM template with required data, and create the necessary CSV files for upload. This procedure explains how to load planning data from files after you have prepared the data and created CSV files.

1. From the Navigator, use the File Import and Export page to upload the previously prepared and zipped CSV files to the Universal Content Manager. Use the account scm/planningDataLoader/Import to upload the zipped file.

   > **Note:** For more information about uploading files to the Universal Content Manager server, see the following section in the Implementing Common Features for SCM guide: External Integration chapter, External Data Integration Services for Oracle Cloud section.

2. From one of the Supply Chain Planning work areas or Setup and Maintenance work area, Supply Chain Planning offering, select the Load Planning Data from Files task.
3. Complete the following parameters on the Load Planning Data from Files page:
   a. Select the source system.
   b. Select Collection Type: **Net change** or **Target**.
   c. Select the .zip file you previously imported into the Universal Content Manager.
4. Click **Submit**. Make a note of the process ID. You will need this process ID to review the status of the process.

Related Topics

- Create CSV Files to Load Planning Data

Load Planning Data from Files for a Selected Group of Organizations

When you load planning data from files with the collection type set to Targeted, you can enable organization group collection and then select an organization group.

Data is collected for only the organizations in the organization group, and the purge of data prior to the load of the new data is also done for only the organizations in the organization group. In other words, previously collected data for organizations that aren't included in the organization group will be retained when you're doing targeted collections using the file-based data import (FBDI) process.

> **Note:** Enabling organization group collection isn't applicable to entities for demand management, such as history, measure, and price list.

Parameters for Load Planning Data from Files

The parameters for the Load Planning Data from Files task:

- Source System: The source system for the data determines which organization groups are applicable.
- Collection Type: You must select the Targeted collection type to enable organization group collection.
- Data File: The file previously uploaded to the universal content manager.
- Enable Organization Group Collection: You must have selected Targeted for the collection type to select Yes for this parameter.

- Organization Group: You must have selected Yes for the Enable Organization Group Collection parameter to select an organization group.

Organization Groups

The list of organization groups you can select from for the Organization Group parameter is determined by:

- Which source system you select for the Source System parameter
- What organization groups are set up for that source system

Organization groups are set up using the Maintain Supply Network Model task, Manage Organization Groups dialog. On the Maintain Supply Network Model page, Organizations tab, you click the Manage Organization Groups button to create or manage organization groups.

Example

Here's an example that shows how data is retained for organizations in other organization groups when you load planning data for a selected organization group.

For this example, let's say you have 3 organizations and 2 organization groups, and the source for your data is the EX1 source system.

- Organization group OG1 includes organization M1
- Organization group OG2 includes organizations B1 and B2

First you load planning data for the OG1 organization group for the Work Order Supplies entity. 2 rows of data are collected for the OG1 organization group.

Item	Organization	Order Type	Order Quantity	Suggested Due Date
Item 1	EX1:M1	Work order	10	2/14/22
Item 2	EX1:M1	Work order	15	2/11/22

Then you load planning data for the OG2 organization group for the Work Order Supplies entity.

- 3 rows of data are collected for the OG2 organization group
- The 2 rows that were previously collected for the OG1 collection group are retained

Item	Organization	Order Type	Order Quantity	Suggested Due Date
Item 1	EX1:M1	Work order	10	2/14/22
Item 2	EX1:M1	Work order	15	2/11/22
Item 1	EX1:B1	Work order	11	2/09/22
Item 1	EX1:B2	Work order	16	1/31/22

Item	Organization	Order Type	Order Quantity	Suggested Due Date
Item 2	EX1:B2	Work order	10	2/09/22

Applicable Entities

You can use file-based data import (FBDI) to load data for a selected group of organizations using the Targeted collection type for these entities:

Source	Entities
From an Oracle Fusion Cloud SCM source	• External Forecasts • Planned Order Supply • Safety Stock Levels
From an Oracle Fusion Cloud SCM source only when the Enable External Data option has been enabled for the entities in the Manage Planning Source System task	• On Hand • Transfer Orders • Purchase Orders and Purchase Requisitions • Sales Order and Associated Reservations • Work Order Component Demands • Work Order Supplies, Work Order By-Product and Co-Product Supplies, Work Order Operation Resources • Resource Availability
From an external source	• External Forecasts • Movement Requests • Planned Order Supply • Purchase Orders and Purchase Requisitions • Reservations • Safety Stock Levels • Sales Orders • Transfer Orders • On Hand • Work Order Component Demands • Work Order Supplies, Work Order By-Product and Co-Product Supplies, Work Order Operation Resources • Resource Availability

Loading data for a selected group of organization isn't applicable to:

- Entities for demand management, such as History, Measures, Price Lists
- Entities categorized as reference entities

Additional Details

Here are a few more details to know about loading planning data from files for a selected group of organizations:

- If you have included the History, Measure, or Price List entities in a data file used during a targeted collection with organization group collection enabled, targeted collections will be done for these entities, but will be done for all organizations, not for only the organizations in the group.
- If you have included reference data entities in a data file used during a targeted collection with organization group collection enabled, these entities will be ignored during collections.
- Data security created and enabled at organization level for any role isn't applied to the Manage Organization Groups task.
- If you also use the Collect Planning Data task to collect some of your data, note that you can use organization groups for the Net Change collection type, but not for the Targeted collection type. For the Targeted collection type for the Collect Planning Data task, you use the Organizations Filter for Transaction Data filter instead.
- You can submit the Load Planning Data from Flat Files process multiple times to specify a different organization group for each submission. The submissions are processed serially in the order of submission.
- You can specify an organization group when you submit the Load Planning Data from Flat Files process for the Targeted collection type from the Scheduled Processes work area or when using a scheduled process job set.
- You can specify an organization group when you submit the Load Planning Data from Flat Files process for the Targeted collection type from the Enterprise Resource Planning integration service.

Improve Performance of Measure Disaggregation

Overview of Improving Performance While Disaggregating Measure Data

While importing data at an aggregate level to stored measures for Oracle Fusion Cloud Supply Chain Planning, you can improve the performance by enabling multithreading for the disaggregation process.

While using the file-based data import (FBDI) template named Supply Chain Planning Measures, you can import data at the stored levels or aggregate levels of the stored levels. For example, if your measure is configured with the dimension levels of Item, Organization, Sales Rep, Customer Site, Demand Class, and Day, you can import data at these stored levels or aggregate levels, such as product category, business unit, sales organization level, customer, demand class, and month.

Measure data that's collected at an aggregate level is disaggregated to the stored levels during the data refresh step in a plan run or when you incrementally refresh a plan after loading new measure data.

By default, the process for disaggregating the measure data is single-threaded. Consequently, long processing times can result when there's a large volume of measure data to disaggregate.

To improve performance, you can configure disaggregation to run as a multithreaded process. The disaggregation process runs in parallel for different time ranges within the time range for the collected measure data.

The multithreaded process runs in 90-day increments by default. For example, if you've collected measure data at an aggregate level for the past year (365 days), then the process runs five disaggregation jobs in parallel, four jobs of 90 days each and one job for the remaining five days of data.

You can do the following:

- Enable multithreading for measure data disaggregation for all plans in the Demand Management, Demand and Supply Planning, Planning Central, Replenishment Planning, Sales and Operations Planning, or Supply Planning work area.
- Enable multithreading for measure data disaggregation for a single plan that's enabled for demand forecasting.
- Override the default of 90 days for the multithreaded process.

Related Topics

- Enable Multithreading for Measure Data Disaggregation for All Plans
- Enable Multithreading for Measure Data Disaggregation for a Single Plan
- Override the Default Value for the Multithreaded Process

Enable Multithreading for Measure Data Disaggregation for All Plans

You can enable multithreading for measure data disaggregation for all demand, demand and supply, replenishment, sales and operations, or supply plans.

Before you start

You may need to work with someone who has administration privileges to make these profile-related changes.

Here's what to do

1. In the Demand Management, Demand and Supply Planning, Plan Inputs, Planning Central, Replenishment Planning, Sales and Operations Planning, or Supply Planning work area, on the Tasks panel tab, under Configuration, select **Manage Planning Profile Options**.

   The Manage Planning Profile Options page opens.
2. Search for the SCP_PARAMETER_OVERRIDES profile option code.
3. If the SCP_PARAMETER_OVERRIDES profile option code exists, then click the **New** icon.

   A new row appears for the profile value.
4. Add the profile value as follows:
   - Profile Level: Select **Site** to set the value globally for all users. Select **User** to set the value for a specific user, in which case you must then select a user. User-level values take precedence over the site-level value.
   - Profile Value: Enter **enableParallelDisaggMeasure=true**.

   > **Note:** You can enter multiple profile values for a profile level provided you separate them with the space or semicolon. Whether you can select the site or user depends on the enabled levels in the profile option.

5. Click **Save and Close**.
6. If the SCP_PARAMETER_OVERRIDES profile option code doesn't exist, then follow these steps:
   a. In the Setup and Maintenance work area, go to the **Manage Profile Options** task.

      The Manage Profile Options page opens.
   b. Click **New**.

      The Create Profile Option page opens.
   c. Create the profile option as follows:
      - Profile Option Code: SCP_PARAMETER_OVERRIDES
      - Profile Display Name: SCP_PARAMETER_OVERRIDES
      - Application: Planning Common
      - Module: Planning Common

- Start Date: Current date

Leave the remaining fields blank.

7. Click **Save and Close**.
8. For the profile option levels for the profile option, select the check boxes under the **Enabled** and **Updatable** columns for both the Site and User levels.
9. Click **Save and Close**.
10. In your work area, open the Manage Planning Profile Options page.
11. Search for the SCP_PARAMETER_OVERRIDES profile option code.
12. Set the profile level and value as previously explained.
13. Click **Save and Close**.

Related Topics

- Overview of Improving Performance While Disaggregating Measure Data
- Enable Multithreading for Measure Data Disaggregation for a Single Plan
- Override the Default Value for the Multithreaded Process

Enable Multithreading for Measure Data Disaggregation for a Single Plan

You can enable multithreading for measure data disaggregation for a single, forecast-enabled plan in the Demand Management, Demand and Supply Planning, Planning Central, Replenishment Planning, or Sales and Operations Planning work area.

1. In your work area, open the Plan Options page for your forecast-enabled plan.
2. On the Demand tab, click **Select Advanced Options**.

   The Demand: Advanced Options dialog box opens.
3. In Forecasting Control Parameters, in **Parameter Overrides**, enter **enableParallelDisaggMeasure=true**.

> **Note:** You can enter multiple values in the **Parameter Overrides** field provided you separate them with the number sign (#).

4. Click **Done**.
5. Save your plan.

Related Topics

- Overview of Improving Performance While Disaggregating Measure Data
- Enable Multithreading for Measure Data Disaggregation for All Plans
- Override the Default Value for the Multithreaded Process

Override the Default Value for the Multithreaded Process

After you've enabled multithreading for the measure disaggregation process for all plans in your work area or a single, forecast-enabled plan, you can override the default value of 90 days for the process.

Before you start

You may need to work with someone who has administration privileges to make these profile-related changes.

Here's what to do

1. In the Setup and Maintenance work area, go to the **Manage Profile Options** task.
   The Manage Profile Options page opens.
2. Click **New**.
   The Create Profile Option page opens.
3. Create a profile option as follows:
   - Profile Option Code: MSC_DISAGG_PERF_BATCH_SIZE
   - Profile Display Name: MSC_DISAGG_PERF_BATCH_SIZE
   - Application: Planning Common
   - Module: Planning Common
   - Start Date: Current date

   Leave the remaining fields blank.
4. Click **Save and Close**.
5. For the profile option levels for the profile option, select the check boxes under the **Enabled** and **Updatable** columns for both the Site and User levels.
6. Click **Save and Close**.
7. In the Demand Management, Demand and Supply Planning, Plan Inputs, Planning Central, Replenishment Planning, Sales and Operations Planning or Supply Planning work area, on the Tasks panel tab, in Configuration, select **Manage Planning Profile Options**.
   The Manage Planning Profile Options page appears.
8. Search for the MSC_DISAGG_PERF_BATCH_SIZE profile option code.
9. Click the **New** icon.
   A new row appears for the profile value.
10. Add the profile value as follows:
    - Profile Level: Select **Site** to set the value globally for all users. Select **User** to set the value for a specific user, in which case you must then select a user. User-level values take precedence over the site-level value.
    - Profile Value: Enter the number of days for processing in each parallel job.
11. Click **Save and Close**.

Related Topics

- Overview of Improving Performance While Disaggregating Measure Data
- Enable Multithreading for Measure Data Disaggregation for All Plans
- Enable Multithreading for Measure Data Disaggregation for a Single Plan

Collections for Oracle Replenishment Planning

This topic explains how collections are done for Oracle Replenishment Planning.

Collections are done at the organization level.

Collections are also done for all subinventories of organizations that are marked for subinventory-level planning on the Organizations tab on the Maintain Supply Network Model page.

Collected Business Objects That Are Relevant for Replenishment Planning

This table lists the collected business objects that are relevant for replenishment planning:

Oracle Fusion Cloud Applications	Business Object
Oracle Fusion Cloud Procurement and Oracle Fusion Cloud Inventory Management	• Purchase orders and requisitions • Suppliers • Approved supplier lists • Units of measure (UOMs) • Transfer orders • Shipping methods • Subinventories • On-hand inventory
Oracle Fusion Cloud Product Lifecycle Management	• Items • Organizations • Catalogs
Oracle Cost Management, Oracle Order Management, and others	• Item costs • Currencies • Calendars and fiscal calendars • Sales orders • Bookings history • Shipments history • Transfer order history • Price lists

Related Topics

- How You Maintain Your Supply Network Model
- How You Set Up Replenishment Planning for Subinventories

Collection of Consumption Data for Oracle Replenishment Planning

This topic discusses the collection of consumption inventory transactions or point-of-sale (POS) data from Oracle Fusion Inventory Management for the generation of consumption-based forecasts in Oracle Replenishment Planning.

To generate consumption-based forecasts for your replenishment plan, make these selections on the Collect Planning Data page:

- On the Parameters tab, for the Targeted collection type, under History Data Options on the Demand Planning Data tab, in **Organization - Consumption Inventory Transactions to Include**, select the types of consumption inventory transactions you want to collect at the organization level. If you select **Transfer orders**, historical transfer orders at the organization level are collected. If you select **All**, all historical consumption inventory transactions at the organization level are collected.
- In **Subinventory - Consumption Inventory Transactions to Include**, select the types of consumption inventory transactions you want to collect at the subinventory level. If you select **Transfer orders**, both historical transfer orders and historical movement requests at the subinventory level are collected. If you select **All**, all historical consumption inventory transactions at the subinventory level are collected.

Consumption-based forecasting provides you with these benefits:

- You can improve the effectiveness of your forecast by basing it on demand signals that are closest to your customers.

  Thereby, you can effectively compute your policy parameters and calculate and release your replenishment orders.
- In the retail and healthcare sectors, you can model stores and departments as subinventories. By collecting consumption inventory transactions at the subinventory level, you can generate forecasts at this level.

Historical Transaction Collections for Consumption-Based Forecasting at the Organization Level

When you select **All** in the **Organization - Consumption Inventory Transactions to Include** field, all historical transactions are collected at the organization level from Inventory Management for consumption-based forecasting except for those listed in this table:

Transaction Action	Transaction Source	Transaction Type
Issue from stores	Purchase Order	Return to Supplier
Issue from stores	Sales Order	Sales Order Issue
Issue from stores	Transfer Order Return	Transfer Order Return with Scrap

Item Transaction Collections for Consumption-Based Forecasting at the Subinventory Level

When you select **All** in the **Subinventory - Consumption Inventory Transactions to Include** field, all item transactions are collected at the subinventory level from Inventory Management for consumption-based forecasting except for those listed in this table:

Transaction Action	Transaction Source	Transaction Type
Direct organization transfer	Transfer Order Return	Transfer Order Return Transfer

Transaction Action	Transaction Source	Transaction Type
Intransit shipment	Transfer Order Return	Transfer Order Return Shipment
Issue from stores	Purchase Order	Return to Supplier
Issue from stores	Transfer Order Return	Transfer Order Return with Scrap
Staging transfer	Transfer Order Return	Transfer Order Return Pick

Difference Between Consumption History and Shipments History

While shipments history includes the history for shipped sales orders, consumption history includes the shipments history as well as the consumption-related history that falls under transaction actions such as Issue from stores.

Measures for Storing Collected or Uploaded Consumption Data

If you're collecting consumption data from Inventory Management, the collected data is stored in the measure that you select in the **Shipments History Measures** field under History Measures and Attributes on the Demand Planning Data tab.

If you're uploading consumption data from an external source, use the file-based data import (FBDI) template named Supply Chain Planning Measures (ScpMeasuresImportTemplate.xlsm) to import consumption data into the predefined Consumption History measure.

In the import template, enter #ignore under the **Customer Level Name** and **Demand Class Level Name** columns if you don't want to specify these levels. Don't enter values in the columns for level member names.

ERP Integrations REST Service

Use of ERP Integrations REST Service in Collections

You can upload all reference and transactional data to Oracle Fusion Cloud Supply Chain Planning from an external source using the ERP Integrations REST service. This external source can be data from Oracle E-Business Suite, Oracle Fusion Cloud Applications, or third-party source. In Collections, this REST service is used to upload data and submit the collection job set.

Overview

This service updates all key changes in supply chain operations like unexpected changes in inventory levels or manufacturing capacities in your application in real-time. Hence when compared to the system that relies on batch integration and synchronizes data only on periodic basis, this system provides accurate results.

Note: To upload data for Oracle Supply Chain Planning products, use of ERP Integrations REST service is preferred over use of ERP Integrations SOAP Service.

ERP Integrations REST Service

The ERP Integrations REST service that is available as part of Oracle Fusion Cloud Financials is used with Oracle Fusion Cloud Supply Chain Planning products to import bulk data, upload files to UCM server, and to load planning data from flat files. The REST resource name is ERP Integrations and it supports multiple POST operations.

This topic provides specific guidelines on how to use these REST operations with Oracle Supply Chain Planning products. For the Oracle Financials documentation regarding the ERP Integrations REST service, refer to the REST API for Oracle Fusion Cloud Financials book, ERP Integrations task, in Oracle Help Center.

Import Bulk Data

The ERP Integration Service importBulkData is the main REST operation that's used to import data for Oracle Supply Chain Planning. This is a multistep operation that invokes the following subprocesses to complete the data load:

1. Upload file content to UCM Server
2. Loads data into Planning staging tables
3. Launches Load Planning Data from Files scheduled process
4. Launches the Collect Planning Data Job Set

This operation is completed in a single API call and also handles encrypted data files and decrypts them as part of upload.

Here are the specific parameters that are used in the importBulkData REST operation.

- JobName: For Oracle Supply Chain Planning data loads, this parameter must be specified as `JobName: /oracle/apps/ess/scm/advancedPlanning/collection/configuration/CSVController`
- Parameter List: This parameter contains a comma separated list of the parameter values. This is used by the Load Planning Data from Files scheduled process that is launched as part of this REST service operation. Here are the parameters that are used in the parameter list.

  Parameters

Scheduled Process Internal Parameter	Maps to the displayed parameter of this process	Expected Value	Parameter Details
Parameter 1	Source System	Source System	Source system code of the source system for which the data is being uploaded. This code is specified during the set up of the source system
Parameter 2	Collection Type	1 or 2	Type of collections to be launched. Valid values are: o 1 denotes Targeted Collection type

Scheduled Process Internal Parameter	Maps to the displayed parameter of this process	Expected Value	Parameter Details
			○ 2 denotes Net change Collection type
Parameter 3	Data File	Zip File name	Name of the zip file to be uploaded.
Parameter 4	Not displayed	Not used	Specify as #NULL.
Parameter 5	Not displayed	Document ID (DId) Value	Document ID of the zip file to be uploaded to UCM. Optional when using importBulkData operation but mandatory when using the submitEssJobRequest operation.
Parameter 6	Not displayed	Instance ID	Internal ID of the source system specified in Parameter 1 (instance code). This is stored internally as MSC_APPS_INSTANCES.INSTANCE_ID and can be derived using the following SQL query: `SELECT instance_id FROM msc_apps_instances WHERE instance_code = '<instance code>'`
Parameter 7	Not displayed	Apps Version	Internal value of the version of the source system specified in Parameter 1 (instance code). This is stored internally as MSC_APPS_INSTANCES.APPS_VER and can be derived using the following SQL query: `SELECT apps_ver FROM msc_apps_instances WHERE instance_code = '<instance code>'`
Parameter 8	Not displayed	Not used	Specify as #NULL.
Parameter 9	Organization Group	Organization Group	This is optional. It is required only if the user wants to run collections for a specific organization group. The value is the name of the organization

Scheduled Process Internal Parameter	Maps to the displayed parameter of this process	Expected Value	Parameter Details
			group. If not specifying, use #NULL.

Parameters File

You must include the special parameters file Supply Chain Planning ERP Integration Service Parameters that's generated using the ScpErpIntegrationServiceParamsImportTemplate.xlsm template file when using ERP Integrations REST service with Oracle Supply Chain Planning products. This parameters file is the file that provides metadata that you need to include in the zip file along with other CSV files to load data in the ERP Integrations Flow. This file contains the following parameters:

- Source System Code (Parameter 1 in the Parameters table)
- Collection Type (Parameter 9 in the Parameters table)
- Organization Group (Parameter 9 in the Parameters table)

If the input zip file does not contain ScpErpIntegrationServiceParams.csv, then the mode of collections is defaulted to Net change and the Load Planning Data from Flat Files schedule process reads the value of instance code from the respective data files.

The ScpErpIntegrationServiceParams.csv meta data file is required only when your loading data using the ERP Integration importBulkData operation and isn't required when you submit the Load Planning Data from Flat Files process either from the Scheduled Processes page or using the submitEssJobRequest operation.

Note: Oracle Supply Chain Planning data loads using importBulkData operation don't need any other properties files like jobDetails.properties that are required for other product areas.

Upload File to UCM

The uploadfiletoUCM operation uploads a file to the UCM server in a single step based on the document specified in the REST operation.

Here is the parameter that is used to complete the operation.

DocumentAccount: For Oracle Supply Chain Planning data loads, this parameter must be specified as

```
DocumentAccount":"scm$/planningDataLoader$/import$
```

The REST response includes the DocumentId as one of the data elements.

Load Planning Data from Flat Files

The submitEssJobRequest operation is used to load planning data from flat files. It submits the collections job set with a set of parameters in a single step.

When loading data for Oracle Supply Chain Planning products, use the following parameters and respective guidelines to complete the operation.

- JobPackageName: This parameter must be specified as
  `JobPackageName:oracle/apps/ess/scm/advancedPlanning/collection/configuration`

- JobDefName: This parameter must be specified as
  `JobDefName: CSVController`
- DocumentId: Use the document ID from the response of uploadFileToUCM operation.
- ESSParameters: This parameter must include a list of values as indicated for the Parameter List parameter of importBulkData operation. For example,
  ESSParameters:EX8,2,UOM.zip,#NULL,289568,300100110961358,3,#NULL,#NULL

The REST response includes the RqstId as one of the data elements. This data element is the process ID of the submitted scheduled process which in this case is the Load Planning Data from Files process. This process is completed only after total flow including Collect Planning Data job set is launched and completed.

For other Oracle Supply Chain Planning processes, like the Publish Data and Release Plan processes, the recommended approach is to use the respective REST services under Oracle Supply Chain Planning group and not use the submitEssJobRequest operation. For example:

- For Publish Data – use Supply Chain Planning/Supply Chain Plans/Publish Data
- For Release Plan – use Supply Chain Planning/Supply Chain Plans/Releases
- For Archive Plan – use Supply Chain Planning/Supply Chain Plans/Archives

Note: loadAndImportData operation isn't recommended for use with Oracle Supply Chain Planning products because with this operation you can't upload encrypted data files.

Verify Collection Processes

Verify the Load Planning Data from Files Process

Perform the following steps to verify the process status of the uploaded file and review log file for any errors or warnings.

1. In the Navigator, click **Scheduled Processes**.
2. In the search area, enter the process ID you noted when you submitted during the Load Planning Data from Files process. Click **Search**.
3. Monitor the process to verify completion.
   If the process completes with warnings, select the request that shows the warning status and click the **View Log** button to review the details.
4. For the rows with errors, resolve the issues found in the log file, and then upload the CSV file again. To load only the revised rows, use the Net Change option.

Review Data in the Planning Data Repository

You can review the data collected or loaded into the planning data repository using two different options. The option you use depends on which data collection entities you want to review.

To review the data collected or loaded into the planning data repository, use one of the following options:

- Review data using the Plan Inputs page layout
- Review data using the Maintain Supply Network Model page

To review the following entities, use the Maintain Supply Network Model page:

- Organizations
- Customers
- Suppliers
- Carriers
- Interlocation Shipping Networks

To review data that's not part of the supply network model, use the Plan Inputs page layout. You can view the following data in the Plan Inputs page layout

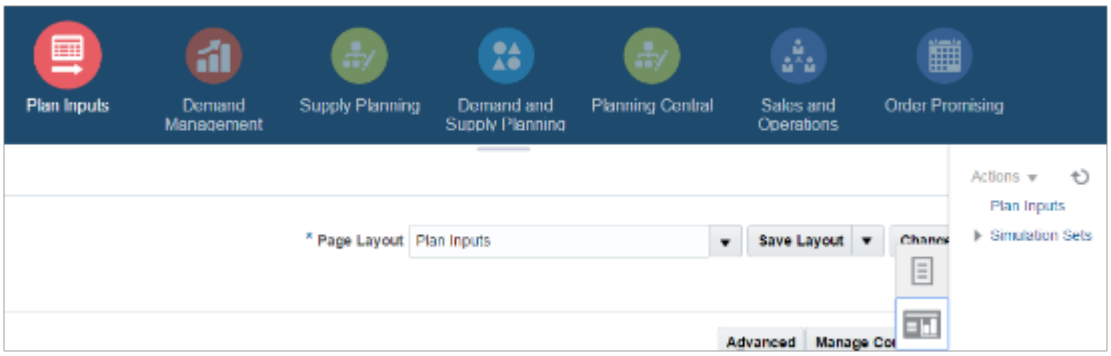
- Supply data
- Demand data

You can view Carriers and Suppliers using either option.

Review Data Using the Plan Inputs Page Layout

Perform the following steps to review the planning data that you loaded.

1. In the Navigator, click **Plan Inputs**.
2. From the Plans menu, right-click **Plan Inputs**, and click **Open**.



> **Tip:** You can set the preview pane to Full Pane for viewing your data in full pane. Click **Change** and select **Full Pane**.

3. On the Plan Inputs page, click **Open**, and click **Full Pane**.
4. On the Open Table, Graph, or Tile Set page, search for the table name.
5. Enter the criteria for the data you want to verify and click **Search**.
6. Review the data in the Search Results table.

Review Data Using the Maintain Supply Network Model Page

Perform the following steps to review the planning data using the Maintain Supply Network Model page.

1. In the Navigator, click **Plan Inputs**.
2. From the Tasks menu, click **Maintain Supply Network Model**.
3. Enter the criteria for the data you want to verify and click **Search**.

4. Review the data in the Search Results table.

Purge Data

How You Purge Collected Data from the Data Repository for Supply Chain Planning

Use the Purge Data Repository scheduled process to purge data collected by supply chain planning collections processes into the database tables that comprise the planning data repository.

Delete data from these tables to free up space and improve performance. Use the Scheduled Processes work area to run the scheduled process. This topic explains the parameters of the **Purge Data Repository** scheduled process. For information on how to run scheduled processes, refer to the Scheduled Processes chapter in the Implementing Common Features for SCM guide.

The parameters for the **Purge Data Repository** scheduled process are in one of these categories:

- The Source System and Purge Global Entities parameters
- Parameters on the Reference Data tab
- Parameters on the Demand Planning Data tab
- Parameters on the Supply Planning Data tab

The Source System and Purge Global Entities Parameters

Provide values for these parameters to determine which data records for reference data will be purged from the staging tables when you run the **Purge Data Repository** scheduled process.

Parameter	Notes
Source System	You must select a source system. • For data collected from the Oracle Fusion source system, select OPS. • For data collected from an external system, select the applicable source system code.
Purge Global Entities	You can select **Yes** if you want to delete data for the entities for which the planning data repository stores only one record for each instance of the global entity so there's no reference to a source system. The default is No.

Parameters on the Reference Data Tab

Provide values for these parameters on the Reference Data tab to determine which data records for reference data will be purged from the staging tables when you run the **Purge Data Repository** scheduled process.

Parameter	Notes
The set of entities categorized as reference entities. The entities you haven't selected yet are included in the Reference Entities list on the Reference Data tab.	You select which reference entities you want data deleted for. The entities you select are included in the Selected Entities list on the Reference Data tab.

Parameters on the Demand Planning Data Tab

Provide values for these parameters on the Demand Planning Data tab to determine which data records for demand planning data will be purged from the staging tables when you run the **Purge Data Repository** scheduled process.

Parameter	Notes
The set of entities categorized as reference entities. The entries you haven't selected yet are included in the Demand Entities list on the Demand Planning Data tab.	You select which demand entities you want data deleted for. The entities you select are included in the Selected Entities list on the Demand Planning Data tab.
Limit the Days to Purge	You can choose to limit the number of days to purge by selecting one of three choices. For each choice you must also specify the additional details needed for that choice: • By date range, followed by a from date and a to date • By number of days in the future, followed by a number of most recent days to keep • By number of days in the past, followed by either a number of most recent days to keep or a number of oldest days to purge

Parameters on the Supply Planning Data Tab

Provide values for these parameters on the Supply Planning Data tab to determine which data records for supply data will be purged from the staging tables when you run the **Purge Data Repository** scheduled process.

Parameter	Notes
The set of entities categorized as supply entities. The entities you haven't selected yet are included in the Supply Entities list on the Supply Planning Data tab.	You select which supply entities you want data deleted for. The entities you select are included in the Selected Entities list on the Supply Planning Data tab.

How You Purge Staging Tables for Supply Chain Planning

Use the Purge Staging Tables scheduled process to delete data from the staging tables used during collections processes for supply chain planning.

Delete data from the staging tables to free up space and improve performance. Use the Scheduled Processes work area to run the scheduled process. This topic explains the parameters of the **Purge Staging Tables** scheduled process.

For information on how to run scheduled processes, refer to the Scheduled Processes chapter in the Implementing Common Features for SCM guide.

Provide values for these parameters to determine which data records will be purged from the staging tables when you run the **Purge Staging Tables** scheduled process.

Parameter	Notes
Source System	You must select a source system. • For data collected from the Oracle Fusion source system, select OPS. • For data collected from an external system, select the applicable source system code.
Record Type	You must select a record type, but you can select **All** if you want to purge all records that meet the values of the other parameters, regardless of their record type. The record types other than the All type are the status of records in the staging tables in regard to the next stage of the collections process. The next stage of the collections process is the import of the records that are in the staging tables into the tables that comprise the planning data repository. • All: All records regardless of status. • Complete: Records that were successfully imported into the tables that comprise the planning data repository. • Error: Records that are in the Error status in the staging tables after import into the planning data repository was tried, but not successful. • New: Records that were collected into the staging tables, but import into the planning data repository hasn't been tried yet. • Retry: Records in the staging tables for which import into the planning data repository is being tried again. • Warning: Records in the staging tables for which a warning occurred when the record was imported into the planning data repository.
Collection Cycle ID	You can enter a request number if you want to do so.
Collected From Date and Collected To Date	You can provide these dates if you want to purge data within a specific time frame.
The set of specific entities for which data is collected and deletion of the data from the staging tables is supported.	Each entity is a parameter for the scheduled process. You can select **No** for any of the parameters if you don't want to purge the data for that entity. The default value for each parameter is Yes.

Aggregate Customer Data

How You Aggregate Customer Data

Use the key customer data options collections template to identify key customers.

The data for these customers will be visible. For each Zone, all non-key customers' data will be aggregated to a member named All Other. By aggregating the planning data for non-key customers, you can focus your analysis on the key customers. You use the Supply Chain Planning Key Customer Options (ScpKeyCustomerOptionsImportTemplate.xlsm) import template to identify the key customers; the rest of the customers' data will be aggregated under an All Other member.

The data that are not identified in the upload template are aggregated to an all other member for each zone. You can view the key customers and the All Other member containing the aggregated non-key customer data when you analyze the forecasts and other data.

Identifying key customers and aggregating non-key customer data helps you to do the following:

- Organize key customer data that are required for planning
- Save time by collecting only the required data from Oracle Fusion Cloud Supply Chain Management
- Build a plan specifically for your key customers

Related Topics
- Collection Filters and Collection Templates

How can I reset the key customer aggregated data for a plan?

After you make changes to the aggregation level values in the ScpKeyCustomerOptionsImportTemplate.xlsm file, you must upload the file and run the plan again.

To reset the key customer aggregated data for a plan, do the following:

1. Review the ScpKeyCustomerOptionsImportTemplate.xlsm file.
2. Update the Aggregation Level values for all of the Level Name values (for example, Customer) and upload the CSV file.
3. From your Supply Chain Planning work area, open the plan and enable the **Aggregate non-key customer data to All Other level member** check box. Run the plan again.

Related Topics
- Considerations for Collecting Key Customer Information

Considerations for Collecting Key Customer Information

Use the ScpKeyCustomerOptionsImportTemplate.xlsm file to identify the key customers for which nonaggregated data must be made available.

For non-key customers, the aggregation level that you define in the import template determines whether the data is retained or aggregated. You can differentiate between key customers and non-key customers and use the aggregated key customer data to build a plan specifically for your key customers.

> **Note:** For details regarding the ScpKeyCustomerOptionsImportTemplate.xlsm file, refer to the File-Based Data Import (FBDI) for SCM guide. This guide is one of the guides in the Oracle Help Center for Oracle Fusion Cloud Supply Chain Management. Use the All Books link for a list of the guides by category, and look for the Development category.

In the ScpKeyCustomerOptionsImportTemplate.xlsm file template:

1. Define your key customers on the KeyCusOptnHeader tab. Enter the name of a valid customer hierarchy in the Hierarchy Name column.
2. Next, enter the level of that hierarchy in the Level Name column. All customers in this level are identified as key customers.
3. To have only certain customers identified as key customers, enter the specific customer names on the KeyCusOptnMembers detail tab.
4. Set the aggregation level values for both key and non-key customers. Use the settings in the template to set the data to different aggregation levels, such as 1, 2, or 3.
5. Upload the template.

Ignore Aggregate by Zone

There are two Customer hierarchies--Customer and Customer Zone--where the lowest level of each hierarchy is Customer Site. If you don't have any key customers, leave the Hierarchy Name and Hierarchy Level columns blank on the KeyCusOptnHeader tab. All customers not named in the template (non-key customers) are aggregated into an All Other member for the hierarchy.

The upload also creates All Other Zone members for the non-key customers in the Customer Zone hierarchy. If you don't want to aggregate by zone, enter #ignore_zone in the Hierarchy Name column in the KeyCusOptnHeader.csv and leave the Level Name column blank.

Aggregation Levels

The aggregation levels are listed in the following table.

Aggregation Level	Description
1	Retain all customer sites, and aggregate non-key customer sites. In addition to key customer data being available, non-key customer data is retained for plans that require data that's not aggregated. Aggregated customer data is available for plans that require aggregated non-key customer data.
2	Aggregate non-key customer sites. Customers that aren't identified as key customers are aggregated to an All Other site by zone. However, if the Hierarchy Name and Level Name columns are blank, all customers are identified as non-key customers and aggregated to an All Other site by zone. This means that there are no key customers.

Aggregation Level	Description
3	No aggregation of customer sites. All data is available at customer site level.

To remove the key customer designation for previously-loaded customers, use Aggregation Level 3. This enables data for all customers to be made available at the lowest level. No customers are marked as key customers.

If you select the aggregation level 3, the following happens:

- No aggregation is done. All data is at the customer site level only.
- If option 2 or 3 was used in previous collection runs, all non-key customer by zone members and data are deleted.
- Plans using the Key Customer feature become invalid and you have to run them again.

The KeyCusOptnMembers detail tab is optional. Use this tab to identify specific customers as key customers. The Hierarchy Name and Level Name column entries must be the same as the information entered on the KeyCusOptnHeader tab. Enter valid level member names in the Level Member Name column. These members are the only customers that will be identified as key customers.

- If the KeyCusOptnMembers detail tab is empty, all child members of the hierarchy level chosen in the Header tab are flagged as key customers.
- If the KeyCusOptnMembers detail tab isn't empty, only the listed members are identified as key customers.

The members must be children of the hierarchy level named on the Header tab.

When you create a plan, there is an option in the Plan Options dialog box that determines what level of customer aggregation is used for the plan:

- Key customer data is available and non-key customer data is aggregated to a level member named All Other.
- No customer data is aggregated for the plan if the option is deselected.

Related Topics

- How can I reset the key customer aggregated data for a plan?

Load Aggregated Customer Data from Oracle E-Business Suite

This topic explains the procedure you follow to load aggregated customer data from an Oracle E-Business Suite source system into your Oracle Fusion Cloud Supply Chain Planning destination system.

The procedure is composed of the following steps:

1. Extract data from your Oracle E-Business Suite source system.
2. Prepare the Supply Chain Planning Key Customer Options file if you have defined key customers in your Oracle E-Business Suite source system.
3. Add the files to your desktop or local hard drive.
4. Import data into your Oracle Supply Chain Planning destination system.

Additional details for each step are provided in this topic.

Prerequisites

To perform the process that extracts data from your Oracle E-Business Suite source system, you must be assigned a configured, administrator-level role that's similar to either the Advanced Planning Administrator role or the Advanced Supply Chain Planner role.

Your source system must be set up as one of the Trading Community Source Systems for Oracle Supply Chain Planning.

You can perform the steps to import data into your Oracle Supply Chain Planning destination system from one of the Supply Chain Planning work areas. You don't need an administrator role to perform these steps.

Extract Data

To extract the data from your Oracle E-Business Suite source system, run the Extract Data for Oracle Supply Chain Planning process.

Consider the following conditions for the MSD_DEM_CUSTOMER attribute when you run the process:

- If the MSD_DEM_CUSTOMER_ATTRIBUTE is set to null, then all sites are extracted.
- If the MSD_DEM_CUSTOMER_ATTRIBUTE is set to none, then all records are aggregated to Default Customer Site.
- If the MSD_DEM_CUSTOMER_ATTRIBUTE is set to a valid customer attribute, then all sites are extracted.

The extracted data is stored in a file in the zipped file format in the middle tier of your source system.

Prepare the Key Customer Options File

If you have defined key customers in your Oracle E-Business Suite source system, then perform these steps to prepare the Supply Chain Planning Key Customer Option file:

1. Download the template for file-based data loads for the Supply Chain Planning Key Customer Options object.
2. Add your data to the file.
3. Generate the CSV file.

For details on preparing files for loading planning data, refer to these help topics: Loading Planning Data from Files: Overview and Creating CSV Files Used to Load Planning Data: Procedure.

Add the Files to Your Desktop or Local Hard Drive

Locate the extracted Zip file on your Oracle E-Business Suite middle tier, and download or transfer the file to your desktop or local hard drive.

If you have defined key customers in the Oracle E-Business Suites source system, then include the Key Customer Options file in the Zip file.

Import Data into Your Oracle Supply Chain Planning Destination System

To import the data into your Oracle Supply Chain Planning destination system, perform these steps:

1. From the Navigator, click **File Import and Export**.
2. On the File Import and Export page, perform the upload action using these values:
    - File: The file you created
    - Account: scm/planning DataLoader/Import

3. From one of the Supply Chain Planning work areas, perform the Manage Planning Source Systems task to check if your source system is already created. If your source system is not already created, then create it with the following values:
    - Version: External.
    - Code: Must be the same as the one used for your Oracle E-Business Suite source system.
4. From a Supply Chain Planning work area, perform the Load Planning Data from Files task.

View and Refresh Collected Measure Data

View Collected Data for Measures Before Running a Plan

The Collected Measure Data table enables you to view imported or collected records and their statuses without having to examine log files or run a plan. The table lists measures that were successfully populated as well as also those that weren't for your plan. By using this table, you can quickly resolve problems in the data load process.

Just as you can use the Supplies and Demands table to view the collected or imported supplies and demands, you can use the Collected Measure Data table to view bookings, shipments, and other entities.

For example, Small Inc. imported its shipments history data using the Supply Chain Planning Shipments History file-based data import (FBDI) template. To save time and work efficiently, the company wants to ensure that data was correctly imported before running its plan. The company uses the Collected Measure Data table and selects the option to view only records with errors. The company notices that several records have an error pertaining to invalid names for the Customer Site level member. Now that the reason behind the error has been identified, Small Inc. can fix the data in the FBDI file, import the data again, and run the plan. By using the Collected Measure Data table, Small Inc. quickly identified data import-related problems and didn't have to spend time analyzing the log files for the import or analyzing the plan after running it.

1. In the Plan Inputs work area, click the **Open** drop-down button.
   The Open Table, Graph, or Tile Set dialog box opens.
2. Select the Collected Measure Data table and click **OK**.
   The Collected Measure Data table opens in a new tab.
3. Specify your search criteria, and click **Search**.
   Use the **Errors** field to limit the records to those with errors or those without errors.

   > **Note:** By default, the table displays only the first 10,000 records that meet your search criteria. To change this limit, you need to create and use a profile option with the MSC_COLLECTED_MEASURE_DATA_MAX_ROWS code. No indication is provided if the table has records that aren't displayed because the predefined or user-defined limit has been exceeded.

4. Analyze the records that are returned according to your search criteria.
   The **Last Updated Date** column displays the date on which the records were created or last updated.
   The **Refresh Number** column displays the refresh numbers of the collection job sets through which the measures were populated when the FBDI templates or collections feature was used.
5. Optionally, to export the records to a Microsoft Excel file for further analysis, click **Actions** > **Export to Excel**.
   The records available in the Collected Measure Data table are exported to the file. The predefined or user-defined limit is applied when the records are exported.

> **Tip:** When you export the records to an Excel file, you can view more than 15 records at a time. You may find it helpful during your error analysis to view more than 15 records at a time.

Additional Points About the Collected Measure Data Table

These are some additional points about the Collected Measure Data table:

- The table displays records that are successfully uploaded to the MSC_MEASURE_DATA table.
- For records with errors, the table displays records from the MSC_ST_MEASURE_DATA staging table that have information in the ERROR_TEXT column.

  The table doesn't display records from the staging table that weren't moved to the MSC_MEASURE_DATA table and don't have error information.
- The table filters records by the applicable security privileges of the user. For example, if you have access to only certain organizations, you can view measure values for only those organizations.
- The table lists both predefined and user-defined measures.
- The table displays measure data that's imported through these file-based data import (FBDI) templates:
  - Supply Chain Planning Bookings History
  - Supply Chain Planning Causal Factors
  - Supply Chain Planning Forecast Measures
  - Supply Chain Planning Measures
  - Supply Chain Planning Option Bookings History
  - Supply Chain Planning Option Shipments History
  - Supply Chain Planning Shipments History
- The table doesn't display measure data that's imported through the Supply Chain Planning External Forecasts and Supply Chain Planning Price Lists FBDI templates.

  To troubleshoot imported data for external forecasts or price lists, examine the log files or run your plan.
- The table also displays any measure for which information is collected from Oracle Fusion Cloud Applications Suite or imported from Oracle E-Business Suite.
- To view aggregated non-key customer data in the table for demand, demand and supply, and sales and operations plans, before collecting or importing measure data, select the **Aggregate non-key customer data to an All Other level member** check box on the Demand tab on the Plan Options page for the plan. Then, enter the required aggregation levels in the Supply Chain Planning Key Customer Options FBDI template, and import customer data with the template. After you collect or import measure data, when you filter your records by the plan name in the table, you can view the aggregated data for non-key customers. For aggregated records, the value displayed in the **Customer** column is "<zone name>:All Other."
- To avoid reduced performance, don't sort the records if you increase the maximum number of records displayed in the table by creating and using a profile option with the MSC_COLLECTED_MEASURE_DATA_MAX_ROWS code.

Related Topics

- How You Aggregate Customer Data

Refresh Collected Measure Data

The Orchestrate Refresh Measures Processes scheduled process lets you update the plan data for collected planning measures without running the plan.

You can refresh a subset of predefined or user-defined measures such as shipments and bookings history, sales and marketing forecasts, and financial measures such as Budget Value and Financial Forecast Value. This process retains the measure data for statistical and simulation demand forecasts usually purged when running your plan. By defining a job set, you can automate this scheduled process to refresh measures immediately after loading external measure data from flat files.

For example, an enterprise has a weekly demand planning cycle. They need to generate a baseline statistical forecast once a week but continue to get daily updates for recent shipments, bookings, and sales forecast. Instead of running the plan daily, they modify their planning process to run it at the start of the week and then refresh the key collected measures daily.

Orchestrate Refresh Measures Processes

Use these steps to configure the Orchestrate Refresh Measures Processes scheduled process using a measure catalog containing only a subset of plan measures:

1. In the Scheduled Processes work area, click **Schedule New Process** on the Overview page.
2. In the Schedule New Process dialog box, search for and select **Orchestrate Refresh Measures Processes**, and then click **OK**.
3. In the Process Details dialog box, Basic Options section, do the following:
    - **Plan**: Select a plan name.
    - **Measure Catalog**: Select a measure catalog.
4. Click **Advanced** and navigate to the Schedule tab. You can set up the process to run as soon as possible or establish a schedule.
5. When done, click **Submit**.

The Confirmation dialog box opens and displays the process number. You can use this process number to search for the process result in the Scheduled Processes work area.

Additional Information about Orchestrate Refresh Measures Processes

Here's some additional information about the Orchestrate Refresh Measures Processes scheduled process:

- You can schedule the Orchestrate Refresh Measures Processes scheduled process to refresh collected measure data for one time or on a repetitive schedule from the Scheduled Processes page. You can configure a job set that contains the Orchestrate Refresh Measures Processes scheduled process after the Load Planning Data from Flat Files scheduled process to sequence and automate these planning processes.

- When copying a plan, you get the following options:
    - Copy plan options only
    - Copy plan with reference to the base plan
    - Copy plan with no reference to the base plan

  If the copied plan was created using the second option (Copy plan with reference to the base plan), then it does not support the Refresh Collected Measure Data capability. Such plans do not appear in the Plan field of the Orchestrate Refresh Measures Processes scheduled process.
- The Orchestrate Refresh Measures Processes scheduled process considers the measure data uploaded using file-based data import (FBDI) templates, including planning measures and demand history. The process does not consider transactional data such as sales orders, price changes, or new items and organizations that are not already included in a plan. For supply plans, measure data loaded using the Supply Chain Planning External Forecasts (FBDI) template can't be refreshed.
- When introducing a new measure to a plan defined with the Refresh with current data option in Manage Planning Measures, you must first run the plan to refresh with the current data before you can refresh that measure's data using this process.

  > **Note:** Run your plan after a release upgrade before using this process.

- You need to include both the Shipments History (or Bookings History) measure and the default measure used to refresh Shipments History in your measure catalog. For example, if the default measure used for the Default Shipments History Measure profile option is Shipments History: Requested Item by Shipped Date, then include both this measure and the Shipments History measure in the measure catalog used to refresh your plan.

7 Segmentation

Segmentation in Oracle Supply Planning

Segmentation is the process of grouping combinations into segments on the basis of user-defined, static, or dynamic attributes. Through segmentation, you can better manage the supply for many combinations by grouping them into a few segments.

In Oracle Supply Planning, these combinations can include items, organizations, customers, and demand classes.

You can use segments in supply planning to do any of the following:

- Apply policy assignment sets by segment groups.
- View data and perform drills in tables and graphs by segments.
- Define segment groups for use in attribute-based netting sequences.
- Filter data in analysis sets by using segments as filters.

For example, you can perform segmentation by defining segment groups that are based on:

- Intermittency and volatility
- Demand volume and cost
- Item attributes
- User-defined attributes

Segmentation is available and functions in a similar way in the following work areas, except for some minor differences, which are noted in specific segmentation topics.

- Supply Planning
- Planning Central
- Demand Management
- Demand and Supply Planning
- Replenishment Planning
- Sales and Operations
- Plan Inputs

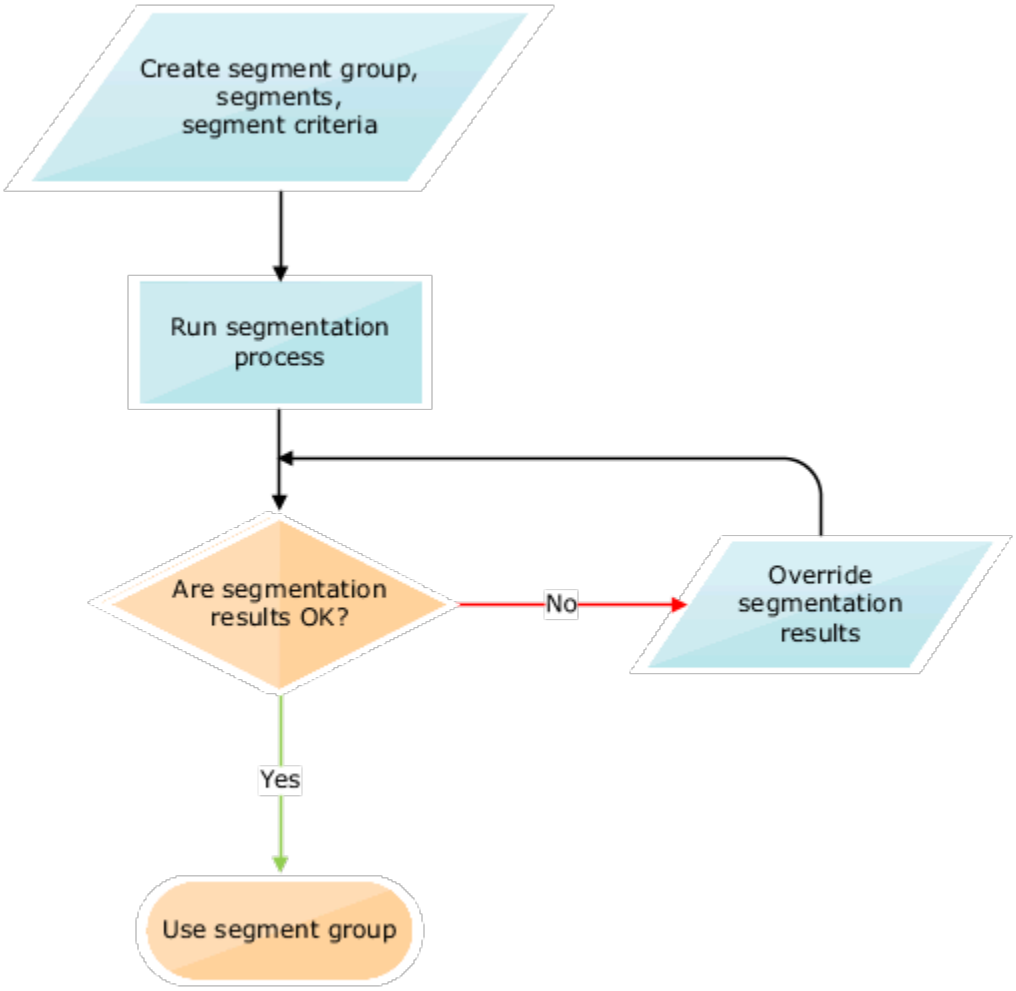
How You Perform Segmentation

Here's what you do during the segmentation process:

1. Set up a segment group and its segments. The segment group has a specific granularity that's applicable to the segments. You specify dimension-based or measure-based criteria for each segment on the basis of which combinations are assigned to the segment.
2. Run the segmentation job for the segment group from the Manage Segment Groups and Criteria page (**Actions** > **Execute Segmentation**). The combinations are grouped into the segments.

3. View the results of segmentation, and optionally override the assignment of combinations to segments to better meet your business requirements.

This flow chart summarizes the segmentation process:



When the segments are used as members for tables and graphs, for combinations that aren't associated with a segment in the segment group, the segment information is shown as "Not available."

What You Do After Segmentation

Here's what you do after the segmentation process:

1. If you're using policy assignment sets, create a policy assignment set, and then attach the segment group to the policy assignment set.
2. Attach the segment group to a supply plan.
3. Run the supply plan to calculate the unique plan requirements for the item-org combinations in each segment.

Work with Segment Groups

Create a Segment Group

A segment group consists of segments into which combinations are grouped. The segment group has a granularity that's also applicable to the segments. You define the segments on the basis of dimension-based or measure-based criteria.

- In the Replenishment Planning work area, the combinations consist of items and locations that are collected from Oracle Fusion Cloud Product Lifecycle Management.
- In the Supply Planning and Planning Central work areas, the combinations consist of items and locations that are collected from Oracle Product Lifecycle Management.
- In the Sales and Operations Planning work area, the combinations consist of items and locations that are collected from Oracle Product Lifecycle Management.
- In the Demand Management work area, the combinations could include both:
  - Items and locations that are collected from Oracle Product Lifecycle Management.
  - Customers and demand classes that are collected from Oracle Fusion Cloud Applications and external sources.

To create a segment group, you must:

1. Create the segment group.
2. Define the segments.
3. Define criteria for the segments.

To restrict segmentation to items for which replenishment planning must be done, you first set the MPS and MRP Planning Method attribute of items to Replenishment planning in Oracle Product Lifecycle Management. Then, while setting up criteria for segments of the segment group, you set the Planning Method attribute for the Product dimension to Replenishment planning. After collection and segmentation, only replenishment planning items are grouped into the segments of the segment group.

If you're planning replenishments at the item-subinventory level, select the Organization dimension for the segment group. Then, add the dimension to segments of the group, and use the Location attribute of the dimension to include subinventories in the segments. The subinventories are listed in the <organization>:<subinventory> format.

Create the Segment Group

Follow these steps to create the segment group:

1. On the Tasks panel tab, under Plan Inputs, select **Manage Segment Groups and Criteria**.

The Manage Segment Groups and Criteria page opens.

2. Under Search Results, click **Actions** > **Create**.
   The Create Segment Group page opens.
3. In **Segment Group**, enter the segment group name.
4. In **Source System**, select the source system for the segment group.
   The source system must be the same as that used in the plan to which you attach the segment group. Only the combinations in the selected source system are available after segmentation in the segment group.
5. In **Simulation Set**, select a simulation set for the segment group.
   If you plan to simulate changes to the same item attributes at the segment group and plan levels, preferably, use the same simulation set in both cases.
6. In **Description**, enter the segment group description.
7. Under Segment Granularity, in the **Dimension** column, select the dimension that you want to specify for the segment group granularity.
   The lowest levels for the selected dimensions are displayed in the **Level** column, and the displayed levels make up the segment group's granularity.
   Note the following:
   - For demand, demand and supply, sales and operations, and supply plans, only the predefined Customer, Demand Class, Organization, and Product dimensions are supported. You must select the Product dimension. If you select the Customer or Demand Class dimension, you must specify measure-based criteria for each segment.
   - For replenishment plans, you must select only the Organization and Product dimensions.
8. Add more dimensions as required by clicking the **Add Row** icon.
9. In **Catalog**, select the Oracle Product Lifecycle Management catalog from which you want to use categories while specifying the attributes for Product dimension-based criteria of segments in the group.
10. Click **Save**.

Define the Segments

Follow these steps to create a segment in the segment group:

1. Under Segments, click the **Add Row** icon.
2. Enter the segment name and description.
3. Under **Rank**, accept the default number that's a multiple of 10 or enter a whole number that's unique for the segment group.
   During segmentation, if a combination meets the criteria for more than one segment, the combination is assigned to the segment with the lower rank.
4. Add more segments as required.
5. Click **Save**.

Define Criteria for the Segments

Follow these steps to define criteria for segments:

1. Under Segments, select the segment for which you want to define criteria.
2. Under Segment Criteria, click the **Add Row** icon.
   A row appears for the segment criterion of the segment.

3. Set the criterion as follows:

    a. In the list under **Dimension**, if you want the criterion to be based on the selected dimensions for the segment group:

        i. Select a dimension.

        The list under **Attribute** is enabled and displays the attributes for the selected dimension.

        ii. In the list for attributes, select an attribute for the dimension.

        If you selected the Product dimension, and you previously specified an Oracle Product Lifecycle Management catalog, the list includes Category as an attribute.

        If you selected the Product dimension, you can select the attribute named Safety Stock Planning Method.

        iii. In the list for operators, select the operator with which you want to evaluate the attribute.

        Depending on your selection, fields or lists under **From Value** and **To Value** may be enabled, and dialog boxes may open.

        iv. Specify the values for the attribute.

        If you selected **Category** as an attribute, the categories for the selected Oracle Product Lifecycle Management catalog are displayed in the list under **From Value**.

        If you selected **Safety Stock Planning Method** as an attribute, you can select **Safety stock quantity**, **Days of cover**, or **Not planned** in the list under **From Value**.

    b. In the list under **Dimension**, if you want the criterion to be based on measures:

        i. Select **Measure-based criteria**.

        The Search and Select: Plans dialog box appears.

        ii. In the Available Plans pane, in **Type**, specify the plan type.

        iii. Click the **Find** icon.

        The available plans are displayed. For Replenishment Planning, only those plans for which the **Generate forecast** check box is selected on the Plan Options page are displayed.

        The plans should have been run and contain tables with the required measures. The tables should have only those dimensions and levels that are in the segment group.

        iv. Select and move plans to the Selected Plans pane.

        v. Click **OK** to return to the Create Segment Group page.

        vi. In **Measure Evaluation Table**, select the table from which a measure should be selected for the segment criterion.

        The tables associated with the selected demand or replenishment plans are available in the list.

        vii. In **Measure Name**, select a measure.

        viii. In **Operator**, select the operator with which you want to evaluate the measure value.

        Depending on your selection, the **From Value** field, **To Value** field, or both are enabled.

        ix. Specify the values for the measure.

4. Add more rows for segment criteria as required.

   If you're adding rows, enter a whole number in the field under **Group** for each row. During segmentation, those rows with the same whole number are processed with the AND operator. Then, the resulting criteria are processed with the OR operator.
5. Click **Save**.

Related Topics
- How You Set Up Replenishment Planning for Subinventories

Edit a Segment Group

You can edit and delete segment groups, segments, and segment criteria.

Edit the Segment Group

You can duplicate, edit, and delete a segment group.

You can delete the segment group only if it's not associated with a policy assignment set or a plan for the work area.

The changes you can make to the segment group are limited. You can't change the name or source system for the segment group, and you can't change its granularity by adding or deleting dimensions.

Follow these steps to edit the segment group:

1. On the Tasks panel tab, under Plan Inputs, select **Manage Segment Groups and Criteria**.

   The Manage Segment Groups and Criteria page opens.
2. Search for the segment group that you want to edit.
3. Select the segment group, and click **Actions** > **Edit**.

   The Edit Segment Group page opens.
4. Change the description and simulation set as required.

   If you plan to simulate changes to the same item attributes at the segment group and plan levels, preferably, use the same simulation set in both cases.
5. In **Catalog**, select the catalog from Oracle Fusion Cloud Product Lifecycle Management from which you want to use categories while specifying the attributes for Product dimension-based criteria of segments in the group.

   If you previously selected a catalog and used one of its categories while setting up a Product dimension-based criterion, the list is grayed out.
6. Click **Save**.

Edit the Segments

You can add, duplicate, and delete segments and change their names, descriptions, and ranks.

In the Replenishment Planning work area, you can delete segments only if the segment group isn't associated with a policy assignment set or replenishment plan. In the Supply Planning work area, you can delete the segment group only if it's not associated with a policy assignment set or supply plan. In the Sales and Operations Planning work area, you can delete the segment group only if it's not associated with a plan.

If you change the rank of a segment, you may change how combinations are assigned to segments after you run segmentation again. During segmentation, if a combination meets the criteria for more than one segment, the combination is assigned to the segment with the lower rank.

Edit the Segment Criteria

You can add, edit, and delete criteria for a segment.

For dimension-based criteria, you can change the attributes, operators, and values. For measure-based criteria, you can change the plans, measure evaluation tables, measures, operators, and values.

Depending on the operator used for a criterion, you can change the values under **From Value**, **To Value**, or both.

If you change the value under **Group** for the criterion, you may affect the segmentation result. During segmentation, those criteria with the same whole number are processed with the AND operator. Then, the resulting criteria are processed with the OR operator.

Run Segmentation

You can run segmentation for a segment group from the Manage Segment Groups and Criteria page.

Follow these steps to run segmentation for the segment group:

1. On the Tasks panel tab, under Plan Inputs, select **Manage Segment Groups and Criteria**.
   The Manage Segment Groups and Criteria page opens.
2. Search for the segment group for which you want to run segmentation.
3. Select the segment group, and click **Actions** > **Execute Segmentation**.
   The Execute Segmentation dialog box opens.
4. To retain your segment overrides, select **Retain segment overrides**.
   To save your last segmentation result for display on the Segmentation Summary page, select **Save the last segmentation result**. When you select this check box, the results of the last segmentation run are displayed under the Previous heading on the Segmentation Summary page, and the results of the segmentation run you are presently submitting are displayed under the Latest heading.

   > **Tip:** If you're performing simulations, you may want to repeatedly make changes to your segmentation criteria and run segmentation so that you can compare the results of your changes with the results of the last segmentation run, which are displayed under the Latest heading on the Segmentation Summary page. In such cases, you don't want to select this check box. When you have finished your simulations and are satisfied with the results of your changes, then select this check box.

5. Click **Submit**.
   The Information dialog box opens and provides you with the request number (process ID) of the segmentation run. You can use this request number to search for the process status and log on the Scheduled Processes page. If the segmentation run fails, see the log for more information and troubleshooting.
6. Click **OK**.
   The Information dialog box closes.
7. On the Manage Segment Groups and Criteria page, click **View** > **Refresh** to update the status and last run date of segmentation for the segment group.

View the Segmentation Summary

You can view segmentation results on the Segmentation Summary page. The results of the latest and previous segmentation runs are displayed.

A segment group consists of segments into which combinations are grouped.

- In the Replenishment Planning work area, the combinations consist of items and locations that are collected from Oracle Fusion Cloud Product Lifecycle Management.
- In the Supply Planning and Planning Central work areas, the combinations also consist of items and locations that are collected from Oracle Fusion Cloud Product Lifecycle Management.
- In the Sales and Operations work area, the combinations consist of items and locations that are collected from Oracle Fusion Cloud Product Lifecycle Management.
- In the Demand Management work area, the combinations could include both:
    - Items and locations that are collected from Oracle Fusion Cloud Product Lifecycle Management.
    - Customers and demand classes that are collected from Oracle Fusion Cloud Applications and external sources.

View the Summary

Follow this procedure to view the segmentation summary for a segment group:

1. Perform one of these steps:
    - On the Tasks panel tab, under Plan Inputs, select **View Segmentation Summary**.

      The Segmentation Summary page opens.
    - On the Manage Segment Groups and Criteria page, select a segment group, and click **Actions** > **View Segmentation Summary**.

      The Segmentation Summary page opens.
2. In **Segment Group**, select the segment group for which you want to view the segmentation summary.

   The page is refreshed with the segmentation summary for the segment group. The results of the latest and previous segmentation runs are displayed, along with other details of the combinations for each segment.

   You can click a number for a segment under a column to open the Manage Segment Members page and view the combinations that meet the criteria for the number that you clicked. If you perform any overrides on the Manage Segment Members page, the changes are immediately reflected on the Segmentation Summary page.

   If you opened the segmentation summary from the Manage Segment Groups and Criteria page, the field is grayed out, and you can view segmentation results for only the segment group you selected on the page.
3. Click **Done** to close the Segmentation Summary page.

Points to Note About Displayed Information

Note these points about the information displayed on the Segmentation Summary page:

- You can use the latest and previous results to understand how and why combinations have moved from one segment to another. These movements happen because of changes in demands, sales, and consumption. By identifying the factors underlying these movements, you can fine-tune the segmentation process and apply manual overrides as required.
- Every time you run segmentation with the **Save the last segmentation result** check box selected in the Execute Segmentation dialog box, the latest results presently displayed on the Segmentation Summary page are displayed as the previous results, and the results of the job you just submitted are displayed as the latest results. Your manual overrides remain unaffected so long as you selected the **Retain segment overrides** check box in the Execute Segmentation dialog box.
- If you have run segmentation for the first time for the segment group, the previous results aren't displayed.
- No previous results are displayed for a segment that's added during the latest segmentation run.
- The values under the **Latest Count**, **Previous Count**, **Added in Latest Run**, and **Removed in Latest Run** columns don't include your manual overrides.

Override Segmentation Results

You can override segmentation results by manually assigning combinations to segments.

- In the Replenishment Planning work area, the combinations consist of items and locations that are collected from Oracle Fusion Cloud Product Lifecycle Management.
- In the Supply Planning and Planning Central work areas, the combinations also consist of items and locations that are collected from Oracle Fusion Cloud Product Lifecycle Management.
- In the Supply Planning and Planning Central work areas, the combinations also consist of items and locations that are collected from Oracle Fusion Cloud Product Lifecycle Management.
- In the Demand Management work area, the combinations could include both:
    - Items and locations that are collected from Oracle Fusion Cloud Product Lifecycle Management.
    - Customers and demand classes that are collected from Oracle Fusion Cloud Applications and external sources.

In the case of Replenishment Planning, the combinations consist of items and locations that are collected from Oracle Fusion Product Lifecycle Management. In the case of Demand Management, the combinations could also include customers and demand classes that are collected from Oracle Fusion Cloud Applications and external sources.

You can override segmentation results using the:

- Manage Segment Members page
- Edit-in-spreadsheet feature

Changes you make to the segments for combinations are overwritten the next time you run segmentation for the segment group unless you have selected the **Retain segment overrides** check box in the Execute Segmentation dialog box.

Override Segmentation Results Using the GUI

To override segmentation results through the Manage Segment Members page, follow this procedure:

1. Perform one of these steps:
    - On the Tasks panel tab, under Plan Inputs, select **Manage Segment Members**.

      The Manage Segment Members page opens.
    - On the Manage Segment Groups and Criteria page, select a segment group, and click **Actions** > **Manage Segment Members**.

      The Manage Segment Members page opens and displays the combinations for the segment group.
    - On the Segmentation Summary page, for the segment of a segment group, click the number under **Latest Count**, **Previous Count**, **Added in Latest Run**, **Removed in Latest Run**, **Manually Added to Segment**, **Manually Removed from Segment**, or **Final Count**.

      The Manage Segment Members page opens and displays the combinations corresponding to the number you clicked.
2. On the Manage Segment Members page, under Search, select the segment group for which you want to override the segmentation results, and click **Search**. You can further refine your search by the segment, previous segment, and levels for the dimensions in the segment group.

   The page is refreshed with the segmentation results. For each combination, the assigned segment in the latest segmentation run, assigned segment in the previous segmentation run, and segment override are displayed.
3. For each combination for which you want to override the segmentation results, under **Segment Override**, select the new segment.
4. Click **Save and Close**.

Override Segmentation Results Using a Spreadsheet

To override segmentation results through the edit-in-spreadsheet feature, follow this procedure:

> **Note:** You must first download and install the desktop integration installer that's available under **Navigator** > **Tools**. Otherwise, you can't override segmentation results using a spreadsheet.

1. Perform one of these steps:
    - On the Tasks panel tab, under Plan Inputs, select **Manage Segment Members**.

      The Manage Segment Members page opens.
    - On the Manage Segment Groups and Criteria page, select a segment group, and click **Actions** > **Manage Segment Members**.

      The Manage Segment Members page opens and displays the combinations for the segment group.
    - On the Segmentation Summary page, for the segment of a segment group, click the number under **Latest Count**, **Previous Count**, **Added in Latest Run**, **Removed in Latest Run**, **Manually Added to Segment**, **Manually Removed from Segment**, or **Final Count**.

      The Manage Segment Members page opens and displays the combinations corresponding to the number you clicked.

2. On the Manage Segment Members page, under Search, select the segment group for which you want to override the segmentation results, and click **Search**.

   The page refreshes with the segmentation results.
3. Under Search Results, click **Edit in Spreadsheet**.

   A dialog box opens and prompts you to open or save a Microsoft Excel file.
4. Open the spreadsheet.

   The Connect dialog box opens and prompts you to connect to the application URL.
5. Click **Yes**.

   A dialog box opens and prompts you to enter your credentials.
6. Sign in with your Oracle Applications Cloud credentials.

   The spreadsheet is refreshed with the combinations in the segment group displayed on the Manage Segment Members page. For each combination, the assigned segment in the latest segmentation run, assigned segment in the previous segmentation run, and segment override are displayed. Only the first 2,000 rows are displayed.
7. To narrow your search to a combination in the segment group, enter the details in the first table, and click **Manage Segment Members** > **Search**.

   You can use the percent sign as a wildcard character for your search.
8. For each combination for which you want to override the segmentation results, under the Segment Override column, select the new segment.

   A symbol appears in the cell under the Changed column for each changed row.
9. To upload your changes, click **Manage Segment Members** > **Upload**.

   The results of the upload for each row are displayed under the Status column.

   The symbol in the cell under the Changed column disappears for each successfully uploaded row.
10. Save and close the spreadsheet.
11. To view your changes on the Manage Segment Members page, click **View** > **Refresh**.

8 Supply Plans

Manage Supply Plans

Create a Plan

You can create plans and then duplicate them to save time and perform planning activities incrementally. For example, you have defined the line of business associated with an existing plan, such as organizations and items.

You can create a copy from that existing plan rather than define a new plan.

Use this generic procedure to create a plan.

1. In a Supply Chain Planning work area, click the **Tasks** panel tab.
2. In the **Tasks** panel drawer, click the **Manage Plans** link.
3. In the **Search Results** region, from the Actions menu, select **Create**.
4. On the Create Plan page, complete the general information for the plan:
    a. Enter a name.
    b. (Optional) Provide a description for the plan.
    c. Select the plan type.
    d. Select a supply planning mode.

        > **Note:** The Supply Planning Mode attribute is only available for a supply plan, demand and supply plan, or a sales and operations plan type.

        - Supply plan and demand and supply plan types: Options are Constrained and Unconstrained. Constrained is only available if you have opted in for Constraint-Based Supply Planning. Otherwise, the supply planning mode defaults to Unconstrained.
        - Sales and operations plan type: The supply planning mode defaults to Aggregate.

    e. (Optional) Select the **Enable for OTBI reporting** check box to make measures from a plan available in Oracle Transactional Business Intelligence (OTBI) for reporting.
    f. Select the owner.
    g. Define the access level:
        i. Select **Public** to make the plan accessible for all users.
        ii. Select **Private** to restrict the plan accessible to you and to a list of users that you want to provide access.
5. Based on the type of plan that you selected, complete the required information in one or more tabs (Scope, Demand, Safety Stock, and Supply).

    If you're planning to show archived measures in your plan, you need to set the duration in days for the archived time periods and enable viewing the past days on the plan table. See the *View Planning Measures from Archived Time Periods* topic to learn more.
6. Click **Save and Close**.

Related Topics

- Copy a Plan
- View a Plan

Copy a Plan

You can create plans and then duplicate them to save time and perform planning activities incrementally.

For example, you have defined the line of business associated with an existing plan, such as organizations and items. You can create a copy from that existing plan rather than define a new plan.

Use the Duplicate procedure to:

- Create a copy of an existing plan that includes the plan data.
- Create only a copy of plan options.

Use these steps to copy a plan.

1. Navigate to the Duplicate Plan dialog box:
    a. In a Supply Chain Planning work area link, click the **Tasks** panel tab.
    b. In the Tasks panel drawer, click the **Manage Plans** link.
    c. Enter the search parameters and click the **Search** button.
    d. In the Search Results region, select the plan that you want to copy, click **Actions**, and then select **Duplicate**.
2. In the Duplicate Plan dialog box, complete the following information for the plan:
    a. Select a copy type:
        - **Copy plan options only**: The planning process copies plan options to the duplicate plan, but not the plan data.

          Typically, when you duplicate the plan with the Copy plan options only option, the next step is to edit the plan options before running the plan.
        - **Copy plan with reference to base plan**: When you duplicate the plan with reference to the base plan, the next step is to open the copied plan as you're likely to make edits before running the plan. On the Manage Plans page, the Copied From column displays the name of the plan that you copied from.

          > **CAUTION:** If you delete the base plan or rerun the base plan with the Refresh with current data option, plans copied from the base plan become invalid.

        - **Copy all plan data with no reference to base plan**: The planning process makes a full, standalone copy of the plan, which can include archived measures. For approved sales and operations plans,

this option enables you to create a full backup copy of your plans at the end of every planning cycle.

On the Manage Plans page, the Copied From column is empty for the new plan because it's a standalone copy of the base plan. Therefore, there's no reference to the base plan.

The Copy all plan data with no reference to base plan option isn't available for demand plan types.

b. Enter a name and a description.
c. Define the access level:
   - Select **Public** to make the plan accessible for all users.
   - Select **Private** to restrict the plan accessible to you and to a list of users that you want to provide access.
d. (Optional) Select the **Load plan after copy** check box to load the copied plan to memory. This check box isn't available for demand plan or sales and operations plan types.
e. Select the owner.
f. (Optional) Select the **Include archives** check box to make a standalone copy of your plan that includes archived measures. The copies of the archived versions are relabeled to remain consistent with the new plan name. This relabeling applies to both scheduled and ad hoc archive versions.

   The transaction history of when archived versions were created in the original plan isn't copied to the new plan. However, the new archived version names retain the date stamp and sequence number of when the archives were originally run.

   The **Include archives** check box is available only when:

   - The **Enable for archiving** check box is selected in the Scope: Advanced Options dialog box in the plan options.
   - The **Copy all plan data with no reference to base plan** is selected as the copy type in the Duplicate Plan dialog box.

3. Click **Save and Close**

Related Topics

- Create a Plan
- View a Plan

View a Plan

If you already have an existing plan, you can open the plan from the Plans drawer or by using the Manage Plans task. You must always run a plan before you can view it.

To open an existing plan from the Plans drawer to view it, do the following:

1. In a Supply Chain Planning work area link, click the **Plans** drawer.
2. Expand **Plans**, and select the plan of your choice.

3. Click the **Actions** button and select **Open**.

> **Tip:** If you have many plans, you have an option to search a plan by using the **Manage Plans** task. In this case, provide appropriate search criteria and click **Search**. In the search results area, select your plan and click the **Action** button and select **Open**. Oracle recommends this method to view sales and operations plans.

> **Note:** If you're planning to show archived measures in your plan, you need to set the duration in days for the archived time periods and enable viewing the past days on the plan table. See the *View Planning Measures from Archived Time Periods* topic to learn more.

Related Topics

- Create a Plan

Enable Plans for OTBI Reporting

Oracle Transactional Business Intelligence (OTBI) is a real-time, self-service reporting solution that helps you create user-defined and interactive reports.

You can enable OTBI reporting for plans created in your Supply Chain Planning work area to:

- Run reports in real-time to analyze supply, demand, and sales and operations planning plans
- Generate user-configurable and easy-to-use reports by using business intelligence tools and charts
- Analyze key metrics, such as exception metrics, inventory balances, pegged quantity, and orders to be released
- Compare two or more plans that are enabled for OTBI reporting

To improve your supply chain performance, you can monitor and identify problem areas by using strategic insights into live and operational data. Compare different scenarios in real-time by using key measures to decide the best course of action. You can respond to changes by modeling complex strategies and plans to analyze and compare them. You can also define native OTBI capabilities like alerts based on exception conditions, user-defined measures, and conditional formatting to monitor or track problem areas.

To create OTBI reports, navigate to the Reports and Analytics work area. You can build reports by using the base measures available in your Supply Chain Planning work area. You can also create user-defined measures based on the base measures by using the standard business intelligence tools.

To open OTBI reports in a Supply Chain Planning work area, save the OTBI reports into the Report Components subfolder within the Transactional Analysis Samples folder. The Report Components folder is located in the shared Supply Chain Planning folder in the Reports and Analytics work area.

To enable OTBI reporting for plans, you must do the following:

- Select the **Enable for OTBI reporting** check box on the Plan Options page of your supply, demand, or sales and operations plan.

  > **Note:** You must run the plan after you enable it for OTBI reporting.

- Set up reporting hierarchies by configuring the Product and Time hierarchies in the dimension catalog named Reporting Catalog. To configure the Product and Time hierarchies, use the Configure Planning Analytics task in your Supply Chain Planning work area. Depending on the reports that you want to generate, move the Product and Time hierarchies from the Available Hierarchies pane to the Selected Hierarchies pane. If you select

multiple Product and Time hierarchies, ensure that you select a default hierarchy for the Product and Time hierarchies. The default hierarchies are used by default in the predefined reports.

You can build reports by using the base measures available in your Supply Chain Planning work area. You can also create user-defined measures based on the base measures by using the standard business intelligence tools.

Accessing the OTBI Reports

Perform these steps to access the OTBI reports:

1. In a Supply Chain Planning work area, open a plan that is enabled for OTBI reporting.
2. Click the **Open** button and then select a pane.
3. In the Open Table, Graph, or Tile Set dialog box, do one of the following:
    - Search for your report.
    - Filter the list by selecting **Type** and then **Report**.
4. Select a report and then click **OK**.

    The OTBI report opens in the context of the current, open plan.

When you search for reports, the list of reports in the search results includes predefined reports and user-defined reports created by you. You must save the user-defined reports into the Reports Components subfolder within the Transactional Analysis Samples folder to make them available in the Supply Chain Planning work areas. The following predefined reports are available only in the Supply Planning and Planning Central work areas:

- Build Plan by End Item
- Exception Summary by Item Order
- Details by Item
- Pegging Details by End Item
- Plan Recommendations Summary Graph

Available Measures

The following measures are available in the Reports and Analytics work area:

- *Configure to Order Forecast Metrics*: The following configure to order forecast metrics are available for demand plans, and demand and supply plans:
    - Final Option Demand Forecast
    - Final Planning Percent
    - Option Demand Forecast

      Configure to order forecast metrics support dimensions, such as Plan, Time, Product, Organization, Customer, Top Model, and Demand Class.
- *Demand Management Metrics*: The following demand management metrics are available for demand plans, and demand and supply plans:
    - Bookings Forecast
    - Bookings History
    - Bookings History Value

- Final Bookings Forecast
- Final Shipments Forecast
- Shipments Forecast
- Shipments Forecast Value
- Shipments History
- Shipments History Value

  Demand management metrics support dimensions, such as Time, Product, Organization, Customer, and Demand Class.

- *Exception Metrics*: The following exception metrics are available for supply plans, and demand and supply plans:
  - Exception Count
  - Exception Quantity
  - Exception Days
  - Exception Ratio
  - Exception Value

    Exception metrics support dimensions, such as Plan, Time, Product, Organization, Customer, Supplier, Manufacturing Resource, and Exception Type.
- *Order Metrics*: The following order metrics are available for supply plans, and demand and supply plans:
  - Order Quantity
  - Implemented Supply Quantity
  - Order Value

    Order metrics support dimensions, such as Plan, Time, Product, Organization, Order Details, and Order Type.
- *Pegging Metrics*: The following pegging metric is available for supply plans, and demand and supply plans:
  - Pegged Quantity

    Pegging metric supports dimensions, such as Plan, Time, Product, Organization, Customer, Supplier, End Demand, and Order Type.

- *Sales and Operations Planning Metrics*: The following sales and operations planning metrics are available for sales and operations plans:
    - Consensus Forecast
    - Consensus Forecast Value
    - Final Sales Forecast
    - Final Sales Forecast Value
    - Sales Forecast
    - Sales Forecast Value

      Sales and operations planning metrics support dimensions, such as Plan, Time, Product, Organization, Customer, and Demand Class.

How You Compare Supply Plans and Orders

You can compare a plan with another plan or an archive of the same plan, and show the difference between them by selecting a metric.

You compare plans at two different levels:

- Compare aggregate plan metrics: You can compare two plans and understand what changed at an aggregate level. For example, you can compare metrics such as Revenue, Demand at Risk, and Exception Count.
- Compare plans at detail level: You can query the supplies and demands when something is different between two plans using the Order Comparison screen. For example, you can compare the baseline plan with the simulation plan and filter to show only those orders where the suggested due date has changed by more than a specified number of days.

  Comparing orders in the Order Comparison report is unrelated to the Compare Plan functionality for aggregate plan metrics.

Plan Comparison

The comparison of plans in a table displays the data for each plan side-by-side. To see the differences between the plans, you can select the metrics in the Comparison Options tab when creating or editing the table. The Show Difference icon in the table or graph toolbar redraws the table or graph with the selected difference metrics.

The comparison metric options are the following:

- Difference
- Percent Difference
- Absolute Percent Difference

To compare a plan:

1. In a Supply Chain Planning work area, open a plan.
2. From the Actions menu, select **Compare**, and then click **Plan**.
3. In the Search and Select: Plan dialog box, search for and select the plan that you want to compare with the current plan. Only plans that use the same supply planning calendar are displayed. After you select a plan, click **OK**.

You can view the table with both plans displayed.

> **Tip:** Click the Graph icon on the toolbar of the table to view the results in a graph.

4. Click **Show Difference** to view the difference between the current plan and the comparison plan.

To stop comparing the plans, select **Cancel Compare** from the **Actions** menu.

Order Comparison

Use Order Comparison to identify the orders that have changed between two plans. You can compare the following order types:

- Sales orders
- Planned orders
- Purchase orders
- Purchase requisitions
- Transfer orders
- Work orders

The Order Comparison page displays the demands and supplies whose key values (such as order quantity, late quantity, or suggested due date) have changed between plans. Use Order Comparison to view values of key fields from each of the two plans. Also, you can filter based on how much the values differ between plans. For example, you can filter to show only orders whose suggested due date differs by more than 5 days.

Open the Order Comparison page using the Open action from the page-level toolbar.

After you open the Order Comparison page, the first thing you must do is select the plan you want to compare. The underlying plan that's already opened is the current plan.

> **Note:** Order comparison works independently from the Compare Plan action that's available in the page-level toolbar reviewed in the previous section. The Compare Plan action has no impact on the Order Comparison page.

After you select the comparison plan, the Changed Demands and Changed Supplies tabs appear. If you perform a search without providing any search criteria, the application displays all changed demands (or changed supplies depending on the tab where you perform the search). Any demands or supplies that are the same between plans aren't displayed.

The following lists what constitutes a change:

- The demand or supply exists in the current plan but doesn’t exist in the compared plan.
- The demand or supply exists in both plans, but the count of exceptions associated with the demand or supply is different.
- The demand or supply exists in both plans, but one or more of the Columns to Compare fields have a different value between the plans.

The values displayed in the table come from the current plan. The current plan is the plan that you opened first.

The default layout displays only a subset of the available fields for the tab. The fields available are relevant to the tab. For example, the Changed Demands tab has demand fields; the Changed Supplies tab has supply fields.

To display values from both plans, use the Columns to Compare action from the View menu. For example, by selecting the Order Quantity field, the table redraws and Order Quantity has a column for the current plan and the compared plan. The same functionality is available on the Changed Supplies tab.

The orders of the current plan are the driver of the table's content. This shows the following:

- Orders that are in both plans
- Orders that are in the current plan and don't exist in the compared plan

Orders that are in the compared plan but not in the current plan aren't shown.

In the redrawn table, the Order Quantity has a column for the current plan and the compared plan. The same functionality is available on the Changed Supplies tab.

Define Scope Plan Options

Scope options determine the scope of the plan. Define or modify scope plan options on the Scope tab on the Plan Options page.

You can configure the plan organizations, items, plan horizon, and planning level for demand forecasting. You also can define the filters for a plan, such as the hierarchy, level, and level members.

The Scope tab displays these sections:

- Plan Organizations
- Plan Items (available only for demand plans or demand and supply plans)
- Supply Planned Items (available only for demand and supply plans or supply plans)
- Plan Parameters

Plan Organizations

Specify a hierarchy, level, and level members by which to filter the plan. Also, select the source system code to use for filtering organizations. Fields in the Plan Organizations section are required. If you select a level that's above the organization level, then organizations that belong to that parent level are included in the plan.

Plan Items

Specify a hierarchy, level, and level members by which to filter specific items for demand planning. Your selections here are used with your selections in the Plan Organizations section. Items that belong to a parent level are included. Fields in this section aren't required. However, if you don't specify a hierarchy, level, and level members, then you can't filter planned items. In this situation, your plan includes all planned items in the organizations you select, which can have performance implications.

> **Note:** The Plan Items section isn't available for supply-only plans.

Supply Planned Items

For **Supply Planned Item Type**, select Manufacturing Plan (MRP) or Production Plan (MPS).

Note: The Plan Items section isn't available for supply-only plans.

For **Supply Planned Items**, select one of these options to control the items to include in the supply plan.

- All planned items: This option can have performance implications.
- Demand plan items and all sales orders
- Demand plan and WIP components
- Demand plan items only
- Demand plan items, WIP components, and all sales orders

Select the **Include items with only safety stock as demand** check box to plan items with safety stock targets, even if there is no demand yet for the items. For example, you want enough safety stock to support demand for new products with long lead times even when you can't formally forecast for the new products or don't have any sales orders.

Select **Include items with only existing supplies, but no demand** to include items with existing supplies but no demand in the plan scope. The supply plan includes those items that are not part of the existing selection but have existing supplies and no demands in the plan scope.

When you select the new plan option and it has an item with only existing supplies but no demand in the plan scope, then the items of its upstream supply chain will also be part of the plan. The plan option **Include items with only existing supplies, but no demand** is disabled if the Supply Planned Items scope is set to All planned items.

Note: The plan option Include items with only existing supplies, but no demand is available in the Supply Planning and Demand and Supply Planning work areas.

Plan Parameters

The Plan Parameters section is available for plans of the demand, demand and supply, and supply plan types.

The following table describes the plan parameters.

Parameter	Definition	Plan Types
Plan Horizon Days	Number of days in the plan. Set horizon days to forecast and plan for future needs. Minimize horizon days to avoid long-running plans. Default is 180 days.	Demand Plan
Forecasting Calendar	Select the forecasting calendar, which must belong to the dimension catalog associated with the plan.	Demand and Supply Plan
Planning Calendar	Select the planning calendar, which must belong to the dimension catalog associated with the plan.	Demand Plan
Planning Time Level	Set the planning time level on the Scope tab, and set the Forecasting time level on the Demand tab. The time levels you can choose depend on the selected planning calendar.	Demand Plan

Parameter	Definition	Plan Types
	If you selected a hybrid time hierarchy as the planning calendar for a demand plan, the planning time level is defaulted to the corresponding Hybrid time level and mustn't be changed. In the Demand Management or Demand and Supply Planning work area, for a demand plan that uses feature-based forecasting, select only Day, Week, or Month.	
Supply Planning Calendar	Select a supply planning calendar. The list of available calendars includes only calendars that meet all of the following criteria: • Belong to the dimension catalog associated with the plan. • Have calendar start and end dates that encompass the entire plan horizon. • Are Gregorian, fiscal, or organization calendars.	Demand and Supply Plan Supply Plan
Supply Planning Buckets	Specify your supply planning buckets. The list of values for the bucket types is determined by the supply planning calendar that you specify. You can base your planning horizon on days, weeks, periods, or months. Or, you can specify a combination of daily time buckets and then specify less granular time buckets such as weeks, periods, or months. If you use two bucket types, the first bucket type must be Day or Week.	Demand and Supply Plan Supply Plan
Number of Buckets	Specify the number of supply planning buckets. **Note:** For a constrained supply plan, the total number of planning time buckets can't exceed 120.	Demand and Supply Plan Supply Plan
Don't create partial buckets	Select to create additional daily buckets in the plan to avoid partial buckets. The planning process adds additional daily buckets to avoid the creation of partial buckets. This ensures that a week, month, or period always starts on the first defined day of that particular week, month, or period. If you don't select this option, the plan doesn't add any additional daily buckets. Instead, the planning process creates a partial bucket and counts that partial bucket as the first week,	Demand and Supply Plan Supply Plan

Parameter	Definition	Plan Types
	period, or month, as specified in the plan options. **Note:** The option is disabled if you select the Week-Period combination in **Supply Planning Buckets.**	
Measure Catalog	Group multiple sets of measures for use in a plan. By enabling only those measures that are needed for any specific plan, you can perform a focused analysis with improved performance. A planning administrator can create and modify measure catalogs.	Demand Plan Demand and Supply Plan Supply Plan
Price Lists	Price list used in revenue calculations. The default price list for use in value calculations is Item List Price, defined in the Items table for Organization and Item. However, if a collected price list is marked as the primary and the Include When Deriving Selling Price checkbox is marked, the revenue is calculated using the derived price.	Demand Plan Demand and Supply Plan Supply Plan
Exception Set	Lists exceptions to compute as part of a plan and also filters on Organizations and Categories for computing exceptions.	Demand Plan Demand and Supply Plan Supply Plan
Simulation Set	Lists simulation sets to use in your plan. A simulation set is a set of adjustments to plan inputs. Apply a simulation set to a plan to model different business scenarios.	Demand Plan Demand and Supply Plan Supply Plan

Related Topics

- Actions to Manage Your Plans
- How You Use Dimensions and Dimension Catalogs in Supply Chain Planning
- Plan Items with Safety Stock Targets with No Demand
- Plan Items with Only Transfer Order Demand
- Why can't I select Supply Planned Items?

Calculate Financial Metrics Using Price Lists

You can determine the selling price of an item using a single price list or by averaging multiple price lists associated with a plan.

You can use this selling price to calculate end demand values and financial metrics, such as revenue and margin. The measures can be displayed in tables and graphs. The updated end demand values are displayed in the Supplies and Demands, Exceptions, and Demand Fulfillment views in the supply plan output.

This functionality is available for constrained and unconstrained supply, demand and supply, and sales and operations plans.

Here's how you can calculate financial metrics using a price list in a plan.

1. Navigate to the **Plan Inputs** work area from the navigator.
2. From the Tasks menu, click **Collect Planning Data**.
3. Select **Items** in the Reference Data tab and **Include Price List** check box in the Demand Planning Data tab.
4. Click **Submit** to initiate the collections process.
5. On the Manage Plans page, create a new plan by selecting the price lists in the plan option to derive the selling price for the item.

   You also can edit the existing plan options to allow the price lists to derive the selling price.
6. Click **Edit** for the price list in the plan option.
7. Click **Add** in the Manage Price Lists window.
8. Select the **Primary** check box to indicate a primary price list.

   You can select a user-defined price list or the Item list Price.
9. Enable the **Include When Deriving Selling Price** plan option for the price lists that must be used to calculate the selling price. Select multiple price lists to compute the average selling price of the item.

   The planning process performs all the necessary units of measure and base currency conversions and represents them in the primary unit of measure. This value takes precedence over the Item List Price.
10. Click **OK** to save the options and run the plan.
11. Click **Open** in the plan output work area and search for the Items view.

    You can see that the plan has computed the Selling Price and Net Selling Price from the price list associated with the plan.

    In the Supplies and Demands view, the Selling Price is used to compute and display the **End Demand Value** for the forecast.

    > **Note:** This view is available in supply and demand, and supply plans.

Things to Consider When Calculating Financial Metrics Using Price Lists

Here's some additional information about this functionality.

- The Include When Deriving Selling Price check box is disabled for Item List Price since it is the default price list for all calculations. The check box is enabled for user-defined price lists collected from Product Information Management (Fusion source) or using file-based data integration (external source).
- The Selling Price is the same as the Item List Price if you don't assign any user-defined price lists to the plan. You can uncheck Include When Deriving Selling Price to consider the Item List price as the Selling Price.
- The Price measure is calculated for the price list you set as Primary. The planning process does not compute the time-varying Price measure values for a price list that is not set as Primary and for which Include When Deriving Selling Price is enabled.

- The Price measure calculated with a Primary price list is used to compute shipment or booking forecast value measures. You also can use it to compute the value in a user-defined measure with an expression in a supply plan.

Examples Showing How to Calculate Financial Metrics Using Price Lists

Example 1 shows how the selling price of an item is derived from the price lists for price list details specified in Oracle SCM. The price list and item price details are created in the Pricing work area.

The item KB-SS-PUMP106's price is defined in two price lists in Pricing. In the price list SN PRICE: LIST1, the price is 98 USD, and in the price list SN PRICE LIST2, the price is 99 USD.

1. Select the item's price list and price details, and run the Collect Planning Data scheduled process. The details are collected in Oracle SCP.
2. Create a plan, and add price lists SN PRICE LIST1 and SN PRICE LIST2 in the Manage Price Lists in the plan option.
3. Select the **Include When Deriving Selling Price** check box for both the lists.
4. Run the plan to see the item's Selling Price and Net Selling Price values in the Items view. These values are calculated from the price lists associated with the plan.

Example 2 shows how the time-varying price is used to calculate the revenue in a sales and operations plan.

The planning process uses the time-varying price for revenue calculation when you mark a single price list as **Primary**, and select **Include When Deriving Selling Price** in plan options.

For example, the Revenue of 32,000 in March 2030 is calculated by multiplying the Constrained Forecast (200) and Price (160).

The Selling Price value in the Items table is computed as the average of the time-varying prices for an item in the plan output.

If you mark more than one price list as **Include When Deriving Selling Price** in plan options, then the computed average Selling Price is used in revenue calculations instead of the time-varying price.

Example 3 shows how the average selling price is derived for an item from price lists in a supply plan.

The item AS7311 in an organization M1 is collected with the following price list details from the source system:

- Price List 1 with the price of 10 USD, effective from January 1st, 2022.
- Price List 2 with the price of 11 USD, effective from February 2nd, 2022.
- Price List 3 with the price of 9.5 Euros, effective from March 3rd, 2022.
- Price List 4 with the price of 14 USD, effective from January 1st, 2022 to June 30th, 2022.

A supply plan is created with the plan horizon start date of July 29th, 2022. The supply planning process derives the selling price for item AS7311 from price lists. **Include When Deriving Selling Price** is marked for all four price lists. The default price list "Item List Price" is marked as **Primary**.

The items AS7311 and CM1234 have a collected list price as a selling price of 10 USD.

The currency of Organization M1 is USD. The latest collected conversion rate from Euros to USD is 1.2, with the conversion date effective from Jan 1st,2022. The price of 9.5 Euros from Price List 3 is converted to USD using the latest conversion rate. The price of 14 USD from Price List 4 is ignored, as the **To Date** ends before the plan horizon start date. So, the average selling price for the item AS7311 is derived from Price List 1, Price List 2, and Price List 3 as 10.8 USD.

Since item CM1234 does not have any price list detail, the list price of the item is applied as a selling price of 10 USD in the plan.

The financial metrics in the plan for item AS7311 are calculated based on the selling price derived from price lists associated to the supply plan.

Safety Stock Parameters

Safety Stock Planning Methods

You can select a Safety Stock Planning Method to plan safety stock for your plan.

Use the Supply Planning, Planning Central, or Demand and Supply work area to open the Plan Options page, Safety Stock tab, where you can select the safety stock planning method.

The following are the four safety stock planning methods from which to select:

- Do not plan safety stock
- User-specified values for all items
- Statistical safety stock for end items, none for all others
- Statistical for end items, user-specified for all others

Note: The safety stock override is used and the planning process doesn't calculate any values for items when the following applies:

- If the **Apply the override quantities for safety stock** check box is selected for the plan.
- If a planned item has its safety stock override item attribute set to Not Null.

Do Not Plan Safety Stock

Select this method if you don't want safety stock calculated or planned for any item in the plan.

If you select this method, the Parameters for Safety Stock Calculation and Parameters for Safety Stock Smoothing sections aren't available.

User-Specified Values for All Items

Select this method to plan safety stock for all items based on the safety stock method for each item. In this case, safety stock planning doesn't consider statistical safety stock parameters. With this option the planning process calculates safety stock in one or more of the following ways:

- If the Safety Stock Planning Method item attribute is set to Non-MRP Planned, then you can upload safety stock quantities by using CSV files for those items.
- If the Safety Stock Planning Method item attribute is set to Days of cover, then the planning process calculates safety stock based on the user-specified days of cover for those items.
- If the Safety Stock Planning Method item attribute is blank, the planning process doesn't plan safety stock.

If you select this method, the Parameters for Safety Stock Smoothing section is editable. However, the Parameters for Safety Stock Calculation section isn't available.

Statistical Safety Stock for End Items, None for All Others

Select this method to plan safety stock only for the end items that have statistical safety stock parameters defined for them. The planning process doesn't plan safety stock for items that don't have forecasts defined.

If you select this method, the Parameters for Safety Stock Calculation and Parameters for Safety Stock Smoothing sections are editable. Statistical safety stock is calculated with parameters specified at the item, policy, or measure level.

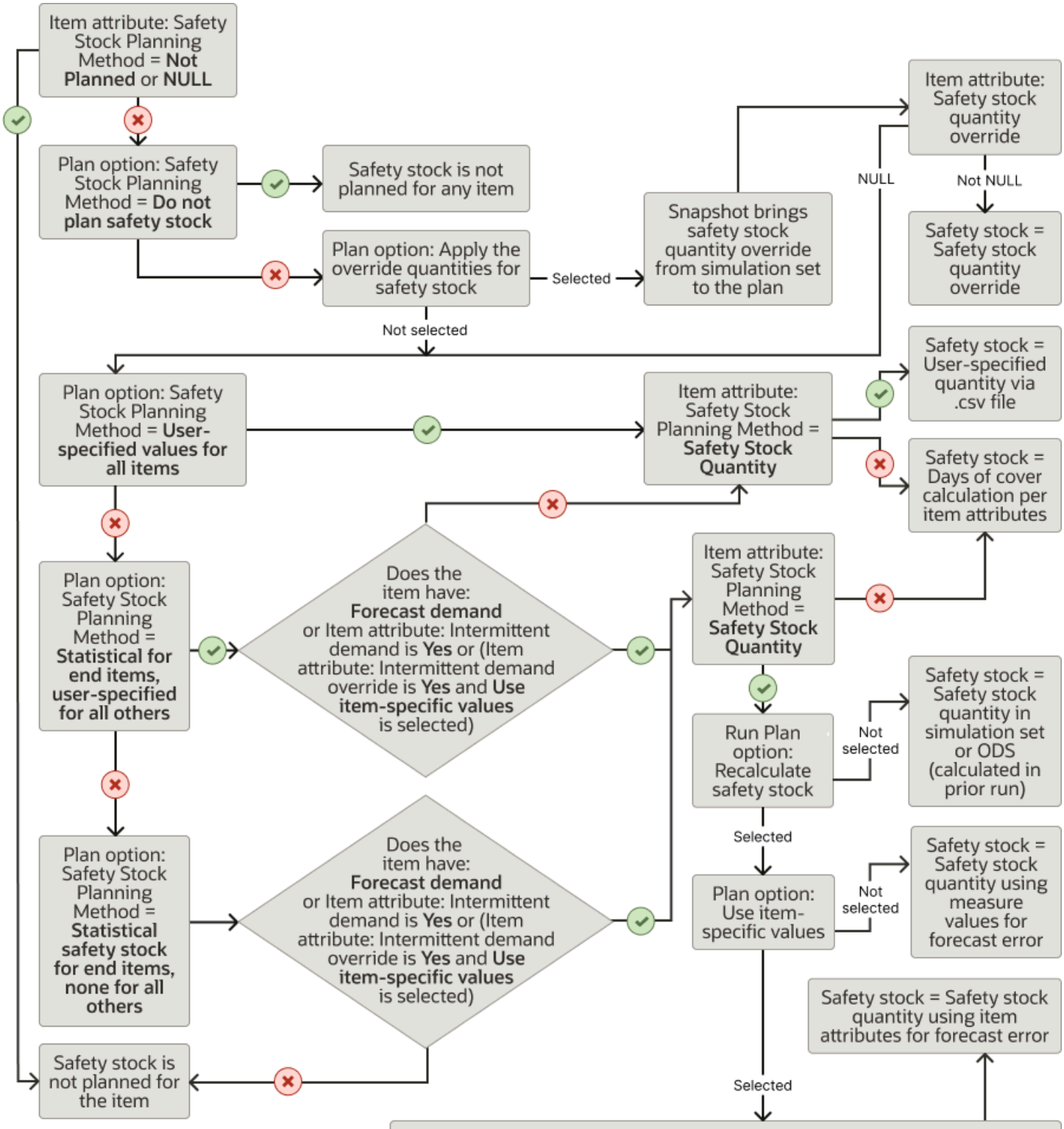
Statistical for End Items, User-Specified for All Others

Select this method to calculate and plan statistical safety stock for end items and user-specified safety stock for all other items.

If you select this method, the Parameters for Safety Stock Calculation and Parameters for Safety Stock Smoothing sections are editable. Statistical safety stock is calculated with parameters specified at the item, policy, or measure level.

Safety Stock Planning Logic

The following flowchart describes the logic used by supply planning to determine the safety stock method for an item.


Item attribute: Safety Stock Planning Method = Not Planned or NULL
Plan option: Safety Stock Planning Method = Do not plan safety stock
Safety stock is not planned for any item
Plan option: Apply the override quantities for safety stock
Selected
Snapshot brings safety stock quantity override from simulation set to the plan
Item attribute: Safety stock quantity override
NULL
Not NULL
Safety stock = Safety stock quantity override
Not selected
Plan option: Safety Stock Planning Method = User-specified values for all items
Item attribute: Safety Stock Planning Method = Safety Stock Quantity
Safety stock = User-specified quantity via .csv file
Safety stock = Days of cover calculation per item attributes
Plan option: Safety Stock Planning Method = Statistical for end items, user-specified for all others
Does the item have: Forecast demand or Item attribute: Intermittent demand is Yes or (Item attribute: Intermittent demand override is Yes and Use item-specific values is selected)
Item attribute: Safety Stock Planning Method = Safety Stock Quantity
Run Plan option: Recalculate safety stock
Not selected
Safety stock = Safety stock quantity in simulation set or ODS (calculated in prior run)
Selected
Plan option: Safety Stock Planning Method = Statistical safety stock for end items, none for all others
Does the item have: Forecast demand or Item attribute: Intermittent demand is Yes or (Item attribute: Intermittent demand override is Yes and Use item-specific values is selected)
Plan option: Use item-specific values
Not selected
Safety stock = Safety stock quantity using measure values for forecast error
Safety stock = Safety stock quantity using item attributes for forecast error
Safety stock is not planned for the item
Selected
Snapshot brings these item attributes from the simulation set to the plan:
Average Interarrival Time Override
MAD Override
Intermittent Demand Override
MAPE Override
Average Interarrival Time
MAD
Intermittent Demand
MAPE
Forecast Error Type
Safety Stock Forecast Plan ID
Safety Stock Quantity
Service Level Percentage
Safety Stock Forecast Measure ID

Related Topics

- Parameters for Safety Stock Smoothing
- Parameters for Safety Stock Calculation

Parameters for Safety Stock Calculation

You can configure parameters in which to calculate safety stock quantities as part of Run Plan. The safety stock calculation process outputs to plan data for the related safety stock fields for each item-organization attribute.

The process calculates statistical safety stock levels based on forecasts and forecast error measures.

Define or modify safety stock plan options on the Plan Options page, Safety Stock tab. The safety stock calculation process also outputs values to the plan simulation set specified on the Plan Options page, Scope tab.

Note: The Parameters for Safety Stock Calculation section is available only when one of the following safety stock planning methods is selected:

- Statistical safety stock for end items, none for all others
- Statistical for end items, user-specified for all others

The following table lists safety stock calculation parameters that you can select or configure.

Parameter	Description
Use item-specific values	Select to specify whether the supply plan run uses item-specific values in safety stock calculations.
Service Level Percentage	Enter a value between 0 and 100 to set the level of customer service that you want in satisfying the product demand immediately out of inventory.
Apply policy overrides	Select to calculate safety stock for an item and organization combination using policy level overrides. If selected, then you must select a policy assignment set.
Policy Assignment Set	Select the policy assignment set to use for the item and organization combinations that correspond to the segments and service level percentages defined in the Manage Supply Planning Policy Assignment Sets task.
Forecast Error Type	Determines whether the quality of a forecast is measured by using MAD, MAPE, Intermittent, or Demand schedule specific.
Overwrite	Select a value to use to overwrite the previously generated or entered safety stock levels.
Save to collected data	If selected, then the collected data is updated with the safety stock quantities that are calculated and with safety stock quantity overrides.

Related Topics

- Safety Stock Planning Methods
- Parameters for Safety Stock Smoothing
- How You Calculate Safety Stock Based on Multiple Demand Schedules
- Overview of Supply Planning Policy Assignment Sets
- Create a Supply Planning Policy Assignment Set

Parameters for Safety Stock Smoothing

You use the Parameters for Safety Stock Smoothing section on the Plan Options page, Safety Stock tab to configure the following options:

- Apply safety stock change interval to all items
- Smoothing method to calculate safety stock within change interval
- Safety stock change interval in days
- Safety stock bucket start offset days
- Maximum percentage variation in safety stock values
- Minimum percentage variation in safety stock values

Note: The Parameters for Safety Stock Smoothing section on the Plan Options page, Safety Stock tab, is available only when one of the following safety stock planning methods is selected:

- User-specified values for all items
- Statistical for end items, user-specified for all others
- Statistical safety stock for end items, none for all others

Apply Safety Stock Change Interval to All Items

If you enable this option, the planning process applies safety stock change interval to all items. If you disable this option, then the safety stock change interval applies only to items with Days of Cover safety stock method. Safety stock change interval is the time interval used for the smoothing within time interval functionality. If you specify an interval of 20 days, then starting from the application date, the planning process groups the safety stock calculation in 20-days bucket. The planning process then uses the smoothing method to calculate the safety stock within change interval to determine the safety stock level for the bucket.

Smoothing Method to Calculate Safety Stock Within Change Interval

Use this option for smoothing raw safety stock quantities in every interval, starting from the plan horizon. You can select Minimum, Maximum, or Average from the drop-down list. The result is always rounded up to nearest integer.

Safety Stock Change Interval in Days

Safety stock change interval is the number of working days used for smoothing safety stock within the time interval. If you specify an interval of 20 days, then starting from the application date, the planning process groups the safety stock

calculation in 20-day buckets. The planning process then uses Smoothing method to calculate the safety stock within change interval to determine the safety stock level for the bucket. Enter a value greater than zero (0).

Safety Stock Bucket Start Offset Days

Use the current day for this option to ignore the impacts of high near-term demand that's possible due to high backlog demand. Enter a value greater than zero (0).

Maximum Percentage Variation in Safety Stock Values

When you use this option, the planning process doesn't let the safety stock deviate by more than the specified value when changing the time interval. Enter a value greater than zero (0). For example, if you specify 25 percent, the planning process sets 25 percent as the maximum percentage of change in safety stock quantity between buckets.

Minimum Percentage Variation in Safety Stock Values

When you use this option, the planning process keeps the safety stock constant across time intervals if the deviation is within the specified percentage. Enter a value greater than zero (0).

Related Topics

- Safety Stock Planning Methods
- Parameters for Safety Stock Calculation

Plan Items with Safety Stock Targets with No Demand

You can plan items with safety stock targets even if there is no demand yet for the items.

For example, you want enough safety stock to support demand for new products with long lead times even when you can't formally forecast for the new products or don't have any sales orders.

Where there are no forecasts or actual demand yet for items, use the safety stock planning method **Safety Stock Quantity** to plan safety stock. Also, select the **Include items with only safety stock as demand** option on the Plan Options page, Scope tab. The supply planning process plans for safety stock, even if there's no actual demand to ensure that there's stock on hand to support any unexpected demand.

The **Include items with only safety stock as demand** check box is available for supply plan and demand and supply plan types for constrained and unconstrained supply planning. This check box isn't available if the Supply Planned Items plan option is set to **All planned items**.

Steps to Include Items with Only Safety Stock as Demand

Perform the following steps to plan items with safety stock targets in your plan for which there is no demand.

1. In the Product Information Management work area, use the Manage Items task to set the **Safety Stock Planning Method** item organization attribute to the **Safety Stock Quantity** value.
2. In the Supply Planning work area, open your plan and navigate to the Plan Options page, Scope tab. In the Supply Planned Items section, select the **Include items with only safety stock as demand** check box.

3. Navigate to the Plan Options page, Safety Stock tab and set the options to one of the following:
    - Set the **Safety Stock Planning Method** field to the **User-specified values for all items** value.
    - Set the **Safety Stock Planning Method** field to the **Statistical for end items, user-specified for all others** value. Next, select the **Apply the override quantities for safety stock** check box.
    - Set the **Safety Stock Planning Method** field to the **Statistical safety stock for end items, none for all others** value. Next, select the **Apply the override quantities for safety stock** check box.

Related Topics

- Define Scope Plan Options

Policy Assignment Sets in Supply Planning

Overview of Supply Planning Policy Assignment Sets

A policy assignment set is a group of policy parameters that are defined for each segment of a segment group.

Policies are calculated for item-location combinations on the basis of these policy parameters. The policy assignment set can also contain policy overrides for segments and item-location combinations.

The policy assignment set is attached to a segment group. You can define multiple policy assignment sets for the segment group. However, you can specify only one policy assignment set for the segment group on the Scope tab of the Plan Options page in a supply plan.

For supply planning, policy assignment sets are used to apply policy overrides as part of the parameters for safety stock calculation.

Related Topics

- Copy, Edit, or Delete a Supply Planning Policy Assignment Set
- Create a Segment Group
- Create a Supply Planning Policy Assignment Set

Create a Supply Planning Policy Assignment Set

Follow these steps to create a supply planning policy assignment set and associate it with a segment group:

1. On the Tasks panel tab, under Plan Inputs, click **Manage Supply Planning Policy Assignment Sets**.
   The Manage Supply Planning Policy Assignment Sets page opens.
2. In the Search Results section, on the toolbar, click the **Create** icon.
   The Create Supply Planning Policy Assignment Set dialog box opens.
3. Enter the name and description of the policy assignment set.
4. In **Segment Group**, select the segment group to which the policy assignment set should be attached.
   Only those segment groups for which the segmentation process has been successfully run are available for selection.
5. Click the **Add Row** icon.

6. Select a Segment.
7. Enter a value in **Service Level Percentage**. You must enter a percentage between 0 and 100.
8. Click **Save and Close**.

Related Topics

- Copy, Edit, or Delete a Supply Planning Policy Assignment Set

Copy, Edit, or Delete a Supply Planning Policy Assignment Set

You can duplicate, edit, and delete a supply planning policy assignment set on the Manage Supply Planning Policy Assignment Sets page.

The changes you can make to the policy assignment set are limited. You can't change the name of the policy assignment set and you can't delete it if it's being used in a supply plan. To change the segment group, you must first delete all the segments from the policy assignment set.

You can duplicate the policy parameters that you have specified for a segment and reuse them in another segment.

Forecast Allocation and Consumption

Forecast Processing

Forecast processing adjusts the forecast received as a demand schedule to make it suitable for use in supply planning. Forecast processing is a multi-step process that involves the following.

1. Forecast Explosion: If enabled, this step explodes the forecast of a model item into separate forecasts for all underlying option classes and options.
2. Forecast Spreading and Rounding: If enabled, this step spreads the forecasts received at a higher level of time aggregation to working days per the forecast spreading calendar. When the daily forecast quantity is calculated, it may be rounded up to a whole number, depending on the Rounding attribute for the item.
3. Forecast Consumption: In this step the forecast quantities, after spreading and rounding, are reduced, at the specified consumption level, by the open sales order quantities to produce a net forecast quantity.

You can define the following aspects of forecast processing on the Plan Options page, Supply tab, Forecast Allocation and Consumption subtab:

- Forecast Explosion
- Forecast Spreading
- Forecast Consumption
- Past Due Demands

Related Topics

- Forecast Explosion
- Forecast Spreading
- Forecast Consumption
- Past Due Demands
- Forecast Consumption View

Forecast Explosion

Forecast explosion explodes the forecast of a model item into separate forecasts for all underlying option classes and options.

Select **Explode model forecasts** to specify whether a top model forecast from a demand schedule is exploded in supply planning.

Select **Use forecasted planning percentages instead of collected data** to specify whether the planning percentages used for the forecast explosion process in supply planning are from demand planning or the Oracle Fusion Product Model.

Configure the forecast explosion parameters on the Plan Options page, Supply tab, Forecast Allocation and Consumption subtab.

Related Topics

- Forecast Processing
- Forecast Spreading
- Forecast Consumption
- Past Due Demands

Forecast Spreading

When you enable forecast spreading, the planning process breaks down the forecast at an aggregate time level to the day level. This is known as forecast spreading. Configure the forecast spreading parameters on the Plan Options page, Supply tab, Forecast Allocation and Consumption subtab.

Use the Forecast Spreading option to decide whether to spread the forecast evenly or to not spread the forecast at all.

- **Spread forecast evenly**: The planning process spreads forecast to daily buckets if the demand is planned at an aggregate level, such as a weekly or monthly level.

  If selected, then select a calendar from the **Forecast Spreading Calendar** drop-down list to determine the start and end date of the consumption buckets as well as the working days. You can only spread the forecast evenly across all working days.

  Let's say that you have a monthly demand forecast of 100 and you enable forecast spreading. There are 20 working days in the month. The planning process spreads the forecast quantity of 5 to each working day of the month.
- **Do not spread forecast**: The planning process retains the forecast at the weekly or monthly level. The planning process puts the forecast at the first day of the week or the first day of the month.

Note: You can enable the **Rounding** item attribute in the product data model or a simulation set. This ensures that the spread forecast is in integers and helps plan for items that aren't divisible.

Related Topics

- Forecast Processing
- Forecast Explosion
- Forecast Consumption
- Past Due Demands

Forecast Consumption

Forecast consumption is the process that replaces forecast demand with sales order demand. Each time you place a sales order, you create actual demand. If you have actual demand, you want to reduce the forecast demand by the sales order quantity to avoid overstating demand. The forecast consumption process deducts sales orders (actual demand) from the gross forecast, after spreading and rounding, to come up with a net forecast. Configure the forecast consumption parameters on the Plan Options page, Supply tab, Forecast Allocation and Consumption subtab.

Use the **Consumption Calendar** and **Consumption Bucket Type** options to specify the calendar and bucket type to use for forecast consumption. Depending on the type of calendar that you select, such as a 4-4-5 or Gregorian calendar, you can then specify the time bucket to use for forecast consumption.

If you select the **Consume by forecast bucket** check box, then consumption happens within a single forecast bucket. For example, if the Forecast Time Level is set to week, then sales orders are deducted from the gross forecast of that same week.

If you don't select the **Consume by forecast bucket** check box and specify values for the options **Backward Consumption Buckets** and **Forward Consumption Buckets**, forecast consumption is affected. These choices create a forecast consumption window of time consisting of the backward and forward consumption buckets. When consuming the forecast, these choices determine whether planning nets sales orders from the prior or subsequent time buckets.

For example, you specify 5 backward and 5 forward days and the forecast consumption is in daily buckets. The consumption search first moves 5 working days backward from the forecast date, deducting open sales order quantities from the forecast quantity until the forecast quantity is depleted. If there is any remaining forecast quantity, then

consumption moves 5 working days forward from the forecast bucket, deducting open sales order quantities from the forecast quantity.

You can specify additional forecast consumption parameters for a plan by defining the following options:

- Consume Forecast Inside Demand Time Fence
- Time Frame for Consuming Forecasts with No Demand Class
- Prefer Consumption Within Forecast Bucket
- Consumption Detail Cutoff Days

Consume Forecast Inside Demand Time Fence

If you enable this option, forecast consumption occurs before enforcing the demand time fence control. The forecast entries within the demand time fence are used for consumption but not as a demand. After consumption, any forecast entries within the demand time fence are removed.

If you disable this option, the demand time fence control is implemented before the forecast consumption. Forecast entries in the demand time fence are dropped as demand statements and are not used for consumption.

> **Note:** Forecast spreading and rounding always take place prior to forecast consumption or applying the demand time fence control.

Time Frame for Consuming Forecasts with No Demand Class

Use this option to instruct the forecast consumption process about the order to use to consume forecast entries when some of the forecasts have a demand class and others don't have a demand class.

If you select **Within each bucket** from the drop-down list, the forecast consumption process starts by consuming forecast entries within the consumption bucket of the sales order. At first, it consumes entries with matching demand class and then entries with no demand class. Then it consumes forecast entries within the backward and forward consumption buckets. For each bucket, it uses the matching demand class first and then the no demand class.

If you select **After consuming forecasts specific to the demand class** from the drop-down list, the forecast consumption process starts by consuming forecast entries within the consumption bucket of the sales orders with matching demand class only. Then it consumes forecast entries within the backward and forward consumption buckets with matching demand class only. If there are any remaining sales order quantity, it repeats the process for forecast entries with no demand class. At first the process runs within the consumption bucket of the sales order and then within the backward and forward consumption buckets.

Prefer Consumption Within Forecast Bucket

Select to specify whether to spread forecasts evenly and then consume if a sales order falls in the same time bucket as the forecast using Backward Consumption Buckets first followed by Forward Consumption Buckets.

If you enable the option, the planning process consumes the forecast within the forecast bucket. This option takes effect when you select **Spread forecast evenly** for forecast spreading and deselect the **Consume by forecast bucket** check box.

Consumption Detail Cutoff Days

Enter a value for the planning process to use to write forecast consumption detail records for a supply plan. The value that you enter is the number of days forward from the plan start date that the planning process writes the consumption details for sales orders or transfer order demands.

View the sales orders or transfer order demands that consumed a particular forecast in the Forecast Consumption table, which you access from the Supplies and Demands or Material Plan table.

Here's some additional information about the Consumption Detail Cutoff Days parameter:

- The number entered must be greater than or equal to zero. If the value is null or zero, then the planning process won't calculate any consumption details.
- The number must be less than or equal to the plan horizon in days.
- The number entered is added to the plan start date to get a cutoff date and identify the eligible sales orders. The planning process writes the corresponding forecast consumption details in the Forecast Consumption table.

  The cutoff date is calculated based on the supply planning calendar associated with the plan. The planning process writes the forecast consumption details for any sales order or transfer order demand with a due date less than or equal to the cutoff date.

  > **Note:** If the forecast consumption starts before the plan start date based on past due sales orders and forecasts that are snapshot into the plan, the planning process clears the forecast consumption details, beginning with the first consumption bucket.

Related Topics

- Forecast Processing
- Forecast Spreading
- Past Due Demands
- Forecast Consumption View

Past Due Demands

You can specify parameters to include past-due demands within a supply plan or a demand and supply plan by using plan option values instead of the supply network model.

Configure the past due demands parameters on the Plan Options page, Supply tab, Forecast Allocation and Consumption subtab.

Parameter	Description
Source for Including Past Due Demands	Indicates the source to determine whether to include past due demands in the plan. Source options are: • **Plan option values**: If selected, then the values specified in the past due demand section of plan options are used instead of the past due values found within the supply network model. The past due demands plan options in this section apply to all organizations included in the plan's scope. The values found in the supply network model can vary by organization. • **Supply network model**: If selected, then the past due values found in the supply network model is used to determine what past due demands are copied into the plan.
Past Due Demand Calendar	Calendar to use to determine which past due demands to include in the plan. The type of calendar selected determines the list of values for Past Due Demand Bucket Type.

Parameter	Description
	If the past due demand calendar is a Gregorian calendar, the past due demand bucket type list of values includes only Day and Month. But if the past due demand calendar isn't a Gregorian calendar, then the past due demand bucket type list of values includes Day, Week, and Period.
Past Due Demand Bucket Type	The level of time, such as day, week, or month, to use to determine whether to include a past due demand in a plan.
Past Due Open Sales Order Buckets	Number of time buckets, such as three weeks or two months. Determines how much earlier than the plan start date to use as a threshold for copying past due open sales orders into a plan.
Past Due Shipped Sales Order Buckets	Number of time buckets, such as three weeks or two months. Determines how much earlier than the plan start date to use as a threshold for copying past due shipped sales orders into a plan.
Past Due Forecast Buckets	Number of time buckets, such as three weeks or two months. Determines how much earlier than the plan start date to use as a threshold for copying past due forecasts into a plan. The planning process aggregates all of the forecasts within the past due dates of the plan and places the result at the plan start.

Understanding Past Due Demands When Forecast Is in Aggregate Buckets

When the forecast is at a higher level than day, you might see past due forecasts in your plan that are earlier than expected.

For example, let's say you've specified in the Past Due Demand section of plan options that the plan should include zero past due forecast buckets. If your forecast is at a higher level than day, the entire forecast of the current forecast bucket is copied into the plan. If the plan start date is a Wednesday, that means the entire week's forecast is copied into the plan.

You can eliminate including Monday's and Tuesday's forecast in the plan by doing both of the following:

- Select the **Demand time fence control** check box on the Supply tab, General subtab, in plan options.
- Set the item's **Demand Time Fence Days** to zero.

When the **Demand time fence control plan** option is turned on in the plan, planning doesn't consider forecast entries within the demand time fence as demand.

If you want Monday's and Tuesday's forecast to be used in forecast consumption and then drop the remaining unconsumed forecast, select the **Consume forecast inside demand time fence** check box. This check box is located on the Supply tab, Forecast and Allocation subtab, in plan options.

Related Topics

- Forecast Processing
- Forecast Spreading
- Forecast Consumption
- Forecast Consumption View
- Review and Improve Your Demand Fulfillment

Supply Plan Inputs

Considerations for Configuring Supply Plan Attributes

On the Plan Options page, Supply tab, General subtab, you can describe the generic attributes of a supply plan in the Supply Plan Attributes section, such as:

- Demand time fence control
- Planning time fence control
- Assignment set
- Overwrite firm planned orders
- Netting rule
- Date used to plan sales orders

Plan Start Date and **Plan End Date** are read-only fields. The planning process calculates the plan end date from the Plan Horizon Date that you define in the Scope tab. Plan End Date is the sum of Plan Start Date and Plan Horizon Date.

Demand Time Fence Control

When you enable this option, planning calculations ignore forecast demands before the demand time fence date and considers only sales order demand when calculating gross requirements. Demand time fence is the time duration within which the planning process doesn't consider forecast demand when calculating actual demand. The demand time fence start date is the current date and the end date is specified by users.

Planning Time Fence Control

Planning time fence is the time duration within which the planning process doesn't alter the plan. For planned items within the planning fence, the planning process doesn't reschedule in order due dates or create planned orders for the item to satisfy net demand requirements. This applies to all order types including make, buy, and transfers.

However, the planning process can reschedule out or cancel an order when it determines that such an order creates excess supply. For planned items outside the planning time fence, the planning process can generate suggestions to create, reschedule, or cancel supplies in the plan.

The planning process calculates a planning time fence date for each planned item. The date is calculated based on the values of the item attributes Planning Time Fence Type and Planning Time Fence Days. The date is calculated based on the working days in the Organization Manufacturing Calendar. For all planned orders, the suggested due date can't be earlier than the planning time fence date.

Assignment Set

Assignment set includes the sourcing rules (hierarchy) and bills of distribution (BOD) for material flow within the supply chain. If you have already created assignment sets, you can select the required assignment set from the drop-down list. You can create an assignment set in Manage Assignment Sets from the Tasks panel drawer.

Overwrite Firm Planned Orders

Use this option to determine whether firm planned orders are retained between plan runs. When you select All from the drop-down list, the planning process overwrites all entries, planned and firm planned, from the current material

plan. When you select None from the drop-down list, the planning process doesn't overwrite any firm planned orders. However, it overwrites any suggested planned orders that isn't firm.

Netting Rule

This option is available when the project-specific supply planning is enabled for your enterprise. You use this option to associate an attribute-based netting rule to your supply plan.

You create and manage your project netting rules on the Manage Attribute-Based Netting Rules page. You can access the Manage Attribute-Based Netting Rules page from the Plan Inputs, Supply Planning, or Demand and Supply Planning work area.

When you associate a netting rule to your plan, the planning process nets and shares supplies at the project group, project, or project and task levels. Netting of supplies depends on the netting sequences that you define in your netting rule.

Date Used to Plan Sales Orders

The Date Used to Plan Sales Orders option enables you to plan customer orders by either the scheduled ship date or by the customer-requested ship date. This option is available for constrained and unconstrained supply plans and demand and supply plans.

Schedule ship date: The planning process plans supplies based on the sales order line scheduled ship date.

Requested ship date: The planning process plans supplies based on the request date on the sales order line and populates the suggested due date based on the following:

- If the order date type on a standard sales order line is Ship Date, then the planning process populates the Suggested Due Date the same as the Requested Ship Date.
- If the order date type on a standard sales order line is Arrival Date, then the planning process populates the Suggested Due date as the Requested Arrival Date after reducing the transit time from it and adjusting the date by the appropriate calendar.
- If the sales order is a drop ship sales order, the Suggested Due Date on the sales order line is the Scheduled Arrival Date. Drop ship purchase orders are aligned with schedule arrival dates, and planning by request date can cause unnecessary reschedules on drop ship purchase orders. Forecasts are still consumed based on the requested ship dates.

> **Note:** You must provide forecast dates that match your choice of the Date Used to Plan Sales Order plan option. For example, if you select Requested Ship Date in the plan option, then you must ensure that the forecast dates are in terms of the requested ship dates.

Related Topics

- Time Fence Options
- How the Planning Time Fence Date Is Calculated

Automatic Release Options

Automatic release uses scheduled processes to release planned orders automatically after the plan run completes.

The following options are available in the Automatic Release Parameters section on the Plan Options page, Supply Tab, General subtab in one of the work areas for Oracle Fusion Cloud Supply Chain Planning:

- Release planned orders automatically
- Include rescheduled and canceled supplies in automatic releases
- Include rescheduled supplies in automatic releases

To navigate to the Automatic Release Parameters section, follow these steps:

1. On the Plan Options page, click the Tasks panel tab.
2. In the Tasks panel tab, click **Manage Plans**.
3. In the Search area, search for your plan.
4. Select the plan from the displayed search result.
5. Click **Actions**, and then click **Edit Plan Options**.
6. On the Plan Options page, click the Supply tab.

   The General subtab appears. The Automatic Release Parameters section is a part of this tab.

Release Planned Orders Automatically

To release planned orders automatically, you must perform these steps before you run the plan:

- Select the **Release planned orders automatically** check box on the Plan Options page, Supply Tab, General subtab.
- Select the **Refresh with current data** option on the Parameters tab in the Run Plan dialog box.

The planned orders are automatically released after the run plan is successful.

For a demand and supply plan, replenishment plan, or supply plan, the selections in the Automatic Release Parameters section aren't copied when you copy a plan. The planning process won't release planned orders when you use the duplicated plan to perform simulations.

> **Note:** Release time fence is an item-organization attribute and isn't defined in plan options.

Include Rescheduled and Canceled Supplies in Automatic Releases

When you select the **Include rescheduled and canceled supplies in automatic releases** check box, the planning process automatically releases rescheduled and canceled supplies. This check box is available only if you selected the **Release planned orders automatically** check box.

> **Note:** The **Include rescheduled and canceled supplies in automatic releases** check box isn't available in the Replenishment Planning work area.

Include Rescheduled Supplies in Automatic Releases

When you select the **Include rescheduled supplies in automatic releases** check box, the planning process automatically releases purchase orders and transfer orders that aren't firm and that were rescheduled during the bottom-up phase of multiechelon replenishment planning. This check box is available only if you selected the **Release planned orders automatically** check box.

> **Note:** The **Include rescheduled supplies in automatic releases** check box is available in only the Replenishment Planning work area.

Related Topics

- How Replenishment Orders Are Automatically Released
- Rescheduling of Orders During Bottom-up Phase of Multiechelon Replenishment Planning

General Parameters for Advanced Supply Options

Use the General Parameters section in the Supply: Advanced Options dialog box to configure the following supply plan options:

- Horizon for average daily demand
- Include scheduled receipts in use-up calculation
- Include drop ship demands and supplies
- Plan external manufacturer supplies
- Don't consider in-transit supplies as firm

Don't Consider In-Transit Supplies as Firm

By default, supplies that are in transit and shipments that are in receiving are considered firm. However, if you select the **Don't consider in-transit supplies as firm** check box in the Supply: Advanced Options dialog box, then the plan will consider them as not firm and can reschedule these supplies as needed to meet demand.

The benefits of treating in-transit supplies as not firm are elimination of redundant new planned order generation to meet the supply shortfalls within the in-transit time fence and reduction of excess inventory by using it to meet the earlier demand. For example, if the in-transit supply is coming on week 4 and demand is on week 2, then with this option selected, in-transit supplies are treated as not firm and are rescheduled to meet the earlier demand without generating an extra planned order.

The **Don't consider in-transit supplies as firm** option is supported for both unconstrained and constrained supply plans. In constrained plans, the related **Enforce lead times for in-transit supplies** option is enabled only if the **Don't consider in-transit supplies as firm** option is selected. In unconstrained plans, the **Enforce lead times for in-transit supplies** option is always disabled.

Access the General Parameters section from a Supply Planning, Demand and Supply Planning, or Planning Central work area.

Use these steps to navigate to the General Parameters section in the Supply: Advanced Options dialog box.

1. Open a plan:
    a. In a Supply Planning, Demand and Supply Planning, or Planning Central work area, click the **Tasks** panel drawer.
    b. In the Tasks panel drawer, click **Manage Plans**.
    c. In the Search area, search for your plan.
    d. Select the plan from the displayed search result.
2. Click **Actions** and then click **Edit Plan Options**.
3. On the Edit Plan Options page, click the **Supply** tab.
4. On the General subtab, click **Select Advanced Options**.
   The Supply: Advanced Options dialog box opens, which includes the General Parameters section.

Related Topics

- Horizons for the Average Daily Demand
- Why You Include Drop Ship Demands and Supplies in Supply Chain Planning

Horizons for the Average Daily Demand

You use Average Daily Demand to calculate Projected Available Balance: Days of Cover. Specify a value greater than zero (0). The default value is seven. You can configure the average daily demand in the Supply: Advanced Options dialog box.

Why You Include Drop Ship Demands and Supplies in Supply Chain Planning

When you select the **Include drop ship demands and supplies** option in the Supply: Advanced Options dialog box, all drop ship demands and supplies for planned source systems are included in the planning process.

Supply chain planning supports only one source system per plan. Item-organization attributes for the drop ship validation organization are included by the snapshot. Drop ship validation organization is defined in the Organization tab of manage supply network. If you don't select this option, the planning process removes drop ship demands and supplies from the plan.

Supplier Capacity Options

You use the Supplier Capacity Parameters section to configure the following options on the Edit Plan Options page in one of the Supply Chain Planning work areas:

- Consume supplier capacity with purchase order
- Supplier capacity accumulation multiplier

Consume Supplier Capacity with Purchase Order

When you select the check box, the planning process consumes supplier capacity with all purchase orders. When you do not select the check box, the planning process consumes supplier capacity with planned orders.

Supplier Capacity Accumulation Multiplier

Use this option to set the date for the planning process to begin the supplier capacity accumulation. You provide a number which acts as a multiplier of the Supplier Item Processing Lead-time. The number must be greater than zero. Supplier capacity is the number of units per day for a specific item that the supplier can produce. To decide the date, the planning process uses the following formula for supplier capacity accumulation:

[Multiplier *(multiplication symbol) Processing lead time] + 1

For example, if the multiplier = 2 and the processing lead time = 7 days, then the supplier capacity accumulation begins on day 15.

To navigate to the Supplier Capacity Parameters section, follow these steps:

1. On the Edit Plan page, click the Tasks panel drawer.
2. In the Tasks panel drawer, click **Manage Plans**.
3. In the Search area, search for your plan.
4. Select the plan from the displayed search result. Click Actions and then click Edit Plan Options.
5. On the Edit Plan Options page, click the Supply tab.
6. On the General tab, click Select Advanced Options.

   The Supply: Advanced Options dialog box opens, which include the Supplier Capacity Parameters section.

Related Topics

- How You Define the Approved Supplier List for Supply Chain Planning

Release Recommendation Options

Use the Release Recommendations Parameters section in the Supply: Advanced Options dialog box to configure the following supply plan options:

- Compression days tolerance for automatic release
- Requisition load group by
- Transfer load group by
- Released only by user

Access the Release Recommendations Parameters section from a Supply Planning, Demand and Supply Planning, Replenishment Planning, or Planning Central work area.

Compression Days Tolerance for Automatic Release

Use this option to indicate the number of compression days allowed for the automatic release of planned orders. The number of compression days applies only to automatic release of planned orders and recommendations. Compression days means the number of days reduced between the start date and due date as suggested by the planning process.

The **Compression Days Tolerance for Automatic Release** field isn't available in the Supply: Advanced Options dialog box for a replenishment plan.

Requisition Load Group By

Use this option to indicate the requisition load group when loading requisitions to purchasing. For each option, except **All**, the planning process creates one line for each planned order within each requisition.

- **All**: The planning process creates one purchase requisition for all recommended orders.
- **Item**: The planning process creates one purchase requisition for each item.
- **Buyer**: The planning process creates one purchase requisition for each buyer.
- **Supplier**: The planning process creates one purchase requisition for each supplier.
- **Category**: The planning process creates one purchase requisition for each item category.
- **Location**: The planning process creates one purchase requisition for each location.

- **Project**: The planning process creates one purchase requisition for each project. This option is available only when the project-specific supply planning is enabled for your enterprise.

Transfer Load Group By

Use this option to indicate the transfer load group when loading transfers to logistics. The value of **Transfer Load Group By** determines how the actual transfer order is created.

- **All**: The planning process creates all transfers in one transfer order.
- **Source and destination and ship date**: The planning process creates one transfer order for each Ship From and Ship To organization, and each ship date.
- **Source and destination, shipping method and ship date**: The planning process creates one transfer for each Ship From and Ship To organization pair, and shipping method and ship date.

Released Only by User

Use this option to specify whether to restrict implementation of planned orders and recommendations to the current user. If you enable this option, the planning process implements only those planned orders and recommendations that the current user has marked. If you disable this option, the planning process implements planned orders and recommendations that are marked by any user.

Note: This option applies only to the manual release of planned orders.

Use these steps to navigate to the Release Recommendations Parameters section in the Supply: Advanced Options dialog box:

1. Open a plan:
    a. In a Supply Planning, Demand and Supply Planning, Replenishment Planning, or Planning Central work area, click the Tasks panel drawer.
    b. In the Tasks panel drawer, click **Manage Plans**.
    c. In the Search area, search for your plan.
    d. Select the plan from the displayed search result.
2. On the Edit Plan page, click **Actions** and then click **Edit Plan Options**.
3. On the Plan Options page, click the Supply tab.
4. On the General subtab, click **Select Advanced Options**.

    The Supply: Advanced Options dialog box opens, which includes the Release Recommendations Parameters section.

Time Fence Options

Use the Time Fence Parameters section to configure the following options:

- Create time fence
- Create firm planned order time fence

Create Time Fence

Select the **Create time fence** check box to instruct the planning process to create a natural time fence for an item at the completion date of the latest firm discrete job, purchase order, or transfer. The natural time fence indicates a new time fence that's set at the latest date of firm supplies. Completion date means the due date of the supply.

The **Create time fence** check box and the **Planning time fence control** check box on the Plan Options page, Supply tab, General subtab work together.

When Planning time fence control check box is:	And when Create time fence check box is:	Results
Not selected	Not selected	Planning time fences aren't used in the plan.
Selected	Not selected	Only planning time fence item-organization attributes are used in the plan to create the time fence.
Not selected	Selected	Only natural time fences are used in the plan.
Selected	Selected	The planning process considers both planning time fence item-organization attributes and natural time fences. The latest date calculated by the planning process, using either the planning time fence item-organization attributes or the natural time fence, is used as the planning time fence date in the plan.

Create Firm Planned Order Time Fence

Use this option to instruct the planning process to create a natural time fence for an item at the completion date of the latest firm planned order. Completion date means the suggested due date of the firm planned order.

Note: To enable the **Create Firm Planned Order Time Fence** plan option, you must first select the **Create time fence** check box on the General tab in the Supply: Advanced Options dialog box.

To navigate to the Time Fence Parameters section, follow these steps:

1. On the Edit Plan page, click the Tasks panel drawer.
2. In the Tasks panel drawer, click **Manage Plans**.
3. In the Search area, search for your plan.
4. Select the plan from the displayed search result. Click Actions and then select Edit Plan Options.
5. On the Edit Plan Options page, click the Supply tab.
6. On the General tab, click **Select Advanced Options**.

   The Supply: Advanced Options dialog box opens, which includes the Time Fence Parameters section.

Related Topics

- How the Planning Time Fence Date Is Calculated

How the Planning Time Fence Date Is Calculated

Planning time fence date is an item attribute that's calculated by planning prior to generating any planned orders. The suggested due date of a planned order is always greater than or equal to the planning time fence date.

Other dates, such as the suggested ship date, can be earlier than the planning time fence date.

You can view the planning time fence date (which is calculated by planning) and the planning time fence days (an input into calculating the planning time fence date) from the Items user interface.

To explain how the planning time fence date is calculated, let's use the following setup data:

- Use the Organization Manufacturing Calendar, where Monday through Friday are working days.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14
Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21

- Plan start date = Day 3
- Planning time fence days = 10 days

In this example, the planning time fence date is Day 17, because the planning time fence days (10 working days) are added to the start date (Day 3).

Note that unconstrained planning will push out the suggested due date of a planned buy order to ensure the dock date, after accounting for postprocessing lead time, is a valid working day on the receiving calendar. For example, if the need-by date is Day 17 and the postprocessing lead time is 12 days, then the suggested due date would be Day 18, to ensure that the suggested dock date (due date minus postprocessing lead time) is on a valid working day (in this example, Day 2) in the plan.

Related Topics

- Time Fence Options
- Considerations for Configuring Supply Plan Attributes

Define a Time Window for Plan Pegging Calculations

Planning cycle times depend on the volume of data that you want to evaluate and the complexity of the calculations that you want to perform. One time-consuming aspect of a plan run is the generation of the pegging data for the supply plan.

In some manufacturing and distribution environments, pegging information outside a near-term horizon isn't used to make business decisions, so it might not be necessary to calculate that data. You can configure how much of the plan horizon for which to generate full pegging. The planning process calculates pegging for all end demands with bucketed due dates that fall on or before the defined time window. The planning process doesn't generate pegging data outside the horizon. The Number of Days to Calculate Pegging field is available for constrained and unconstrained supply plans or demand and supply plans.

For example, you set the Number of Days to Calculate Pegging to 10 days. The planning process calculates all end demands with bucketed due dates that fall on or before Day 10. The planning process doesn't calculate any pegging on Day 11 or later. This parameter only impacts generation and display of pegging and not the demand and supply netting, which occurs as usual for the entire plan horizon.

Steps to Enable Pegging Calculations for a Time Window

Follow these steps to enable pegging calculations for a time window.

1. In the Supply Planning or Demand and Supply work area, open a supply plan or a demand and supply plan. The supply plan can be constrained or unconstrained.
2. In an open plan, click **Actions** and then select **Edit Plan Options**.
3. On the Edit Plan Options page, click the Supply tab.
4. On the Edit Plan Options page, Supply tab, click the **Select Advanced Options** button.
5. In the Supply: Advanced Options dialog box, Pegging Parameters section, specify a value in the **Number of Days to Calculate Pegging** field to define the demand window for pegging calculations. This value is the number of days from the plan start date that the planning process calculates the pegging relationship between demands and supplies.

Tips and Considerations

You should consider the extent of impact on planning output when you select a value for the **Number of Days to Calculate Pegging** parameter. Here are some things to consider when you use this pegging parameter:

- For all existing plans and any copy of these plans, the planning process continues to calculate the pegging for the full plan unless you update the **Number of Days to Calculate Pegging** plan option.
- You can use the pegging parameter for all demand types except reservations in an unconstrained supply plan.
- In addition to the Pegged Quantity, these order attributes that rely on pegging aren't calculated for all demand and supplies not pegged to end demands inside the new demand window:
    - Quantity by Due Date
    - Material Available Date
    - Planned Arrival Date
    - Planned Ship Date
    - Days Late

- Contributes to Demand Lateness
- Contributes to Overload
- Shared Supply Pegged to Firm

The Supplies and Demands and Gantt Chart views won't show values for these attributes for orders that don't meet the criterion.

- The Demand Fulfillment table won't show expedite or capacity recommendations for demands outside the time window.

Pegging Related Exceptions

The planning process doesn't calculate these exceptions, which rely on pegging, for demands and supplies not pegged to end demands inside the new demand window:

- Late Supply Pegged for Forecast
- Late Supply Pegged to Sales Order
- Demand at Risk due to Material Shortage
- Demand at Risk due to Resource Shortage
- Demand at Risk due to Supplier Capacity Shortage
- Demand at Risk due to Insufficient Lead Time

The Exceptions table won't show these exceptions for supplies and demands that don't meet the criterion.

Order Modifier Options

You can control the planning cycle time by deciding whether to use the order policies for an item in aggregate time buckets, such as a week or period.

To control order policy enforcement in aggregate time buckets for supply plans, use the Order Modifier Parameters section in the Supply: Advanced Options dialog box, General tab to configure the following options:

- Enforce order modifiers in aggregate time buckets
- Maximum number of planned orders per item-ORG per time bucket

Enforce Order Modifiers in Aggregate Time Buckets

Select the checkbox to enforce order modifiers in aggregate time buckets in constrained and unconstrained supply plans. This plan option applies to aggregate time bucket types of Week and Period.

Maximum Number of Planned Orders per Item-ORG per Time Bucket

The maximum number of planned orders that the planning system can create in a planning time bucket for each item and organization combination. The default value is 100. This plan option applies to all time bucket types (Day, Week, and Period).

Related Topics

- Control Order Policy Enforcement in Aggregate Time Buckets

Control Order Policy Enforcement in Aggregate Time Buckets

You can control the planning cycle time by deciding whether to use the order policies for an item in aggregate time buckets, such as a week or period.

You will have shorter plan run times if you choose to not enforce order policies in aggregate time buckets. However, you might have planned supply quantities aggregated for the entire time bucket. You can control order policy enforcement for constrained and unconstrained supply plans by using the order modifier parameters in the Supply: Advanced Options dialog box, General tab.

Let's see how this functionality works. For our example, we have a Fixed Order Quantity of 50 that's respected in the weekly bucket.

- If you don't select the **Enforce order modifiers in aggregate time buckets** check box, the order policy isn't enforced. You might have planned supply quantities aggregated for the entire time bucket.

Demand/Planned Orders	Week 1	Week 2	Week 3
Demand	80	120	90
Planned Orders	80	120	90

- If you do select the **Enforce order modifiers in aggregate time buckets** check box, the order policy is enforced. When you enforce order modifiers in aggregate time buckets, you will have multiple planned orders in each week. In our example, the Maximum Number of Planned Orders per Item-ORG per Time Bucket is set to 3. You will have 2 planned orders for Week 1, 3 planned orders for Week 2, and 2 planned orders for Week 3.

Demand/Planned Orders	Week 1	Week 2	Week 3
Demand	80	120	90
Planned Orders	50 + 30	50 + 50 + 20	50 + 40

Note that the last planned order in each bucket can be less than the Fixed Order Quantity.

Let's use the following parameters to show you another example of how the control order policy enforcement in aggregate time buckets functionality works.

- Enforce order modifiers in aggregate time buckets check box is selected
- Maximum Number of Planned Orders per Item-ORG per Time Bucket is set to 5
- Fixed Order Quantity is 2
- Forecast demand is 20

When you look at the Supplies and Demands table for your plan, you will see the following information for the item:

Order Type	Order Quantity	Uses Order Modifier
Planned Order	2	Yes
Planned Order	2	Yes
Planned Order	2	Yes
Planned Order	2	Yes
Planned Order	12	No
Forecast	-20	n/a

In this example, the plan created 5 planned orders for the forecast demand of 20. The order quantity for the first 4 planned orders is 2, which respects the Fixed Order Quantity. However, the last planned order has a quantity of 12 to satisfy the remaining balance of demand, which is 12.

The **Uses Order Modifier** column in the Supplies and Demands table is read-only and indicates whether the planning process respected the order modifiers in aggregate time buckets. For the last planned order in our second example, the planning process needed more than the fixed order quantity to satisfy demand, so the **Uses Order Modifier** column will indicate No. Also, the **Uses Order Modifier** column is No if the **Enforce order modifiers in aggregate time buckets** check box isn't selected in the Supply: Advanced Options dialog box, General tab.

Related Topics

- Order Modifier Options

Technical Control Parameters

You can use multithreading to decrease the overall runtime of a supply plan.

In the plan options, navigate to the Supply: Advanced Options dialog box, Technical tab and select the **Enable multithreading** check box. When selected, the planning process implements multithreading during the plan run.

Why You Disable or Enable Dimensions for Supply Plan Measures

In your organization, you might not use all of the preconfigured dimensions to analyze your supply plans. To improve system and application performance while working with your supply plans, you can decide which dimensions are applicable to measures.

You can disable the Customer, Supplier, Demand Class, Order Type, and Exception Type dimensions to optimize data volumes and improve query performance. The Organization, Item, Resource, and Time dimensions are always used and you can't disable them.

When you disable a specific dimension, the planning engine preaggregates the related measures along that dimension. For example, measures such as Revenue or Sales Order Value are computed by default at the most detailed level of Organization, Item, Day, Customer Site, and Demand Class. However, this type of detailed analysis might not be necessary. You can configure your plan to compute the measure at only the Organization, Item, and Day level and ignore calculating the measure at the Customer Site and Demand Class levels.

Configure the dimensions in the Dimensions for Supply Measures section in the Supply: Advanced Options dialog box, which you open from the Plan Options page, Supply tab. The Supply: Advanced Options dialog box is accessible only for supply plans from a Supply Planning, Demand and Supply Planning, or Planning Central work area.

> **Note:** The dimension catalog that is configured in the Configure Planning Analytics task and specified in the plan options governs the hierarchies that are available in a plan for any selected dimension. If any of the optional dimensions are not selected in the dimension catalog, those dimensions are automatically disabled in the advanced plan options.

Because tables are shared across work areas, the selector in pivot tables displays all dimensions (enabled and disabled), and you can add a disabled dimension to a table or graph. In this case, the dimension does not show individual members, but shows one aggregated row or column of All.

When you enable a supply plan for Oracle Transactional Business Intelligence (OTBI), the reports won't have any members in the disabled dimensions of a supply plan.

Related Topics

- How You Use Dimensions and Dimension Catalogs in Supply Chain Planning
- Considerations for Setting Up Dimension Catalogs
- Enable Plans for OTBI Reporting

Supply Plan Options for Organizations and Schedules

Use the Organizations and Schedules subtab on the Edit Plan Options page to configure subinventory netting, demand and supply netting, and the forecast spreading calendar, depending on the organization for a supply plan.

You can also specify the demands that you want to consider in the supply plan.

Configure the supply plan options for organizations and demand schedules on the Plan Options page, Supply tab, Organizations and Schedules subtab.

Organizations

The organizations are based on the organization level members that you specify on the Scope tab of the Plan Options page. During data collection, the planning process collects the organization based on your configuration in the source system.

Subinventory Netting: The subinventories are based on the organization. You can enable or disable the subinventory netting for purchase orders, on-hand quantity, and work order assembly supply types. You can select or deselect the listed subinventories under **Enable Netting** to include or exclude the subinventories from the supply plan. If you enable the subinventory netting for a new subinventory in the source, the plan automatically includes the new subinventories that are collected after the initial plan run.

For example, if the material is on hold for quality and is reworked upon, the work order shouldn’t be used in supply planning. To exclude the work order from being considered in supply planning, deselect the Enable Netting check box for the subinventory associated with the work order. The work order isn’t considered in supply planning.

Note: The work order demand and work order resource requirement associated with a nonnettable work order are considered for supply planning by default.

Demand and Supply Netting: Run plans with only demands or supply types depending on your requirement. You can include or exclude sales orders, reservations, on hand, purchases, transfers, and work orders for each organization in your plan. A new plan enables all the demand and supply netting options by default.

Forecast Spreading Calendar: Select a user-defined forecast spreading calendar for each organization.

- The supply planning process uses the calendar to spread aggregate forecast demand across daily buckets.
- If you don't specify any calendar at the organization level, then the supply planning process spreads the aggregate forecast evenly across daily buckets.
- The planning process uses this calendar only when you select the User-defined calendar value for the Forecast Spreading Calendar attribute in the Forecast Allocation and Consumption section. The Forecast Allocation and Consumption section is available on the Plan Options page, Supply tab, General subtab.

Demand Schedules

Select the demands to include in the supply plan. If the plan type is demand and supply, the demand schedule is automatically included in the supply plan. The supported types of demand schedules are:

- Demand (demand plan)
- External (external forecast)
- Production (production plan used in manufacturing plan)

Demand Measures: Click **Select** to access the Demand Measures dialog box where you can select the following measures:

- End Item Demand
- Option Demand
- Planning Percentage

The **Select** button for Demand Measures is enabled when the demand schedule type is Demand or Sales and Operations. The **Select** button isn't available for an external demand schedule type.

Forecast Accuracy Measures: Click **Select** to access the Forecast Accuracy Measures dialog box where you can select the following measures:

- Forecast Error Type for Nonintermittent Demand
- Measure for MAD or MAPE
- Measure for Intermittent Demand
- Measure for Average Interarrival Time

The **Select** button for Forecast Accuracy Measures is enabled when both of the following attributes are set on the Edit Plan Options page, Safety Stock tab:

- **Safety Stock Planning Method** is set to **Statistical safety stock for end items, none for all others**.
- **Forecast Error Type** is set to **Demand schedule specific**.

Measure Levels: Select dimension levels at which to load the measure. If the demand schedule type is external or production, then the measure level option isn't available.

Ship-to Consumption Level: Select a forecast consumption level for the local demand plan.

Related Topics

- Configure Measure Levels for Demand Schedules

How You Calculate Safety Stock Based on Multiple Demand Schedules

For supply plans or supply and demand plans, you can plan statistical safety stock for end items whose forecasts are distributed across multiple demand schedules. The planning engine calculates safety stock based on forecasts in each demand schedule.

The calculation uses either the measure values generated in each of the demand schedules or item-specific values specified for each item and organization combination.

Select your demand schedules in the Demand Schedules section on the Plan Options page, Supply tab, Organizations and Schedules subtab. The planning engine uses the forecasts and other measures from these demand schedules to plan statistical safety stock for the respective item-organization combinations.

The planning engine uses each demand schedule to drive safety stock calculations for the items that belong to that demand schedule. If the same item is present in two or more demand schedules, the planning engine selects only one demand schedule to use for safety stock calculation. Oracle recommends that you ensure that forecasts for an item in an organization are restricted to just one demand schedule.

Related Topics

- Parameters for Safety Stock Calculation

Configure Measure Levels for Demand Schedules

You can select dimension levels in the Measure Levels dialog box at which to load measures into a plan. After configuring your measure levels for demand schedules, run your demand plan to generate the forecasts.

Next, run the supply plan and then review the Supplies and Demands table.

You can configure dimension levels for a supply plan or a demand and supply plan from the Planning Central, Supply Planning, or Demand and Supply Planning work area. To access the Measure Levels dialog box, navigate to the Plan Options page, Supply tab, Organizations and Schedules subtab. In the Demand Schedule section, click the **Select** button in the **Measure Levels** column.

> **Note:** If the demand schedule type is External or Production, then the **Select** button under the **Measure Levels** column isn't available.

In the Measure Levels dialog box, you can configure measure levels for the following dimensions:

- *Time*: The time hierarchy and level choices are based on the planning calendar used for the demand plan. You set the planning calendar on the Plan Options page, Scope tab, in the Plan Parameters section.

  If the demand plan uses a hybrid time hierarchy, the available levels are parent levels of the Hybrid time level for the selected hybrid time hierarchy. For a manufacturing hybrid hierarchy, the available levels are Week and Period. For a Gregorian hybrid hierarchy, the available levels are Month, Quarter, and Year. For a fiscal hybrid hierarchy, the available levels are Month, Quarter, and Year.
- *Demand Class*: If you leave the Demand Class level and Customer level blank and select Day for the Time level, then the forecast that comes from the demand schedule into Supply Planning will be aggregated at the item-organization-day level.
- *Customer*: If you want an aggregated forecast by day or month, leave the customer level blank.

  If you select the Customer Site level, the forecast for each day is broken down into forecasts for each customer site in the demand plan. For example, you have 20 customer sites for your demand plan and select the Customer Site level and Day for the Time level. You will see 20 forecasts for each day in the Supplies and Demands table.
- *Organization*: The organization hierarchy and level are fixed for the organization dimension. The Enterprise hierarchy only supports the Organization level.
- *Product*: The product hierarchy and level are fixed for the product dimension. The Product hierarchy only supports the Item level.

Related Topics

- Supply Plan Options for Organizations and Schedules

Run a Supply Plan or an Integrated Plan

Run a supply plan or an integrated plan to generate forecasts and safety stock levels and to create replenishment.

An integrated plan includes both a demand and a supply plan. You can run a supply plan or a demand and supply plan from the Supply Planning, Planning Central, or Demand and Supply Planning work areas.

When you run a supply plan or an integrated plan, you can specify the scope of the plan that you want to run. You can decide whether to refresh the plan input data before running it. Also, you can run the plan immediately or you can run the plan in the background at a set time or on a repetitive schedule, such as daily or weekly.

Note: For a constrained supply plan, you can only run the plan in Batch mode.

After you create a supply plan or a demand and supply plan, you must run the plan to generate the data. In the Run Plan dialog box, Parameters tab, run plan options are sequenced in the order of operations: scope, demand, and supply. You also have an option to recalculate safety stock levels. The forecasting process runs first, safety stock is calculated next, and then the output is used for supply planning calculations. You can configure the following options, depending on the plan type:

- Data Refresh Options
- Scope Options
- Demand Plan Run Options

- Supply Plan Run Options

Data Refresh Options

The following data refresh options are available:

- **Do not refresh with current data**: Select this option to run your plan with no changes to demand, including no advancement of the plan start date.
- **Refresh with selected current data**: Select this option to partially refresh your data. You can refresh transaction data and some reference data without performing a full refresh. For example, selectively refreshing Demand history and measures and Forecasts covers the following scenarios:
  - Demand history and measures: You have reloaded external or third-party forecasts and the plan must reflect these recent updates (for example, Sales Forecast, Marketing Forecast, Financial Forecast, and Shipments Forecasts).
  - Forecast: You have changed the input measure level on the Plan Options page, Supply tab, Organizations and Schedules subtab, in the Demand Schedules section. For example, you copy a plan, change the input measure level to another forecast within the same plan, and want to rerun the plan. In this scenario, specify the **Refresh with selected current data** option for Forecast. Because you changed the plan options but didn't edit the plan, the plan doesn't require a full refresh.
- **Refresh with current data**: Select this option to refresh the complete plan with the latest collected data. When you run the plan for the first time, this is the only data refresh option available and it's selected by default. If you select this option for an integrated plan (Demand and Supply Plan type), the Plan demand and Plan supply check boxes in the Scope Options section are selected by default and can't be deselected.

Scope Options

Scope options restrict the focus of the replan. The following scope options are available:

- **Plan demand**: Select to forecast demand when running a plan. If you selected **Refresh with current data** in the Data Refresh Options section, then this option is selected by default for an integrated plan. This option is available for Demand and Supply Plan types in the Planning Central and Demand and Supply Planning work areas.
- **Approve plan**: Select to approve the plan during the plan run. This option is available for Demand and Supply Plan types in the Demand and Supply Planning work area.
- **Recalculate safety stock:** Select to recalculate safety stock quantities when running a plan. This option is available for Supply Plan or Demand and Supply Plan types in the Planning Central, Supply Planning, and Demand and Supply Planning work areas.
  The Recalculate safety stock check box is available only when one of the following safety stock planning methods is selected on the Plan Options page, Safety Stock tab:
  - Statistical safety stock for end items, none for all others
  - Statistical for end items, user-specified for all others
- **Plan supply**: Select to have the planning process calculate only the supply. If you selected the **Refresh with current data** check box in the Data Refresh Options section, then this option is selected by default for an integrated plan. This option is available for Demand and Supply Plan types in the Planning Central and Demand and Supply Planning work areas.
- **Archive plan**: Select to archive data from the plan. This option is available for Supply Plan or Demand and Supply Plan types in the Supply Planning and Demand and Supply Planning work areas.

Demand Plan Run Options

The Demand Plan Run Options section is available for Demand and Supply Plan types, but isn't available for Supply Plan types.

Forecast Profiles: Select the forecasting profiles that you want to include as part of the plan. If you don't select a forecasting profile, then the forecasting process doesn't run.

Include details of forecast methods: Select to specify whether to provide details of the forecast methods that make up the forecast. This option is available for Demand and Supply Plan types in the Demand and Supply Planning work area.

Include details of causal factors: Select to specify whether to provide details of the causal factors that make up the forecast. This option is available for Demand and Supply Plan types in the Demand and Supply Planning work area.

Supply Plan Run Options

The Supply Plan Run Options section appears for unconstrained supply plans but not for constrained supply plans. You can only run constrained supply plans in batch mode. The following supply plan run options are available:

- **Interactive**: Select this option to run a plan into memory, without saving the plan to the database. If a typical plan is scheduled to run on weekends, you can use the Interactive option to run the plan during the week. If you select Interactive, the Schedule tab is disabled and the plan is set to run as soon as possible.

  > **Note:** Interactive option isn't available for a constrained supply plan.

- **Batch**: Select this option to run the plan per a schedule. When you select this option, the Schedule tab becomes available where you can set up when to run the plan.

  Use Batch to save all plan data to a database, including calculated totals. To save a plan to a database, you must run the plan at least once. The plan will be available for analysis without loading into memory.

Run a Supply Plan or an Integrated Plan

Use these generic steps to run a supply plan or an integrated demand and supply plan:

1. Open the Run Plan dialog box:
   a. From a Supply Chain Planning work area, click the Plans panel tab and expand the Plans list.
   b. Select the plan that you want to run, click **Actions**, and then select **Run**.
2. In the Run Plan dialog box, Parameters, tab, expand **Details** to review the plan options:
   a. In the Data Refresh Options section, review the options and make appropriate selections.

      > **Note:** When you run the plan for the first time, you must select **Refresh with selected current data**. This option refreshes historical data, imports sales orders, and advances the plan start date to align with the current date.

   b. In the Scope Options section, select the options that you want for the plan run.
   c. For demand and supply plan types: In the Demand Plan Run Options section, select the appropriate demand plan run options, including the forecasting profiles that you want to include as part of the plan run.
   d. For unconstrained supply plans: In the Supply Plan Run Options section, select the options that you want for the plan run.

3. If you selected Batch in the Supply Plan Run Options section, or for constrained supply plans, click the Schedule tab to set up the frequency parameters:
    a. To run the plan immediately, select **As soon as possible**.
    b. To run the plan in the background at a set time, select **Using a schedule** and then select a **Frequency**, such as **Daily** or Weekly.
4. Click **OK** to run the plan.

Publish Plan Data

You can publish data for a plan in the Demand Management, Demand and Supply Planning, Planning Central, Replenishment Planning, Sales and Operations Planning, or Supply Planning work area to a compressed file.

You can then use the file for data integration between your Supply Chain Planning application and other Oracle or external applications.

By submitting a scheduled process from your Supply Chain Planning work area or the Scheduled Processes work area, you can publish the data in a pivot table within your plan to a file on the content server of Oracle WebCenter Content.

Using APIs of Oracle's ERP integration service for automating the data integration between your Supply Chain Planning Application and an external application, you can submit the scheduled process, check its status, and get the details of the published document.

The file name is in the <plan name>_<pivot table name>.zip format.

Publish Plan Data from a Supply Chain Planning Work Area

Here's how you can publish data for your plan from your Supply Chain Planning work area:

1. Do one of the following to open the Publish Data dialog box:
    - On the Manage Plans page, select the plan and click **Actions** > **Publish Data**.

      The Publish Data dialog box opens.
    - Open your plan and click **Actions** > **Publish Data**.

      The Publish Data dialog box opens.
2. Optionally, enter submission notes for your scheduled process.
3. On the Parameters tab, optionally, select the **Append request number to output file name** check box.

   Selecting this check box results in the request number being appended to the file name, which enables easy identification of the file on the content server. The resulting file name (<plan name>_<pivot table name>_<request number>) is also used as the document title.

   If you don't select this check box, the document title is PUBLISHPLANDATA.
4. In **Table Name**, select the pivot table of your plan for which you want to publish data.

   The available tables are enabled for the work area of the plan, and you have the required access to these tables.
5. In **Source System**, select the source system that's specified on the Scope tab of the Plan Options page for the plan.
6. On the Schedule tab, specify whether you want to run the process as soon as possible or according to a schedule.

If you publish the file according to a schedule, you can specify the frequency and start and end dates for the process.

7. Click **Submit**.

   The Status dialog box opens and displays the request number. Make a note of this number and then click **OK**.

   You can use this number to search for the result of your request in the Scheduled Processes work area.

   If you appended this number to the compressed file's name, you can use this number to search for the file in the File Import and Export work area. You can then download and check the file.

Publish Plan Data from the Scheduled Processes Work Area

Here's how you can publish data for your plan from the Scheduled Processes work area:

1. On the Overview page, click the **Schedule New Process** button.

   The Schedule New Process dialog box opens.
2. In **Name**, select the Publish Plan job, and click **OK**.

   The Process Details dialog box opens.
3. To be notified when the process ends regardless of the result, select the **Notify me when this process ends** check box.
4. Optionally, enter submission notes for your scheduled process.
5. On the Parameters tab, in **Plan Name**, select your plan.
6. Optionally, select the **Append request number to output file name** check box.

   Selecting this check box results in the request number being appended to the file name, which enables easy identification of the file on the content server. The resulting file name (<plan name>_<pivot table name>_<request number>) is also used as the document title.

   If you don't select this check box, the document title is PUBLISHPLANDATA.
7. In **Table Name**, select the pivot table of your plan for which you want to publish data.

   The available tables are enabled for the work area of the plan, and you have the required access to these tables.
8. In **Source System**, select the source system that's specified on the Scope tab of the Plan Options page for the plan.
9. To set a schedule for your request and notify other users about the result, click the **Advanced** button.

   The Schedule and Notification tabs are displayed.

   - On the Schedule tab, specify whether you want to run the process as soon as possible or according to a schedule.

     If you publish the file according to a schedule, you can specify the frequency and start and end dates for the process.
   - On the Notification tab, specify the recipients to whom result notifications should be sent and the conditions under which the notifications are sent.
10. Click **Submit**.

    The Confirmation dialog box opens and displays the process number. Make a note of this number, and click **OK**.

    You can use this number to search for the result of your request in the Scheduled Processes work area.

If you appended this number to the compressed file's name, you can use this number to search for the file in the File Import and Export work area. You can then download and check the file.

Supply Planning Concepts

Daily Buckets in Supply Planning

The planning process always plans in daily buckets because it considers that demands are due at the end of the day. The planning process doesn't plan demands and supplies at weekly, period, or monthly level.

Demands and supplies are balanced at the end of the day. The shortages or excess in demand and supplies are carried over to the next day. However, tables and graphs can aggregate daily planning results into weekly, period, or monthly level.

Demands and supplies don't have time stamps. The planning process considers that the capacity during the day can be used for resource or supplier requirements scheduled for the same day. If a planned work order can be completed in less than a day, it's scheduled on the same day as the demand due date. Also, if the work order is less than a day, the start date and the end date are same.

The planning process supports three calendars for aggregation in the planning output:

- Manufacturing calendars: Supports aggregation by week and period.
- Fiscal calendars: Supports aggregation by week and period in the tables.
- Gregorian calendars: Supports daily bucketing and aggregation by calendar month. The Gregorian calendar doesn't support bucketing by week.

Requirements Explosion for Make Items

When you run a supply plan or a supply and demand plan, one of the processes that take place is requirements explosion for make items.

The supply planning process reviews the supply chain item structure to ensure that there is enough supply on hand and on order to meet demand. The shortage of one item creates a demand for the items one level below it in the supply chain item structure. This process of analyzing the demand of individual components that make up an item and creating a demand for those components is known as requirements explosion.

The planning process uses the work definition of make order items to determine component requirements. The planning process makes suggestions accordingly to replenish the components that are in low supply to make the supply of the make order item easier.

Settings that Affect Requirements Explosion for Make Items

Supply planning respects component effective dates. The planning process determines a new date for the planned make order after it takes into consideration the following:

- The components that are part of the work definition
- The operations that are part of the work definition

- The component effective dates for the make item on or before the order start date of the planned order
- The operation effective dates for the make item on or before the order start date of the planned order

Note: Requirements explosion is performed only for make items. If you mark a make item as a buy item, the planning process does not suggest replenishing any of its components.

How Requirements Explosion for Make Items is Calculated

Consider the following scenario:

- Item A is a make order for which there is a sales order of 100.
- It takes two of item B and three of item C to make one of item A.

The planning process explodes the demand to a component level and creates a demand of 200 for item B and 300 of item C. The demand quantity on an item is the shortage of its parent item multiplied by the usage of the child component in the parent item.

Related Topics

- How Resource Scheduling Is Done

How Resource Scheduling Is Done

Resource scheduling can be calculated when you know the planned make order duration. The planning process uses lead times, both fixed and variable, to calculate planned make order duration. For existing work orders, the lead time is the duration of the work order.

The planning process does not change the duration of the work order. You can also manually set fixed and manual lead times.

Tip: If you manually configure the lead times, then set larger values for a conservative planning result. Set smaller values for an aggressive planning result.

For example, suppose the fixed lead time = 1

Variable lead time = 0.2.

The planned order size = 10 units

Make planned order lead time = fixed + variable multiplied by order size = 1 + 0.2 multiplied by 10 = 1 + 2 = 3 days

Demand due date = Day 5

Make planned order: Suggested start date = Day 2; Suggested due date = Day 5

The calculation assumes that day 5 ends at 23:59 and so one full day of lead time pushes the start date to day 4 at 23:59. So in the example, the 3-day lead time pushes the start date to day 2.

The following calculations are used to calculate planned make order duration, routing resource duration, operation duration, and resource duration"

- Planned make order duration: The planned make order quantity is determined by total quantity of demands and order modifiers. Total make order lead time (days) = fixed lead time + quantity multiplied with variable lead time.
- Routing resource duration: Resource requirement (in hours) is calculated for item-based resource usages. Resource requirement = Quantity multiplied by Usage hours. Operation duration (in hours) is calculated by adding each resource requirement adjusted for any simultaneous resources. Total Routing Duration = Sum of the operation duration (hours).
- The operation duration and resource duration calculations are shown in the following illustrations. Each operation and resource requirement is spread over the total make lead time.

The following figure illustrates the calculation for operation duration.

$$\text{Operation Duration (in days)} = \frac{\text{Operation (in hours)} * \text{Total Make Order Lead Time (in days)}}{\text{Total Routing Duration (in hours)}}$$

The following figure illustrates the calculation for resource duration.

$$\text{Resource Duration (in days)} = \frac{\text{Resource Requirement (in hours)} * \text{Total Make Order Lead Time (in days)}}{\text{Total Routing Duration (in hours)}}$$

For a planned make order, the planning process performs the following task:

- Calculates duration based on fixed and variable lead times.
- Calculates required resource hours from the work definition.
- Spreads the required resource hours evenly across the calculated work order duration. If the work order has multiple operations, the duration for each operation is calculated and the resource hours are spread out within the operations for assigned resources.

Rescheduling Existing Work Order

For an existing work order, you can either continue with the existing schedule or change the schedule and assign new dates. If the work order is not rescheduled, then the planning process:

- Does not change the work order start and end dates
- Does not change the operation and resource requirement start and end dates
- Spreads each resource usage evenly over the days of the resource requirement

For example, if the resource requirement start date is Day 5 and end date is Day 6, and resource usage is 14 hours, then the planning process allocates 7 hours on Day 5 and 7 hours on Day 6. If you reschedule a work order, the job duration is preserved and does not change. The lead time for each operation and for each resource requirement remain the same. Only the start and end dates change.

Planning calculations follow these guidelines while rescheduling a work order:

- Allocate the same number of days for work order start and end dates. For example, if the end date is moved by two days, then move the start date by two days.

- Allocate the same number of days to each operation and resource requirement date. Using the previous example, move each operation and resource requirement date by two days.
- Spread each resource usage evenly over the days of the resource requirement. For example, if the resource requirement start date is Day 5 and end date is Day 6, and resource usage is 14 hours, then allocate 7 hours on Day 5 and 7 hours on Day 6.
- Adjust for days on and days off by increasing or decreasing the job, operation, and resource dates. Depending on whether days off are included or removed from the work order, the relative working days remain the same before and after the move. For example, the work order duration is 5 days, starting on Friday and ending on Tuesday including two nonworking weekend days. If the work order is rescheduled to start on Monday, the new end date becomes Wednesday. If any adjusted dates for the work order are pushed into the past, then place the dates on Day 1 of the plan. If a part of the work order is completed, then only the open quantity of the work order is scheduled. If some components and resources are consumed by the work order, then only the open component requirements and open resource usages are planned in the planning process.

Related Topics

- How Resource Efficiency and Resource Utilization Are Calculated
- How Backward Scheduling and Order Dates Are Calculated

How Resource Efficiency and Resource Utilization Are Calculated

While scheduling resources, the planning process uses resource efficiency and utilization that you specify at the resource level. Resource efficiency is a measure (expressed in percentage) of the actual output to the standard output expected.

Resource efficiency determines the time that a resource takes to complete a task.

For example, if you expect a resource having an efficiency of 100% to complete a task in 12 hours, the resource having an efficiency of 50% would take 24 hours to complete the task. Effective usage of a resource is the ratio of resource hours as specified in routing (theoretical usage) to efficiency.

The following figure illustrates the calculation used for actual resource usage.

$$\text{Actual Resource Usage} = \frac{(\text{Quantity} * \text{Resource hours per resource})}{(\text{Resource Efficiency} * \text{Resource Utilization})}$$

Resource utilization is a measure (expressed in percentage) of how intensively a resource is used. For example, a resource may take frequent breaks or you may assign maintenance tasks to the resource. This indicates that a percentage of the resource time isn't available for the task. The actual usage is the ratio of the resource hours as specified in routing to the product of efficiency and utilization. For example, a routing has a resource requirement for 2 hours. The efficiency and utilization of the resource is expected to be 90% and 75%, respectively. Therefore, the actual resource usage is calculated as 2.96 hours.

Actual Resource usage = (1 each multiplied by 2 hours per resource) divided by (90% multiplied by 75%) = 2 hours divided by 0.675 = 2.96 hours

For a Make Order to manufacture 50 units, using the same routing as described in the previous example, you have:

Actual Resource usage= (50 each multiplied by 2 hours per resource) divided by (90% multiplied by 75%) = 100 hours divided by 0.675 = 148.15 hour

Considering the actual resource efficiency and utilization, the planning process generates a plan. If an additional resource usage is required to satisfy a demand, the planning process recommends inflating the resource usage.

Configure the Precision of Resource Usage Calculations

You can configure the level of decimal precision to which resource usage calculations are rounded to accurately calculate resource requirements in supply planning. Use the **Decimal Precision for Resource Usage** profile option to set the decimal precision to up to 9 digits.

Related Topics

- How Resource Scheduling Is Done
- Manage Planning Profile Options

Sourcing Allocation Splits

The planning process creates supplies based on the sourcing splits (rank one only). Supply planning uses split percentages that can be specified on sourcing rules.

You can rank the sources of supply that are named in the rules and bills, giving one priority over another when the planning process generates recommendations. You can also assign sourcing percentages to these sources, which lets you to allocate a portion of the total orders to each source. Sourcing allocation considers all supply sources: buy, make, and transfer.

If there are no order modifiers, then when supplies are required on a day, the planned orders for the day are split into as many planned orders as required to meet the rank one sourcing allocation splits. If there are item-attribute or supplier-order modifiers, the supply is created for the highest allocation split percent source (rank one) respecting the order modifiers. Then a supply is created for the next source, again respecting the order modifiers. The supply sources are used in allocation percent order. As each order is created, the next lower allocation percentage source is considered. If all rank one sources are used, then an order is created for the remaining top allocation percent source again and so forth through the top rank sources. This is repeated until enough supply is created.

The calculation attempts to balance supply sources over the plan horizon to meet the rank one allocation percents. If supplies don't respect the split due to existing purchase orders or order modifiers, then the planning process select sources each day to bring the plan horizon supplies into alignment with the sourcing splits. You have to create supply on the source that leads to the lowest deviation of the cumulative sourcing split from the split percentages specified in the sourcing rule. The planning process doesn't consider historical receipts when calculating sourcing splits. Only open purchase orders, transfer orders, and make orders are considered.

The following formula is used to calculate the sourcing split each day:

If Total Supply multiplied by Source A allocation percentage > Supply for Source A, then create a new planned order for Source A (respecting order modifiers) so that supply for Source A > or = Source A allocation percentage multiplied by Total Supply, until Total Supply > or = Total Demand.

Sourcing allocation and effective dates: If a sourcing rule becomes effective on a certain date, then the planning process respects the allocation percentages from the effective date and after. The planning process doesn't consider allocation that has happened before the effective date.

For example, a plan runs on March 1st and the sourcing rule is:

- Effective January 1st until May 31st: 40 % Acme, 60 % Business World
- Effective June 1st: 50 % Acme, 50 % Consolidated

Starting June 1st, the allocation process splits 50/50 between Acme and Consolidated. The allocation process ignores the history before the effective date. The allocation process doesn't consider whether Acme has 40% or 60% of the orders before June 1st.

Guidelines for Using Alternate Resources and Substitute Components for Planned Orders

Use alternate resources and substitute components to plan your orders to meet high-priority demands. You can plan your orders effectively if you can firm a resource or component to a particular plan.

You can select alternate resources and substitute components for a planned order from the Supplies and Demands page in the Supply Planning work area.

- To select and firm alternate resources, select a planned order on the Supplies and Demands page and click the Edit icon from the Firm Resources column. You can also firm alternate resources by selecting the Firm Resources option in the Actions menu.
- To select and firm substitute components, select a planned order on the Supplies and Demands page and click the Edit icon from the Firm Components column. You can also firm components by selecting the Firm Components option in the Actions menu.

On the Supplies and Demands page, if Firm Resources and Firm Components columns are not visible, enable the columns by clicking **View** > **Columns** > **Firm Resources** and **Firm Components**.

Points to Consider for Firm Resources

Consider the following points before you firm resources:

- The order type must be a planned order and the item must have a work definition.
- The planned order is firmed when you select a resource from the Firm Resource dialog box.
- The start date of the planned order needs to be within the effective date range of the operation for which the firm resource is selected.
- To save the changes that you make in the Firm Resources dialog box, close the Firm Resources dialog box and save the Supplies and Demands page. You must rerun the plan so that the planning process can select the firmed resources.

Points to Consider for Firm Components

Consider the following points before you firm components:

- The order type must be a planned order and the item must have an item structure defined.
- *For items or organizations that have work definitions:* You can either change the work definition and item structure name, or select a work definition and item structure name from the Work Definition drop-down list. When you change the work definition and item structure, the planning process firms the underlying planned orders.

You can also select an item structure and work definition name from the Item Structure drop-down list. If you select an item structure and work definition, the planning process firms the underlying planned orders. Selecting a firm component in the Firm Component dialog box firms the planned order.

- The Operation Sequence Number column in the Firm Components dialog box includes the list of values (operation sequence number, effective start date) contained within the work definition.
- You must select an operation in the Firm Components dialog box to firm a component. The start date of the planned order must be within the effective date range of the operation for which the firm component is selected.

Using the Actions Menu to Firm Resources and Components

Consider the following points before you firm resources and components using the Actions menu:

- When you select multiple orders, you can select Firm Resources and Firm Components from the Actions menu.
- To firm resources, all selected rows must have the same item, organization, and the order type must be a planned order. The item and organization must have at least one work definition defined.
- To firm components, all selected rows must have the same item, organization, and the order type must be a planned order. The item and organization must have at least one work definition or one item structure defined.

Related Topics

- Considerations for Creating Work Orders from Planning With Alternate Resources and Substitute Components

Reservations in Supply Chain Planning

You can collect information about all reservations that are created by the inventory processes and view them in one of the Supply Chain Planning work areas. You can view the amount of supply that is pegged to order fulfillment lines.

Oracle Fusion Cloud Supply Chain Planning doesn't create reservations; it just displays all the reservations that are created by the inventory processes. You cannot edit the quantity or kind of supply that is reserved to a sales order in the configurable planners' workbench.

The following types of supply can be reserved to a sales order in the inventory:

- On hand inventory
- Work orders
- Purchase orders
- Transfer orders

Multiple sources and quantities of supply can be reserved to a single sales order fulfillment line.

There are two ways by which sales orders are pegged to supplies:

- Multiple sales orders can be pegged to a single source of supply: In this case, the pegged quantity does not exceed the total supply quantity. This type of reservation is done when a single source of supply is adequate enough to fulfill many sales orders.

  For example, there are 50 sales orders for item A. Each sales order is for a single unit of A. You have defined one of your supply sources as an inter-organization transfer that supplies 100 units of A. Therefore, 50 units out of the 100 units from the transfer supply can be pegged to the different sales order fulfillment lines.
- Multiple sources of supply can be pegged to a single sales order: In this case, the pegged quantity does not exceed the total demand quantity. This type of reservation is done when a single supply source is not adequate to fulfill a sales order which demands a large quantity of supply for an item.

  If a sales order is recorded for an item that has a high demand, multiple sources of supply can be pegged in varied quantities to that single sales order. For example, you have defined two supply sources A and B as the following: A is an inter-organization transfer and B is a purchase from an external supplier. If a sales order of 800 units for this item is recorded, a part of the supply from A and a part of the supply from B will be reserved. Those reserved quantities are then pegged to the single order fulfillment line.

Supply planning respects a demand reservation to a lot without regard to the lot expiration dates. A lot that expires on day 6 can be reserved to a demand that is due on day 10. Supply Chain Planning collects this reservation as it is and reflects all reservations on the **Supplies and Demands** page. You can only view reservations in a Supply Chain Planning work area, but you cannot modify them.

Related Topics

- View Pegging for Reservations
- How FIFO Pegging Is Used in Supply Chain Planning

View Pegging for Reservations

You can view all of the reservations that the inventory process creates. To view the sales order fulfillment lines that are pegged to different supplies and the amount of supply reserved against each sales order, follow these steps:

1. Open a plan:
   a. In the Navigator, click a Supply Chain Planning work area.
   b. Click the **Plans** drawer.
   c. Expand Plans, and select the plan of your choice.
   d. Click the **Action** menu and select **Open**.
2. Open the Supplies and Demands table and search for all sales orders. You can search by defining one or more attributes in the search criteria, such as Item, Organization, or Order Type.
3. In the Search Results area, click **View** and then select **Manage Columns**.
4. In the Manage Columns dialog box, move Reserved Quantity and Reservation Type from the **Hidden Columns** section to the **Visible Columns** section.
5. Optionally, use the **Move selected items to the top of list** button to move these two columns to the beginning of the row. This enables you to view all information related to reservations at once.
6. Click **OK** to return to the Supplies and Demands table.

Tip: You can also enhance your search by setting an **Advanced** search criteria such as Reserved Quantity > 0. This will display only those sales orders that have some amount of reserved supply pegged to them.

Related Topics

- Reservations in Supply Chain Planning

How You View Model Forecast and Sales Order Together

In the configure-to-order process, the execution system transacts the configured item using a unique item identifier that's different from the model item identifier. To make effective planning decisions, you need to view the model forecast, and the supply and demand orders together.

You can view the model forecast and the sales order together in the Material Plan table.

By viewing the model forecast and sales order together, you can analyze and make effective supply and demand decisions in a configure-to-order environment.

Enable the Measure for a Combined View of the Model Forecast and Sales Order

To view the model forecast and the sales order together, you must enable the Configured Item Sales Orders measure. Before you enable the measure, add the measure to the measure catalog. To view the measure, assign a category to the model.

Follow these steps to enable the measure:

1. From your Supply Chain Planning work area, open a plan, and click **Open** > **Full Pane**.
2. From the **Open Table, Graph, or Tile Set** page, search and open the **Material Plan**.
3. From the Material Plan table, click the **Selector Tool View Table Configuration** icon from the material plan tool bar.
4. In the Measures tab, move the **Configured Item Sales Orders** measure from the Available Measures column to the Selected Measures column.
5. Click **Save and Close**.

Considerations for Changing the Organization for a Sales Order

You can change the organization for a drop ship sales order or a regular sales order, depending on the associated supplier or supplier site. The following situations summarize how the drop ship or regular sales order is affected when you change the organization.

Drop ship sales order for an outsourced manufacturing organization

You can change the current organization to any other organization. Consider the following points when you change the organization:

- If you change the current organization to another organization that has an associated supplier or supplier site, the sales order remains a drop ship sales order. The supplier and supplier site on the sales order will reflect the value associated with the new organization on the sales order.

- If you change the current organization to a drop ship validation organization, you have to manually provide a supplier or supplier site. List of values for the supplier or supplier site includes only those suppliers or supplier sites that are not associated with any organization.
- If you change the current organization to an internal organization, the supplier and supplier site are set to blank values. The drop ship sales order becomes a regular sales order.

You cannot make line edits to the supplier or supplier site in the drop ship sales order on the Supplies and Demand page.

Drop ship sales order for a drop ship validation organization

You can change your current organization to any other organization. Consider the following points when you change the organization:

- If you change the current organization to an organization that has an associated supplier or supplier site, then the supplier and supplier site on the drop ship sales order gets changed to reflect the ones associated with the new organization. The sales order still remains a drop ship sales order.
- If you change the current organization to an internal organization, the supplier and supplier site are set to blank values. The drop ship sales order becomes a regular sales order.

You can make line edits to the supplier or supplier site in the drop ship sales order on the Supplies and Demands page. List of values for the supplier or supplier site includes only those suppliers or supplier sites that are not associated with any organization.

Regular sales order for an internal organization

You can change your current organization to any other organization. Consider the following points when you change the organization:

- If you change the current organization to an organization that has an associated supplier or supplier site, the regular sales order is converted into a drop ship sales order. The supplier or supplier site in the newly converted drop ship sales order reflects the supplier or supplier site associated with the new organization.
- If you change the current organization to the drop ship validation organization, you have to manually provide a supplier or supplier site. List of values for a supplier or supplier site includes only those suppliers or supplier sites that are not associated with any organization.
- If you change the current organization to another internal organization, the sales order still remains an internal sales order.

Regular sales order for an outsourced manufacturing organization

You cannot make any changes to the organization, or to the supplier or supplier site.

How You Plan and Collaborate with Drop Ship Manufacturers

Using supply planning, you can plan and collaborate with your contract manufacturers in a configure-to-order environment. You can plan and collaborate with your contract manufacturers to drop ship customer orders directly from contract manufacturers to customers.

Add each contract manufacturer as an organization in the Product Information Management work area so that you can plan and collaborate with the contract manufacturers. You can add the contract manufacturers as item organizations, if you do not plan to enable transactions at these organizations. After you add the contract manufacturers as an

organization, you can share the model and option forecast with your contract manufacturers and plan to fulfill the orders.

Using demand management, you can forecast demands for models and options at contract manufacturing locations. The planning percentages for an option can vary according to the top model, where the option is a part of the model. The planning percentages for an option can also vary by the demand class of the forecast.

You can consume forecasts for models and options in supply planning using the drop ship sales orders that the contract manufacturers fulfill. Supply planning also generates planned orders to fulfill the demand for models and options at contract manufacturing organizations. You can publish the planned order as an order forecast to Oracle Supply Chain Collaboration. You can collaborate with your contract manufacturers to receive supply commits for models and options.

Plan Demands from Maintenance Work Orders

You can plan supplies for components required by maintenance work orders, such as the components created to maintain production equipment and transportation fleets.

Before you can use this functionality for constrained or unconstrained supply planning, your enterprise must opt in to the Plan Demands from Maintenance Work Orders feature. For more information and detailed instructions on opting in to new features for your offering, refer to the Using Functional Setup Manager guide.

With this feature, you can plan demands from maintenance work orders in your constrained or unconstrained supply plans. This functionality ensures that you have the right components on hand to minimize the downtime of your assets and return them to service as quickly as possible.

For example, an international chemical manufacturer uses modular spectrometers in their production operations. These spectrometers require regular and timely maintenance to ensure progress of manufacturing operations with minimal downtime. To ensure that all of the required components are available at the time of scheduled maintenance, the maintenance planner creates maintenance work orders a month earlier than the scheduled maintenance. The planner ensures that the work order scheduled dates conform to the scheduled maintenance dates. The planner uses supply planning to collect maintenance work orders and suggest planned orders for the materials required in these maintenance work orders.

Only asset items that are planned items based on the Product Information Management Planning Method attribute are collected:

- All collected assets are available in the plan.
- Asset items are planned as normal.
- All item attributes of these asset items are collected and you can edit the editable attributes in the plan.

You can view the maintenance work orders and maintenance work order demands in the Supplies and Demands table. The table also displays the asset name for the maintenance work orders and maintenance work order demand, but the Asset column is blank for all other supply order types.

The planning process collects the maintenance work orders as firm work orders, and you can't edit the **Firm Status** attribute. This means that you can't edit the date or quantity of the maintenance work order in the Supplies and Demands table. Also, the maintenance work orders aren't included in the Work Order measure.

The maintenance work order of collected assets are available in the plan. The maintenance work order demands are planned; however, the resources used to maintain the asset item aren't planned. Also, the maintenance work order:

- Can't be edited.
- Has an Action attribute of None, and it can't be released.

- Isn't considered as a valid supply and the planning process pegs it to excess.

Checklist to Set Up Plan Demands from Maintenance Work Orders

Before you can use the Plan Demands from Maintenance Work Orders feature, you must set up your system.

Set up step	Comments
Opt in to the feature	Your enterprise must first opt in to the *Plan Demands from Maintenance Work Orders* feature. Refer to the Using Functional Setup Manager guide for more information about opting in to features.
Collect planning data for work order supplies	In the Collect Planning Data dialog box, Supply Planning Data tab, select **Work Order Supplies** to collect all work orders, including maintenance work orders.
Select a Planning Method	In the Product Information Management work area, select a planning method on the Manage Item page, Specifications tab, in the Planning section. The asset item is planned if it's a planned item, based on the planning method attribute: • If the planning method is anything but **Not Planned** (for example, **MRP Planning** or **MPS Planning**), the asset item will be collected. • If the planning method is **Not Planned**, then the asset item won't be collected.
Select the Include in Planning check box	To select the Include in Planning check box to collect and plan maintenance work order components: 1. In the Maintenance Management work area, select the **Manage Maintenance Work Orders** task. 2. On the Maintenance Work Order page, select the work order. 3. On the Edit Work Order page, Operations tab, click on the item. 4. In the Edit Operation Items dialog box, select the **Include in Planning** check box.

Plan Items with Only Transfer Order Demand

You can plan for item and organization combinations that have no demand other than transfer order demand from a downstream organization, such as a distribution center.

For example, ABC Enterprises has multiple distribution centers where it receives sales orders from different customers. It replenishes the distribution centers either by transferring existing supplies or by manufacturing the supplies in manufacturing organizations based on demand from distribution centers. ABC Enterprises can focus on planning only manufacturing organizations in a supply plan with transfer order demands from distribution organizations without running the supply plan with all planned items.

To plan items with only transfer order demands in an organization, select one of the following from the **Supply Planned Items** drop-down list on the Scope tab in plan options:

- All planned items
- Demand plan items and all sales orders
- Demand plan items, WIP components, and all sales orders

You can plan items with only transfer order demand from a Supply Planning or Demand and Supply Planning work area for constrained and unconstrained supply plans.

If your plan includes both transfer order demands and sales orders, you can modify a setting to plan only the transfer order demands. To plan only transfer order demands but not sales orders, deselect the **Enable Netting** check box for sales orders in Demand and Supply Netting dialog box in plan options.

To deselect the **Enable Netting** check box for sales orders:

1. In the Supply Planning work area, open the Manage Plans page.
2. Create a plan or edit plan options for an existing plan.
3. Click the Supply tab in Plan Options and navigate to the Organizations and Schedules subtab.
4. Select an organization and then click the **Select** button in the Demand and Supply Netting column.
5. In the Demand and Supply Netting dialog box, deselect the **Enable Netting** check box for sales orders.

Related Topics

- Plan Items with Safety Stock Targets with No Demand
- Define Scope Plan Options
- Supply Plan Options for Organizations and Schedules
- Why can't I select Supply Planned Items?

Telescoping Time Buckets

Overview of Telescoping Time Buckets

With telescoping time buckets, you determine the low-level time bucket for the near term of your planning horizon. And if you want, you can also determine a different time bucket for the remainder of the planning horizon.

Filtering, graphing, conditional formatting, and setting exception message thresholds all play a part in facilitating plan management by exception. And certainly, the time dimension levels that you select for your tables and graphs help. For example, if you don't need to see plan output in days, then select weeks, periods, or months for your plan output.

You can also use telescoping time buckets to handle information overload. For example, instead of your plan calculating and planning in 100 daily buckets for a 100-day plan, the horizon can be telescoped as follows: The first 1.5 months in 45 daily buckets, and the remaining 2 months in 8 weekly buckets.

Telescoping a plan's planning time buckets reduces granularity of calculation and the number of data points in your plan. By selecting a larger planning time bucket, you eliminate unnecessary plan precision and detail for the entire plan, or just the portion of the horizon beyond the near term. The plan consolidates output into larger time buckets that you determine, such as weekly instead of daily, monthly instead of weekly or daily, and so on. The result is an improved plan runtime performance and visibility further out into the plan without having to scroll as much.

Keep in mind that telescoping does affect the available levels for you to view and edit measure data in a supply plan. In our 45 daily plus 8 weekly buckets planning horizon, if you look beyond day 45 of the supply plan, daily viewing and editing is no longer possible. However, if you view data in a demand and supply plan, you can drill down to the daily level, even if you use telescoping time buckets. This is because demand planning allocates demand measures down to the day level.

Configure Telescoping Buckets in a Supply Plan

You can configure your supply plan to use telescoping buckets. You can set your planning horizon to include only days, weeks, periods, or months. Or you can set your supply planning buckets at two levels of granularity.

For two levels, select a planning horizon that's a combination of daily time buckets and less granular time buckets such as week, period, or month. The planning process calculates detailed plan information for the shorter time horizon (days), and plans the later part of the planning horizon with less granularity. You improve your plan run time by eliminating unneeded precision and detail for the later parts of the planning horizon.

Before you use telescoping time buckets, think about how many daily time buckets and less granular time buckets you want to use.

To use telescoping buckets, configure the plan parameters for your supply plan.

1. In a Supply Planning, Planning Central, or Demand and Supply Planning work area, open a plan and navigate to the Plan Options page, Scope tab.
2. In the Plan Parameters section on the Scope tab, select a supply planning calendar.
3. Next, select your supply planning buckets. The list of values for the bucket types is determined by the calendar that you specify.

   You can base your planning horizon on days, weeks, periods, or months. Or, you can specify a combination of daily time buckets and then specify less granular time buckets such as weeks, periods, or months. If you use two bucket types, the first bucket type must be **Day** or **Week**.
4. Specify the number of buckets for each supply planning bucket.
5. Select **Don't create partial buckets** to create additional daily buckets in the plan to avoid partial buckets.

   Select this option to ensure that a week, month, or period always starts on the first defined day for that particular week, month, or period. For example, a weekly bucket starts on a Monday when you designate Monday as the week start date. A monthly bucket starts on the first day of the month.

   If you don't select this option, the plan doesn't add any additional daily buckets. Instead, the planning process creates a partial bucket and counts that partial bucket as the first week, period, or month, as specified in the plan options.

   This option is disabled if you select Week-Period combination in **Supply Planning Buckets**.

Related Topics

- Define Scope Plan Options

How Demands and Supplies Are Impacted in Supply Plans That Use Telescoping Time Buckets

When you configure your supply plan to use telescoping time buckets, you can set your planning horizon to include only days, weeks, periods, or months.

Or you can use telescoping buckets to plan in a combination of daily time buckets and more aggregate time buckets, such as weeks, months, or periods.

Let's say that you have a plan with time buckets larger than days.

- The net forecast quantities that remain after forecast spreading and forecast consumption are aggregated up to the planning time bucket level.
- These net forecast quantities are placed on the last working day of the planning time bucket.
- The supply planning process considers each combination of item, organization, demand schedule, demand class, customer, and customer site.

For example, suppose the net forecast quantity is 10 units per working day per combination of item, organization, and demand class in a plan with all daily buckets. Your organization is set up for 5 working days per week. The same plan with weekly buckets displays an aggregated net forecast for a quantity of 50 units for each demand class. This aggregated forecast has a suggested due date of the last working day of each weekly bucket.

These are other ways that demands and supplies are impacted when you use weekly, monthly, or period time buckets.

- All supply and demand orders and all resource requirement dates are subject to bucketing logic. In other words, for time buckets larger than days, dates calculated on supply and demand orders are bucketed to the last working day of the bucket. The working days specification is based on the supply planning calendar that you select on the Plan Options page, Scope tab, not the organization calendar.
- When you release make or transfer planned orders created in planning time buckets larger than days, the orders have a suggested due date that corresponds to the last working day of the time bucket. Buy planned orders also have a suggested due date that corresponds to the last calendar day of the bucket. However, the implement date is set as the first calendar day of the bucket. This implement date ensures that the supplier delivers the material in time to meet the entire planning time bucket's demand for the item.
- Firm dates, implement dates, and dates in the input data such as requested ship date or scheduled ship dates aren't subject to the bucketing logic. For example, you can firm a planned order that was previously bucketed to the last working day of the month to any day, regardless of whether day is the last day of the supply planning bucket or even a working day.
- When generating planned orders in aggregate buckets, all order modifiers are honored except for fixed days of supply.

Related Topics

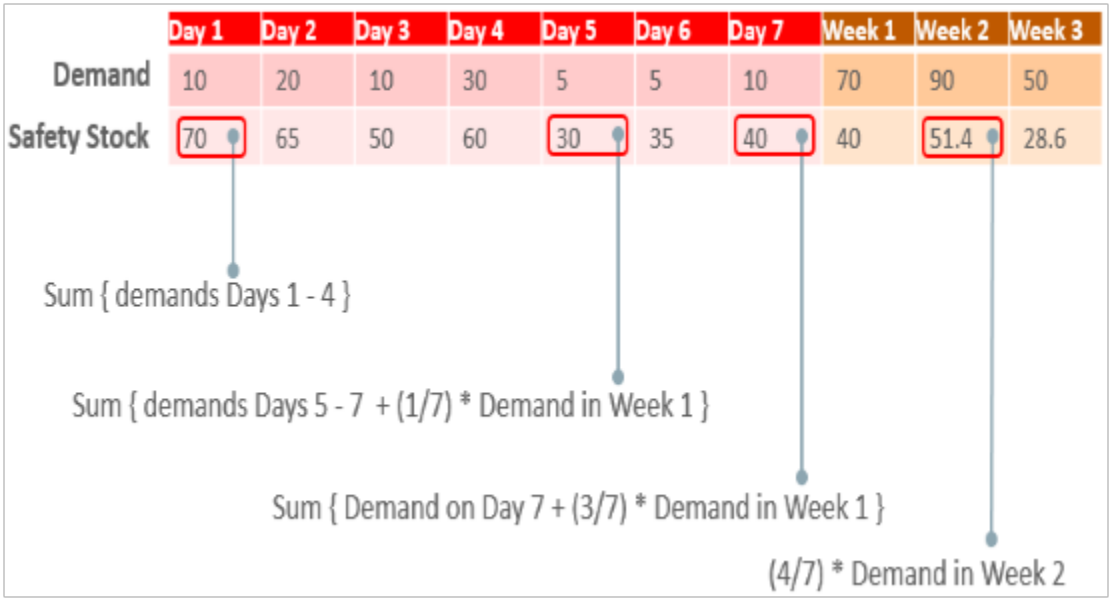
- Order Modifier Options

How Safety Stock is Calculated for Supply Plans That Use Telescoping Time Buckets

If you use days of cover for your safety stock calculation method, then the calculation method factors in the telescoping time buckets. If you don't use days of cover, then telescoping buckets has no impact on how safety stock is calculated.

For days of cover based safety stock calculations, the planning process prorates demand in the supply planning buckets based on the specified demand period.

Let's suppose you have an item with the safety stock planning method of Days of Cover. The Demand Period and Days of Cover values are set to 4 days. Additionally, the organization calendar has 7 working days.



Calculating Safety Stock for Day 1 (Daily Buckets)

Safety stock in the daily buckets sums the demands over the demand period. Next, that sum is divided by the demand period and multiplied by the days of cover.

In our example, the demand for Days 1 through 4 adds up to 70. This number is divided by 4 (demand period) and then multiplied by 4 (days of cover). So, the safety stock for Day 1 is 70.

Calculating Safety Stock for Day 5 (Daily and Weekly Buckets)

When the demand straddles the daily and weekly buckets, the demand in the weekly bucket is prorated.

In our example, Days 5 through 7 are daily buckets and Day 8 is in the weekly bucket. These steps show you how to calculate safety stock for Day 5.

1. Add the demand for Days 5 through 7, which is 20 (5+5+10).
2. The next portion of the time bucket is weekly, so to get the demand for Day 8, you must prorate the week. The prorated demand for Day 8 is 10 (1/7th of 70).
3. Add the demand for the daily and prorated weekly buckets to determine the calculated safety stock for Day 5, which is 30 (20+10).

Calculating Safety Stock for Weekly Buckets

When the demand is in the weekly buckets, the safety stock is the prorated daily demand multiplied by the days of cover.

In our example, Week 2 demand is 90 units. The prorated daily demand is 12.85 (4/7th of 90) that you multiply by 4 (days of cover), which calculates to 51.4 for your safety stock for Day 9.

How Exceptions are Calculated in Supply Plans That Use Telescoping Time Buckets

When you use telescoping buckets in your supply plan, the planning process handles exception messages based on what you specify for Planning Time Buckets in plan options.

This table explains how the planning process calculates exceptions when you use time buckets larger than days.

Exception Type	Calculation Logic
• Orders To Be Rescheduled In • Orders To Be Rescheduled Out	The planning process generates reschedule exceptions only if the supply orders get rescheduled across planning time buckets. Any reschedules of the order due dates within a planning time bucket doesn't trigger reschedule exceptions.
• Late Supply Pegged to Sales Order • Late Supply Pegged to Forecast • Late Replenishment for Sales Order • Late Replenishment for Forecast	The planning process generates late supply or late replenishment exceptions only if the supply and demand dates are in different planning time buckets. For example, a sales order suggested due date is in the middle of a week. The suggested due date of the supply is the last working day of the week. In this case, the planning process doesn't generate a Late Supply Pegged to Sales Order or Late Replenishment for Sales Order exception. However, suppose you have a sales order suggested due date in the middle of a week. The suggested due date of the supply is the first working day of the following week. In this case, the planning process generates an exception.
• Items with a Shortage • Items Below Safety Stock	The planning process creates an exception only if the available quantity is less than the required quantity at the planning time bucket level. The planning process evaluates item shortages by using the projected available balance on the last day of the planning time bucket. The planning process ignores daily fluctuations within a planning time bucket.
• Items with Excess Inventory	The planning process creates an exception only if the available quantity is greater than the required quantity at the planning time bucket level. The planning process evaluates item excesses by using the projected available balance on the last day of the planning time bucket. The planning process ignores daily fluctuations within a planning time bucket.
• Resource Overloaded • Supplier Capacity Overloaded	The planning process creates an exception only if the available capacity is less than the required capacity at the planning time bucket level. For example, in a weekly bucket, a resource can have some overloads within the week on a few days. As long as the available capacity at the week level is more than the required capacity, the planning process doesn't generate a resource overload exception. The planning process ignores daily fluctuations within a planning time bucket.

Guidelines to View and Edit Measure Data in Tables for Supply Plans That Use Telescoping Buckets

When you use telescoping buckets in your supply plan, there are some things to understand before you view plan output or edit measure data in tables.

If you use a table to view the plan output in a supply plan that includes the time dimension, the time hierarchy selected in this table must be the Supply Planning Calendar. Use this time hierarchy to ensure consistency between the level at which planning is performed and the level at which you view the plan output.

When you use telescoping buckets in a supply plan, you can't edit measure data in a table at a level lower than the supply planning bucket. For example, you can't edit data at the day level if your data in the table is at a weekly bucket. However, you can view and edit the measure data at or above the planning time bucket level.

> **Note:** If you view data in a demand and supply plan, you can drill down to the daily level, even if you use telescoping time buckets. This is because demand planning allocates demand measures down to the day level.

Let's walk through how viewing and editing measure data in tables works in a bit more detail.

If you're viewing the portion of the plan horizon that's planned in:	Measure data that you can view or edit in tables
Daily Buckets	You can view or edit the measure values in either daily, weekly, period, or monthly levels in the table.
Weekly Buckets	• You can view or edit the measure values in either weekly or period levels in the table. • You can't view the data at the daily granularity, even though the planning process allocates some measure data down to the day level. • You can't drill down from the week to the day level. • Any edit that you make at the period level is allocated to the last day of each of the underlying weeks within that period.
Period Buckets	• You can only view or edit the measure at the period granularity. • You can't drill down from the period to the week or day level. • Any edit that you make at the period level is allocated to the last day of the period.
Monthly Buckets	• You can only view or edit the measure at the monthly granularity. • You can't drill down from the month to the day level. • Any edit that you make at the monthly level is allocated to the last day of the month.

These four measures work differently when you edit them.

- Gross Forecast
- Net Forecast
- Manual Demand

- Planned Orders

You can view the portion of the plan horizon that's planned in weekly buckets. Any edit that you make at the week level is allocated to the last day of the week for these four measures. After you save your plan, the supply planning process updates or creates demands and supplies. These demands and supplies have a suggested due date that's the last working day of the supply planning bucket.

Modeling a Supply Chain

How Phantom Assemblies Are Used in Supply Chain Planning

A phantom assembly, also known as phantom bill, is a nonstocked assembly that lets you group materials required to produce a subassembly. When you create a bill of material for a parent item, you can specify a component as a phantom.

One bill of material can represent a phantom subassembly for one parent item, and a stocked subassembly for another parent item. A phantom bill of material enables you to manufacture and stock the assembly when necessary. For example, you can use phantoms to build and stock occasional spares for field service requirements. The planning process explodes through a phantom subassembly to the components.

Settings That Affect Phantom Assembly

The planning process ignores phantom assembly routing when you define a job or repetitive schedule. To avoid any additional lead time offset for components, you set the lead time of the phantom to zero.

How Phantoms Are Used in Planning

When model bills or option class bills are components to another bill of material, the component supply type is a phantom. Instead of passing the parent's planned orders to the phantom, netting the phantom, and passing requirements to the phantom's components, the planning process blows through the phantom to create component planned orders. For the organization parameter, you have only the Material Only option for Phantom Operation Sequence Inheritance. The planning process ignores order modifiers for items that have a phantom supply type. The planning process plans the phantom subassembly using the lot-for-lot lot-sizing technique.

Typically, phantom assemblies act as normal assemblies when they represent a top-level assembly, such as when you master schedule them or manufacture them using a discrete job. As a subassembly, however, they lose their identity as distinct assemblies and are a collection of their components. The components of the phantom subassembly are included on the job and in the planned supplies, but not the phantom itself. Using the bill of material to determine phantoms, has two advantages: it allows for more flexibility (because a component can be a phantom in one bill and not another), and treatment of phantoms in the planning process is consistent with Oracle WIP.

How FIFO Pegging Is Used in Supply Chain Planning

Pegging is a process that the planning calculations use to link the supply with the demand, and the demand with the supply. FIFO is first in, first out. In FIFO pegging, demands are linked to supplies on a day-by-day basis.

The planning processes sort demands by day, demand type, and supply quantity in ascending order. The planning processes sort supplies by day, supply type, and supply quantity in ascending order.

For all reserved demands and supplies, the planning processes first pegs demands with reservations (existing or recommended) to the reserved supply without regard to the demand type, the supply type, and dates. Pegging always respects reservations. For unreserved demands and supplies, the planning processes sort demands day by day in the following sort order:

- Past due sales orders
- All sales orders
- Manual demands

For all other demands, including forecasts and dependents demands, the planning processes sort supplies day by day in the following sort order:

- On hand
- Past-due supplies (firm by definition)
- Existing firm supplies
- Existing non-firm supplies
- Planned orders

During demand and supply netting in planning calculations, if safety stock levels are specified for an item organization, then the netting is performed considering the daily safety stock level. The planning calculations do not use the notion of safety stock demand. As there is no concept of safety stock demand, there is no pegging of a supply to a safety stock demand. The planning calculations do not peg some or all of a supply to anything when some or all of the supply is used to meet the required safety stock level. A supply, which meets a safety stock level, pegs to either future demand or is not pegged. Excess supplies because of order modifiers can peg to nothing at the end of the planning horizons.

How Shrinkage Is Calculated

The planned quantities of products sometimes decrease or shrink as they move through the production process. Shrinkage rate is an item-organization attribute, which determines the expected scrap and other losses in inventory.

To overcome the inventory shrinkage, the planning process begins with production quantities greater than the required quantity to meet the demand. The planning process considers the value that you specify for shrinkage and uses it to plan for shrinkage of an item in an organization. The planning process plans for demand by starting with a quantity that considers shrinkage and then arrives at the required order quantity. The order quantity is the quantity after the shrinkage is applied. The planning process uses the shrinkage rate and the required order quantity to determine the start quantity. The planned order needs the start quantity to account for the shrinkage.

The planning process derives the start quantity based on the following equation:

Start Quantity = Order Quantity / (1 - Shrinkage)

For example, consider an item that has a shrinkage of 10%. For a demand of 100, the planning process starts with a quantity that will shrink by 10% to arrive at 100.

Start Quantity = 100 / (1 - 10%) = 111.11

If the Apply Order Modifier to Start Quantity item attribute is set to Yes, then the start quantity will be adjusted to conform to the applicable order modifier and the order quantity will be calculated based on the following equation:

Order Quantity = Start Quantity * (1 – Shrinkage)

For example, consider an item that has a shrinkage of 10% and a fixed order quantity of 100. For a demand of 100, the planning process first creates a planned order with a start quantity of 100 (which conforms to the Fixed Order Quantity order modifier) and an order quantity of 90 (due to 10% shrinkage). Because 10 more are needed to fulfill the demand, a second planned order is created with a start quantity of 100 (which conforms to the Fixed Order Quantity order modifier) and an order quantity of 90, of which 10 are needed to meet the demand and 80 are available for another demand or go unused.

Shrinkage is also applied when collecting data from an external source system. When uploading purchase requisitions, purchase orders, or work orders using the file-based data import (FBDI) template, the planning process applies any specified shrinkage rate and reduces the order quantity. For example, if an item has a shrinkage of 10% and the order quantity in the .csv file for a purchase requisition is 100, then the order quantity is reduced to 90 when the purchase requisition is uploaded.

The supply planning process considers shrinkage for both planned orders and existing supplies.

Firming Supplies

When you firm a supply order, you can select either the start quantity or the order quantity as the firm quantity on the Supplies and Demands table. You can update either the Firm Quantity or the Firm Start Quantity column to a different value.

When you firm a planned order, the planning process updates the Firm Quantity column with the value in the Order Quantity column. You can also edit the Firm Quantity column based on your planning needs. Alternatively, you can specify the Firm Start Quantity column on a firm planned order. When you enter a value in the Firm Start Quantity column, the planning process clears the value from the Firm Quantity column.

When you rerun the plan in a simulation mode, you can see the following data:

- For the planned order with Firm Start Quantity specified, the Start Quantity column displays the Firm Start Quantity value. The Order Quantity column displays a value based on the following calculations:

  Order Quantity = Firm Start Quantity * (1 - Shrinkage)
- For the planned order with Firm Quantity specified, the Order Quantity column displays the Firm Quantity value. The Start Quantity column displays a value based on the following calculation:

  Start Quantity = Firm Quantity / (1 - Shrinkage)

Calculating Shrinkage for Work Orders

A work order can be fully complete or partially complete during collections. When you collect a work order, the collected quantity represents the start quantity. The planning process calculates the new order quantity based on the current state of completion and the expected scrap.

Because work orders can be incomplete at the time of planning, you can track the status of the work order from the Supplies and Demands table in your Supply Chain Planning work area. You can review the following attributes to track the status of the work order:

- Start Quantity
- Completed Quantity
- Scrapped Quantity
- Remaining Quantity
- Expected Scrap Quantity

- Order Quantity

During collections, the planning process collects the start quantity from the execution systems. When you release a planned order, the planning process releases the start quantity back to the execution systems.

Measures to View Start Quantity

The following three predefined measures let you view the start quantity and the start dates:

- Supply Start Quantity
- Reserved Supply on Start Date
- Reserved Supply Value on Start Date

Work with Supply Plans

How Purchase Orders Are Scheduled

Purchase orders, also known as buy orders, enable you to accurately measure the transit time from the supplier to the organization. The following fields are included on the purchase order schedule:

- Requested Ship Date
- Promised Ship Date
- Requested Delivery Date
- Promised Delivery Date
- Buyer-managed Transportation Indicator
- Shipping Method

Buyer-managed Transportation specifies that the buying company is responsible for arranging the transportation, from picking up the requested goods to delivering to ship-to locations specified in the order. When the Buyer-managed Transportation indicator is not selected, delivery dates are populated on the purchase order and ship dates are not populated on the purchase order. When it is selected, the ship dates are populated on the purchase order and delivery dates may be populated on the purchase order.

When Buyer-managed Transportation is selected, the buyer communicates a requested ship date on Purchase Orders and the supplier provides a promised ship date in response. When not selected, delivery dates are communicated between buyer and supplier. In both cases, the purchase order also contains shipping method at the line level. Transit times can be defined between a supplier site and organization location for shipping methods. The planning process can consider transit times for purchase orders.

When the planning process creates planned purchase orders, the planning process uses the shipping method from the sourcing rule to calculate the transit time. The total lead time from planned purchase order start date to dock date includes both processing lead time and transit lead time.

When you release a planned purchase order from a Supply Chain Planning work area, the following information is sent to purchasing:

- Shipping method

- Requested ship date and requested delivery date. If Buyer-managed Purchasing is selected, then both ship and delivery dates are populated on the purchase order. If Buyer-managed Purchasing is not selected, then only the delivery dates are populated on the purchase order.

Purchase orders are scheduled backward from the order due date. Scheduling purchase order respects all valid shipping, receiving, transit, manufacturing, and supplier capacity calendars. In supply chain planning, if any dates are in the past, then the dates are set to the plan start date. The planning process issues reschedule recommendations for the following conditions:

- When the purchase order **Buyer-managed Transportation** indicator is selected and the old ship date is different from the new ship date calculated by planning.
- When the purchase order **Buyer-managed Transportation** indicator is not selected and the old delivery date is different from the new dock date calculated by planning.

Example of Backward Scheduling Calculations

Consider that the suggested due date is Day 10, where postprocessing = 1 day, transit time = 2 days, processing = 4 days, and preprocessing = 2 days. The following calculations are used for backward scheduling:

- Suggested Due Date = Day 10
- Suggested Dock Date = Day 9 (Dock Date = Due Date minus Postprocessing Lead Time)
- Suggested Ship Date = Day 7 (Ship date = Dock Date minus Transit Lead Time)
- Suggested Start Date = Day 3 (Start Date = Ship Date minus Processing Lead Time)
- Suggested Order Date = Day 1 (Start Date = Preprocessing Lead Time)

Related Topics

- How Backward Scheduling and Order Dates Are Calculated

How Backward Scheduling and Order Dates Are Calculated

Backward scheduling is the process by which lead time is applied to supply orders. When the planning mode is unconstrained, backward scheduling is performed by the planning process.

When you run a supply plan, the planning process reports constraint violations as capacity overloads and lead time exceptions so that you're alerted to supply problems. The supply for your sales order becomes due on the end demand date.

Settings That Affect Backward Scheduling and Order Dates

When supply is just in time for a demand, the supply completion date is the demand date. The supply is then scheduled backward to arrive at the start dates for each operation that must be completed and due dates for supply of lower-level components that make up the final supply.

> **Note:** If the operation consuming a component doesn't have any scheduled resources, then the supply is scheduled to arrive on the order (not operation) start date.

During backward scheduling of dates, if the plan start date is crossed, then all earlier dates are bucketed to the plan start date. This process is referred to as compression.

Backward scheduling affects order due dates in the following ways for different types of items:

- For make items, compression begins at preprocessing lead time. The first operation and each successive operation are then compressed to zero duration until there is sufficient lead time for the remaining operations to complete using the resource duration.
- For transfer and buy items, the preprocessing lead time is compressed first. The processing lead time is then compressed and if insufficient lead time remains, postprocessing lead time is compressed.

> **Note:** The processing time for a buy item is independent of item quantity.

You can set organization and customer receiving and shipping schedules and carrier transit schedules in the Manage Transportation Schedules section in Logistics. The only valid dates that planning calculations use for backward scheduling are the working days on the manufacturing and shipping calendars. Calendar defaulting rules are used by planning to determine order dates calculations. The defaulting rules are:

- Valid Supplier Capacity Calendar: Either the Supplier Site Capacity Calendar is used or a fully open calendar of 7 days, 24 hours. If the Supplier Site Capacity Calendar in the Approved Supplier List is blank, then the Supplier Site Calendar from the Supply Network Model is used.
- Valid Supplier Shipping Calendar: The Carrier, or Supplier, or Supplier Site Calendar, the Supplier, or Supplier Site Shipping Calendar, the Carrier, or Supplier Calendar, the Supplier Shipping Calendar, or a fully open calendar of 7 days, 24 hours is used.
- Valid Organization Receiving Calendar: Either the Carrier or Organization Calendar is used, or the Organization Receiving Calendar, or the Organization Manufacturing Calendar.

> **Note:** The defaulting rules are also applied to determine different calendars, such as Valid Organization Manufacturing Calendar, Valid Organization Shipping Calendar, Valid Customer Shipping Calendar, and Valid Transit Calendar.

How Backward Scheduling Is Calculated

Backward scheduling is calculated based on the following:

- Planned Make Order: If your order is for a make item, the component due date is the start date for the operation that requires it and supply is scheduled backward. The work definition provides the information about the component and resource requirements for such an order. The new order due date becomes the date of the end demand.

  > **Note:** A make planned order exists only as a planned order in supply chain planning, and isn't part of manufacturing yet.

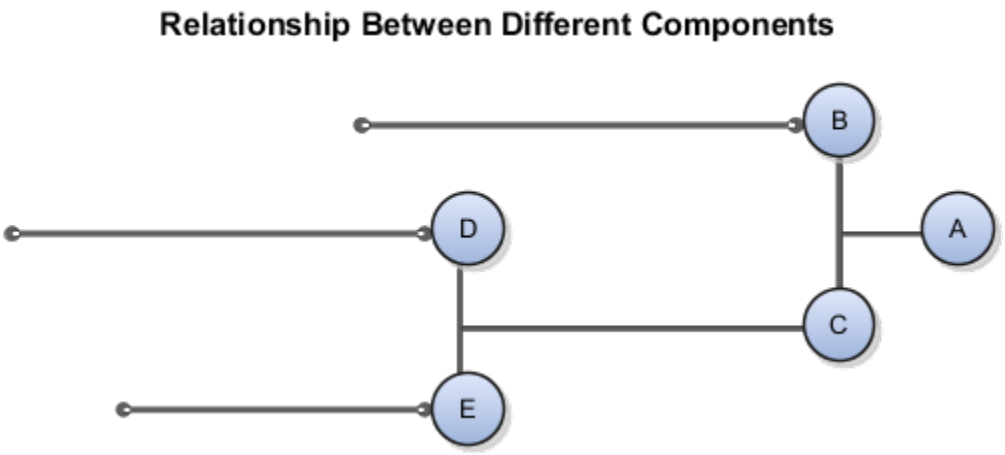
- Work Order: If your order is for an item that already exists as a work order, the component and resource requirements are collected from the work order. The planning process can shift the work order to a new set of dates without making alterations to the relationship of dates in the work order. The component due dates for that end item are collected from manufacturing.

For example, take the following scenario:

- A is an end item with two components B and C that have different start dates.
- C is a make item with two components D and E that also have different start dates.

Components D and E are in the lower level of the work definition for item C and they're needed for the assembly of the make planned order C. Similarly, components B and C are in the lower level of the work definition for item A and they're needed for the assembly of the work order A.

The following figure illustrates the relationship between components A, B, C, D, and E that are used to make an end item.



The planned make order rescheduled dates are determined by total quantity of demands and order modifiers. Total make order lead time (days) = fixed lead time + quantity multiplied by variable lead time.

The work order rescheduled dates are determined by component requirement start dates and end dates. If the end date is moved by 3 days, the start date is also moved by 3 days.

Related Topics

- How Purchase Orders Are Scheduled

How You Prioritize Work Orders with Ready to Build Items

The Ready to Build Quantity value of a supply order represents the quantity of the supply order that can be built using only on-hand supplies of components.

You can estimate the supply quantity that can be built using the pegged, on-hand components of the supply. You can decide which orders are ready to work upon and which orders you need to wait for the components to be available.

The planning process uses the Ready to Build Quantity to calculate the Ready to Build Percentage.

Ready to Build Percentage = Ready to Build Quantity divided by Supply Quantity

The Ready to Build Quantity uses the Consider in Clear-to-Build item attribute to determine the components that participate in the ready to build calculation for assembly items. Consider in Clear-to-Build is an item attribute which you must specify in the Items page. If you set this attribute to Yes for specific components, the calculations will consider only those components for Ready to Build calculations of the assembly items. If you set this attribute to No, those specific components don't affect the Ready to Build calculations of the assembly item.

For the component items that you want to include in the Ready to Build calculation of assembly items, you must first set the Consider in Clear-to-Build attribute to Yes in the Items page. This attribute isn't available in Oracle Product Information Management. You must set this attribute in a plan or within a simulation set.

Ready to Build Quantity and Ready to Build Percentage are calculated for supplies of Make items only. Also, the Ready to Build Quantity and Ready to Build Percentage fields are available in the Supply Planning and Demand and Supply Planning work areas. These fields aren't available in the Planning Central work area.

Rework and Transform Work Orders

Rework and transform work orders are collected during the data collections process and they are shown as nonstandard work orders in Planning Central, Supply Planning, and Demand and Supply Planning work areas.

You create rework work orders in Oracle Manufacturing to perform rework activities on items that have issues or defects. The objective of rework is to make those items usable to satisfy customer demand.

You create transform work orders in Oracle Manufacturing to enhance or upgrade existing items by adding or removing selective components from existing items. The objective of transform work orders is to transform the existing item into a new item.

The rework and transform activities can result in the removal of components from the item being reworked or transformed. You can use the removed components to satisfy future demands. Data collection collects the removed components and you can search for the removed components when you select the order type as nonstandard work order by-product in the Supplies and Demands table. The data collection process filters out all work order demands for an item, when the item itself is manufactured by the rework work order.

The planning process considers all nonstandard work orders as firm orders. Like other firm orders, nonstandard work orders will be included in the calculation of the natural time fence for an item.

How Supply Planning Considers Additional Work Order Status

Oracle Supply Planning considers the scheduling status, completion status, and specific attributes of work orders to make informed decisions about how to allocate resources, coordinate tasks, and fulfill demand efficiently.

Undercompleted Work Orders

Oracle Supply Planning treats a work order as complete and doesn't expect further supplies if a work order is defined as Undercompleted in Oracle Fusion Cloud Manufacturing.

When creating a supply plan, the status of work orders is assessed to determine the remaining work and resources needed to complete them. In your manufacturing environment, you may want to complete work orders even if the output quantity from the manufacturing process is less than the original quantity specified. You can define the undercompletion tolerance value in Oracle Manufacturing. The supply plan automatically sets the work order to the complete status if the work order is defined as undercompleted. If a work order status is set to complete based on the undercompletion tolerance value, you still can continue to complete any further product quantity. If there are no more supplies expected from a work order, select Undercomplete in Review Dispatch List in Oracle Manufacturing.

If a work order is undercompleted, the supply plan considers its status as complete and doesn’t expect any further supplies from the work order. In Plan Inputs, the order quantity is zero for such work orders.

Note: Both unconstrained and constrained supply plans support undercompleted work orders. The undercompletion tolerance is supported for standard and nonstandard work orders. It is not supported for maintenance, rework, and transform work orders.

You can view the undercompleted status on the Supplies and Demands page in Plan Inputs.

For discrete work orders:

- The undercompletion tolerance is applied on the product quantity.
- If a work order is defined as undercompleted, based on the undercompletion tolerance value, you cannot complete any further product quantity.
- If a work order is undercompleted, you still can continue to issue input materials and the supply plan continues to plan for the remaining input materials (to-be-issued to the work order) until it is closed.

For process work orders:

- The undercompletion tolerance is applied on the batch quantity and not on the output quantities.
- If a work order is defined as undercompleted, you still can continue to complete output items (primary output, co-product, and by-products) and the supply plan will continue to consider the output quantity as supply from the work order until it is closed.

  For example, a process work order has started with the original batch quantity equal to 500, and the planned primary output quantity equal to 200. If the work order is undercompleted with batch quantity equal to 400, you still can complete the primary output quantity 200 or until the work order is closed.

Work Orders in Pending Approval Status

Supply Planning considers a work order in Pending Approval status as available supply and plans work orders accordingly.

You might be required to keep detailed records of product manufacturing processes on electronic records and signatures. Oracle E-Signatures and E-Records is a configurable framework for securely capturing, storing, retrieving, and printing electronic records and signatures. You can enforce generation of an e-record and capture e-signatures when a work order is initially changed to the Released status in Oracle Manufacturing. Using a deferred approval process with notifications, the work order is held in a Pending Approval status until the approvals are obtained. This status means that no changes can be made to the quantity or schedule.

Supply planning considers work orders that come from Oracle Manufacturing in Pending Approval status as available supply.

These work orders are planned as non-firm work orders unless explicitly firmed in Oracle Manufacturing or in Supply Planning by a planner. Supply Planning can issue a reschedule or cancel recommendation on such work orders by virtue of them being not firm.

Note: Both unconstrained and constrained supply plans support work orders in Pending Approval status.

The work orders in Pending Approval status remain locked in Oracle Manufacturing for all updates and transactions. Oracle Manufacturing won't process any update or cancel recommendation for such work orders when they are released from Supply Planning. An applicable message is displayed in Oracle Manufacturing if any recommendation isn't processed.

In such cases, you need to release the work order again in the next planning cycle (assuming by that time the work order status is changed depending on the outcome of approval process). To avoid this, check the work order status in Oracle Manufacturing before releasing the work orders in organizations configured for e-signature.

Manually Scheduled Work Orders

You might want to change the schedule of a work order in the execution system owing to your business requirements. For example, you might update the work order start and completion dates, update work order operation, or resource start and completion dates. In Oracle Manufacturing, select the User or External scheduling method. The Firm check box is automatically selected. You then can schedule a work order manually by updating the work order, operation, and resource dates in Oracle Manufacturing.

Supply Planning respects the manually scheduled work order and doesn't consider it for automated rescheduling by virtue of it being firm.

Optionally, you can deselect the Firm option for a work order in Oracle Manufacturing for the User or External scheduling methods. In this case, since the work order is not firm, Supply Planning will plan it as a regular non-firmed work order and recommends a reschedule or cancellation. On releasing such work orders, Oracle Manufacturing will honor Supply Planning's recommendation.

You can also change the firm status of a manually scheduled work order to Not firm in Supply Planning. In this case also, Supply Planning will plan the work order as a regular non-firm work order and can recommend a reschedule or cancellation. On releasing these work orders, Oracle Manufacturing will honor the Supply Planning's recommendation.

Note: Both unconstrained and constrained supply plans support manually scheduled work orders.

How Plan Recommendations Are Processed

Supply chain planning can generate plan recommendations. These are suggestions to take actions that can create a balance between supply and demand. You can view these suggestions in the Supplies and Demands table.

The planning process can release two primary kinds of plan recommendations.

- It can suggest new planned orders: The planning process suggests that you order some new supply to meet the demand for a certain product. All of these supply suggestions are released by planning to Oracle Supply Chain Orchestration in the form of new planned orders. This new supply can be in the form of a manufacturing job, in which case the planned order is released to manufacturing. If the new supply suggestion is a purchase requisition, Supply Chain Orchestration releases the planned order to purchasing. If the new supply suggestion is a transfer, Supply Chain Orchestration releases the planned order to logistics.
- It can suggest rescheduling or cancellation of existing supplies: The planning process suggests that you reschedule or cancel a current supply because the total supply for a product might be in excess compared to the demand for it. You can cancel current planned orders that exist as discrete jobs or as purchase orders or transfer orders. Similarly, planning can also suggest that you reschedule some of the existing supply to meet future demand. The rescheduling is done for supplies that exist as discrete manufacturing jobs, purchase orders or transfer orders.

If the planning process suggests new supply, and the planner releases the planned order, the released planned order is sent to Supply Chain Orchestration. The planned order has the following details specified in it:

- Item
- Organization

- Start date, dock date and if applicable, ship date
- Source
    - If it's a make item, the organization remains the same.
    - If it's a transfer item, the source organization must be specified.
    - If it's a buy item, the supplier and supplier site must be specified.

You can open the **Supplies and Demands** table to view individual planned orders. You can also open the material plan to view the aggregate total supply for your plan.

You can't view rescheduled plan recommendations in the material plan. The material plan accepts the recommendations from supply chain planning and uses the rescheduled dates when aggregating supply. The planning calculations assume that the rescheduled recommendations are already incorporated within the aggregate supply calculations and use the rescheduled dates.

Related Topics

- How Plan Recommendations Are Released

How Plan Recommendations Are Released

One of the key execution capabilities that supply chain planning offers is that you can release plan recommendations to implement standard plan-to-produce business flows. You can release plan recommendations either from a supply plan or from a demand and supply plan.

You can either manually review and release each supply chain planning recommendation or automatically approve and release them.

The following table illustrates the plan recommendations that either the planning processes can release automatically for different order types, or you can manually release the orders:

Order Type	Updates Suggested by Planning Calculations	Actions You Can Take
Purchase Orders	Quantity, Delivery Date, Firm Status	Reschedule, Cancel
Purchase Requisitions	Cancellation	Cancel
Work Orders	Start Date, Completion Date, Firm Status	Reschedule, Cancel
Transfer Orders	Start Date, Arrival Date, Shipping Method	Reschedule, Cancel
Sales Orders	Scheduled Arrival Date, Scheduled Ship Date, Shipping Method	Reschedule

Note: In all cases, cancellation entails releasing an order quantity of zero.

For purchase orders and transfer orders, you can manually change the input values for the updates suggested by the plan recommendations. You can do this in the planners' workbench.

The following recommendations are released by supply chain planning to Oracle Supply Chain Orchestration:

- New planned orders for make, buy, and transfer of supplies
- Reschedules of existing make, buy, and transfer supplies

Supply Chain Orchestration processes these recommendations and sends both new releases and reschedules to manufacturing, purchasing, and logistics depending on the type of supply.

The following recommendations are released by supply chain planning to Oracle Order Management:

- Reschedules of sales orders
- New planned orders for drop shipments

Related Topics

- How Plan Recommendations Are Processed
- Manually Release Plan Recommendations
- Automatic Release Options
- Release Recommendation Options

Manually Release Plan Recommendations

You can review the plan recommendations generated by the planning process and then manually release them for execution. You can either release new planned orders as supply or you can release reschedule recommendations for existing supplies, such as work orders, transfer orders, and purchase orders.

To review and release plan recommendations:

1. Open the **Supplies and Demands** table and search for your orders.
2. Select one or multiple rows that show the orders that you want to release for execution.
3. At the order level, click **Actions** and then select **Mark for Release**.

   > **Note:** The **Release Status** field is updated to the appropriate status (for example, Marked for release or Marked for reschedule) for each of the selected rows.

4. Save your changes.
5. At the page level, click **Actions** and then select **Release**. This action initiates the release plan process.

   A dialog box displays the status of the process. You can monitor the process or close the dialog box and resume other activities. If you close the dialog box, the plan action continues.
6. You can also verify the status of this process by navigating to the Scheduled Processes page. Follow these steps to verify release results on the Scheduled Process page:

   a. Use the **Hierarchy** view. The top-level process name is **Release Plan**.
   b. Drill down to **Release Planning Recommendations** and select **Load Interface Tables**.
   c. Check the log file of each table to confirm the release. Also, check the submission notes for each process. The notes identify the type of release.

After you release the plan recommendations, all new, rescheduled, or canceled orders are sent to Oracle Supply Chain Orchestration. Navigate to the Supply Chain Orchestration work area to view requests that weren't processed and check why these exceptions were created.

Release Planned Make Orders

After you mark a planned make order for release, you can specify a work order number to use when the planned make order is released. In the **Implement Work Order Number** column, the number that you enter must be valid based on your source system. No validation is performed in the Supplies and Demands UI. For example, if you're using an Oracle Fusion source system, the number that you enter must be unique within the organization. Release planned make orders with duplicate work order numbers appear in Oracle Supply Chain Orchestration with an error.

Release Planned Buy Orders

After you mark a planned buy order for release, you can specify a deliver-to location to use when the planned buy order is released. If you leave the **Implement Location** field blank, then the default location associated with the organization is used as the deliver-to location. Optionally, you can specify a different location to be used as the deliver-to location. Only the locations that have been associated with the organization can be selected for the implement location.

> **Note:** Changing the **Implement Location** field doesn't cause any of the other implement fields, such as **Implement Shipping Method** or **Implement Ship Date**, to be reevaluated.

Related Topics

- How Plan Recommendations Are Released
- How Plan Recommendations Are Processed

Release Plan Recommendations to an External Execution System

You can release plan recommendations or planned orders from Oracle Fusion Cloud SCM Applications to an external execution system. When you release a planned order, the planning process generates a CSV file for the planned order.

The planning process attaches the generated CSV file to the scheduled process called Release Planning Recommendations: Release to External Source Systems. You can download the CSV file from the scheduled processes. The planning process also saves the CSV file in a .zip file format in the Universal Content Manager. The name of the .zip file is ReleasetoExternal.zip.

Prerequisite

Before you can release planned orders from Oracle Fusion Cloud SCM Applications to an external execution system, you must do the following:

1. Assign your organization as an external source system.
2. Run collections from the external source system.

After you successfully run collections, you can plan your orders and release them to the external source system. The release process is same for an Oracle Fusion source system and an external source system.

Release Planned Orders

Follow these steps to release the planned orders:

1. From your Supply Chain Planning work area, click the **Tasks** panel.
2. Click **Manage Plans** and then search your plan.
3. Open the plan, mark the orders for release, and then click **Actions** > **Release**.

The planning process exports the plan in the CSV format and attaches the CSV file to the scheduled process. Also, the planning process saves the CSV file in a .zip file format in the Universal Content Manager. You can download the .zip file from the **File Import and Export** link in the **Navigator**.

For more information, see Releasing Plan Recommendations to External Systems (Doc ID 2305394.1) on My Oracle Support at https://support.oracle.com.

Create and Release Manual Planned Orders

You can create manual planned orders for buy, make, and transfer order types. For each planned order type, you can select your source specifications.

After you create the manual planned orders, you can then release the orders to the relevant source application. Creating and releasing manual planned orders enables you to respond quickly to issues by creating supplies in the source applications. You can create and release manually created planned orders from the Planning Central, Supply Planning, Demand and Supply Planning, or Replenishment Planning work area.

To create a manual planned order from the Supplies and Demands page, click the Create icon. The Create Order dialog box opens. In the Create Order dialog box, select the source type. The source type that you select enables additional parameters for the supply source.

Source Type	Additional Parameters
Buy	• Supplier • Supplier Site • Shipping Method
Make (Not relevant to Oracle Fusion Replenishment Planning)	• Item Structure Name • Work Definition
Transfer	• Source Organization • Shipping Method

After you create the manual planned orders, optionally rerun your plan to determine if the new planned orders can be executed. You can then mark the manually created planned orders for release on the Supplies and Demands page. Next, run the release process and the planning process releases your manually created planned orders.

How to Prevent Creating Planned Orders in a Supply Plan

In some business cases, you might want to prevent the creation of planned orders for particular items. You can use the Create Supply attribute to manage scenarios such as end-of-life items or phasing out of components.

The Create Supply attribute also applies to end items. If set to No for an end item, all remaining demands for the end item are marked as unmet demands after using up all on-hand inventory and on-order inventory.

This topic describes how to prevent the creation of planned orders. If you instead want only to delay the creation of planned orders until after a specified date, see the *How to Create New Supplies Only After a Specified Date* topic in this guide.

You can use the Create Supply attribute in both constrained and unconstrained supply plans, with a few minor differences, which are noted in this topic.

To prevent creating planned orders in a supply plan:

1. Set the **Create Supply** attribute to **No** for an item-organization.
2. (Constrained Plans Only) Select your decision rules in the plan options. This step is required only if you defined substitutes or alternates in your plan and want the supply plan to use existing supplies or recommend planned orders on them.

CAUTION: Set the **Create Supply** attribute to **No** only on required items for which you don't want to create any new supplies. Setting the attribute on the wrong items can lead to unmet demands.

Set the Create Supply Attribute

To prevent the planning process from creating planned orders for a particular item, set the **Create Supply** attribute to **No** for an item-organization. To set this attribute, from the Product Information Management work area, navigate to the Items page, Specifications tab. You can also set the Create Supply attribute in the Item simulation set that's available in Supply Chain Planning.

This table describes how the planning process manages supplies when the **Create Supply** indicator is set to **No.**

Applies to plan types:	When Create Supply indicator is set to No for:	The planning process does this:
Constrained and Unconstrained	End items	All on-hand inventory and on-order inventory is used up to satisfy demands. All remaining demands for the end item are marked as unmet demands.
Constrained and Unconstrained	Primary components	All demands for end items whose item structure includes this component is unmet after on-hand and existing supplies are used up to satisfy demands.
Constrained	Primary components that have substitute components defined in Item Structures	A substitute component is used to satisfy the demand of an end item. The **Use substitute components** decision rule must be selected on the Plan Options page, Supply tab, Constraints and Decisions Rules subtab.

Applies to plan types:	When Create Supply indicator is set to No for:	The planning process does this:
Constrained	A component in a primary bill of material that has alternate bill of materials defined	An alternate item structure that doesn't have this component is used. The **Use alternate item structure and work definitions** decision rule must be selected on the Plan Options page, Supply tab, Constraints and Decisions Rules subtab.

For information on how to configure decision rules for constrained plans, see the *Configure Constraints and Decision Rules* topic in this guide.

How to Create New Supplies Only After a Specified Date

In some business cases, you might want to delay the creation of planned orders until after a specified date. For example, if there's a temporary product recall, you might want to allow new orders to be placed, but only after a certain date.

The Create Supply After attribute lets you prevent the creation of new supply order recommendations until after a date you specify. It allows you to configure each product's earliest supply creation date.

The Create Supply After attribute must be used in conjunction with the Create Supply attribute. The Create Supply attribute specifies whether the plan can create a new supply for the item. The Create Supply After field is enabled only if the Create Supply attribute is first set to Yes.

To set these attributes, from the Product Information Management work area, navigate to the Items page, Specifications tab. These attributes can also be modified in a plan and in a simulation set, in the Items table.

To delay creating a planned order until after a specified date:

1. Set **Create Supply** to Yes.
2. Enter a date in the **Create Supply After** field.

These attributes control the creation of new make and buy planned orders. They don't control the creation of new transfer planned orders or reschedules of existing orders, because the intent is to limit new orders while utilizing all possible existing inventory in the supply chain.

Planning ensures that the Suggested Due Date of any new make or buy supply is after the Create Supply After date. However, the other dates, such as Suggested Dock Date, can be prior to the Create Supply After date based on lead times. In aggregate planning buckets, the due dates are always at the end of the bucket, but the dates released to the source system are at the beginning of the bucket. So, in such cases, the released date could fall prior to the Create Supply After date.

Note that if a demand is satisfied late due to the Create Supply After date constraint, then the Late Supply Pegged to Sales Order (or Forecast) exception is generated.

The Create Supply and Create Supply After attributes can be used in either constrained or unconstrained supply plans.

Related Topics

- How to Prevent Creating Planned Orders in a Supply Plan

Circular Transfer Orders

Use circular transfer orders to rebalance your inventory at both the source and destination organizations. In Oracle Planning Central and Oracle Supply Planning, supply planning can process a transfer order that is a circular order in the plan.

The supply plan considers the circular transfer order and treats it as a supply at the destination organization. The supply planning process marks both the transfer order supply and the transfer order demand as firm. This means that the plan won't recommend reschedules or cancellations for the circular transfer order, which can generate late supply exceptions or excess inventory exceptions.

For example, your sourcing rule is set to transfer supply from source organization ORG1 to destination organization ORG2. You discover that you have excess inventory in ORG2 due to a canceled sales order. You decide that you want to transfer supply from ORG2 back to ORG1, so you manually create a transfer order to move the excess inventory. The planning process includes your circular transfer order in the plan as a supply to ORG1 and is marked as a firm supply in the plan.

The planning process pegs the circular transfer demand to an existing supply. In our example scenario, the excess inventory is pegged to the transfer order demand in destination organization ORG2. The transfer supply is pegged to some demand in source organization ORG1. If there is no demand in the source organization, then the transfer order supply doesn't peg to anything.

The transfer order supply in the destination organization can be early, on time, or late for some demand. However, it can't be rescheduled by the planning process.

If the transfer order is inside the planning time fence, it can cause these supply exceptions because new supplies cannot be created:

- Late Supply Pegged to Forecast
- Late Supply Pegged to Sales Order

If the transfer order is outside the planning time fence, it can cause supply exceptions because the transfer is firm. The Items with Excess Inventory exception is generated when the Projected Available Balance on a particular day exceeds the Safety Stock Level quantity.

If the transfer order is in the past, it causes the Past Due Orders exception.

> **Note:** If you create a transfer order in error, there may not be supply in the ship-from organization to use for the transfer. Circular pegging occurs in this case, with the transfer demand pegging to the transfer supply. In this situation, you should cancel the circular transfer.

How You Publish Supply Order Details

One of the important aspects of collaborating with suppliers is to provide them an insight into the open supply orders. Collaborating with suppliers on open supply orders enables you and your suppliers to plan supply chain activities more efficiently.

Supply orders are of four types: purchase order, purchase requisition, shipment in receiving, and in-transit shipment.

You can publish supply orders along with planned orders to Oracle Supply Chain Collaboration using the Publish Order Forecast scheduled process. Use the Navigator to access the Scheduled Processes page where you can select the Publish Order Forecast scheduled process. In the Process Details dialog box for the Publish Order Forecast scheduled process, you can select the following check boxes:

- **Include purchase orders in order forecast**: Includes purchase orders within the order forecast. All the open purchase orders for an item on a day are added to the planned orders on that day and published as order forecast at the supplier or supplier site level.
- **Include requisitions in order forecast:** Includes purchase requisitions within the order forecast. All the open purchase requisitions for an item on a day are added to the planned orders on that day and published as order forecast at the supplier or supplier site level.
- **Run the Supply Planning Collaboration Decomposition job**: Runs the Supply Planning Collaboration Decomposition scheduled process along with the Publish Order Forecast scheduled process.
- **Publish order details**: Publishes all four types of supply orders along with the planned orders.

How You Publish Order Forecasts

You publish order forecast for your suppliers. The suppliers can view the forecast and send their commits to you as a supplier capacity. You don't have to save the plan to the database before publishing the order forecast.

You can publish order forecast from the following pages in the Supply Planning, Demand and Supply Planning, or Planning Central work area:

- Items
- Supplies and Demands
- Manage Plans or individual plan

When you select Publish Order Forecast from the Actions menu, the planning process submits a job in Scheduled Processes. The planning process deselects all additional parameters that are available in the Publish Order Forecast job and submits the job. If you want to select various additional parameters that are available for the Publish Order Forecast scheduled process, you must submit the job manually from the Scheduled Processes work area and select your parameters.

Points to Remember

Consider the following points before you publish the order forecast:

- When you publish the order forecast from the Manage Plans page, you publish the order forecast for all the valid suppliers within the plan.
- When you're in the Items table or the Supplies and Demand table, you can publish order forecast that belongs to one Item-Organization at a time. You can't publish two rows of items with different Item-Organization combinations.
- The Publish Order Forecast job also launches the Supply Planning Collaboration Decomposition job. You don't have to run the decomposition job separately.

Lead-Time Insights for Purchased Items

Lead-Time Variances Insights Overview

Enable automated monitoring of purchasing lead times and recommendations when there are variances from your Supplier Lead Time planning assumptions.

The planning advisor framework enables you to assess the impact, view insights, and act upon recommendations to change the lead time assumptions for the item and supplier site combinations you select. The charts and tabular analytics show the high and low areas of item and supplier site combinations that have variance. Using this, you can monitor the lead times to observe the increasing and decreasing trends.

Here's a functional infographic that depicts how you get the lead-time variances insights and use them to improve your supply plans.

Data collection is a prerequisite to generating the necessary insights. All the other steps follow thereafter. So, after having your data collected, you:

1. Configure the lead-time parameters to get accurate variances and generate insights.
2. Assess the impact of purchase lead-time variances.
3. Review the insights from the analytics.
4. Investigate the variances compared to actuals and drill down into areas that need more attention.
5. Adjust the supplier lead time according to your findings and copy it to the simulation set.
6. Run the plan with the simulation to assess impact of recommendation.
7. Review the outcomes and make supply planning decision with the impact of your changes.

You'll be doing most part of it on the Oracle UIs. However, your approach to investigating the details in the analytics provided, making changes to your plan, and reviewing outcomes are all functional.

Prerequisite

Let's begin with our prerequisite, data collection. All the information about how to collect the data, security privileges you need, and lot more is in the *Planning Data Collections* chapter of the Using Supply Planning guide. However, when collecting and contextualizing the purchase order receipts data, you need to choose specific business object and filters. Here are the particulars:

UI	Setting	Value you need to select
Collect Planning Data	Collection Type	**Targeted** - If you want to perform an initial or re-run of all the computations based on collected data. Selecting this mode will run the computations based on the latest collected data. See the *Collect Data Using the Targeted Collection Type*topic to learn more about Targeted collection type. **Net Refresh** - If you want to compute only new insights based on net new data.
Collect Planning Data > Select Collection Filters	Items Filtered by Catalog	Select any product catalog. Ensure that you select the same catalog for Shipments Receipt History Filtered by Catalog. If you don't select any catalog here, you can select any catalog for Shipments Receipt History Filtered by Catalog.

UI	Setting	Value you need to select
	Shipments Receipt History Filtered by Catalog	If you have selected a product catalog for Items Filtered by Catalog, select the same catalog here.
Collect Planning Data > Supply Planning Data tab	Select Supply Entities for Supply Planning Data.	Select the **Purchase Orders Shipments Receipts History** business object and move it to Selected Entities.
Collect Planning Data	Date Range Type	Select **Relative to Collection Run Date**. If you select **Fixed**, enter a date range.
Collect Planning Data	• Rolling Date Range • Collection Window in Days • Roll off time periods automatically • Number of days to keep	The **Rolling Date Range** option enables you to collect the history data for the number of days that you specify. For example, if you forecast weekly, specify 7 in the **Collection Window in Days** field to collect the shipment receipt history data once per week. The data collections collect the shipment receipt history data for the latest week. Select **Roll off time periods automatically** to truncate the history data by the number of days that you specify in the **Number of days to keep** field each time you run collections for the demand history data. For example, if you prefer to forecast each week based on the history data of 52 weeks, select the **Roll off time periods automatically** check box and specify **Number of days to keep** as 364 days. This setting ensures that as you collect data every week, you keep the most recent history of 52 weeks and automatically purge history data older than 52 weeks.

After collecting the data, ensure that the Planning Advisor UI is enabled for the planners.

Next Steps for Viewing Insights

See these topics to learn more about the next steps in the functional flow:

1. *Enable Planning Advisor for Data Insights*
2. *Configure Lead-Time Parameters*
3. *Assess the Effect of Purchase Lead-Time Variances*
4. *Gain Insights on Lead-Time Variances*
5. See the tree-map view, supplier, and order details shown in the analytics:
    - *Lead-Time Insights Overview*
    - *Purchase Lead-Time Variances Summary View*
    - *Supplier Lead-Time Variances View*
    - *Order Details View*
6. *Adjust Supplier Lead-Time Variances and Simulate Plan*

Enable Planning Advisor for Data Insights

Planning Advisor is a dashboard that lets you identify deviations of purchase lead-time from the planned lead-time. You need to enable this dashboard for a plan to see the variances and open insights from there.

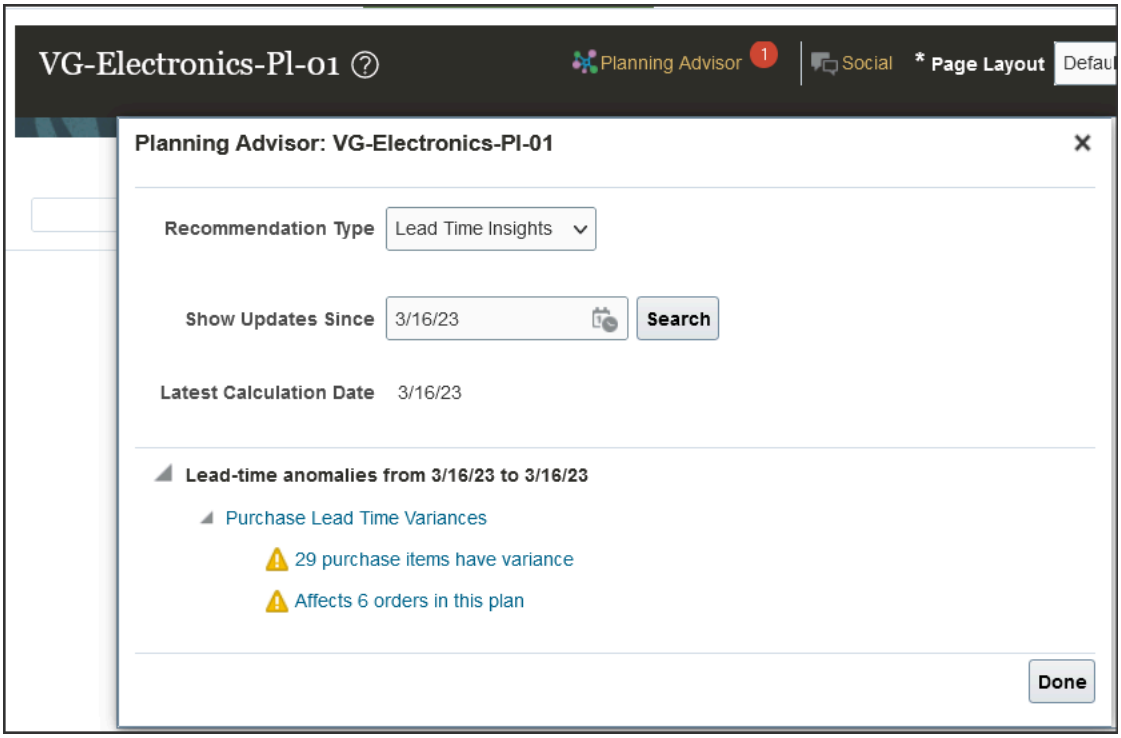
Here's how you enable Planning Advisor:

1. From home page, navigate to **Supply Chain Planning** > **Supply Planning**.
2. Open a plan.
3. On a plan, click **Actions** and select **Edit Plan Options**.

4. On the Edit Plan Options UI, go to the **Supply** tab.
5. Click **Select Advanced Options**.
6. On the Supply Advanced Options UI, in the General tab, under General Parameters, select the **Include lead-time insights alerts** check box.
7. Click **Done**. Reopen the plan to refresh.

Planners can now see Planning Advisor on the banner of a plan. Here's a screenshot of a plan that shows Planning Advisor on its banner. On clicking the link, the Planning Advisor UI shows up.

> **Note:** If this is the first time you're setting up Planning Advisor, you will see no insights. Run the **Generate Data Insights for Planning** scheduled process to generate insights.



Configure Lead-Time Parameters

The configuration contains parameters that govern the computation of the results. These are the recency weighting, outlier threshold, and catalog.

Recency weighting assigns relative importance to the historical data that is used for computing the lead-time insights. Outlier threshold allows data points outside a range to be ignored when computing the insights. Catalog is useful for the computation.

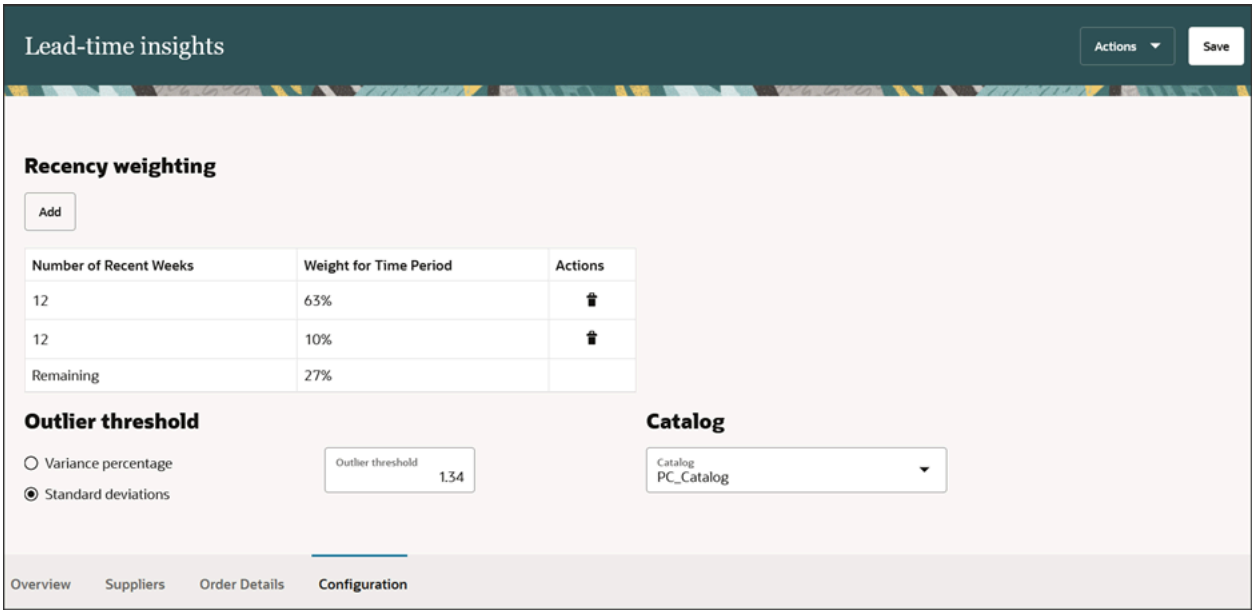
To assign the recency weighting, you create time buckets of the most recent weeks and assign a weight to them. This helps in giving more importance to data of certain periods, while computing the insights, based on the weight assignment. For outlier maintenance, you set a variance percentage or a standard deviation value to indicate the outer range for the data. This leaves out outlier shipment history that could potentially skew the insights due to inflated or

deflated lead-times. After setting the parameters, run the **Generate Insights for Planning** scheduled process, which triggers the computation process and produce the insights. Here's how you set the parameters and run the job:

1. From home page, go to **Supply Chain Planning** > **Planning Inputs**.
2. On the Plan Inputs page, click the tasks icon and select **Lead-Time Insights Parameters Configuration**.
3. On the configuration page, set these parameters:

Parameter	Description
Recency weighting	With this setting, you decide the weighting you want to give to the average lead-time that's calculated for a given number of recent weeks, spanning in your collection window. For example, let's say you have set your collection window to 90 days, which is about 14 weeks. When you give **Number of Recent Weeks** as 5 and **Weight for Time Period** as 90% in the first row and give 9 weeks as recent weeks and weighting as 10% in the next, you're indicating that you want the calculation engine to consider 90% of average lead-time calculated from the first 5 weeks in your collection window and only 10% of it from the next 9 weeks. This assigns a better weighting average to understand the lead-time variances for shorter durations.
Outlier threshold	Setting an outlier threshold helps improve the quality of data. You can set outliers for any of these two kinds of measures: ○ **Variance percentage**: This ignores individual shipment receipt history records that are above this threshold. ○ **Standard deviations**: This considers all the shipment receipts history records present as a normal distribution and ignores the records that are outside this standard deviation parameter. For example, when a standard sigma of 3 is defined, lead-time results which are outside the 99.87 percentile will be ignored from the overall computation.
Catalog	Select the same catalog that you chose while setting up the collection filters during the data collection.

Here's a screenshot of the configurations page showing the parameters selected.



a. Click **Save**.

b. Next, click **Actions** and select **Generate Insights**.
The calculation engine runs the Generate Data Insights for Planning scheduled process. You can check the status of the scheduled process by clicking **View Job Status** under **Actions**. After the process is successfully run, the insights are generated.

Related Topics

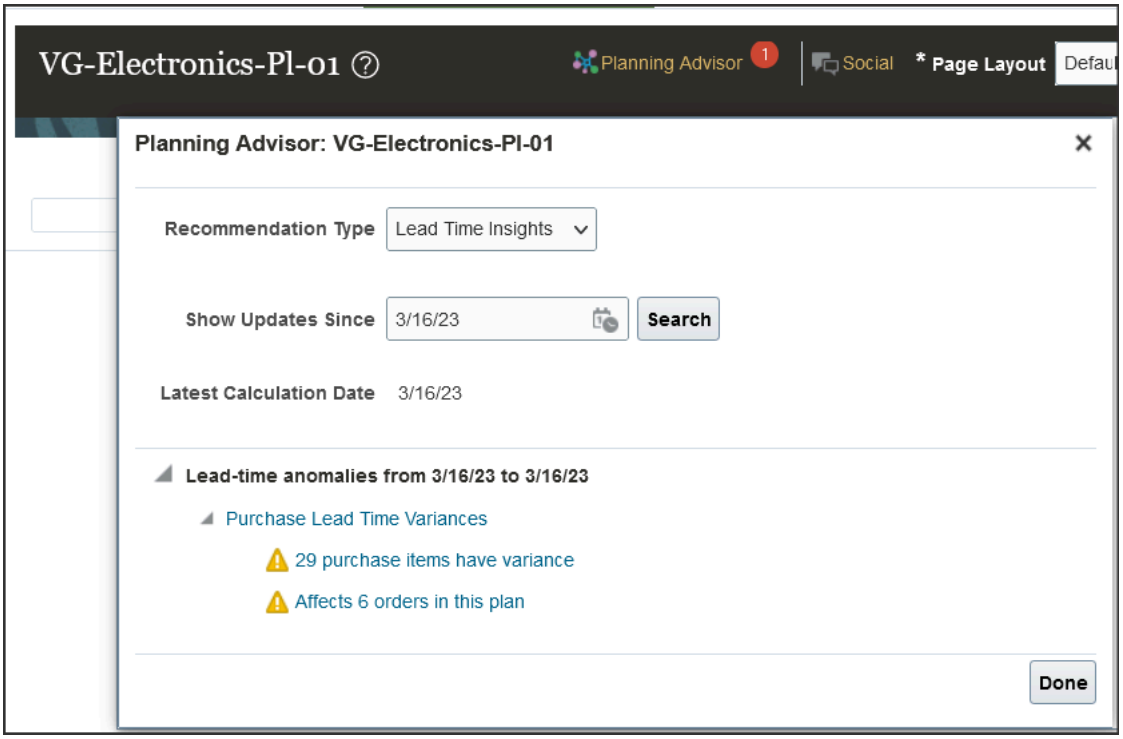
- Assess the Effect of Purchase Lead-Time Variances
- Purchase Lead-Time Variances Summary View
- Supplier Lead-Time Variances View
- Order Details View

Assess the Effect of Purchase Lead-Time Variances

After you have *enabled Planning Advisor*, configured the *lead-time insights parameters*, and run the Generate Insights for Planning scheduled process, open Planning Advisor from a supply plan.

Planning Advisor gives high-level insights on number of purchase items that have lead-time variances and orders that are affected in your plan. From this UI, you can dive into analytics to understand to what extent the variances have affected your supplies. Here's how you view insights from Planning Advisor:

1. Open a plan and click the **Planning Advisor** link on the banner. Below is a screenshot of a plan that shows Planning Advisor on its banner. On clicking the link, the Planning Advisor UI shows up.



2. On the Planning Advisor UI, select Recommendation Type as **Lead Time Insights**.
3. For the **Show Updates Since** date field, select a date that's earlier than the latest calculation date.

4. **Latest Calculation Date**: The latest calculation date is the date when the lead-time insights were last computed. No new insights since that date will be available.
5. Click **Search**. You get to see these lead-time anomalies in the plan, during the date range you selected.
    - **Purchase Lead-Time Variances**: This links takes you to the treemap view of the lead-time insights.
    - **Number of buy items in a plan that have variance**: This link takes you to the Suppliers view on the lead-time analytics page. It shows a tabular summary of the lead time variances with statistics summarized at an item level.
    - **Number of buy orders in this plan that are affected by the variance**: This link takes you to the Supplies and Demand view in the plan to evaluate the impact of the lead-time variances.
6. **Variance Filters**: This info field shows a message based on the selection of the Include Variance or Exclude variance filters on the charts of lead-time insights. If filters are applied on the insights, Planning Advisor shows alerts based on variance range you selected.

    Use the Clear Filters action to remove the variance filters.

Gain Insights on Lead-Time Variances

The Lead-Time Insights analytics summary that you have opened from Planning Advisor, shows three tabs: Overview, Suppliers, and Order Details.

Here's a screenshot of the Overview tab of the insights page that shows metrics such as Items with Variance, Supplier with Variance, Orders with Variance, and a tree-map view of variances by supplier and category with the size of the node governed by count of items and the highest average variance percentage displayed in a color range from low to high.

These three tabs show three different views related to lead-time variances:

- **Overview**: You land on this view when you click the Purchase Lead-time variances link from Planning Advisor. Here, you see an analytical summary that represents the lead-time variance in a range of low to high-impact nodes on a tree-map view with supplier variances organized by supplier and category with the size of the node governed by count of items and the highest average variance percentage displayed in a color range from low to high.

- **Suppliers**: You see this table view when you click the **Purchase items have variance** link from Planning Advisor. The table shows items with variances and statistics on the lead-time performance. You can see details such as minimum and maximum range, variance days, and variance percentage. You can evaluate the historical lead times and wherever needed and adjust the supplier lead time here. See the *Adjust Supplier Lead-Time Variances and Simulate Plan* topic to learn more about adjusting lead times and copying the adjusted values to simulation sets.
- **Orders Details**: You see this table view when you click the **Affects orders in this plan** link from Planning Advisor. The table helps you review the purchase shipment receipt history received at an item level and provides details such as order number, line number, order date, shipping date, receipt date, and statistics such as supplier lead-time, historical lead-time, and the variance in days and percentage for each order receipt.

Learn more about each of these insights:

- *Purchase Lead-Time Variances Summary View*
- *Supplier Lead-Time Variance View*
- *Order Details View*

Adjust Supplier Lead-Time Variances and Simulate Plan

The supplier lead-time variance view shows a summary of item-supplier level delivery performance indicating planned vs. historical lead-time, minimum and maximum range of variance, variance percentage, and variance days. You can adjust lead time and take it to your planning through simulation sets.

Here's how you do all that:

1. On the Supply Variances view, double-click on the **Adjusted Lead Time** field and enter your adjusted value.
2. Click **Save to Simulation Set**.
3. On the dialog box that appears, select a simulation set to which you want to save the adjusted value.
4. Click **Save**.

   Verify the simulation with lead-time adjustments. When you're good to go, copy the adjustments to your plan and run it based on the adjusted lead-time.

Export Data to a CSV File

You can export the data from lead-time insights into a CSV file. The name of the CSV file is a combination of the UI page name (Suppliers or Order Details) and the scheduled process job ID. For example, Order Details 156207.zip

> **Note:** If an exported CSV file has data spanning more than 5000 rows, then the file is available in the File Import and Export menu option under the Tools menu.

Now that you have the analytics, you can monitor the lead time trends regularly. You can review your lead-time parameters for the item and supplier-site combinations, take decisions, and act on the suggestions shown on Planning Advisor to run the simulations and assess the impact on your plans.

Downtime Predictions from IoT Production Monitoring

Downtime Alerts for Resources in Supply Plan

On the Planning Advisor UI of the Supply Planning work area, you can get alerts on possible downtime events, anomalies, and confidence levels of downtime for shop floor resources in your supply plan.

The downtime alerts are calculated using the advanced machine learning algorithms from Oracle Production Monitoring, part of the Oracle Fusion Cloud IoT Intelligent Applications, powered by the 3-way integration between Oracle Fusion Cloud Manufacturing, Production Monitoring, and Oracle Fusion Cloud Supply Chain Planning.

These downtime alerts show expected timeframe of each downtime event. To mitigate the impact on the order due-date commitments, change the resource availability and rerun the plan. One of the ways to mitigate is to have the workload offloaded to an alternate resource.

Prerequisites

Ensure that you set up resources and resource instances in Oracle Fusion Cloud Manufacturing along with the other required setups needed to run a supply plan. See the *How you Manage Resources* chapter in the Implementing Manufacturing and Supply Chain Materials Management guide, to learn more.

Also, ensure that on Production Monitoring, you set up sensor attributes and complete setups related to resources and resource instances. This is necessary to generate predictions and anomalies. See the Using Oracle Internet of Things Production Monitoring Cloud Service guide to learn about configurations for Production Monitoring.

Setups Required to See Downtime Alerts

Get some setups in place before you get to see downtime alerts for resources in supply plans.

To see downtime predictions for the resources and their instances in Supply Planning, enable sync of the manufacturing plant with Oracle Production Monitoring, part of the Oracle Fusion Cloud IoT Intelligent Applications. Also, create an application for Production Monitoring server and enable settings to show predictions and anomalies on Planning Advisor for supply plans.

- Set up an application for Production Monitoring server.
- Sync a manufacturing plant with Production Monitoring.
- Enable alerts from Production Monitoring to see the predictions and anomalies for supply plans.

Set Up an Application for Production Monitoring

Provide the Production Monitoring server details to connect and get the product monitoring events through Manage Setup Content. For example, here's how you can set up the server application:

1. In Setup and Maintenance, click tasks icon and select **Manage Setup Content**. On the Manage Setup Content page, click **Manage Integration of Additional Applications**.
2. On the Create Application Integration page, create an application and provide the following connection details:
    a. **Application Name**: Production Monitoring.

b. **Full URL**: Use the following format:`https://hostname`

   Here, `hostname` is the host name of your Production Monitoring instance. For example: `https://xyz.oraclecloud.com`
c. **Partner Name**: Production Monitoring.
d. **Security Policy**: Select a security policy.
e. **User Name**: Specify the user name for connecting to your Production Monitoring.
f. **Password**: Specify the password for connecting to your Production Monitoring.

> **Note:** If you change the password for connecting to your Production Monitoring instance in future, then you must update the password in Oracle Fusion Cloud Supply Chain Planning.

3. Click **Save and Close** to save the application integration entry.

Enable Syncing a Manufacturing Plant with Production Monitoring

Enable your manufacturing plant for real time synchronization with Production Monitoring. If this is enabled for the first time, a factory is automatically created in Production Monitoring.

The parameter, Oracle SCM Organizations Mapping under Manufacturing Cloud Service integration settings in Oracle IoT, influences how manufacturing plants are organized within Production Monitoring. If you select One to One option, IoT server creates an independent IoT organization for each manufacturing plant. If you select Many to One option, entities from all manufacturing plants go into one IoT Organization. For more details, see the Integrate Oracle Fusion Cloud Manufacturing with Production Monitoring topic in the Using Oracle Internet of Things Production Monitoring Cloud Service guide.

Here's how the parameter is enabled:

1. In the Setup and Maintenance work area, go here:
   - Offering: Manufacturing and Supply Chain Materials Management
   - Functional Area: Manufacturing Master Data
   - Task: Manage Plant Parameters

> **Note:** This task is enabled for organizations in which resource instances are set up.

2. On the Manage Plant Parameters page, select the **Enable synchronization to IoT Production Monitoring** check box.
3. Click **Save and Close**.

Show Alerts from Production Monitoring on Planning Advisor

Select the advanced supply plan options to include alerts and show anomalies from Production Monitoring. Here's how you do:

1. From home page, navigate to **Supply Chain Planning** > **Supply Planning**.
2. Open a plan.
3. On a plan, click **Actions** and select **Edit Plan Options**.
4. On the Edit Plan Options UI, go to the Supply tab.
5. Click **Select Advanced Options**.
6. On the Supply Advanced Options UI, in the General tab, select these options:
   a. **Include alerts from IoT Production Monitoring**: This enables a plan to get predictions from Production Monitoring. These alerts provide information of current and predicted machine health to improve factory uptime.

On selecting this, Planning Advisor appears on the banner of a plan. The predictions detected and synced from Production Monitoring are shown on Planning Advisor.

b. **Show anomalies**: This check box is enabled only when Include alerts from Production Monitoring is selected. Selecting this check box gets anomalies from Production Monitoring.

7. Click **Done**.

In addition to this, schedule the **Retrieve Production Monitoring Alerts** scheduled process to show the alerts in real time.

See Downtime Alerts on Planning Advisor

After you enable getting alerts and anomalies reports from Production Monitoring, run the supply plan with the organizations including the resources you have setup in Production Monitoring.

You can see the number of events generated by Production Monitoring for those resources in the red notification box at the plan header. Click Planning Advisor on the plan banner to see the details of events generated. Here's how you see the alerts on Planning Advisor:

1. Open a plan and click **Planning Advisor**.
2. Select Production Monitoring for Recommendation Type.
3. To see the open downtime events pending for resolution, select Open for **Status**.
4. Select Resource or Resource Instance for **Search** to search by a resource or its instance.
5. Set a **Confidence Level**. Confidence level shows confidence of prediction. You can search the recommendations based on certain confidence levels. For example, confidence level greater than 60%. Confidence level can have the following operators:
    - Equals
    - Greater than
    - Less than
    - Less than or equal to
    - Greater than or equal to
6. Click **Search**.

    The engine searches for recommendations within a plan that have resources with a possible downtime. The headers of recommendation are a combination of resource name: work center: organization.
7. Expand a recommendation to see predictions and anomalies reported for a resource.

Prediction and Anomalies

Predictions and anomalies are generated for a resource instance. Predictions are generated with a confidence level and a prediction time window. Confidence level shows the chances of a prediction to come true. A high confidence percentage shows more chances of machine failure.

Predictions

This section shows the resource instance to which the prediction belongs, the date of generating the report, and confidence level. Confidence level depicts the possibility of a machine failure, in a prediction time window.

Predictions section also shows a **Suggestion** that has a link to the Resource Availability page. You can change the availability of the resource alerted in this prediction.

Anomalies

While predictions predict the future state of a machine, such as chances of a machine failure in next time bucket, anomalies provide alerts on current machine health that need attention to avoid production delays.

This section shows resource instance, date of generating the report, and the anomaly detected in the machine that may lead to the downtime prediction.

Responding to an Event

After analyzing the recommendations, click the **Modify Resource Availability** link to update the resource availability. Do the necessary changes and simulate the supply plan. This helps you analyze the impact and minimize the demand lateness caused by potential resource failures.

After implementing the suggestion, you can close the prediction to indicate that you have taken a necessary action. Click **Close** to change the status of the recommendation to Closed. If you want to resolve the alert by taking an action different from the one suggested, you can choose to ignore the recommendation by clicking **Ignore** so that the recommendation won't reappear on open recommendations. You can always reopen the status for a resource to get future predictions.

> **Note:** The statuses don't changes between the supply plan runs or immediately after the Retrieve Production Monitoring Alerts scheduled process is started.

You can search for recommendations that are in Open, Closed, or Ignored statuses and take actions as required.

You can also filter the recommendations based on different confidence levels. For example, if you are interested in looking for predictions having confidence level more than 70%. You can also search the recommendations for a specific resource or a resource instance.

> **Note:** Apart from getting Production Monitoring recommendations through supply plan run, you can also schedule the **Retrieve Production Monitoring Alerts** scheduled process to get the production monitoring events in the real time.

9 Analyze Supply Plans

Build Plan View

Build Plan View

Use the Build Plan view to analyze the end-to-end supply chain relationships that span end items, components, suppliers, and resources. You can identify inventory and capacity shortages, find the root causes, and modify your plan to resolve issues.

For example, you can select specific orders, firm dates and quantities, or select alternate resources and substitute components for those orders.

From the Build Plan table, you can:

- Analyze your plan by looking at all or a subset of subassemblies, resources, and components that relate to an end item.
- Direct your focus to only those components, resources, and measures that are important to your business.
- Track the supplies of the end item and its components that are pegged to a selected demand of the end item.
- Track the resource requirements that are pegged to a selected demand of the end item.
- View individual orders that make up an aggregate quantity.
- Edit measures such as Planned Orders or Manual Demands.
- Perform a bottom-up analysis by looking at end items that use a certain component.
- Perform a resource-centric analysis by looking at all or a subset of items produced on a resource.

The Build Plan view provides a time-phased summary of supply and demand for an end item as well as a selected list of components that are used to make the end item. It also provides a time-phased summary of resource availability and resource usage of a selected list of resources used to make the end item or one of its subassemblies or components.

You can easily spot exception conditions, such as inventory shortages or resource capacity overloads. You can then trace the pegging relationships between supplies and demands across supply chain levels to determine the root causes for these exceptions. And then you can take corrective action by adding capacity, increasing supply quantities, or expediting supplies.

When you're viewing your Build Plan, you can click buttons or drop-down lists for additional functionality.

- **Configure Build Plan**: Opens the Configure Build Plan dialog box where you can configure the list of items, resources, and suppliers to include in your Build Plan.
- **Criteria**: Select a criteria, manage existing criteria, or create a new criteria.
- **Save**: Save the current contents of the Build Plan into a named criteria.
- **Layout**: Select a layout or manage your existing layouts.
- **Highlight Exceptions**: Select an exception to highlight in your Build Plan. You set up the exception by doing the following:

    a. In your Build Plan, select **View**, **Format Measures**.

b. In the Format Measures: Build Plan dialog box, select a measure and then select the **Use Override Conditional Formatting** check box.
c. In the Conditional Formatting section, set up your condition.
d. Next, in the **Apply** column, select whether you want the conditional formatting to be highlighted in your Build Plan table all the time or only when you select it from the Highlight Exceptions drop-down list: **Always** or **When selected**.
e. If you selected **When Selected** in the **Apply** column, enter a name for your highlight exception, which appears in the Highlight Exceptions drop-down list.

- **Show Details**: Click to show the order details and make some edits. You can firm orders and also specify the work definition, source organization, shipping method, supplier, and supplier site at the order level in the Details section of the Build Plan.
- **Highlight Related Cells**: Select an option to highlight cells in the Build Plan table relative to the selected cell.

Highlight Related Cells Action	Measures this Action Applies To	What this Action Does
Dependent Demands	Any cell corresponding to a supply measure	The Total Demand cells that contain the dependent demands related to the selected supply cell are highlighted.
Pegged End Demands	Any cell corresponding to a supply measure	The Net Forecast, Manual Demand, Sales Orders, or Total Demand cells that contain the end demands pegged to the selected supplies are highlighted.
Pegged Supplies	Any cell corresponding to a demand measure	The supply measure cells corresponding to the supplies that end peg to the selected demand are highlighted.
Pegged Upstream Supplies	Any cell corresponding to a supply measure	The supply measure cells corresponding to the upstream supplies that peg to the selected supply are highlighted. For example, if the selected supply is a subassembly supply, the component supplies are highlighted.
Pegged Downstream Supplies	Any cell corresponding to a supply measure	The supply measure cells corresponding to the downstream supplies that peg to the selected supply are highlighted. For example if the selected supply is a component supply, the pegged subassembly and finished good supplies are highlighted.
Substitute Components	Total Demand measure	The Projected Available Balance measure and the Total Supply measure of the substitute components in the time buckets

Highlight Related Cells Action	Measures this Action Applies To	What this Action Does
		up to and including the time bucket of the selected cell are highlighted.
Alternate Resources	Resource Requirement measure	The Resource Availability measure for those alternate resources in time buckets up to and including the time bucket of the selected cell are highlighted.
Related Output Supplies	Any cell corresponding to a supply measure	The other supplies that are related to the selected supply through a co-product or by-product relationship are highlighted.
Remove Highlighting	N/A	This action removes any highlighting of related cells currently displayed in the Build Plan.

Note: If you defined a value for the Number of Days to Calculate Pegging in the plan options, then the planning process highlights related cells for end demands within the pegging window and their associated pegged supplies for the following pegging options:

- Pegged End Demands
- Pegged Supplies
- Pegged Upstream Supplies
- Pegged Downstream Supplies

When you open Build Plan for the first time, you might see an empty plan layout. Configure the layout to show only the components, resources, and measures that you're interested in. Create a criteria to select an item, category, or resource, and create a layout to select your measures. You can also save your work in the form of saved criteria and layouts to use for a future planning cycle.

From the Supply Planning work area, you can navigate to the Build Plan for your plan from the following tables:

- Items
- Item Structures
- Supplies and Demands
- Material Plan
- Resources
- Resource Plan
- Resource Requirements

Related Topics

- Create Build Plan Criteria
- Create a Build Plan Layout
- Add or Replace Items in Your Build Plan

Add or Replace Items in Your Build Plan

Use the Configure Build Plan dialog box to configure the list of items, resources, and suppliers that you want to include in your Build Plan.

Select components and resources that relate to an end item, items that are produced on a specific resource, or the set of end items that relate to a specific component.

Follow these steps to add or replace items in your Build Plan.

1. Open your plan:
    a. In the Navigator, click the Supply Planning work area.
    b. Click the Tasks panel tab.
    c. In the Tasks panel drawer, click the **Manage Plans** link.
    d. Search for and open your plan.
2. Open the Build Plan table:
    a. From your plan, click the **Open** button.
    b. In the Open Table, Graph, or Tile Set dialog box, search for the **Build Plan** table.
    c. Select **Build Plan** and then click **OK**.
3. In the Build Plan table, click the **Levels to Display** drop-down list and select a level. This action determines the list of available items, resources, and supplier items that you can pick from.

Levels to Display Choice	Results Shown
All levels down	For the selected item or category, all the lower-level items and resources are shown. Components that have buy from sourcing rules are also shown in the Items section.
Next level down	The items, item-suppliers, and resources one level down from the selected item are shown.
All levels up	All the items whose multilevel supply chain bill includes the selected item are shown. Item-suppliers or resources are never displayed with this choice.
Next level up	All the items whose single level supply chain bill includes the selected item are shown. Item-suppliers or resources are never displayed with this choice.
Lowest level	For the selected item, all the lower level components and their suppliers are shown. Resources are never displayed with this choice.

Levels to Display Choice	Results Shown
End items	The end items related to the selected item or resource are shown. Item-suppliers or resources are never displayed with this choice. If you defined a value for the Number of Days to Calculate Pegging in the plan options, then the planning process only considers end items that have demands within the specified time window to calculate pegging.
Produced items	The items whose work definitions include the selected resource are shown. Item-suppliers or resources are never displayed with this choice.
Related output items	For the selected item/organization or category, all items that appear as output items in the work definitions are shown.

4. After you select a level to display, you can do the following in the Items, Resources, and Suppliers sections:
    - Filter items and suppliers by catalog.
    - Filter items and suppliers by category.
    - Perform a query by example on columns.
    - Select all or a subset of rows to include in your Build Plan.
5. After you select the set of items, resources, and suppliers, do one of the following:
    - Click the **Add** button to add the selected items and resources to your Build Plan.
    - Click the **Replace** button to replace the current contents of your Build Plan with the selected items and resources.

Related Topics
- Build Plan View

Create a Build Plan Layout

When you open the Build Plan table for the first time, you see a predefined layout. You can create your own layout with preferred measures for the items, resources, and suppliers.

Follow these steps to create a layout for your Build Plan.

1. Open your plan:
    a. In a Supply Planning or a Demand and Supply Planning work area, click the Tasks panel tab.
    b. In the Tasks panel drawer, click the **Manage Plans** link.
    c. Search for and open your plan.

2. Open the Build Plan table:
    a. From your plan, click the **Open** button.
    b. In the Open Table, Graph, or Tile Set dialog box, search for the **Build Plan** table.
    c. Select **Build Plan** and then click **OK**.
3. From the Build Plan table, click the **Layout** drop-down list and then click **Manage**.
4. In the Manage Layouts dialog box, click the **Add** icon and enter values for the **Name**, **Description**, **Access**, and **Time** fields.
   The Time field contains options for **Day**, **Week**, **Period**, **Month**, and **Supply planning buckets**. Select **Supply planning buckets** to display the time dimension in your Build Plan that's in alignment with the planning time buckets specified in the plan options. Configure the planning time buckets on the Plan Options page, Scope tab, in the Plan Parameters section.
5. Optionally, select the **Default** check box to mark this layout as the default layout for your Build Plan.
6. Select your preferred measures in the **Available** column and move them to the **Selected** column for your item, resource, and supplier measures.
7. When you are done, click **Save and Close**.

Related Topics

- Build Plan View

Create Build Plan Criteria

When you open the Build Plan table for the first time, you might see an empty plan layout. Use the Criteria drop-down list in the Build Plan toolbar to create criteria or manage existing criteria.

Create a criteria to select an item, category, or resource. You can set this criteria as the default criteria for all other plans.

Follow these steps to create a Build Plan criteria.

1. Open your plan:
    a. In the Navigator, click the Supply Planning work area.
    b. Click the Tasks panel tab.
    c. In the Tasks panel drawer, click the **Manage Plans** link.
    d. Search for and open your plan.
2. Open the Build Plan table:
    a. From your plan, click the **Open** button.
    b. In the Open Table, Graph, or Tile Set dialog box, search for the **Build Plan** table.
    c. Select **Build Plan** and then click **OK**.
3. From the Build Plan table, click the **Criteria** list and then click **Create**.
4. In the Create Criteria dialog box:
    a. Enter values for **Name** and **Description**.
    b. Select **Public** or **Private** for the type of access.
    c. Select the **Favorite** check box to use this criteria for all of your plans.
    d. Select the criteria as either **Item**, **Category**, or **Resource**.
        - If you selected **Item**, then select an item and organization from the list. Organization is optional.
        - If you selected **Category**, then select a catalog and category from the list.

- If you selected **Resource**, then select a resource from the list.

5. Click **Save and Close**.

Related Topics

- Build Plan View

Supplies and Demands View

Filter Supplies and Demands Based On Conditions

You can narrow your search in the Supplies and Demands table by selecting a condition from the search filter. Conditions are a group of supply-related attributes with a specific value. A condition can have one or more attributes.

From an open plan, open the Supplies and Demands table and click the Manage Conditions button in the Search region. When you open the Manage Conditions dialog box, you can create and manage conditions. When you create conditions, you specify attributes for your conditions and provide a value to those attributes. The value could be a specific date or you can specify the number of days relative to another date for a given attribute.

The relative comparison options are available only for date-based attributes, such as Requested Ship Date or Actual Arrival Date. The values for relative comparison options are enabled when you select one of the following operators:

- Before
- After
- On or before
- On or after

For example, consider a scenario where you make the following selections for a condition:

Condition	Values
Attribute	Suggested Start Date
Operator	On or before
Relative Date	Scheduled Ship Date
Number of Days	10

In this case, the condition would consider the Suggested Start Date as 10 days on or before the Scheduled Ship Date. If the Scheduled Ship Date is 10-January-2020, then the condition would filter all orders whose Suggested Start Date is on or before 01-January-2020.

Use Comma-Separated Values with the In Operator

When using the **In** operator, you can either enter values individually for items, organizations, or order numbers or you can enter a list of comma-separated values.

If you select the item or organization attribute and the **In** operator, then the Insert List of Comma-Separated Values tab appears, which enables you to insert a list of comma-separated values. When you click the Insert button, then planning validates the individual entries in the list. If all values are valid, then the list of items or organizations is inserted into the condition.

If you select the order number attribute and the **In** operator, then you can enter a list of comma-separated values. Planning doesn't validate the order numbers that you enter.

Supplies and Demands View Modes

The Supplies and Demands table has two modes to view supplies and demands data: pegging mode and plain table mode (also called flat file mode). Click the Show Table icon on the table toolbar to toggle between the two modes.

When you're in the pegging mode, the Supplies and Demands view includes pegging details and the child rows tied to each root node. For example, if you search for Forecast order types, the Supplies and Demands view shows order types that are pegged to the forecast.

When you're in plain table mode, the **Show Table** icon is blue and the Supplies and Demands table only displays the root node data. The table doesn't display the nested, or pegged data.

Planned Order Dates

The Supplies and Demands view displays many dates, such as Suggested Due Date and Suggested Order Date. This topic discusses the different dates used for planned orders, how the dates are calculated, and the calendars used by the planning process for the calculations.

> **Note:** Refer to the Calendars Used to Calculate Dates in the Supplies and Demands View topic for information about the different calendars and the calendar selection hierarchy used by the planning process to calculate dates.

Buy Item

This section discusses the different dates used for buy items, how the dates are calculated, and the calendars used by the planning process to calculate dates.

Date	Calculation	Calendar Used
Suggested Due Date	Demand Date	Organization Manufacturing Calendar (OMC)
Suggested Dock Date	Due Date minus Postprocessing Lead Time	Organization Receiving Calendar (ORC)

Date	Calculation	Calendar Used
Suggested Shipment Date	Dock Date minus Transit Lead Time	Supplier Shipping Calendar (SSC)
Suggested Start Date	Shipment Date minus Processing Lead Time	Supplier Capacity Calendar (SCC) from the Approved Suppliers List (ASL)
Suggested Order Date	Start Date minus Preprocessing Lead Time	Manufacturing Organization Calendar (not from the SSC)

If there is no sourcing rule, then the following applies:

- Suggested Shipment Date is the Dock Date.
- Suggested Start Date is the Shipment Date minus the item's Processing Lead Time.

Make Item

This section discusses the different dates used for make items, how the dates are calculated, and the calendars used by the planning process to calculate dates.

Date	Calculation	Calendar Used
Suggested Due Date	Demand Date	Organization Manufacturing Calendar (OMC)
Suggested Dock Date	Due Date minus Postprocessing Lead Time	Organization Manufacturing Calendar (OMC)
Suggested Start Date	Dock Date minus Processing Lead Time	Organization Manufacturing Calendar (OMC)
Suggested Order Date	Start Date minus Preprocessing Lead Time	Organization Manufacturing Calendar (OMC)

Processing Lead Time equals Item attribute Fixed Lead Time plus (quantity multiplied by item attribute Variable Lead Times).

Transfer Item

This section discusses the different dates used for transfer items, how the dates are calculated, and the calendars used by the planning process to calculate dates.

Date	Calculation	Calendar Used
Suggested Due Date	Demand Date	Valid date on the Destination Organization Manufacturing Calendar
Suggested Dock Date	Suggested Due Date minus Postprocessing Lead Time	Valid date on the Destination Organization Receiving Calendar

Date	Calculation	Calendar Used
Suggested Shipment Date	Suggested Dock Date minus Transit Lead Time	Valid date on the Source Organization Shipping Calendar
Suggested Start Date	Suggested Shipment Date	Valid date on the Source Organization Manufacturing Calendar
Suggested Order Date	Start Date minus Preprocessing Lead Time at the destination organization	Valid date on the Destination Organization Manufacturing Calendar

When calculating Suggested Start Date, the planning process uses the Suggested Shipment Date, which is calculated using the Source Organization Shipping Calendar. The planning process checks to see if that date is a valid working day on the Source Organization Manufacturing Calendar. If the date is a working day per the Source Organization Manufacturing Calendar, then the Suggested Start Date is equal to the Suggested Shipment Date. If it's not a working day per the Source Organization Manufacturing Calendar, then the Suggested Start Date is moved ahead to the first working day in the Source Organization Manufacturing Calendar.

Additional Information About Planned Order Dates

When you mark an order for release, the Implement Date is defaulted from the Firm Date or Suggested Due Date. If you need to account for postprocessing lead time, then you must manually update the Implement Dock Date.

If a make or buy planned order is pegged to multiple demands, the Need by Date on the planned order is the Earliest Pegged Demand Date.

Related Topics

- Calendars Used to Calculate Dates in the Supplies and Demands View

Calendars Used to Calculate Dates

In the Supplies and Demands view, there are different calendars used to calculate the various dates. This topic discusses the different calendars and the calendar selection hierarchy used by the planning process to calculate dates.

For each calendar hierarchy listed in this topic, the planning process searches for an associated calendar. When an associated calendar is found, the planning process stops and the other levels in the hierarchy aren't checked.

For example, to calculate the start date of purchase supplies, the planning process first looks for the Supplier Site Capacity Calendar in the Approved Supplier List (ASL). If the planning process doesn't find a Supplier Site Capacity Calendar, then the process defaults to a 24 hour, 7 days a week calendar to calculate the start date of purchase supplies.

The following lists the calendars and the calendar hierarchy the planning process uses to calculate dates. In cases where the calendar association appears in the Review Planning Calendar Associations UI, the applicable calendar type and assignment type is listed.

- **Supplier Capacity Calendar (SCC)**: Calendar used to calculate the start date of purchase supplies.

Hierarchy of Calendar Selection	Calendar Type	Assignment Type
1. SSC = Supplier Site Capacity Calendar in the ASL	N/A	N/A
2. 24 Hours, 7 Days a Week	N/A	N/A

  View the Supplier Capacity Calendar in the Suppliers UI. When copying supplier item records into the plan and the Supplier Capacity Calendar isn't found, the Supplier Site Calendar from the Supply Network Model is copied into the Supplier Capacity Calendar.

- **Supplier Shipping Calendar (SSC)** : Calendar used to calculate the shipment date of purchase supplies.

Hierarchy of Calendar Selection	Calendar Type	Assignment Type
1. SSC = Carrier/Supplier/Supplier Site Calendar	Carrier	10 - Carrier and Supplier Site
2. Supplier/Supplier Site Shipping Calendar	Shipping	5 - Supplier Site
3. Carrier/Supplier Calendar	Carrier	7 - Carrier and Supplier
4. Supplier Shipping Calendar	Shipping	1 - Supplier
5. 24 Hours, 7 Days a Week	N/A	N/A

- **Organization Receiving Calendar (ORC)**: Calendar used to calculate the dock date at destination and receiving organization.

Hierarchy of Calendar Selection	Calendar Type	Assignment Type
1. ORC = Carrier/Organization Calendar	Carrier	9 - Carrier and Organization
2. Organization Receiving Calendar	Receiving	3 - Organization

Hierarchy of Calendar Selection	Calendar Type	Assignment Type
3. Organization Manufacturing Calendar (OMC)	N/A	N/A
5. 24 Hours, 7 Days a Week	N/A	N/A

- **Organization Manufacturing Calendar (OMC)**: Calendar used to calculate the order date and due date of purchase supplies. This calendar is used to calculate all dates of make supplies. You can view the Organization Manufacturing Calendar in the Supply Network Model UI.

Hierarchy of Calendar Selection	Calendar Type	Assignment Type
1. OMC = Organization Manufacturing Calendar	N/A	N/A
2. 24 Hours, 7 Days a Week	N/A	N/A

- **Organization Shipping Calendar (OSC)**: Calendar used to calculate the ship date at the source and shipping organization for transfer orders.

Hierarchy of Calendar Selection	Calendar Type	Assignment Type
1. OSC = Carrier/Organization Calendar	Carrier	9 - Carrier and Organization
2. Organization Shipping Calendar	Shipping	3 - Organization
3. Organization Manufacturing Calendar (OMC)	N/A	N/A
5. 24 Hours, 7 Days a Week	N/A	N/A

- **Customer Receiving Calendar (CRC)**: Calendar used to calculate the arrival date on end demands (sales orders).

Hierarchy of Calendar Selection	Calendar Type	Assignment Type
1. CRC = Carrier/Customer/Customer Site Calendar	Carrier	11 - Carrier and Customer Site

Hierarchy of Calendar Selection	Calendar Type	Assignment Type
2. Customer/Customer Site Receiving Calendar	Receiving	6 - Customer Site
3. Carrier/Customer Calendar	Carrier	8 - Carrier and Customer
4. Customer Receiving Calendar	Receiving	2 - Customer
5. 24 Hours, 7 Days a Week	N/A	N/A

- **Valid Transit Calendar (VTC)**: Calendar used to calculate transit days on demands and supplies.

Hierarchy of Calendar Selection	Calendar Type	Assignment Type
1. VTC = Carrier Transit Calendar	Carrier	4 - Carrier
2. 24 Hours, 7 Days a Week	N/A	N/A

Related Topics

- Planned Order Dates in the Supplies and Demands View

Use Calendar Details View to Analyze Supply Dates

When you analyze a plan, it's important for you to have insight into how supply dates were generated.

The View Calendar Details action displays a Gantt chart that shows the schedule details of a specific supply, such as lead times and calendar constraints. The View Calendar Details action is available from the Supplies and Demands page.

You can use the View Calendar Details action to readily gain insight into information such as:

- The calendar used in calculating a specific supply date, as well as the associated calendar's nonworking days
- The lead times used in calculating a supply date
- Other related attributes that factor into calculating supply dates, such as the planning time fence date of an item or the time zones of the related entities

The View Calendar Details action can help you troubleshoot supply dates when there are questions.

To use the View Calendar Details action:

1. From the Supplies and Demands page, select a single supply that is not an on-hand supply.
2. Select **View Calendar Details** from the Actions menu.

The Calendar Details window opens and displays a Gantt chart with a timeline that specifies the details of the calendars used.

Note: The View Calendar Details action is not available in Replenishment Planning.

Calendar Details Overview

The Calendar Details window displays the attributes that factored into the calculation of supply dates. Based on order type, these attributes might vary.

- For example, the Supplier and Supplier Site fields are applicable only for purchase orders, purchase requisitions, and planned buy orders. Therefore these fields aren't displayed when viewing calendar details for a transfer order or work order.
- Other fields, such as Supply Planning Calendar and Plan Start Date, are always displayed, regardless of order type.
- Earliest Start Date and Latest Start Date are specific to constrained planning and, therefore, these fields appear only when a supply in a constrained plan is displayed.
- The rows that are displayed in the Gantt chart vary based on order type. For example, the Suggested Ship Date and the Transit Lead Time rows aren't displayed when viewing a work order or a planned make order because these rows aren’t applicable for make orders.

The View menu can be used to hide or show columns in the Gantt chart. For example, you might choose to hide the Time Zone column if all supply dates are in the same time zone.

Within the Gantt chart, a vertical red line represents the plan start date. For interpreting other icons, refer to the legend below the Gantt chart.

Hover over any milestone or bar within the Gantt chart to display the applicable start and end dates. When milestone dates overlap, the suggested date is always displayed on top in the Gantt chart. If you hover over the milestone, you can see if there are any overlapping dates. Dates that have a potential to overlap are also displayed in the header fields of the Calendar Details window. For example, the Need-by Date might be hidden by the suggested due date, so the Need-by Date is displayed in the header section of the window.

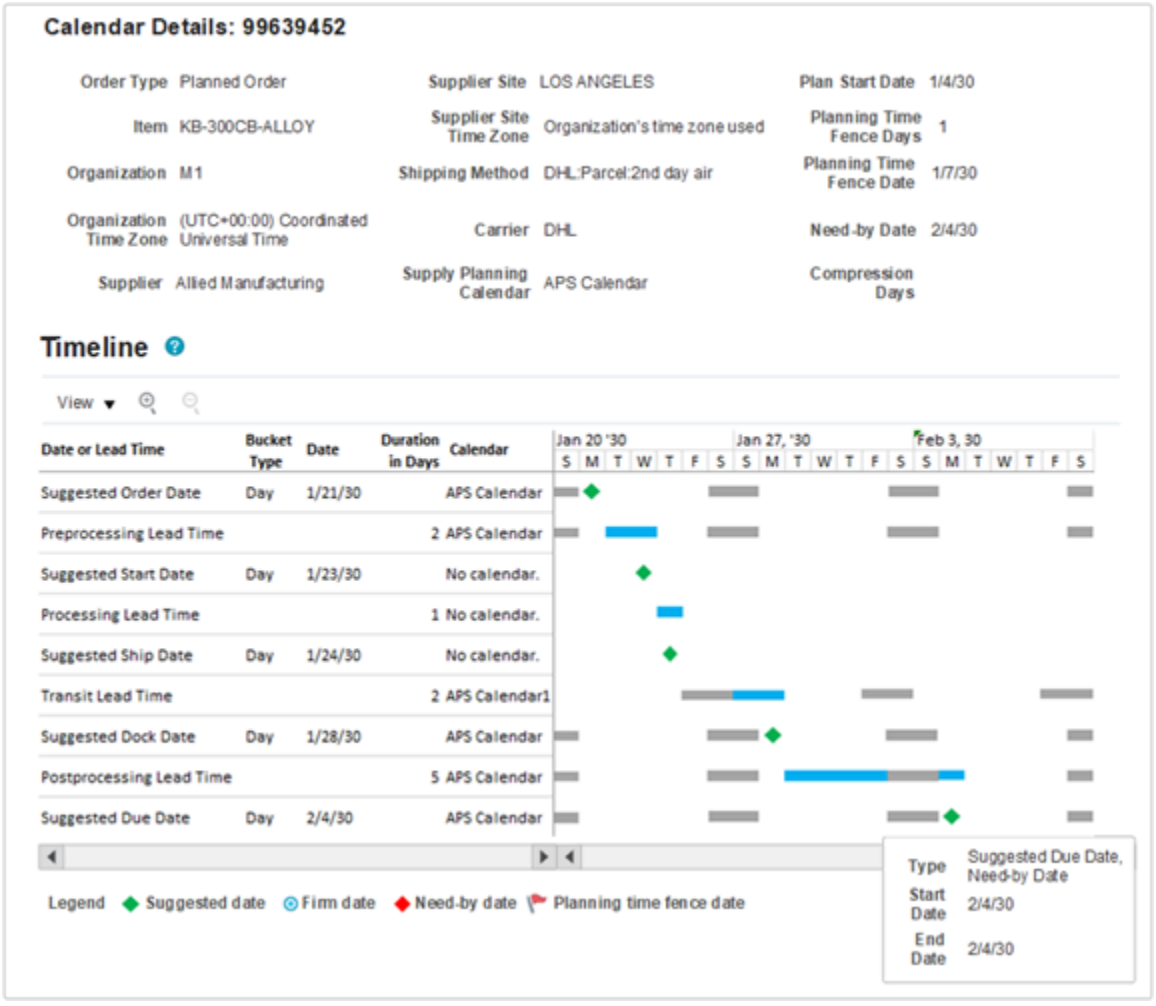
When viewing the Calendar Details window, you should be aware of how lead times are calculated for this view. When displaying lead time duration, the Calendar Details window uses the applicable suggested date and time that is output by the planning process as the end date and then calculates the start date. All supply dates, after they are saved to the database, have an end-of-day time stamp of 23:59:00. As a result, the start date as calculated for this window might appear to be off by a day.

For example, let’s say during plan run, the planning process calculated a Suggested Dock Date of September 14, 12 p.m. Assuming transit lead time is 1.75 days, the planning process would calculate a Suggested Ship Date of September 12, 6 p.m. When the supply dates are written to the database, the actual times are replaced with an end-of-day time stamp of 23:59:00. The Calendar Details window uses the Suggested Dock Date of September 14, 11:59 p.m. as the end date of the Transit Lead Time Gantt bar. It then subtracts 1.75 days of transit lead time to get the start date for the Transit Lead Time Gantt bar, which would be September 13, 5:59 a.m. Because the Calendar Details window is using the end-of-day time stamp, there’s a gap between the Suggested Ship Date, which is September 12, and the calculated start of the Transit Lead Time, which is September 13. This is just something to be aware of when viewing the Calendar Details window.

View Calendar Details Example: Planned Buy Order

This example describes the calendar details of a planned buy order in an unconstrained plan.

You can tell it's a buy order because the Supplier, Supplier Site, and Supplier Site Time Zone fields are displayed in the header section. This is an unconstrained plan. If this were a constrained plan, there would be two additional fields displayed in the header section: Earliest Start Date and Latest Start Date.



For planned buy orders, all lead times and suggested dates are applicable, so all available rows are shown in the Gantt chart.

Planning uses backward scheduling to calculate supply dates, so we'll analyze the dates starting from the Suggested Due Date (the last row).

Date or Lead Time Row	Value	Explanation
Suggested Due Date	February 4	In this example, the Suggested Due Date is the same as the Need-by Date. Because unconstrained planning schedules supplies based on Need-by Date, it's common that both dates are the same. When milestone dates overlap, the suggested date is always displayed on top in the Gantt chart. If you hover over the Suggested Due Date milestone, you can see that both the Need-by Date and Suggested Due Date are on February 4. The Need-by Date is also displayed in the header section for quick reference without having to hover. If needed, planning will move the Suggested Due Date out so that it's on or after the Planning Time Fence Date. In this case, the Planning Time Fence Date is January 7, so there's no need to move the Suggested Due Date out. The calendar used in calculating the Suggested Due Date is the Organization Manufacturing Calendar. In this example, the calendar used is APS Calendar, which has Saturdays and Sundays as nonworking days, represented by gray bars in the Gantt chart. Planning always ensures that the Suggested Due Date is on a working day, however, a planner may firm the order on a nonworking day. If the order is firmed, the Gantt chart will display the Suggested Due Date using the firm date icon (a blue circle), in place of the regular green diamond icon. The planning bucket type for this date and all other dates is day. This lets you know that the Suggested Due Date didn't get moved to the last working day of the planning bucket, which is what happens when planning in aggregate planning buckets.
Postprocessing Lead Time	5 days	The Postprocessing Lead Time's duration in days value comes from the Items page and includes any simulation set overrides. In this example, there are 5 days of Postprocessing Lead Time. The same calendar used for Suggested Due Date (the Organization Manufacturing Calendar) is also used in calculating Postprocessing Lead Time duration. The end date of the Postprocessing Lead Time is set to the Suggested Due Date. The start date of the Postprocessing Lead Time is calculated by subtracting the Postprocessing Lead Time from the end date of the Postprocessing Lead Time, only counting the working days. In this example, the Postprocessing Lead Time starts at the beginning of the day on Tuesday, January 29, and goes through the end of the day on Monday, February 4 (skipping Saturday and Sunday, which are nonworking days on the APS Calendar).
Suggested Dock Date	January 28	The Suggested Dock Date is based on the Organization Receiving Calendar. Depending on your setup, the Organization Receiving Calendar might be different from the Organization Manufacturing Calendar, which is used in calculating the Suggested Due Date and Postprocessing Lead Time. The Organization Receiving Calendar can be specific to the receiving organization, or to a carrier and receiving organization combination. In this example, the same calendar (APS Calendar) that's used in calculating the Suggested Due Date and Postprocessing Lead Time is also used for calculating the Suggested Dock Date. In cases where the Organization Receiving Calendar is different from the Organization Manufacturing Calendar, the Suggested Dock Date might need to be moved earlier to ensure that it ends up on a working day on the Organization Receiving Calendar. In this example, APS Calendar is used as both the Organization Manufacturing Calendar and the Organization Receiving Calendar, so there's no need to make any adjustment because of differences in working days between the two calendars.

Date or Lead Time Row	Value	Explanation
		The Suggested Dock Date of January 28 matches what we expect to see, given the Postprocessing Lead Time.
Transit Lead Time	2 days	The Transit Lead Time was derived based on the Shipping Method shown in the header section, which comes from the Interlocation Shipping Methods tab of the Supply Network Model UI. The calendar used in calculating Transit Lead Time is APS Calendar1, which has different working days from the calendar used for the Suggested Dock Date. Only Sundays through Thursdays are working days for APS Calendar1. The end date of the Transit Lead Time is set to the Suggested Dock Date. If the Suggested Dock Date is not a valid working day on the transit calendar, then the Transit Lead Time end date will be moved earlier, to a working day on the transit calendar. In this example, the Suggested Dock Date, January 28, is a valid working day on the transit calendar, so there's no need to adjust the end date of the Transit Lead Time. The start date of the Transit Lead Time is calculated by subtracting the Transit Lead Time from the end date of the Transit Lead Time, only counting the working days on the transit calendar. In this example, Transit Lead Time starts at the beginning of the day on Sunday, January 27, and goes through the end of the day on Monday, January 28.
Suggested Ship Date	January 24	The Supplier Shipping Calendar is used to calculate the Suggested Ship Date of a buy order. In this example, no Supplier Shipping Calendar was found, so all days are considered working days. Because all days are working days, there was no need during plan run to adjust the Suggested Ship Date so that it ended up on a working day. You might be asking why the suggested date is Thursday, January 24. Given that the start of the Transit Lead Time shown in the window was the beginning of the day on Sunday, January 27, shouldn't the ship date have been Saturday, January 26? The probable cause is that when Transit Lead Time was calculated during plan run, the end date of the Transit Lead Time wasn't at the very end of the day, but sometime earlier that day. This would cause the Transit Lead Time start date to be sometime during the day on Thursday, January 24 (given that Fridays and Saturdays are nonworking days on the transit calendar). So the Suggested Ship Date makes sense, even though there is a gap, because of the difference between the time stamps used during plan run and the time stamp used in the Calendar Details window to calculate lead times.
Processing Lead Time	1 day	The Processing Lead Time's duration in days value comes from the Approved Supplier List (ASL), which is displayed using the Suppliers UI. If no ASL exists for the Supplier/Supplier Site/Item combination, then the Processing Lead Time's duration in days value comes from the Items page and includes any simulation set overrides. The Supplier Capacity Calendar is used in calculating Processing Lead Time. In this example, there is no Supplier Capacity Calendar, so all days are considered to be working days for the supplier. The Processing Lead Time end date is set to the Suggested Ship Date. If the Processing Lead Time end date is a nonworking day on the Supplier Capacity Calendar, it will be moved earlier to a working day. In this example, the Suggested Ship Date, January 24, is a valid working day, so there's no need to adjust the Processing Lead Time end date. The start date of the Processing Lead Time is calculated by subtracting the Processing Lead Time from the end date of the Processing Lead Time, only counting the working days. In this example, the Processing Lead Time starts at the beginning of the day on January 24 and goes through to the end of that same day.

Date or Lead Time Row	Value	Explanation
Suggested Start Date	January 23	The Supplier Capacity Calendar is used to calculate the Suggested Start Date. In this example, no Supplier Capacity Calendar was found, so all days are considered working days. The Suggested Start Date of January 23 matches what we expect to see, given the Processing Lead Time.
Preprocessing Lead Time	2 days	The Preprocessing Lead Time's duration in days value comes from the Items page and includes any simulation set overrides. Preprocessing Lead Time and Suggested Order Date are used to account for the time it takes the organization to raise an order. So it's the Organization Manufacturing Calendar that is used in calculating Preprocessing Lead Time and the Suggested Order Date. In this case, the calendar used is APS Calendar. The Preprocessing Lead Time end date is set to the Suggested Start Date. If the Preprocessing Lead Time end date is not a valid working day on the Organization Manufacturing Calendar, it will be moved earlier to a working day. In this example, the Suggested Start Date, January 23, is a valid working day, so there's no need to adjust the end date of the Preprocessing Lead Time. The start date of the Preprocessing Lead Time is calculated by subtracting the Preprocessing Lead Time from the end date of the Preprocessing Lead Time, only counting the working days. In this example, Preprocessing Lead Time starts at the beginning of the day on January 22 and goes through the end of the day on January 23.
Suggested Order Date	January 21	The Organization Manufacturing Calendar is used to calculate the Suggested Order Date. In this example, the calendar used is APS Calendar. The January 21 Suggested Order Date matches what we expect to see, given the Preprocessing Lead Time. The supply dates of a purchase order or purchase requisition can be analyzed using the View Calendar Details action in the same way that supply dates are analyzed for planned buy orders. The only difference is that, by default, Preprocessing Lead Time is not applied to purchase orders and purchase requisitions. After the planned order is released and an order is created on the source system, the ordering process is complete and there's no need for planning to account for the time it takes to raise an order. As a result, the Preprocessing Lead Time row isn't applied (and therefore it isn't displayed) for purchase orders and purchase requisitions. When Preprocessing Lead Time isn't applied, the Suggested Order Date is equal to the Suggested Start Date.

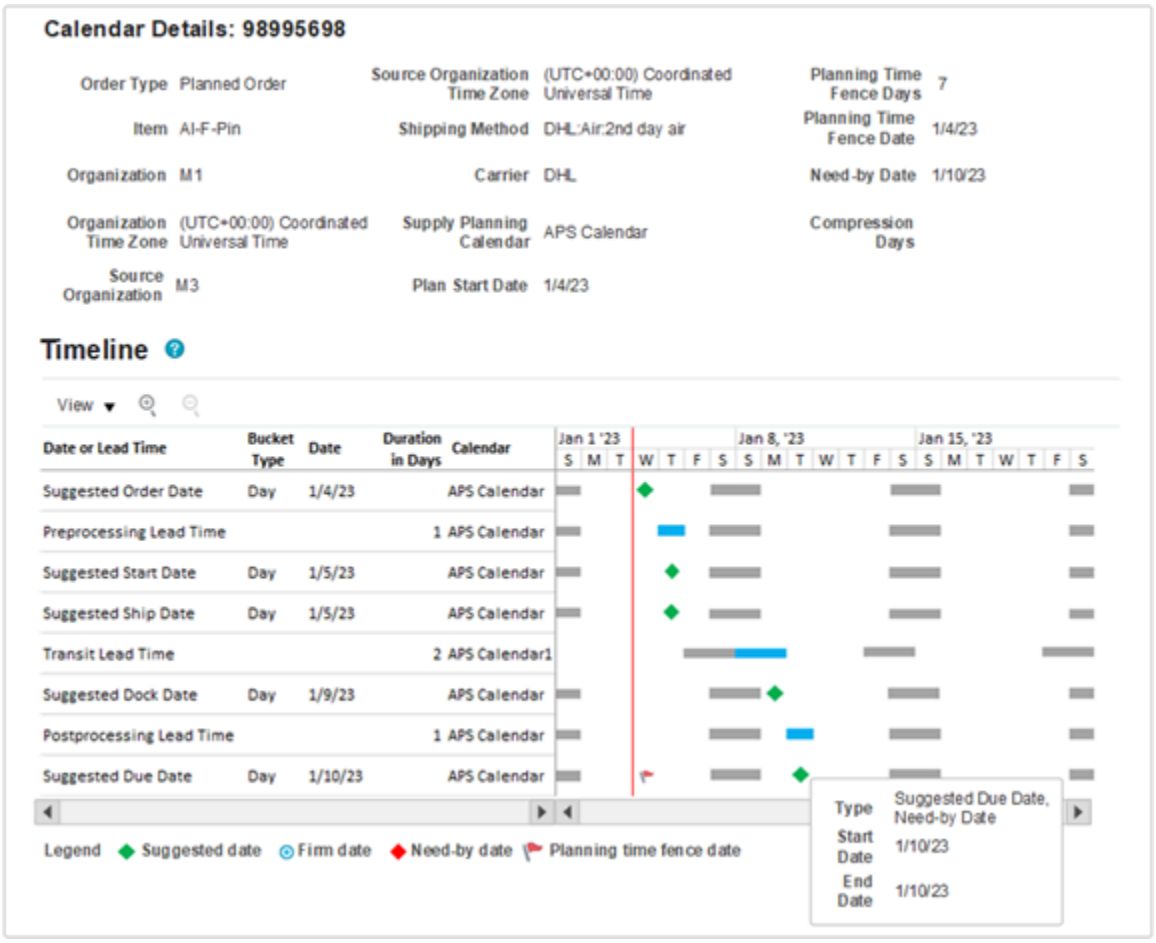
Related Topics

- Calendars Used to Calculate Dates in the Supplies and Demands View

View Calendar Details Example: Planned Transfer Order

This example describes a planned transfer order in an unconstrained plan.

You can tell it's a transfer order because Source Organization and Source Organization Time Zone fields are displayed in the header section. This is an unconstrained plan. If this were a constrained plan, there would be two additional fields displayed in the header section as well: Earliest Start Date and Latest Start Date.



When looking at the Gantt chart of a transfer order, the Processing Lead Time row isn't displayed. Processing Lead Time doesn't factor into the scheduling of a transfer order (planned or otherwise) because the transfer order only accounts for the transferring of the supply from the source organization to the destination organization. The processing time required at the source organization is accounted for on the applicable buy or make order.

The red vertical line in the Gantt chart represents the plan start date, which is also shown in the header field. This line is only visible when the plan start date is within the visible portion of the Gantt window.

Planning uses backward scheduling to calculate supply dates, so we'll analyze the dates starting from the Suggested Due Date (the last row).

Date or Lead Time Row	Value	Explanation
Suggested Due Date	January 10	In this example, the Suggested Due Date is the same as the Need-by Date. Because unconstrained planning schedules supplies based on Need-by Date, it's common that both dates are the same.

		When milestone dates overlap, the suggested date is always displayed on top in the Gantt chart. If you hover over the Suggested Due Date milestone, you can see that both the Need-by Date and Suggested Due Date are on January 10. The Need-by Date is also displayed in the header section for quick reference without having to hover. If needed, planning will move the Suggested Due Date out so that it's on or after the Planning Time Fence Date. In this case, the Planning Time Fence Date is January 4 (the same as the Plan Start Date), so there's no need to move the Suggested Due Date out. The calendar used in calculating the Suggested Due Date is the Destination Organization Manufacturing Calendar. In this example, the calendar used is APS Calendar, which has Saturdays and Sundays as nonworking days, represented by gray bars in the Gantt chart. Planning always ensures that the Suggested Due Date is on a working day, however, a planner may firm the order on a nonworking day. If the order is firmed, the Gantt chart will display the Suggested Due Date using the firm date icon (a blue circle), in place of the regular green diamond icon. The planning bucket type for this date and all other dates is day. This lets you know that the Suggested Due Date didn't get moved to the last working day of the planning bucket, which is what happens when planning in aggregate planning buckets.
Postprocessing Lead Time	1 day	The Postprocessing Lead Time's duration in days value comes from the Items page and includes any simulation set overrides. The same calendar used for Suggested Due Date (the Destination Organization Manufacturing Calendar) is also used in calculating Postprocessing Lead Time duration. The end date of the Postprocessing Lead Time is set to the Suggested Due Date. Because the same calendar is being used for both dates, there's no need to make any adjustment to the end date of the Postprocessing Lead Time to ensure it's on a nonworking day. The start date of the Postprocessing Lead Time is calculated by subtracting the Postprocessing Lead Time from the end date of the Postprocessing Lead Time, only counting the working days. In this example, Postprocessing Lead Time starts and ends on Tuesday, January 8. Because the time associated with the Suggested Due Date is the end of the day (that is, 23:59:00), the 1 day of Postprocessing Lead Time starts at the beginning of the day and goes to the end of the same day.
Suggested Dock Date	January 9	The calendar used in calculating the Suggested Dock Date is the Destination Organization Receiving Calendar. In this example, the calendar used is APS Calendar. Depending on your setup, the Destination Organization Receiving Calendar might be different from the Organization Manufacturing Calendar, which is used in calculating the Suggested Due Date and Postprocessing Lead Time. The Organization Receiving Calendar can be specific to the receiving organization, or to a carrier and receiving organization combination. In this case, the same calendar used for calculating the Suggested Due Date and Postprocessing Lead Time is also used for calculating the Suggested Dock Date. Therefore, there was no need to adjust the Suggested Dock Date so that it ended up on a working day. The Suggested Dock Date of January 9 matches what we expect to see, given the Postprocessing Lead Time.
Transit Lead Time	2 days	The Transit Lead Time was derived based on the Shipping Method shown in the header section, which comes from the Interlocation Shipping Methods tab of the Supply Network Model UI. The calendar used in calculating Transit Lead Time is APS Calendar1, which has different working days from other calendars used. Only Sundays through Thursdays are working days for APS Calendar1.

		The end date of the Transit Lead Time is set to the Suggested Dock Date. If the end date of the Transit Lead Time is not a valid working day on the transit calendar, then the Transit Lead Time end date will be moved earlier, to a working day on the transit calendar. In this example, the Suggested Dock Date, January 9, is a valid working day on the transit calendar, so there's no need to adjust the end date of the Transit Lead Time. The start date of the Transit Lead Time is calculated by subtracting the Transit Lead Time from the end date of the Transit Lead Time, only counting the working days on the transit calendar. In this example, Transit Lead Time starts at the beginning of the day on Sunday, January 8, and goes through the end of the day on Monday, January 9.
Suggested Ship Date	January 5	The Source Organization Shipping Calendar is used to calculate the Suggested Ship Date. In this example, APS Calendar was used in calculating the Suggested Ship Date, which has Saturdays and Sundays as nonworking days, represented by the gray bars in the Gantt chart. As you can see, there's a gap between the Suggested Ship Date and the Transit Lead Time start date. Some of the gap is accounted for because Sunday, January 8, is a nonworking day on the shipping calendar. Why did planning calculate a Suggested Ship Date of Thursday, January 5, and not Friday, January 6? The most likely answer is that the Suggested Dock Date calculated during plan run had a time stamp that wasn't at the end of the day, and that caused the transit time to actually start on Thursday, January 5 (due to Friday, Saturday, and Sunday being nonworking days). Because the View Calendar Details action calculates lead times after suggested dates are moved to the end of the day, there's a loss of precision from how the planning process calculated suggested dates during plan run. This can result in a gap of one working day being shown in the Calendar Details window.
Suggested Start Date	January 5	The Source Organization Manufacturing Calendar is used to calculate the Suggested Ship Date. Because the transfer order doesn't include Processing Lead Time, the Suggested Start Date is set to the same date as the Suggested Ship Date. If the Suggested Start Date is not a valid working day on the Source Organization Manufacturing Calendar, it will be moved earlier to a working day. In this example, the same calendar (APS calendar) was used for calculating both Suggested Ship Date and Suggested Start Date. The Suggested Start Date, January 5, is a valid working day on the Source Organization Manufacturing Calendar, so there's no need to adjust the date.
Preprocessing Lead Time	1 day	The Preprocessing Lead Time's duration in days value comes from the Items page and includes any simulation set overrides. Preprocessing Lead Time and Suggested Order Date are used to account for the time it takes the destination organization to raise an order. The Destination Organization Manufacturing Calendar is used in calculating Preprocessing Lead Time. In this case, the calendar used is APS Calendar. The Preprocessing Lead Time end date is set to the Suggested Start Date. If the Suggested Start Date is not a valid working day on the Destination Organization Manufacturing Calendar, it will be moved earlier to a working day. In this example, the Suggested Start Date, January 5, is a valid working day, so there's no need to adjust the end date of the Preprocessing Lead Time. The start date of the Preprocessing Lead Time is calculated by subtracting the Preprocessing Lead Time from the end date of the Preprocessing Lead Time, only counting the working days. In this example, Processing Lead Time starts at the beginning of the day on January 5 and goes through the end of that same day.

Suggested Order Date	January 4	The Destination Organization Manufacturing Calendar is used to calculate the Suggested Order Date. In this example, the calendar used is APS Calendar. The January 4 Suggested Order Date matches what we expect to see, given the Preprocessing Lead Time. In this example, the Suggested Order Date just happens to be the same day as the plan start date. This was not a case where the Preprocessing Lead Time needed to be compressed because the plan start date was reached. The supply dates of a transfer order can be analyzed using the View Calendar Details action in the same way that supply dates are analyzed for a planned transfer order. The only difference is that, by default, Preprocessing Lead Time is not applied to transfer orders. After the planned order is released and an order is created on the source system, the ordering process is complete so there's no need for planning to account for the time it takes to raise an order. As a result, the Preprocessing Lead Time row isn't applied (and therefore it isn't displayed) for transfer orders. When Preprocessing Lead Time isn't applied, the Suggested Order Date is equal to the Suggested Start Date.

Related Topics

- Calendars Used to Calculate Dates in the Supplies and Demands View

View Calendar Details Example: Planned Make Order

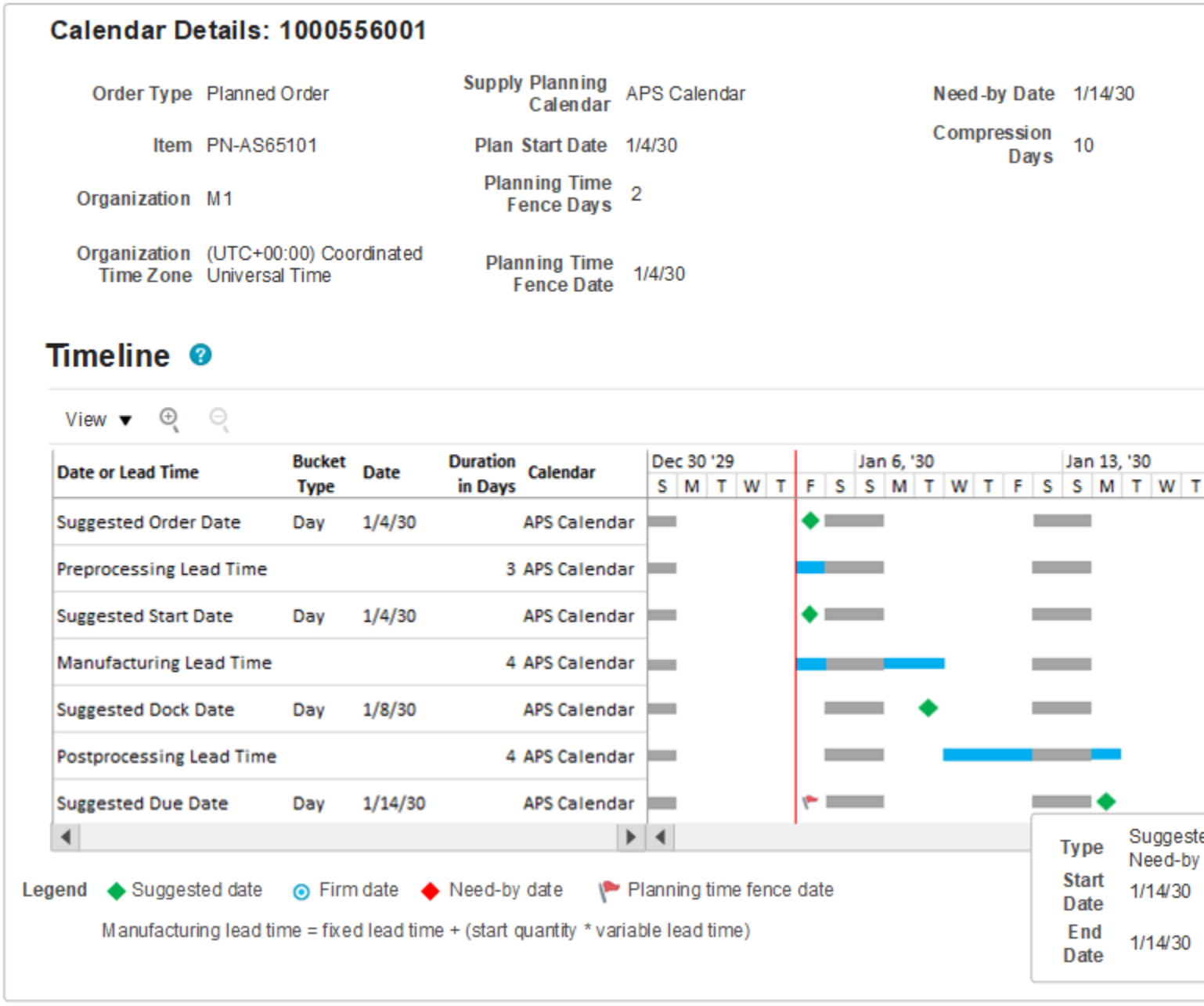
This example describes a planned make order in an unconstrained plan.

You can tell it's a make order because the Supplier and Source Organization fields aren't displayed in the header section. This is an unconstrained plan. If this were a constrained plan, there would be two additional fields displayed in the header section: Earliest Start Date and Latest Start Date.

When looking at the Gantt chart of a make order, the Transit Lead Time and Suggested Ship Date rows aren't displayed. Make orders aren't shipped or received, so these dates don't factor into the scheduling of a make order (planned or otherwise).

The Organization Manufacturing Calendar is used in calculating all suggested dates and lead times of a make order.

The red vertical line in the Gantt chart represents the plan start date, which is also shown in the header field. This line is only visible when the plan start date is within the visible portion of the Gantt window.



Planning uses backward scheduling to calculate supply dates, so we'll analyze the dates starting from the Suggested Due Date (the last row).

Date or Lead Time Row	Value	Explanation
Suggested Due Date	January 14	In this example, the Suggested Due Date is the same as the Need-by Date. Because unconstrained planning schedules supplies based on Need-by Date, it's common that both dates are the same.

		When milestone dates overlap, the suggested date is always displayed on top in the Gantt chart. If you hover over the Suggested Due Date milestone, you can see that both Need-by Date and Suggested Due Date are on January 14. The Need-by Date is also displayed in the header section for quick reference without having to hover. If needed, planning will move the Suggested Due Date out so that it's on or after the Planning Time Fence Date. In this case, the Planning Time Fence Date is January 4 (the same day as the Plan Start Date), so there's no need to move the Suggested Due Date out. In this example, the Planning Time Fence Date is the same day as the Plan Start Date, even though the value of the Planning Time Fence Days is 2. This is because the planning time fence control plan option is not checked, so the Planning Time Fence Date defaults to the Plan Start Date. The calendar used in calculating the Suggested Due Date, as well as all other suggested dates, is the Organization Manufacturing Calendar. In this example, the calendar used is APS Calendar, which has Saturdays and Sundays as nonworking days, represented by gray bars in the Gantt chart. Planning always ensures that the Suggested Due Date is on a working day, however a planner may firm the order on a nonworking day. If the order is firmed, the Gantt chart will display the Suggested Due Date using the firm date icon (a blue circle), in place of the regular green diamond icon. The planning bucket type for this date and all other dates is day. This lets you know that the Suggested Due Date didn't get moved to the last working day of the planning bucket, which is what happens when planning in aggregate planning buckets.
Postprocessing Lead Time	4 days	The Postprocessing Lead Time's duration in days value comes from the Items page and includes any simulation set overrides. The end date of the Postprocessing Lead Time is set to the Suggested Due Date. The start date of the Postprocessing Lead Time is calculated by subtracting the Postprocessing Lead Time from the end date of the Postprocessing Lead Time, counting only the working days. In this example, the Postprocessing Lead Time starts at the beginning of the day on Wednesday, January 9, and goes through the end of the day on Monday, January 14 (skipping Saturday and Sunday, which are nonworking days).
Suggested Dock Date	January 8	The Suggested Dock Date of January 8 matches what we expect to see, given the Postprocessing Lead Time.
Manufacturing Lead Time	4 days	The Manufacturing Lead Time's duration in days value is calculated using the item's fixed and variable lead time and includes any simulation set overrides, where Manufacturing Lead Time = Fixed Lead Time + (Start Quantity * Variable Lead Time). The Manufacturing Lead Time end date is set to the Suggested Dock Date. The start date of the Manufacturing Lead Time is calculated by subtracting the Manufacturing Lead Time from the end date of the Manufacturing Lead Time, counting only the working days. In this example, the Manufacturing Lead Time was compressed because the plan start date was reached. The Manufacturing Lead Time starts at the beginning of the day on January 4, which is the plan start date, and goes through the end of day on January 8, which accounts for only 3 of the 4 required manufacturing days.
Suggested Start Date	January 4	Because the plan start date has been reached, the Suggested Start Date is set to the plan start date. Planning will not schedule a suggested date that is earlier than plan start date. During backward scheduling, when the plan start date is reached, the Suggested Start Date will be set to the plan start date, even if the plan start date is a nonworking day.

Preprocessing Lead Time	3 days	The Preprocessing Lead Time's duration in days value comes from the Items page and includes any simulation set overrides. Because the plan start date has already been reached, the Preprocessing Lead Time is compressed to the first day of the plan.
Suggested Order Date	January 4	In this example, planning has already reached the plan start date so the Suggested Order Date is placed on the first day of the plan (regardless of whether the first working day of the plan is a working day or not). The scheduling of a work order works differently from a planned make order. Refer to the work order example in this chapter to understand how planning calculates suggested dates on work orders.

Related Topics

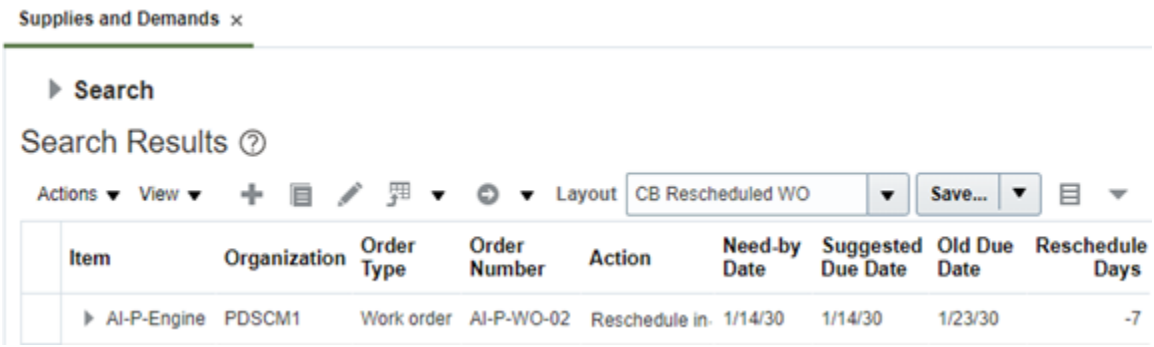
- Calendars Used to Calculate Dates in the Supplies and Demands View

View Calendar Details Example: Work Order

This example describes a work order that has been rescheduled in, meaning the Suggested Due Date is earlier than the old due date.

Collected work orders are scheduled differently from the other order types. If planning didn't reschedule the work order, then the suggested dates seen in the Calendar Details window are the ones that were collected from the source system.

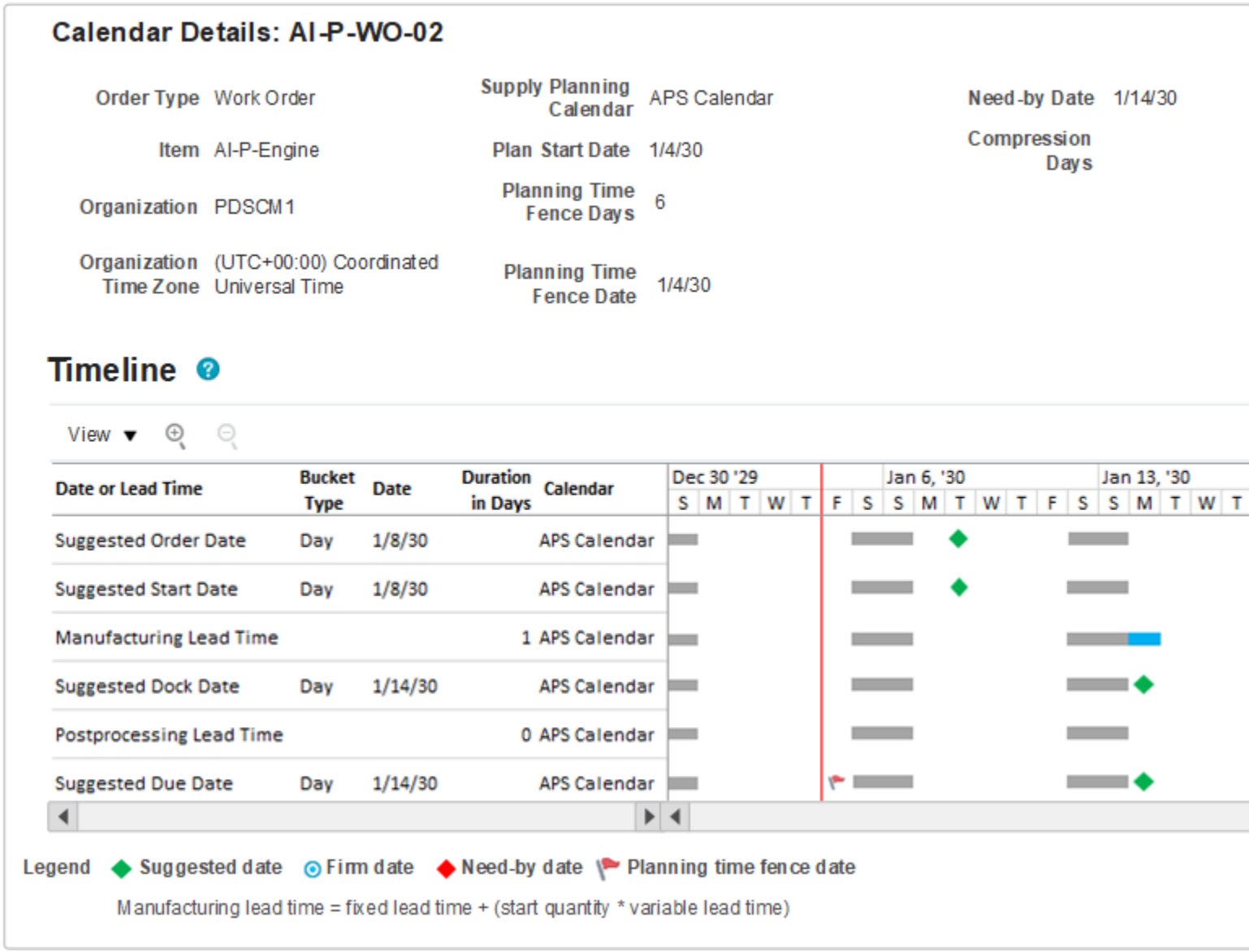
Looking at the order in the Supplies and Demands page, we can see the old dates (before rescheduling) as well as the new suggested dates. The Reschedule Days column displays the number of working days on the Organization Manufacturing Calendar that the work order was scheduled in or out. When the work order is rescheduled in, meaning the Suggested Due Date is earlier than the old due date, Reschedule Days will be a negative number. In this example, the work order has been rescheduled in by 7 working days on the Organization Manufacturing Calendar.



When looking at the Gantt chart of a work order, the Transit Lead Time and Suggested Ship Date rows aren't displayed. Make orders aren't shipped or received, so these dates don't factor into the scheduling of a make order (planned or otherwise). Because this an existing work order collected from the source system, Preprocessing Lead Time is not applied, so this row is also hidden.

The Organization Manufacturing Calendar is used in calculating all suggested dates and lead times of a work order.

The red vertical line in the Gantt chart represents the plan start date, which is also shown in the header field. This line is only visible when the plan start date is within the visible portion of the Gantt window.



When rescheduling a work order, planning doesn't recalculate suggested dates by subtracting lead times. Instead, planning will adjust the suggested dates by subtracting the Reschedule Days from the collected dates, as described in the following table.

Date or Lead Time Row	Value	Explanation
Suggested Due Date	January 14	In this example, planning has rescheduled the work order in by 7 days to meet the Need-by Date. So the Suggested Due Date is the same as the Need-by Date, which is January 14. When milestone dates overlap, the suggested date is always displayed on top in the Gantt chart. If you hover over the Suggested Due Date milestone, you can see that both the Need-

		by Date and Suggested Due Date are on January 14. The Need-by Date is also displayed in the header section for quick reference without having to hover. The calendar used in calculating the Suggested Due Date, as well as all other suggested dates, is the Organization Manufacturing Calendar. In this example, the calendar used is APS Calendar, which has Saturdays and Sundays as nonworking days, represented by gray bars in the Gantt chart. The planning bucket type for this date and all other dates is day. This lets you know that the Suggested Due Date didn't get moved to the last working day of the planning bucket, which is what happens when planning in aggregate planning buckets.
Postprocessing Lead Time	0 days	The Postprocessing Lead Time's duration in days value comes from the Items page and includes any simulation set overrides. In this case there's no Postprocessing Lead Time defined, so there's no bar in the Gantt chart that represents Postprocessing Lead Time.
Suggested Dock Date	January 14	Instead of calculating a Suggested Dock Date using the item's Postprocessing Lead Time, planning calculates a Suggested Dock Date by adjusting the old (also known as collected) dock date to be 7 working days earlier on the Organization Manufacturing Calendar.
Manufacturing Lead Time	1 day	The Manufacturing Lead Time's duration in days value is calculated using the item's fixed and variable lead time and includes any simulation set overrides, where Manufacturing Lead Time = Fixed Lead Time + (Start Quantity * Variable Lead Time). The Manufacturing Lead Time end date is set to the Suggested Dock Date. The start date of the Manufacturing Lead Time is calculated by subtracting the Manufacturing Lead Time from the end date of the Manufacturing Lead Time, counting only the working days. In this example, the Manufacturing Lead Time starts at the beginning of the day on Monday, January 14, and goes through to the end of that same day.
Suggested Start Date	January 8	The start date is Tuesday, January 8, which appears to be earlier than needed, given the Manufacturing Lead Time shown in the Calendar Details window. Instead of calculating a Suggested Start Date using the item's Manufacturing Lead Time, planning calculates a Suggested Start Date by adjusting the old (also known as collected) start date to be 7 working days earlier on the Organization Manufacturing Calendar. The work order start date established by the manufacturing execution source system considers various constraints, which unconstrained planning doesn't. So unconstrained planning tries to honor those constraints, as best as it can, by keeping the same number of working days between the supply dates.
Suggested Order Date	January 8	Because Preprocessing Lead Time isn't applied to work orders, the Suggested Order Date is set to the Suggested Start Date.

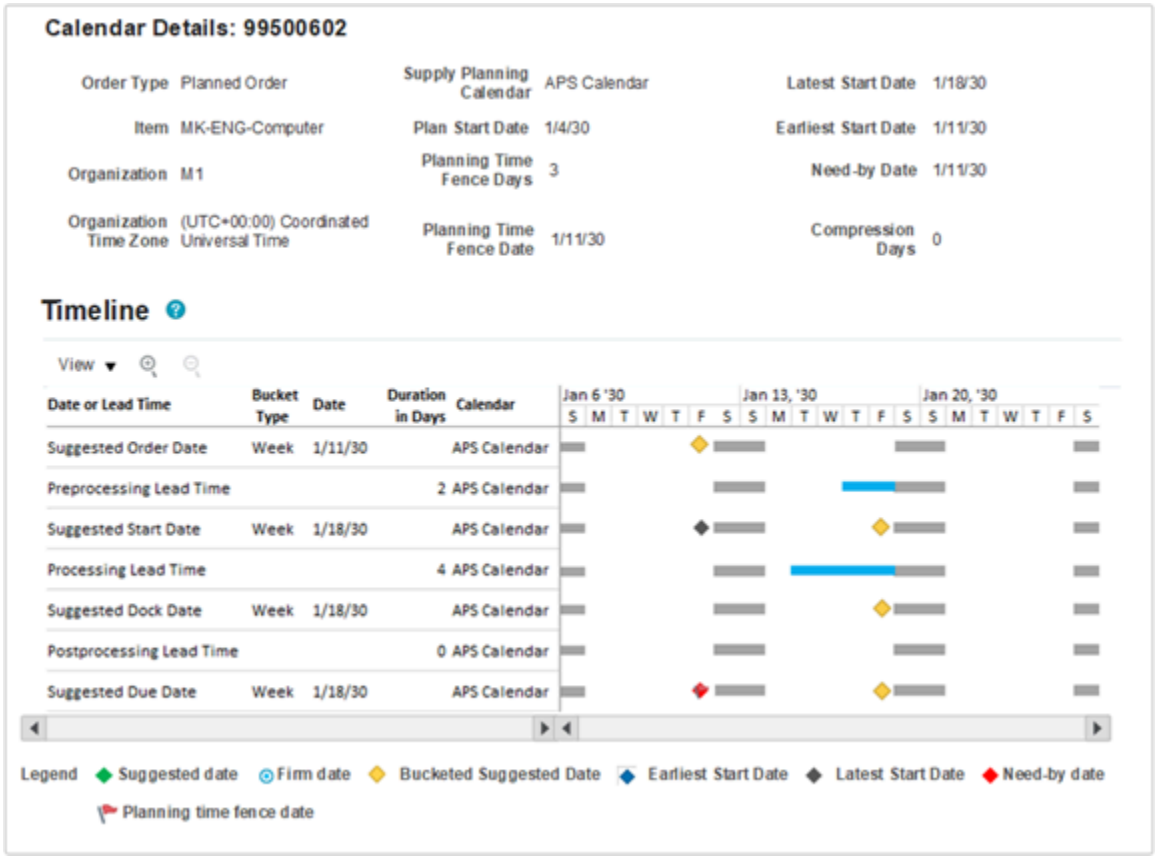
Related Topics

- Calendars Used to Calculate Dates in the Supplies and Demands View

View Calendar Details Example: Aggregate Planning Buckets

This example describes a planned make order in a constrained plan, using aggregate planning buckets.

The Earliest Start Date and Latest Start Date are displayed in the header section. These fields are displayed only in a constrained plan. These dates are also plotted in the Gantt chart, if the dates fall within the Gantt window.



In this example, the supply planning bucket type for each suggested date is week. Depending on your plan options, it's possible for some suggested dates to have a different bucket type than others. For example, some dates might fall into a daily bucket while other dates for the same supply might fall into a weekly bucket.

When planning in aggregate time buckets, meaning a time bucket that is higher than a day, the suggested dates are moved to the last working day of the supply planning bucket during plan run. A yellow diamond on the Gantt chart indicates a suggested date that has been moved to the last working day of the supply planning bucket.

Date or Lead Time Row	Value	Explanation
Suggested Due Date	January 18	In this example, the Suggested Due Date is later than the Need-by Date. This is a constrained plan, so there was some constraint that caused the Suggested Due Date to be after the Need-by Date. If needed, planning will move the Suggested Due Date out so that it's on or after the Planning Time Fence Date. In this case, the Planning Time Fence Date is January 4 (the same day as Plan Start Date and Need-by Date), so it had no impact on the Suggested Due Date. Because this is a planned make order, the calendar used in calculating the Suggested Due Date, as well as all other suggested dates, is the Organization Manufacturing Calendar. In this example, the calendar used is APS Calendar, which has Saturdays and Sundays as nonworking days.

		Planning always ensures that the Suggested Due Date is on a working day, however, a planner may firm the order on a nonworking day. If the order is firmed, the Gantt chart will display the Suggested Due Date using the firm date icon (a blue circle), in place of the regular green diamond icon. The planning bucket type for this date and all other dates is week. This tells you that the Suggested Due Date was moved to the last working day of the planning bucket, which is what happens when planning in aggregate time buckets.
Postprocessing Lead Time	0 days	The Postprocessing Lead Time's duration in days value comes from the Items page and includes any simulation set overrides. In this example, the Postprocessing Lead Time is zero, so there's no need to calculate Postprocessing Lead Time start and end date. If Postprocessing Lead Time wasn't zero, it would be calculated as follows: • The Postprocessing Lead Time end date is set to the Suggested Due Date. • The start date of the Postprocessing Lead Time is calculated by subtracting the Postprocessing Lead Time from the end date of the Postprocessing Lead Time, only counting the working days. • The calculations of Postprocessing Lead Time start and end dates are performed when the UI is displayed, after planning has moved the Suggested Due Date to the last working day of the planning bucket. As a result, the postprocessing start and end dates might not match the dates that were calculated during plan run (which is done before moving the Suggested Due Date to the end of the planning bucket). This loss of precision is expected when displaying calendar details of a supply that was planned using aggregate time buckets.
Suggested Dock Date	January 18	Given that the Postprocessing Lead Time is zero, a Suggested Dock Date that is the same as the Suggested Due Date is expected.
Processing Lead Time	4 days	The Processing Lead Time's duration in days value comes from the Items page and includes any simulation set overrides. The Processing Lead Time end date is set to the Suggested Dock Date. The start date of the Processing Lead Time is calculated by subtracting the Processing Lead Time from the end date of the Processing Lead Time, only counting the working days. In this example, the Processing Lead Time starts at the beginning of the day on Tuesday, January 15, and goes through the end of the day on Friday, January 18. The calculation of Processing Lead Time start and end dates is performed when the UI is displayed, after planning has moved the Suggested Dock Date to the last working day of the planning bucket. As a result, the processing start and end dates might not match the dates that were calculated during plan run (which is done before moving the Suggested Dock Date to the end of the planning bucket). This loss of precision is expected when displaying calendar details of a supply that was planned using aggregate time buckets.
Suggested Start Date	January 18	The Suggested Start Date was moved to the last working day of the supply planning bucket, so it ended up being the same date as the Suggested Dock Date. This is because both dates (after accounting for Processing Lead Time) fell into the same supply planning bucket.
Preprocessing Lead Time	2 days	The Preprocessing Lead Time's duration in days value comes from the Items page and includes any simulation set overrides. The Preprocessing Lead Time end date is set to the Suggested Start Date. The start date of the Preprocessing Lead Time is calculated by subtracting the Preprocessing Lead Time from the end date of the Preprocessing Lead Time, only counting the working days. In this example, Processing Lead Time starts at the beginning of the day on Thursday, January 17, and goes through the end of the day on Friday, January 18.

		The calculation of Preprocessing Lead Time start and end dates is performed when the UI is displayed, after planning has moved the Suggested Start Date to the last working day of the planning bucket. As a result, the preprocessing start and end dates might not match the dates that were calculated during plan run (which is done before moving the Suggested Start Date to the end of the planning bucket). When suggested dates are moved to the last working day of the supply planning bucket, it's common to see that lead times overlap in the Calendar Details window. In this example, we see that Preprocessing and Processing Lead Times are overlapping. This loss of precision is expected when displaying calendar details of a supply that was planned using aggregate time buckets.
Suggested Order Date	January 11	While not obvious at first, it makes sense that the Suggested Order Date is Friday, January 11. When calculating the Suggested Order Date, planning had to account for 4 days of Processing Lead Time and 2 days of Preprocessing Lead Time, without any overlap. This caused the Suggested Order Date to fall into the prior planning bucket (before the Suggested Order Date was then bucketed to the last working day of the planning bucket).

Related Topics

- Calendars Used to Calculate Dates in the Supplies and Demands View

Export Supplies and Demands Data

You can export supplies and demands data into a Microsoft Excel spreadsheet. However, what data gets exported depends on how and where you initiate the export process.

- If you export data from the Supplies and Demands pegging mode, your spreadsheet includes child rows tied to each root node that's exported. The two options to export are:
    - **Include All Child Rows**: Export all child rows, even if they aren't expanded in the table.
    - **Include Child Rows if Expanded**: Export the child rows only if you have expanded them in the table.

  In pegging mode, the export process checks the FND_EXPORT_ROWLIMIT profile option. If a maximum row limit isn't defined, then the default is 20,000 rows. Also, you can only export up to 500 root nodes. If the export process reaches the row limit when exporting child rows, the process adds a line at the bottom of the exported worksheet stating that not all rows were exported.
- If you export data from the Supplies and Demands plain table mode (also called flat file mode), the exported data includes only the records retrieved by your search, but doesn't include pegged data.

  The export process exports all rows that match your criteria until it reaches the maximum allowed by Microsoft Excel. If the export process reaches the row limit, the process adds a line at the bottom of the exported worksheet that not all rows were exported.

Related Topics

- Supplies and Demands View Modes

Forecast Consumption View

Use the Forecast Consumption table to quickly understand the misalignments between the forecast and actual sales at different levels such as item, organization, customer, and demand class. The Forecast Consumption table, which you drill to from the Supplies and Demands or Material plan table, enables you to analyze the sales orders or transfer order demands that consumed a particular forecast. You can also determine the portion of the plan horizon for which the forecast consumption details must be calculated.

The Forecast Consumption table displays the details for your plan based on the forecast consumption parameters, including the **Consumption Detail Cutoff Days** plan option. Configure these parameters on the Plan Options page, Supply tab, Forecast Allocation and Consumption subtab. After you configure the forecast allocation and consumption parameters, run your plan. The planning process calculates forecast consumption for the entire plan based on the forecast consumption parameters. Use the Consumption Detail Cutoff Days parameter to limit the number of days in which to view the forecast consumption details.

After you run the plan, navigate to the Supplies and Demands or the Material Plan table. In the Supplies and Demand table, select a sales order, forecast, or transfer order and then drill to the Forecast Consumption table. In the Material Plan table, select either a sales order, transfer order, or a net forecast measure and then drill to the Forecast Consumption table. Review the forecast consumption details in the context of the table that you drilled from, which can include the following information:

- Multiple sales orders or transfer orders for a forecast entry. A forecast entry can be consumed by multiple sales orders or transfer orders.
- Multiple forecast entries for a sales order or transfer order. A sales order or transfer order can consume multiple forecasts.
- The original item of the sales order consuming the forecast where the sales order item has been changed to a substitute item.

This table describes the various columns in the Forecast Consumption table:

Column	Description
Consumption Sequence	Sequence of forecast consumed by sales orders or transfer order demand for an item.
Consumed Item	Forecast of the item for which consumption occurred. This item can be the same item that's available in the sales order, and can be a requested item for an end item substitution.
Organization	Inventory organization in which the sales order or transfer order demand consumed the forecast.
Forecast Customer	Name of the customer in the forecast.
Forecast Customer Site	Name of the customer site in the forecast.
Demand Schedule	Name of the demand schedule from which forecast was consumed by the sales order or transfer order demand.
Ship-to Consumption Level	Consumption level used by the forecast consumption process in the plan to consume forecasts.
Consumption Date	Date on which the forecast was consumed.
Forecast Quantity	Original quantity of the forecast before consumption.
Consumed Quantity	Consumed quantity of the forecast by a sales order or transfer order demand.

Column	Description
Sales or Transfer Order Number	Sales order or transfer order demand number that consumed the forecast.
Sales or Transfer Order Line	Specific sales order line or transfer order demand line number that consumed the forecast.
Sales Order or Transfer Order Item	Item in the sales order or transfer order demand that consumed the forecast.
Sales Order or Transfer Order Original Ship Date	Original ship date of the sales order line or transfer order demand line that consumed the forecast.
Sales or Transfer Order Quantity	Quantity of the sales order line or transfer order demand line.
Order Type	Order type, which is either sales order or transfer order.
Sales Order Customer	Customer name on the sales order.
Sales Order Customer Site	Customer site name on the sales order.
Demand Class	Name of the demand class on the sales order.

The Forecast Consumption table is sorted by the Consumption Sequence column by default. You can change the default setting and sort the table by other columns. Use the Manage Columns actions on the View menu to configure which columns are visible. The layout persists across sessions until changed.

The Forecast Consumption table is available in the Supply Planning, Demand and Supply Planning, and Planning Central work areas for constrained and unconstrained supply plans.

You can add the Forecast Consumption table as a link to drill to from the context of a new forecast measure in any user-defined table.

Related Topics

- Forecast Processing
- Forecast Consumption
- Supplies and Demands View Modes
- Material Plan View
- Review and Improve Your Demand Fulfillment

Material Plan View

The Material Plan is a predefined table in Supply Chain Planning. The Material Plan table is a time-phased view of the demands, supplies, and daily balances across the plan horizon for any item and organization combination.

The item, organization, and measures are displayed for the row headings, while the time periods are displayed for the column headings. Access the Material Plan table from the Planning Central or Supply Planning work area.

> **CAUTION:** If you open the predefined Material Plan table without using any filters, it can take a long time to display the results. Oracle recommends that you create a copy of the Material Plan and add filters to reduce the item count and horizon of the material plan.

You can edit the measures at aggregate levels and allocate the measures to lower levels. For example, you can edit the manual demand measure by organization, item, and period, and then allocate that measure down to the day.

You can edit a measure's value inline by clicking in a cell and changing the value. Or, you can use mass editing capabilities that are available to adjust several cells at the same time. For example, you can increase the forecast of item X for the next three months by 30 percent.

You can also display the material plan as a graph. Each measure is plotted along the x-axis, which is the time dimension.

From the Material Plan table, you can drill down to the following tables:

- Item Exceptions
- Items
- Supplies and Demands
- Supply Chain Bill

Although you cannot modify the layout of the material plan, you can copy the material plan and configure the new layout in the following ways:

- Add or remove members and measures
- Filter members, such as items or categories
- Add conditional formatting, such as font, background color, and status icons
- Add user-defined drill-to actions

Pegging Analysis View

Pegging Analysis View

Using the Pegging Analysis view, you can analyze pegging relationships between supplies and demands of different items. For example, you can analyze how supplies of component items are pegged to sales orders and forecasts.

The view displays the quantity of supplies that are pegged to demands.

You can group supplies by the Item, Order Type, Organization, Suggested Due Date, or Supplier attributes. Similarly, you can group demands by the Item, Order Type, Organization, Suggested Due Date, or Customer attributes. You can choose to look at demand items one level below the supply items or look at the end demand items that are pegged to the supply items. You can view the pegged supply quantity as it is or as a percentage of the total supply quantity. Pegging Criteria controls the layout of the pegging analysis view. The Application Default pegging criteria is the predefined layout. You can save the group by criteria and display options as Pegging Criteria. You can later select this Pegging Criteria from within the Pegging Analysis view. You can mark the criteria as Public or Private.

You can open the Pegging Analysis view using the drill-down action from the Items, Supplies and Demands, and Demand Fulfillment page. From the Pegging Analysis view, you can further drill down to supplies or demands depending on your need. When you drill down to supplies, you open the Supplies and Demand view where you see only the supply items. Similarly, if you drill down to demands, you open the Supplies and Demands view where you see only the demand items. You can also drill down to Items and Item Structure pages.

Create a Pegging Criteria Layout

Use Pegging Criteria to create a layout to view the pegging details. Create a pegging criteria from the Pegging Analysis view. After you create a criteria, you can use the criteria as the default criteria for future needs.

Use these steps to create a pegging criteria.

1. In the Supply Planning work area, open your plan:
    a. Click the Tasks panel tab.
    b. In the Tasks panel drawer, click **Manage Plans**.
    c. Search and open your plan.
2. After you open your plan, click **Actions** and then click **Open**.
3. In the **Open Table, Graph, or Tile Set** dialog box, search for and select the **Items**, **Supplies and Demands**, or **Demand Fulfillment** table.
4. Click **OK**.
5. Search the demands or items.
6. Select the demands or items for which you want to perform pegging analysis.
7. Click **Actions**, **Drill to**, **Pegging Analysis**.
8. In the Pegging Analysis dialog box, click the Pegging Analysis drop-down list and click **Create**.
9. In the Create Pegging Criteria dialog box, enter the details and click **Save and Close**.

> **Note:** To make this criteria your default criteria, select the **Set as default** check box in the Create Pegging Criteria dialog box.

Demand Fulfillment View

Review and Improve Your Demand Fulfillment

To improve the demand fulfillment of your plan, use the Demand Fulfillment table to review the at-risk demands in your plan and their related recommendations. You can take actions to accept recommendations from this page.

In the Demand Fulfillment UI, you can:

- View prioritized at-risk demands based on order values weighted by the number of associated recommendations.
- Take actions to accept or mark recommendations as complete.
- Review summary information provided for the current demand fulfillment position of your plan to analyze the potential for improvement based on selected at-risk demands. The information also provides an understanding of the expected demand fulfillment position based on accepted and completed recommendations.

To review and improve your demand fulfillment:

1. In a Supply Planning, Planning Central, or Demand and Supply work area, select the **Manage Plans** task.
2. On the Manage Plans page, search for and open your plan.

3. In the Page Layout list, select Plan Summary.

   Note that the tiles in the Plan Summary layout include a Demand at Risk in thousands tile.
4. In the **Demand at Risk in thousands** tile, click the **Select Tile** bar to review the Demand at Risk Summary data.

   You can review the demand at risk data through a treemap view or a table view, the treemap view is the default. To switch to the table view, click the **Show Table** icon.
5. To review the demand at risk data:
   - Using the treemap: Click an area in the treemap. Typically, you want to start with the area that has the highest demand at risk value. From the Drill To actions, click **Demand Fulfillment**.
   - Using the table: Click the **Show Table** icon. In the Demand at Risk Summary table, click a cell. Typically, you want to start with the cell that has the highest demand at risk value. From the Drill To actions, click **Demand Fulfillment**.
6. The Demand Fulfillment UI shows the individual orders that are at-risk and their related recommendations.

   > **Tip:** You can open the Demand Fulfillment table directly without drilling from the Plan Summary. After you open a plan, click the Open button at the page level. In the Open Table, Graph, or Tile Set dialog box, search for and select the Demand Fulfillment table. In the Demand Fulfillment UI, you can search for at-risk demands by using the filter fields in the search panel.

   Review the At-Risk Demand section and the Recommendations section, and then take further actions.

How You Filter Recommendation Summaries

The recommendation summary information available on the Demand Fulfillment page can assist you in selecting at-risk demands to work on. You have a summary graph, a summary table, and a cumulative at-risk demand value slider for filtering the information to analyze the recommendations.

Recommendation Summary Graph

The recommendation summary graph shows the cumulative at-risk demand value and the related number of recommendations associated with that value. To maximize effort, aim for a low number of recommendations with the associated at-risk demand value substantial enough to make a difference in demand fulfillment percentage. Use the slider to filter by top n, the cumulative demand value.

For example, move the slider to the marker most closely matching $500,000 and click **Go** or arrow button to the right of the slider. After moving the slider to the left, the graph shows the at-risk demands that make up the top n of at-risk demand value.

Recommendation Summary Table

In addition to the recommendation summary graph, demand fulfillment also provides a summary table that shows you information about demand fulfillment position.

Column Name	Description
Actual	Indicates the demand fulfillment position based on selection criteria coming from the search panel. This column is not impacted when you move the cumulative at-risk demand value slider.

Column Name	Description
Potential	Indicates the demand fulfillment position for a product category if all the selected at-risk demands were no longer at risk. Moving the slider to the left selects only the top n cumulative at-risk demands that meet the selection criteria coming from the search panel, thereby applying an additional filter on top of the selection criteria.
Accepted	Indicates the demand fulfillment position when the recommendations are accepted or completed. The values in this column change when you accept or complete the recommendations.

Considerations for Resolving Demand Fulfillment Recommendations

You take actions on the demand fulfillment recommendations by accepting recommendations. Five types of recommendations are associated with an at-risk demand. They are displayed in tabs under the Recommendations section on the Demand Fulfillment page.

Following are the recommendation tabs:

- Expedite Buy Orders
- Expedite Make Orders
- Expedite Transfer Orders
- Add Resource Availability
- Add Supplier Capacity

You can choose to view all recommendations associated with all at-risk demands, or choose to view the recommendations associated with the demands that you have selected.

Expedite Recommendations

You can review and accept three types of expedite recommendations:

- Expedite buy orders: This includes purchase orders, requisitions, and planned buy orders.
- Expedite make orders: This includes work orders and planned make orders.
- Expedite transfer orders: This includes transfer orders and planned transfer orders.

Expedite recommendations show when the supply is needed (expedite date) and how many days earlier (expedite days) the supply is required than currently planned.

Regardless of the type of expedite recommendation, many columns of an expedite recommendation are the same. For example, organization, item, order, expedite date, and expedite days are common to all expedite recommendations. However, some columns are specific to certain types of expedite recommendations. For example, processing lead time is specific to the make order recommendation tab.

When you accept an expedite recommendation, the order is firmed using the expedite date as the firm date. When the plan is run after accepting the recommendation, the planning process assumes the supply is available on the firm date.

Add Resource Availability Recommendation

The add resource availability and add supplier capacity recommendations are handled in similar ways. The add resource availability recommendation indicates how many hours a resource is overloaded. To resolve an add resource availability recommendation, you must increase the available hours through Oracle Fusion Cloud Manufacturing applications and then recollect the data.

If you have increased the available hours, but have not run collections yet, you can mark the recommendation as complete to indicate that you have taken action against the recommendation.

Add Supplier Capacity Recommendation

The add supplier capacity recommendation indicates how many additional units of capacity are required. To resolve an add supplier capacity recommendation, you must increase the supplier capacity. Use the CSV file method to upload an increased supplier capacity for the item.

If you have increased the capacity, but have not run collections yet, you can mark the recommendation as complete to indicate that you have taken action against the recommendation.

Late Demand Analysis View

As a supply planner, you want to readily understand which supply is the root cause for a demand that is at risk of fulfilling late in a multilevel supply chain with a complex bill of material. Access the Late Demand Analysis table to identify the supplies at any level of the bill of material that are causing an end demand to be at risk of being late.

> **Note:** You must be opted in to the feature named Constraint-Based Planning to access the Late Demand Analysis table.

Constrained supply plans consider lead times as a hard constraint while resource or supplier capacity can be overloaded. A plan can have late demand satisfaction due to lead time or time fence constraints. The Late Demand Analysis table enables you to pinpoint the components or subassemblies that are the root cause of demands being at risk. You can then choose specific activities to resolve the issues. You can't edit the data in the Late Demand Analysis table. However, you can edit the data elsewhere, such as in the Supplies and Demands table or a simulation set. For example, you can select an alternate shipment method to expedite the supplies causing the lateness. After you make changes, rerun the supply plan to check if demands are satisfied on time.

To access the Late Demand Analysis table from an open constrained supply plan, open the Open Table, Graph, or Tile Set dialog box and search for the table. You can also drill to the Late Demand Analysis table to analyze late end demand from the following tables after selecting one or more end demands:

- Build Plan
- Exceptions
- Material Plan
- Supplies and Demands

You can also drill from the following exception reports to the Late Demand Analysis table:

- Late Replenishment for Sales Order
- Late Replenishment for Forecast
- Late Supply Pegged to Sales Order

- Late Supply Pegged to Forecast
- Demand at Risk Due to Insufficient Lead Time

The Late Demand Analysis table displays the supply pegging chain of only those components or subassemblies that are causing demand to satisfy late. The table displays the constrained supply path when one or more selected end demands are satisfied late. However, the table won't display all pegged supplies to the end demand. Additional calculated attributes, such as slack days, are available to further understand the degree of flexibility for manual changes to the plan.

When you access the Late Demand Analysis table, select a **Late Demand Analysis Type** in the Search section to search for constrained supplies to analyze any late demands:

- **All supply paths causing late demand**: When selected, the table displays the pegging chain of all potential supplies that might cause end demands to satisfy late.
- **Most constrained supply path**: When selected, the table displays the supply pegging chain that's caused the maximum delay to an end demand.

The following table describes some of the columns in the Late Demand Analysis table:

Column Header	Description
Assembly Item	Assembly item name for the end demand.
Component Item	Subassembly or component of finished good present in the constrained supply plan.
Component Supply Organization	Organization of the assembly or component supply.
Due Date of End Demand	Due date of end demands such as sales order, forecast, and manual demand.
Earliest Start Date	Earliest date on which the supply can start.
End Demand Value	Value of the end demand.
Latest Start Date for Pegged Supply	Latest date when the pegged supply should have been started to complete demand on time.
Level	Pegging level of assembly or components. The level for the end item is 0 (zero). The end item's immediate component is level 1, and so on.
Need-by Date	Date on which the supply should be complete in order to meet the demand on time.
Number of Occurrences	Number of occurrences of a particular supply record for a subassembly or component in the selected search.
Order Number	Order number of pegged supply.
Order Number for End Supply	Order number of the supply pegged to end demand in constrained supply path.
Order Quantity	Order quantity of late supply pegged to demand.
Order Type	Order type of supplies present in constrained supply path.
Order Type for End Demand	End demand's order type, such as sales order, forecast, and so on.
Organization	Organization for the end demand.
Shared Supply	If Yes, the supply is consumed by multiple demands; if No, then the supply isn't consumed by multiple demands.
Slack Days	The number of days between the earliest start date and the latest start date for pegged supply. The supply planning process calculates this number.

Column Header	Description
Suggested Due Date	Suggested due date of pegged supply.

Lead-Time Insights

Lead-Time Insights Overview

Lead-time insights are the analytics that highlight variances in the actual lead-time versus the planned lead-time for purchased items.

There are two ways you can open lead-time insights:

- **From Planning Advisor**: To see insights specific to a plan, open a plan from Supply Planning and click the Planning Advisor link. On the Planning Advisor UI, select a date to get updates since and search. You get variances based on the selected date range. Click any of the insights to reach the analytics UI.
- **From Plan Inputs**: From the home page, navigate to Supply Chain Planning and open Plan Inputs. Select Lead-Time Performance Summary from the tasks icon. Lead-time insights opened from Plan Inputs shows analytics from a wider date range. You can apply filters to narrow down your results.

Lead-time insights show these analytics:

- *Purchase Lead-Time Variances Summary View*
- *Supplier Lead-Time Variances View*
- *Order Details View*

See these topics to learn more about the next steps in the functional flow:

1. *Configure Lead-Time Parameters*
2. *Assess the Effect of Purchase Lead-Time Variances*
3. *Gain Insights on Lead-Time Variances*

Purchase Lead-Time Variances Summary View

This Analytics summary shows number of purchased items with variance, suppliers with variance, number of orders that are affected because of variance, and a tree-map view of lead-time variance in a range of low to high-affect nodes.

You can fine-tune the data on the analytical summary by applying filters. Click **Show Filters** to apply date criterion or adjust minimum and maximum variances between which you want to see the data.

You can drill down the tree map further to investigate deeper details of the variances for a combination of Item, Supplier, and Supplier Site attributes alongside other planning attributes and performance metrics.

Supplier Lead-Time Variances View

The Suppliers tab shows details related to the items with variances, statistics on the lead-time performance such as Minimum and Maximum range, Variance days, and Variance percentage. It also shows the historical average lead time along with the suggested lead time recommendation.

You can adjust the supplier lead-time and copy it to the simulation set.

Use the advanced search and filter options in the search menu to filter the data based on the text and numerical attributes.

Table View

The following table describes some of the columns in the Supplier Lead-Time table:

Column Header	Description
Item	Shows the item being supplied.
Supplier	Shows the supplier of the item.
Supplier Site	Shows the location of the supplier.
Supplier Lead Time	Shows the actual lead-time of this purchase order. Supplier lead-time can be affected by three factors: procurement, manufacturing, and shipping. Ideally, supplier actual lead time must be same as or below the historic lead time.
Historical Lead Time	This is historical lead-time is the mean of all receipts for an Item-Supplier-Supplier Site combination and is the difference between the actual order date and the actual ship date less Pre-processing Lead-time.
Minimum Range	This is the minimum lead time observed for the historical period.
Maximum Range	This is the maximum lead time observed for the historical period.
Variance Days	Is the difference between supplier lead time and historical lead time shown in number of days.
Variance Percentage	Is the difference between supplier lead time and historical lead time shown in percentage.
Suggested Lead Time	This is the recommended lead-time suggested for the item, supplier, supplier-site combination based on the historical lead time.
Adjusted Lead Time	Use this field to enter a revised supplier lead time. You can save it to a selected simulation set.

Order Details View

The Order Details view lets you see the shipment receipts over time. You can see the lead-time trend chart and also the tabular view of order details.

The chart view helps you:

- Examine historical order information for a category's supplier, supplier site, and item.

- Review the historical lead time and variance to plan for an item, including the purchase order lines' order, ship, and receipt dates.
- Determine the accuracy of the expected lead time in comparison to actual performance by understanding the pattern of past shipping data.

Table View

The following table describes some of the columns in the Order Details table:

Column Header	Description
Order Date	Shows the date of placing the order.
Shipping Date	Shows the date when the supplier shipped the requested item.
Receipt Date	Shows the date when the item was received.
Supplier Lead Time	Shows the item's actual planned lead-time as listed in the supply plan for this purchase order.
Historical Lead Time	Is the realized lead time for this item order line and is the difference between the actual order date and the actual ship date, less pre-processing Lead-time.
Variance Days	Shows variance in number of days.
Variance Percentage	Shows variance in percentage.

10 Constraint-Based Supply Planning

Overview of Constraint-Based Supply Planning

With constraint-based supply planning, you can create and run supply plans that consider material and capacity constraints. Constraint-based planning improves productivity by automating the process of applying lead time and supplier capacity constraints to make planning decisions.

You can focus on meeting demand on time by evaluating all possible alternatives, such as using different sources, substitute components, or alternative work definitions.

A constrained supply plan respects constraints by moving orders to earlier time buckets or offloading to an alternate resource, work definition, or supply source. If these measures are insufficient, then the constrained supply plan, as a last resort, overloads resource and supplier capacity to meet demands on time. In this sense, resource and supplier capacities are soft constraints that the planning process violates only when necessary.

In contrast to the soft constraints, a constrained supply plan in general treats lead times as hard constraints. A demand suddenly arising inside of manufacturing or procurement lead time causes the constrained supply plan to fulfill the demand late. An exception to this rule can be made for buy supplies. If the Enforce Purchasing Lead Time item attribute is set to No, then the supply planning process compresses the purchasing lead time to meet demands on time.

Now, you already know that to create a plan, the first thing that you do is define your plan options. For constraint-based supply planning, you must set the Supply Planning Mode to Constrained when you create your plan. You can specify the constrained mode only for a supply plan type or a demand and supply plan type. There are additional plan options that drive planning behavior for a constrained supply plan.

- Plan Options page, Scope tab, Plan Parameters section: Specify a combination of bucket types to define the planning horizon of a constrained plan.
- Plan Options page, Supply tab, Constraints and Decision Rules subtab.
    - Specify capacity constrained resources to indicate how your plan applies capacity constraints to resources.
    - Specify whether to apply supplier capacity constraints.
    - Select the types of alternate sources of supply that your plan can evaluate if the primary source of supply is unable to meet demand on time.
- Supply: Plan Options dialog box, Optimization Parameters tab: Don't change these default values unless advised to do so by your Oracle help desk.

Run a Constrained Supply Plan

Unlike unconstrained plans that can be run in interactive mode or in batch mode, you can only run a constrained plan in batch mode.

Constraint-Based Supply Planning Behavior

Here are some important points about the constraint-based planning behavior.

- In constraint-based supply planning, supply quantity is determined based on capacity within the processing lead time.

In unconstrained planning, the supply quantity is determined first and then the lead time of the supply is calculated using fixed and variable lead times.

- Internal lead time rollup is used to determine the Processing Lead Time of items with order modifiers, if the user-specified value isn't feasible.
  For example, suppose that an item has a fixed order quantity of 100, and based on the routing-level processing time, the time required to make 100 units is 5 days.
  - If the processing lead time for the item is 3 days, the planning process uses 5 days as the lead time since it's not feasible to make 100 units in a 3 day lead time.
  - If the processing lead time for the item is 7 days, the planning process uses 7 days as the lead time since the user-specified value is more than the value calculated by the internal lead time rollup.

Prioritization of Demand

Demands are prioritized in a particular sequence in a constrained supply plan. This prioritization drives decisions made in constrained planning on how existing supplies such as on-hand supplies are allocated to meet competing demands.

1. Sales orders by schedule date
2. Sales orders by request date
3. Sales orders by order value
4. Forecasts by suggested due date
5. Forecasts by order value

Related Topics

- Configure Constraints and Decision Rules
- Overview of Calculated Order Attributes and the Gantt Chart
- Overview of How You Plan Considering Material Constraints
- Automatically Evaluate and Select Alternatives to Meet Demand on Time
- Plan Considering Resource Constraints in a Constrained Supply Plan

Configure Constraints and Decision Rules

Configure constraints and decision rules for your constrained supply plan on the Plan Options page, Supply tab, Constraints and Decision Rules subtab. You can access the Constraints and Decision Rules subtab in a Supply Planning or a Demand and Supply Planning work area.

When configured, the planning process evaluates alternate sources, alternate work definitions, alternate resources, and substitute components to ensure that supply orders meet demand on time.

Perform these steps to configure the constraints and decision rules for your constrained supply plan.

1. Access the Constraints and Decision rules subtab:
   a. In a Supply Planning or Demand and Supply Planning work area, open a constrained supply plan.
   b. Click **Actions** and then select Edit Plan **Options**.
   c. Click the Supply tab.
   d. Click the constraints and Decision Rules subtab.

2. In the **Capacity Constrained Resources** drop-down list, select how you want your plan to apply capacity constraints to resources. The two types of capacity constrained resources are:
    - **All resources**: The plan treats every resource as a potential constrained resource and applies capacity constraints on all resources when calculating the plan output.
    - **Bottleneck resources only**: the plan only considers resources that have the Bottleneck attribute set to Yes as a capacity constrained resource.

    > **Note:** The resource attribute Bottleneck isn't a source attribute. It can be specified on the Resources page. The default value for the bottleneck attribute is set to No.

3. Select **Apply Supplier Capacity Constraints** to have the plan constrain by supplier capacity when generating purchase recommendations.
4. In the Decision Rules section, select the alternate sources of supply that the plan can evaluate if the primary source of supply can't meet demand on time.

    This table describes the decision rules that you can use in your constrained plan. The table also describes how the planning process evaluates each alternative to ensure that supply orders meet demand on time.

Decision Rule	Functionality
Use alternate resources	The planning process uses alternate resources to avoid overloads on a primary resource.
Use substitute components	The planning process uses substitute components to minimize demand lateness or capacity overloads. Existing supplies on primary components are used first to satisfy demand on time before the planning process selects substitutes. You can have multiple substitute components for a primary component. Supply Planning also minimizes excess inventory at the end of the planning horizon.
Use alternate item structures and work definitions	The planning process uses alternate item structures and work definitions when material or resource (or both) in the primary work definition and item structure are causing delay, or having overloads, in meeting demand on time. You can define priorities for alternate item structures and work definitions. The planning process uses alternate item structures and work definitions to meet demand on time. You can define priorities for alternate item structures and work definitions.
Use alternate suppliers and source organizations	The planning process uses alternate suppliers and source organizations to meet demand on time. By default, the planning process tries to minimize using alternate sources and alternate supplies to meet demand on time. However, if it's necessary to use alternate sources or alternate suppliers, then the planning process uses the priority rank that's assigned to select the alternates.

Decision Rule	Functionality
	Define the priority of alternate sources and alternate supplies in the sourcing rule in Supply Planning.

5. Click **Save and Close**.

Related Topics

- Create a Plan
- Define Scope Plan Options
- Overview of How You Plan Considering Material Constraints
- Automatically Evaluate and Select Alternatives to Meet Demand on Time

Plan Considering Resource Constraints

You can generate a supply plan where resource capacity is a soft constraint that drives the selection of alternate sources of supply.

In a constrained supply plan, the planning process solves resource capacity constraints by moving orders to earlier time buckets or offloading to an alternate resource. When a constraint is encountered, the planning process generates recommendations where resource capacity is available so that the demand can be fulfilled on time. For example, the recommendations can be to use an alternate resource, alternate work definition, or alternate source. The constrained supply plan only overloads resource capacity if there's no other alternative to meet demand on time.

Let's suppose a frame manufacturer can't satisfy customer demands due to the overloaded labor resource in its cutting department. To resolve this issue, they add an additional labor as an alternate in the cutting department. As a result, the planning process uses the alternate resource when the primary resource is overloaded, which resolves the overloaded issue.

Supply orders can use resource capacity in any planning time bucket within their lead time. If the lead time is larger than the required resource usage, the capacity is used up in earlier time buckets first and then in later time buckets. The supply due date is still planned as late as possible to meet the demand on time.

Resource capacity constraints impact order sizing for items without order modifiers. Consider an item with a lead time of 3 days whose production rate is 10 units per hour. A demand for this item for 480 units on Day 6, which results in the planning process creating 2 planned orders for 240 units each.

Orders that use non-bottleneck resources won't take capacity constraints into account during order sizing. These orders will be sized based on demand and will overload capacity within the lead time.

Order in Which Capacity Constraints Are Applied

The planning process applies capacity constraints in a specific order.

1. Prebuild in earlier time buckets
2. Offload to an alternate resource
3. Overload capacity

Now, let's look at an example of how the planning process handles the capacity constraints. Consider a demand for 500 units of widgets on Day 3. The production rate is 10 widgets an hour.

- The plan uses the primary resource for Days 1, 2, and 3 to produce 80 widgets per day for a total of 240 widgets.
- The plan then uses the designated alternate resource for Days 1, 2, and 3 to produce 80 widgets a day for a total of 240 widgets.
- Finally, the plan overloads the primary resource on Day 3 to produce the remaining 20 widgets needed to meet the demand of 500 widgets.

Capacity Constrained Resources

Resource constraints are applied based on the Capacity Constrained Resources attribute in plan options. The Capacity Constrained Resources attribute is on the Plan Options page, Supply Tab, Constraints and Decision rules subtab. The two types of capacity constrained resources are:

- **All resources**: The plan treats every resource as a potential constrained resource and apply capacity constraints on all resources when calculating the plan output.
- **Bottleneck resources only**: The plan only considers resources that have the Bottleneck indicator set to Yes as a capacity constrained resource in the Resources view.

Related Topics

- Configure Constraints and Decision Rules

Plan Based on Workday Patterns in a Resource Calendar

Manufacturing organizations use calendars most commonly applicable for a plant and assign workday patterns that are applicable to specific resources in that plant.

In a constrained supply plan, you can configure a plan option parameter to consider more granular workday patterns in a resource shift instead of using the manufacturing calendar.

Use the **EnableResCalendar=true** parameter to instruct the planning process to honor the resource availability of the first and last resource in a work definition. The suggested start date and suggested dock date of a make supply will then fall on days when respective resources are available. This process enables more accurate planning calculations by considering the actual resource availability in a constrained supply plan.

Perform these steps to configure the **Setting for Multithread** parameter to enable the resource calendar.

> **Note:** Before you can set the multithread parameter, you must first opt in to the Plan Based on Workday Patterns in a Resource Calendar feature.

1. Open a constrained supply plan and navigate to the Plan Options page, Supply tab, General subtab, and click the Select Advanced Options button.
2. In the Supply: Advanced Options dialog box, navigate to the Optimization Parameters tab.
3. In the **Setting for Multithread** text box, enter **EnableResCalendar=true**.

   If there is another value set for this parameter, add the EnableResCalendar=true value at the end, separated by a comma.

The following provides some insight into how supply planning plans based on workday patterns in a resource calendar when the Setting for Multithread parameter is set to EnableResCalendar=true.

- The planning process honors only the shift calendar assigned to the first and last resource of a work definition.
- The planning process determines the first resource as the first scheduled resource associated with the first operation in the work definition.

  The planning process determines the last resource as the last scheduled resource associated with the last operation of the work definition.
- The suggested start date of a make supply will fall on a working day of the resource shift calendar associated with the first resource.

  The suggested dock date falls on a working day of the resource shift calendar associated with the last resource of the work definition.
- While planning, if the suggested start date falls on a nonworking day for a resource, then the planning process starts the order early by moving the start date into a working date.

  If the suggested dock date falls on a nonworking day of the last resource, then the planning process will prebuild the order by moving the dock date to an earlier working day of the resource.
- The planning process respects processing lead times. If the planning process doesn't find a working day in an earlier bucket, the suggested start date or dock date can fall on a nonworking day of a resource shift calendar.
- If supply planning selects alternate resources during the planning process, then the start date or dock date for the make supply falls on a valid workday of the shift calendar for the alternate resource.
- If the **Capacity Constrained Resources** plan options parameter is **All resources**, then resource shift calendar is considered for all resources that are assigned as first and last resource of work definitions as described above.

  If **Bottleneck resources only** is selected, then resource shift calendar is considered only for bottleneck resources based on criteria as described above.
- The resource requirements of intermediate resources in a work definition can fall on days when a resource isn't available but is a working day in the organization's manufacturing calendar.

Plan Considering Material Constraints

Overview of How You Plan Considering Material Constraints

You can generate a supply plan where the lead time or supplier capacity is a constraint.

When you use the constrained planning mode for a supply plan, the planning process respects material lead times as hard constraints, which can't be compressed to meet demand due dates. The planning process respects supplier capacity as soft constraints and will only overload supplier capacity if there aren't other alternatives to meet demand on time. To control whether purchasing lead time constraints are applied during the planning process, use the Enforce Purchasing Lead Time attribute.

> **Note:** You can set the Enforce Purchasing Lead Time item attribute in Item Organization: Planning attributes when you define an item in the Product Information Management work area. Or you can set this item attribute in the Items view in the Supply Planning work area.

When the supply planning process encounters a constraint, it provides recommendations to help you to fulfill the demand on time. For example, it might recommend that you build ahead, use a substitute component, or use an alternative source.

Let's dig a little deeper into how the planning process handles lead time constraints and supplier capacity constraints in a constrained supply plan.

Lead Time Constraints

Lead time constraints determine how soon new material can be made available. Within the lead time, only on-hand inventory and scheduled receipts are used to satisfy demands. Beyond the lead time or planning time fence, you can create planned orders.

The quantity of these planned orders is constrained by the available supplier capacity. The planning process honors lead times, and orders can be fulfilled late to respect lead time constraints.

Purchase orders within the planning time fence or lead time can only be rescheduled out, but not rescheduled in. If a purchase order is outside of the planning time fence or lead time, then the purchase order can be rescheduled out. Also, the purchase order can be rescheduled in only until the planning time fence or lead time.

How to Offset Dependent Demand Due Dates in Aggregate Time Buckets

For constrained supply plans, you can offset dependent demand due dates when planning in aggregate time buckets. You can enforce a more granular control over lead times for subassemblies and components whose dates need to be offset by user-specified lead times.

Use the following attributes in an items simulation set to offset dependent demands into a previous aggregate time bucket:

- **Lead Time Offset in Week Buckets**: The planning process offsets the lead time by number of days used in this attribute for an item and organization when planning in week buckets.
- **Lead Time Offset in Period or Month Buckets**: The planning process offsets the lead time by number of days used in this attribute for an item and organization when planning in period or month buckets.

By using these attributes, you can ensure that subassemblies and components of manufacturing assemblies with lengthy cumulative manufacturing lead times are manufactured and procured on time in the correct aggregate time bucket.

Define the item attributes in a simulation set to adjust the lead times in aggregate buckets. You can also update these attributes in the Items table in plan output and then simulate the plan to correctly offset the lead time.

When planning in aggregate buckets, the planning process considers the lead times based on specific criteria with respect to the two attributes.

- For make planned orders, the planning process uses the maximum of processing lead time and aggregate bucket lead time offset attribute for that item.
- For planned transfer supplies, the planning process uses the maximum in transit lead time and aggregate bucket lead time offset item attribute value.

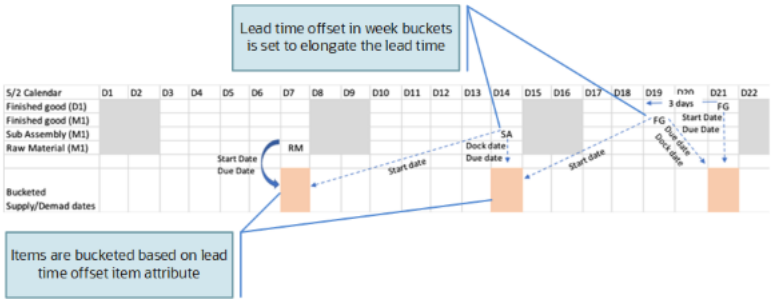
- For new buy orders, the planning process uses the maximum of processing lead time in the approved supplier list (or processing lead time at item if ASL isn't defined), and aggregate bucket lead time offset item attribute value.

Example of How to Offset Dependent Demand Due Dates in Aggregate Time Buckets

Let's look at an example of how you can offset dependent demand due dates when you plan in aggregate time buckets.

For our example, your constrained supply plan is run in weekly buckets and the planning calendar is a 5,2 calendar (5 days working, 2 days nonworking). The demand for a finished good is on day 21.

- The demand for a finished good (FG) is in distribution organization D1.
- The finished good is sourced from manufacturing organization M1 and is manufactured in M1.
- The in transit lead time between organization D1 and M1 is 3 days.
- The finished good and subassembly (SA) are make items and the raw material is a purchased item.
- The processing lead time for each item is 4 days and there are no other lead times.



You can set the item attribute for aggregate time buckets to offset the dates. For our example, let's set the Lead Time Offset in Week Buckets attribute for the finished good and subassembly to 7 in the M1 organization.

The constrained supply planning process looks at the Lead Time Offset in Week Buckets attribute value. If the value is greater than the processing lead time for the item, the planning process replaces the processing lead time with the Lead Time Offset in Week Buckets attribute value. In our example, processing lead time is 4 days, which is less than a week. So, the planning process picks up the value in the Lead Time Offset in Week Buckets attribute, which is 7.

For the finished good in the M1 organization, the due date and dock date falls on week 3 (postprocessing led time is 0 in our example). However, the start date is offset by one week and falls on week 2 (dock date minus Lead Time Offset in Week Buckets attribute value). Since it's a weekly bucket, the start date is bucketed to the end of week 2.

Similarly, for the subassembly (SA), the dock date and due date is on the end of week 2, but the start date is bucketed on week 1.

For the raw material (RM), the Lead Time Offset in Week Buckets attribute value is blank. The planning process considers the processing lead time and buckets all dates (start date, ship date, dock date, and due date) on the end of week 1.

The planning process considered the Lead Time Offset in Week Buckets item attribute in this example because of planning in week buckets. If the item is planned in period or month buckets, then the planning process considers the Lead Time Offset in Period or Month Buckets attribute.

Supplier Capacity Constraints

Supplier capacity constraints determine how much new material can be ordered from a supplier within a given time bucket. If the supply planning process can't find any alternatives to meet demand on time, then supplier capacity is overloaded to fulfill the demand on time.

Here are some additional points about supplier capacity constraints:

- Supplier capacity is applied as a soft constraint when planning supplies for buy items.
- Supplier capacity constraint can result in the selection of an alternate supplier.
- Supplier capacity is consumed on the suggested dock date of buy orders.
- Supplier capacity is cumulative and any unused capacity from one planning time bucket carries forward into the next bucket.
- For configure-to-order items in a constraint-based supply plan, the planning process considers capacity at the model-item level. Supplies for configurations consume supplier capacity of the base model.

Supplier Capacity Constraint Parameters

For your constrained supply plan, you can establish parameters to determine when supplier capacity starts accumulating and whether purchase orders consume supplier capacity or not.

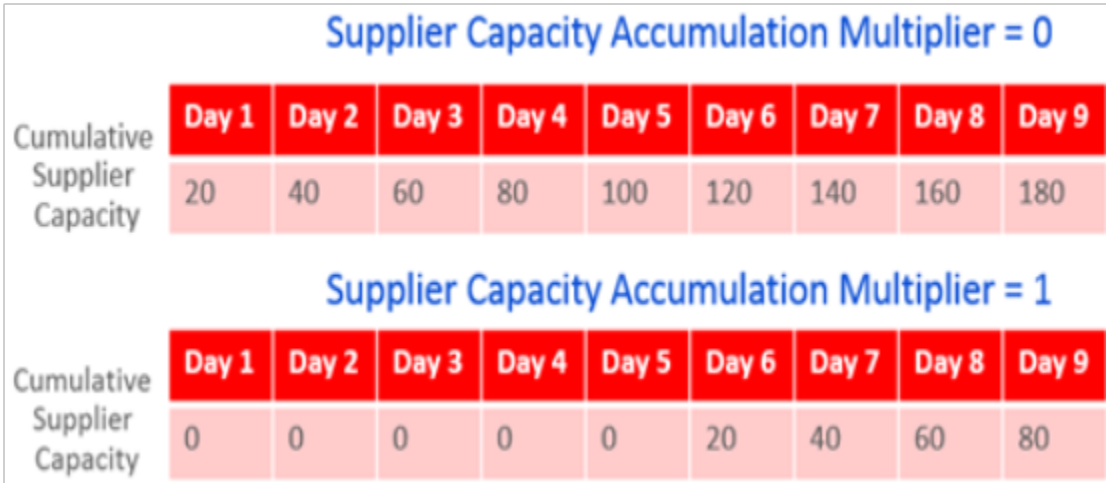
For these supplier capacity constraints, you can set two attributes in plan options in the Supply: Advanced Options dialog box, Supplier Capacity Parameters section.

- Supplier Capacity Accumulation Multiplier
- Consume supplier capacity with purchase orders

Supplier Capacity Accumulation Multiplier

The **Supplier Capacity Accumulation Multiplier** attribute determines when supplier capacity starts accumulating. Supplier capacity accumulates from the time bucket corresponding to the item lead time, multiplied by the supplier capacity accumulation multiplier. This attribute is located in plan options in the Supply: Advanced Options dialog box, Supplier Capacity Parameters section.

For example, you have an item with a 5-day lead time that has a supplier capacity of 20 units per day. If the supplier capacity accumulation multiplier is zero, then capacity is accumulated starting on Day 1. If supplier capacity accumulation multiplier is set to 1, then capacity is accumulated starting on Day 6.



Consume Supplier Capacity with Purchase Orders

The **Consume supplier capacity with purchase orders** attribute determines whether purchase orders consume supplier capacity or not. This attribute is located in plan options in the Supply: Advanced Options dialog box, Supplier Capacity Parameters section.

If you select this option, purchase orders consume supplier capacity. Use this setting when the supplier capacity stated for your supplier is inclusive of any capacity they're going to use for purchase orders you have already placed against the supplier.

If you don't select this option, purchase orders don't consume supplier capacity. Use this setting when the supplier capacity stated for your supplier excludes any commitment they have already made to fulfill existing purchase orders.

Demand Cutoff Constraint Parameters

In constrained plans, you can use demand cutoff parameters to specify that certain demands be fulfilled only by supplies that match the demand due date or that fall within the lateness time window specified.

You can use these parameters to avoid planning for demands that can’t be fulfilled within the specified lateness time window.

To use this functionality, your enterprise must have opted in to the Fill Demand with Supplies Only Within a User-Specified Window feature.

You must also select at least one option from the Applies-to Order Types drop-down list to enable this feature. The Applies-to Order Types drop-down list is located in the Supply: Advanced Options dialog box, under the Demand Cutoff Parameters section. The options are:

- Forecast
- Manual demand
- Sales Order

You can select one, multiple, or all. If you don’t select any options, then this functionality won’t be enabled and demand cutoff parameters won’t be applied.

To navigate to the Demand Cutoff Parameters section:

1. On the Edit Plan page, click the **Tasks** panel drawer.
2. In the Tasks panel drawer, click **Manage Plans**.
3. In the Search area, search for your plan.
4. Select the plan from the displayed search result. Click **Actions** and then click **Edit Plan Options**.
5. On the Edit Plan Options page, click the **Supply** tab.
6. On the General tab, click **Select Advanced Options**.
   The Supply: Advanced Options dialog box opens, which includes the Demand Cutoff Parameters section.

You can set demand cutoff parameters at both the plan and item-organization levels.

Demand Cutoff at the Plan Level

To set demand cutoff at the plan level, enter a whole, positive number in the **Number of Days for Demand Cutoff** field in the Supply: Advanced Options dialog box. This field specifies the number of days after the demand date that the demand can be fulfilled by supplies for a plan, and applies to sales order, forecast, or manual demand.

You also can specify the attribute in the Plan Options UI.

Demand Cutoff at the Item-Organization Level

To set demand cutoff at the item-organization level, enter a whole, positive number in the **Number of Days for Demand Cutoff** column on the Items page. This column specifies the number of days after the demand date that the demand can be satisfied, and it applies to sales order, forecast, or manual demand.

You can enter or edit this attribute only in the Item Simulation Sets UI. It can't be edited in the Plan mode.

Demand Cutoff Parameters Priorities

Because demand cutoff can be specified at several levels, it's important to understand how planning prioritizes and selects the value to use.

Forecast and Manual Demand Cutoff Parameters are prioritized as follows:

1. Item-Organization Parameters
2. Plan Options Parameters

Sales Order Demand Cutoff Parameters are prioritized as follows:

1. Sales Order Line (Latest Acceptable Date)
2. Item-Organization Parameters
3. Plan Options Parameters

This means that if, for example, a sales order has a value set in the Latest Acceptable Date field, then planning uses that date and doesn't look at any settings at the item-organization or plan levels to determine demand cutoff. However, if a sales order doesn't have a value set in the Latest Acceptable Date field, then planning next looks to see if there's a demand cutoff value set at the item-organization level, in the Number of Days for Demand Cutoff field on the Items page. If there's a value specified at the item-organization level, then the system uses that. However, if that field is also blank, then planning continues on and looks at the plan-level options, as specified in the Number of Days for Demand Cutoff field in the Supply: Advanced Options dialog box.

> **Note:** To use plan-options parameters, you must select the appropriate option for that demand type (Forecast, Manual demand, or Sales Order) in the Applies-to Order Types drop-down list in the Supply: Advanced Options dialog box.

Unmet Demand

The unsatisfied demands resulting from the demand cutoff dates are displayed in the Unmet Demand Quantity column of the Supplies and Demands table. You can use the Unmet Demand Quantity attribute to query the unmet demands.

For more information, refer to the *Configure Order-Based Exceptions for Constrained Supply Plans* topic in this guide.

How Demand Cutoff Parameters Affect Demand Dates

Using demand cutoff parameters affects dates for forecast, sales order, and manual demands.

How Demand Cutoff Parameters Affect Forecast Demands

Planning won't plan supplies for any item-organization forecast quantity that can't be satisfied by the Final Date to Satisfy Forecast Demand value. This value is determined based on the following equation:

Final Date to Satisfy Forecast Demand = Forecast Demand Date + Number of Days for Demand Cutoff

If the Final Date to Satisfy Forecast Demand falls inside a Period or Week planning bucket, then planning considers the last day of the bucket as the cutoff date for demand. If the cutoff date is in a bucket on or after the Forecast Bucket in which the Forecast Demand can be satisfied, then the forecast demand is partially or completely satisfied. In case of partial satisfaction, the remainder of the forecast will be unmet.

How Demand Cutoff Parameters Affect Sales Order Demands

For sales orders demands, planning first looks to determine if there's a Latest Acceptable Date specified. If there is, then planning uses the Latest Acceptable Date value to set demand cutoff.

The Latest Acceptable Date is specified at the sales order line level.

Note that the Request Type affects the Latest Acceptable Date:

- If the Request Type value is Ship on, then the Latest Acceptable Date equals the Latest Acceptable *Ship* Date.
- If the Request Type value is Arrive on, then the Latest Acceptable Date equals the Latest Acceptable *Arrival* Date.

If the Latest Acceptable Date for a sales order falls inside a Period or Week planning bucket, then it's moved to the last day of the bucket for planning purposes. The plan output displays the Latest Acceptable Date after it's offset by the transit lead time.

If there isn't a Latest Acceptable Date specified for a sales order, then planning will use a demand cutoff parameter set at either the item-organization level (next priority) or the plan level (last priority).

Past Due Demand and Demand Cutoff Dates

Demand cutoff parameters also apply to past due sales orders, past due forecasts, and past due manual demands. For a past due forecast or manual demand, the Final Date to Satisfy Demand is calculated from day 0. If the Latest Acceptable Date or the Final Date to Satisfy Demand is before the plan start date, then the corresponding demands are ignored by the planning process, and they aren't brought to the plan output.

End Item Substitution and Demand Cutoff Dates

If the demand of an original item is substituted with the supply of a substitute item, then the demand cutoff date is calculated based on the demand cutoff parameters of the original item.

Reservations and Demand Cutoff Dates

Planning still respects reservations if demand cutoff parameters are used. That is, planning can ignore the Latest Acceptable Date or the Final Date to Satisfy Demand in order to honor reservations.

For more information on reservations, refer to the *How Supply Planning Respects Reservations in a Constrained Plan* topic in this guide

Plan Considering Process Manufacturing Work Definitions

Overview of How You Plan Considering Process Manufacturing Work Definitions

In a constrained supply plan, you can plan supply based on the process manufacturing work definition as specified in Oracle Fusion Cloud Manufacturing or in other manufacturing applications. You can use a manufacturing plant to support production needs for process manufacturing and discrete manufacturing.

You can plan appropriate batch quantities and account for the creation of co-products and by-product supplies along with the primary product specified in theprocess work definition.

Process manufacturing environments are characterized by a set of unique planning challenges. These include products, co-products, and by-products that are generated at various steps in the manufacturing process, not all of which are at the end of the process. When using Oracle Manufacturing, you can specify a work definition that captures the batch quantity and the manufacturing process. You can also specify the work definition to take into account the steps and quantities at which products, by-products, and co-products are generated, in addition to the ingredients required for the manufacturing. Supply Planning honors these work definitions when the planning process generates the plan. Additionally, you can analyze the plan in the context of the co-products and by-products generated.

Use File-Based Data Imports to upload process manufacturing work definitions into Supply Planning for sources other than Oracle Manufacturing .

Use the Recalculate action to recalculate a subset of your plan output to quickly see the impact of changes to your constrained supply plan.

Related Topics

- Recalculate for Process Manufacturing Work Definitions

Supply Planning Behavior and Concepts for Process Manufacturing

Let's talk about the business logic employed by Supply Planning when it plans process manufacturing facilities and activities.

In a constrained supply plan, you need to understand some of the behavior and concepts for process manufacturing, such as the following:

- Supply planning behavior
- Considerations when you define and plan for process manufacturing
- Batch quantity concepts

Supply Planning Behavior

The following are some supply planning behaviors for process manufacturing:

- The supply planning process plans for existing process work orders and recommends new supplies, based on process work definitions.
- The planning process recommends new supplies in proportion to the output quantities for primary, co-product, and by-product supplies.
- The batch quantity linearly scales to the primary output quantity and all the output and input items on the work definition.
- For existing process work orders, the supply planning process considers operation level scrap to determine the remaining planned quantities of output products associated with current and future operations.
- If an item is the primary output in one work definition and a co-product in another work definition, the work definition in which it's the primary output is used to create a supply for this item to meet demand.

Considerations When You Define and Plan for Process Manufacturing

Consider these points when you define and plan for process manufacturing work definitions in a constrained supply plan.

- The unique criteria for work definition selection by supply planning is based on primary output item, work definition name, and highest production priority.
- At any given point in time, an output item can be associated to one and only one operation. The same product can't be completed from multiple operations.
- A work definition operation can complete more than one output item.
- Output of one operation can't be the input product at the last operation.
- It's not mandatory to attach any output product at the last operation.
- Item shrinkage is supported for process work orders and planned orders.

Batch Quantity Concepts

Using batch quantity while defining a work definition helps you to specify the product outputs, ingredients, and resource usages with a user-friendly range of numbers instead of small fractions or large numbers.

There are some additional batch quantity concepts. Batch quantity:

- Is the quantity of the production batch used for batch sizing and scaling.
- Is the quantity that moves between the operations in a work order.
- Linearly scales to the primary output quantity and all the output and input items in the work definition.
- Can't add up to the sum of the quantities for the output items, or the sum of the input items, or both.

Analyze Process Manufacturing Plans

In constraint-based supply planning, you can analyze the process manufacturing work definitions in your plans from several views. There are also some specific measures that support process manufacturing work definitions in a constrained supply plan.

Routings View

When you create a work definition or work order, the Routings view displays the **Work Method** attribute. The **Work Method** attribute represents the production process, or manufacturing work method. Valid values are **Discrete manufacturing** and **Process manufacturing**.

Item Structures View

In a constrained supply plan, the Item Structures view distinguishes between ingredients and output products.

- The Component Items tab contains the details about ingredients required to build an assembly, including substitute components.
- The Output Item tab shows various output types, such as primary product, co-products, and by-products produced at different operations of a process work definition. The Output Items tab is read-only.

Supplies and Demands View

These attributes in the Supplies and Demands view support process manufacturing work definitions in a constrained supply plan

Attribute	Description
Suggested Completion Date	The completion date for work orders and planned orders. The suggested completion date can be later than the due date of the primary product for process manufacturing.
Batch Quantity	The quantity of the production batch used for batch sizing and scaling. It is also the quantity that moves between the operations in a work order. The batch quantity linearly scales to the primary output quantity and all the output and input items on the work definition.
Batch Quantity UOM	The unit of measure code of the work definition quantity (Batch Quantity).
Work Method	The manufacturing work method. You can select the work method in the Routings view. Value are:

Attribute	Description
	• Process manufacturing • Discrete manufacturing

Build Plan View

In the Build Plan view, you can select **Related Output Supplies** from the **Highlight Related Cells** drop-down list. The other supplies that are related to the selected supply through a co-product or by-product relationship are highlighted.

In the Configure Build Plan dialog box, you can select the **Related Output Items** option in the **Levels to Display** drop-down list. For the selected item/organization or category, all items that appear as output items in the work definitions are shown in the Build Plan.

Measures to Support Process Manufacturing Work Definitions

These measures support process manufacturing work definitions in a constrained supply plan.

Measure	Description
Planned Order Co-Product Supply	Measure contains the supplies for products recommended by the supply planning process, which gets produced with primary product in the manufacturing process.
Work Order Co-Product Supply	Measure contains work order supplies for products that are getting produced during the manufacturing process of the primary finished good work order.
Planned Order By-Product supply	Measure contains the supplies recommended by the supply planning process for residual items that gets produced in the manufacturing process of the primary finished good.
Work Order By-Product supply	Measure contains supplies that are produced as a residual of, or incidental to, the production process of the primary finished good work order. By-product supplies aren't inventoried.

Automatically Evaluate and Select Alternatives to Meet Demand on Time

You can run a constraint-based supply plan that evaluates the use of alternate sources of supply to overcome demand fulfillment issues.

Configure constraints and decision rules on the Plan Options page, Scope tab, Constraints and Decision Rules subtab in a Supply Planning or Demand and Supply Planning work area. When configured, the planning process evaluates alternate sources, alternate work definitions, alternate resources, and substitute components to ensure that supply orders meet demand on time.

Supply Planning Logic to Automatically Evaluate and Select Alternatives

Constrained supply planning prioritizes satisfaction of demand due dates higher than the need to respect resource or supplier capacity constraints. When a capacity constraint exists, the planning process will:

1. First try to satisfy the demand in an earlier time bucket by using the primary sources of supply.
2. If there is no capacity available on the primary on or before the demand due date, the planning process selects alternate sources of supply.
3. If there is no capacity available on the primary or the alternate on or before the demand due date to fulfill demand on time, then the planning process overloads capacity.

Supply Planning Sequence to Automatically Evaluate and Select Alternatives

The planning process uses a specific sequence for alternate selections.

1. Use alternate resources
2. Use substitute components
3. Use alternate item structures and work definitions
4. Use alternate suppliers and source organizations

Before Setting Up Constraints and Decision Rules

Before you set up your constraints and decision rules to automatically evaluate and select alternatives to meet demand on time, consider the following implementation advice:

- Define the alternates in the supply chain to meet our specific business needs. Understand that some alternates are expensive.
- Select only those alternate options in supply planning for which there is corresponding data in the source.

Alternate Resource Rules

You can use alternate resources with these supported setups:

- One alternate resource is specified for one primary resource.
- One alternate resource is specified for one primary resource, and one alternate resource is specified for the simultaneous resource.
- Multiple ranked alternate resources specified for one primary resource.

These setups aren't supported with respect to alternate resources:

- Multiple alternate resources (used simultaneously) to replace one primary resource.
- A set of alternate resources (used simultaneously) to replace a set of primary resources (used simultaneously).

Exceptions in a Constrained Supply Plan

You can evaluate a plan and prioritize the manual changes to perform based on the exceptions generated from a plan. Oracle Supply Planning provides several exception messages for constraint-based supply planning.

You can drill down on an exception to obtain more detailed information about the exception. These are the four types of exceptions for a constrained supply plan.

- Demands at Risk Exceptions
- Late Supply Exceptions
- Overloaded Capacities Exceptions
- Usage of Alternates and Substitutes Exceptions

Demands at Risk Exceptions

This table shows the demands at risk exceptions for unconstrained and constrained supply plans.

Exception	Exception is generated for the following conditions:
Demand at Risk Due to Insufficient Lead Time	• Suggested order date is less than plan start date. • Reschedule days is less than 0 (Reschedule in Recommendations). • Firm status is set to Not Firm. **Note:** All three conditions must be met before the planning process generates the exception.
Demand at Risk Due to a Resource Capacity Shortage	Resource availability is less than the resource requirements for the resource capacity measures of any resource used in making any supply that's end-pegged to the demand.
Demand at Risk Due to a Supplier Capacity Shortage	Supplier capacity availability is less than the supplier capacity required for the supplier capacity measures of any item that's end pegged to the demand.

Late Supply Exceptions

This table shows the late supply exceptions for unconstrained and constrained supply plans.

Exception	Exception is generated for the following conditions:
Late Supply Pegged to Forecast	Days late is greater than 0 for the Days Late demand order attribute. This condition means that the demand could be at risk due to the late supply.
Late Supply Pegged to Sales Order	Days late is greater than 0 for the Days Late demand order attribute. This condition means that the demand could be at risk due to the late supply.
Orders with Insufficient Lead Time	• Suggested order date is less than plan start date. • Reschedule days is less than 0 (Reschedule in Recommendations). • Firm status is set to Not Firm.

Exception	Exception is generated for the following conditions:
	Note: All three conditions must be met before the planning process generates the exception
Orders To Be Canceled	The planning process detects a supply order that's not firm for which you don't need to satisfy demand or safety stock requirements. The planning process: • Suggests that you cancel the supply order. • Continues to plan lower item structure levels as if you accepted the suggestion.
Orders To Be Rescheduled In	The planning process detects a supply order that's not firm with an original due date that's later than the suggested due date. The planning process: • Suggests that you reschedule the supply order to an earlier date. • Continues to plan lower item structure levels as if you accepted the suggestion.
Orders To Be Rescheduled Out	The planning process detects a supply order that's not firm with an original due date that's earlier than the suggested due date. The planning process: • Suggests that you reschedule the supply order to a later date. • Continues to plan lower item structure levels as if you accepted the suggestion.

Overload Capacities Exceptions

This table shows the overload capacity exceptions for unconstrained and constrained supply plans.

Exception	Exception is generated for the following conditions:
Resource Overloaded	Resource utilization percentage is greater than 100.
Supplier Capacity Overloaded	Supplier capacity utilization percentage is greater than 100.

Use of Alternates and Substitutes Exceptions

This table shows the use of alternates and substitutes exceptions for only constrained supply plans.

Exception	Exception is generated for the following conditions:
Order Sourced from Alternate Facility	Alternate Facility Used attribute is set to True. The order is sourced from an alternate facility due to the material, resource, or lead time constraints.
Order Sourced from Alternate Supplier	Alternate Supplier Used attribute is set to True. The order is sourced from an alternate supplier (Rank 2 supplier and higher) due to the supplier capacity constraints.

Exception	Exception is generated for the following conditions:
Planned Order Uses Alternate Work Definition	Alternate Work Definition Used attribute is set to True. The planned order has used an alternate work definition due to the material, resource, or lead time constraints.
Planned Order Uses Alternate Resources	Alternate Resource Used attribute is set to True. The planned order has used an alternate resource due to the capacity constraints.
Planned Order Uses Substitute Component	Substitute Component Used attribute is set to True. The order has used a substitute component. The scenarios where this exception is generated are: • The primary component lead time is long, which causes demand lateness (Lead Time Constraint). • The supplier capacity of the primary component isn't sufficient, which causes lateness (Supplier Capacity Constant). • The resource capacity for making the primary component isn't sufficient, which causes lateness (Resource Constraint). • The Create Supply plan option is set to No for the primary component and there's enough on hand or capacity available on the substitute component.

Diagnose Planning Issues in Constrained Supply Plans

Overview of Calculated Order Attributes and the Gantt Chart

Calculations are more complex in a constrained supply plan than in an unconstrained plan. So, there are additional diagnostic attributes to help you diagnose issues in your constrained supply plan.

The calculated order and resource requirement attributes help you understand why the supply planning process made certain decisions during the calculation process. In conjunction with these diagnostic attributes for a constrained supply plan, you can also use the Gantt Chart to:

- View orders and resource requirement duration on a timeline along with the calculated attributes.
- Visualize the timing of supplies to be manufactured and sourced to support the demand.
- Visualize how orders consume capacity on a resource.
- Interactively modify the planned dates of a supply or resource requirement. For example, use drag and drop to change a supply order or a resource activity to an earlier time or a later time.

Calculated Order Attributes

Constraint-based supply planning includes several calculated order and resource requirement attributes to help you diagnose issues in your plan. Some attributes are based on milestones on an order that are calculated as part of a plan run, such as Earliest Start Date.

Other attributes are explanatory order attributes, such as Shared Supply.

Milestones

These attributes are based on milestones.

Diagnostic Attribute	Applies to	Description
Need by Date	Supply and resource requirement	The date when the supply or resource requirement must complete to satisfy demand on time.
Earliest Start Date	Supply and resource requirement	The earliest possible date that a supply or resource activity can start, based on the nominal lead times of all pegged upstream supplies and resource activities.
Consumption Start Date	Supply and resource requirement	The date when a downstream supply or resource activity starts consuming the output of the supply or resource activity. If the supply or resource activity has multiple consumers, the earliest consumer is used to calculate this date.
Material Available Date	Supply and resource requirement	The date when the upstream supply or resource activity that feeds the supply or resource activity is planned to complete. If the supply or resource activity has multiple upstream supplies or resource activities feeding it, the latest producer is used to calculate this date.
Latest Start Date	Supply	The latest possible date that a supply can start so that it can complete by its need-by date.

Explanatory Order Attributes

These attributes are based on explanatory order attributes.

Diagnostic Attribute	Applies to	Description
Contributes to Overload	Supply	This attribute value is Yes if one of these conditions occurs: • The supply is in a time bucket where it overloads supplier capacity. • One of the resource requirements of this supply is in a time bucket where the resource capacity is overloaded.
Contributes to Overload	Resource requirement	This attribute value is Yes if the resource requirement is in a time bucket that overloads resource capacity.

Diagnostic Attribute	Applies to	Description
Contributes to Demand Lateness	Supply and resource requirement	The attribute value is Yes if the Need-by Date minus the Earliest Start Date of the supply or resource requirement is less than the nominal lead time of the supply or resource requirement.
Shared Supply	Supply	The attribute value is Yes if the supply is consumed by multiple demands.
Uses Order Modifier	Supply	The value is Yes if the supply quantity has been determined by the use of an item level order modifier such as Fixed Order Quantity.
Pegged to Firm	Supply	The value is Yes if the supply is pegged to a downstream firm supply.

Gantt Chart

Use the Gantt Chart to view orders and resource requirement durations on a timeline along with the calculated attributes. You can also interactively modify the planned dates of a supply or resource requirement from the Gantt Chart.

You can only open the Gantt Chart in context by drilling to it from another table. Also, the Gantt chart always opens in a different pane than the pane from which you drilled from. For example, if you're using a single pane layout and open the Gantt Chart from the Supplies and Demands table, the page layout switches to a double pane (top and bottom) layout. In this situation, the Gantt chart opens in the bottom pane.

How You Drill to the Gantt Chart

You can only open the Gantt Chart in context by drilling to it from another table. Here are the tables from which you can drill to the Gantt Chart.

Drill to Context	What is Displayed in the Gantt Chart
Supplies and Demands	Supply orders
Resource Requirements	Resource requirements
Cells corresponding to these measures in the Material Plan, Build Plan, or a user-defined table: • Total Supply • Planned Orders • Scheduled Receipts	Supply orders

Drill to Context	What is Displayed in the Gantt Chart
• Purchase Orders • Purchase Requisitions • Transfer Orders • Work Orders • Dependent Demands	
Cells corresponding to the Resource Requirements measure in the Resource Plan, Build Plan, or a user-defined table.	Resource requirements

Drill From the Gantt Chart to Other Tables

From the Gantt Chart, here are the tables that you can drill to and what the tables display.

Drill From	Drill to Table	What the Table Displays
Supply bar	Supplies and Demands	Supply order details
Supply bar	Material Plan	Material plan for the item-organization
Supply bar	Items	Item corresponding to the supply
Supply bar	Item Structure	Item structure corresponding to the item of supply
Supply bar	Routings	Routing of the item of the supply
Supply bar	Suppliers	Suppliers for the item corresponding to the supply
Resource Requirement bar	Resources	Resource corresponding to the resource requirement
Resource Requirement bar	Resource Availability	Resource availability of the resource
Resource Requirement bar	Resource Plan	Resource plan for the resource corresponding to the resource requirement
Resource Requirement bar	Resource Requirements	Resource requirement details

List of Order Attributes You Can Display

You can display these order attributes in the left pane of your Gantt Chart:

Order Attribute	Automatically Displayed
Item	Yes
Organization	Yes
Order Number	Yes
Order Quantity	Yes
Order Type	Yes
Supplier	No
Supplier Site	No
Source Organization	No
Ship Method	No
Work Definition	No
Item Structure	No

Supply Bar and Resource Requirements Bar

Let's discuss the characteristics of the supply bar and the resource requirement bar in your Gantt Chart.

- Supply bars span from the suggested start date to the suggested due date of the supply. If the suggested start and suggest due dates are the same, the supply bar appears as a thin line.
- Resource requirement bars span from the bucket start date of the planning time bucket that contains the start date of the resource requirements to the bucket end date of the planning time bucket that contains the end date of the resource requirement.

Show Diagnostics

You can select from the Show Diagnostics drop-down list which diagnostic attributes to display for orders and resource requirements. These are the diagnostic attributes that you can display in your Gantt Chart:

- Contributes to Demand Lateness
- Contributes to Overload
- Consumption Start Date
- Need-by Date
- Material Available Date
- Earliest Start Date

- Firm

Gantt Chart Actions

When you work in the Gantt Chart, there are some useful tool for you to use.

Action you can take from the Actions menu or the Gantt Chart toolbar	Result of the action
Move In	Moves the selected bar in by one planning time bucket. **Note:** You can't move a bar from a less granular time bucket, such as week, to a more granular time bucket, such as day.
Move Out	Moves the selected bar out by one planning time bucket.
Zoom In	Zooms in the time line display. You can't zoom in below the planning time bucket level.
Zoom Out	Zooms out the time line display.
Refresh	Refreshes the content in the Gantt Chart.

Moving the Bars in the Gantt Chart

Here are some pointers about moving the bars in the Gantt Chart.

- You can use the Move In and Move Out options in the toolbar or use the drag and drop action. However, you can't move a bar to another row.
- The end date of the supply bar always snaps to the last working day of the planning time bucket that you move the bar to.
- If you move a bar to a non-working day within the daily bucket portion of the plan horizon, you will be asked if you want to move it to the previous working day.
- The time durations of the bars remain the same as you move them across planning time buckets. A replan or recalculate action can change the durations.

How to Diagnose Plan Output Using Order Attributes and the Gantt Chart

Here we have some details that show you how you can diagnose a plan output. You can view the order attributes referenced in this table from within the Supplies and Demands table or the Gantt Chart.

Data Conditions	Inference
• Need by Date < Earliest Start Date • (Need by Date - Earliest Start Date) < Lead Time	The supply is on the critical path of demands that are within the lead time. In this case, the supply is planned to start on its earliest start date to minimize demand lateness.
• (Need by Date - Earliest Start Date) > Lead Time • Suggested Due Date < Need by Date	You can move the supply to an earlier time by pulling it in to start on or after the material available date without impacting upstream feeding supplies. You can also pull in the supply to start on or after the earliest start date without impacting the lead time of any of the upstream supplies. However, the upstream supplies should be re-pegged or rescheduled to ensure that projected available balance of the upstream materials remain greater than or equal to zero.
• (Need by Date - Earliest Start Date) > Lead Time • Suggested Due Date < Consumption Start Date	You can move the supply to a later time by pushing it out to end on or before the consumption start date. This action doesn't impact any of the downstream consuming supplies and end demands. You can also push out the supply to complete on or before the need-by date without impacting the lead time of any of the downstream supplies. However, the downstream supplies might need to be rescheduled or re-pegged to ensure that projected available balance stays at or above zero.
Contributes to Overload order attribute is Yes for some supplies in the pegging tree of an end demand	You can filter the list of supplies in the pegging tree in the Supplies and Demands table to only show those supplies that have the Contributes to Overload order attribute set to Yes. This filtering helps you to quickly understand the items that need action to make the plan feasible.

Simulate Changes in a Constrained Supply Plan

Overview of the Recalculate Action

Use the plan level Recalculate action to recalculate a subset of the plan output to quickly see the impact of changes to your constrained supply plan.

When planning, you can make changes to planning assumptions, such as a change in resource capacity or supply and demand quantities and dates. You can also simulate the impact of plan changes by running your plan without a fresh snapshot. The output of the recalculation process is persisted into the plan. The output is also visible in different views, such as Supplies and Demands, Resource Requirements, Material Plan, Resource Plan, and Build Plan.

After you make changes in your plan, run the Recalculate process. You immediately see the effects of your changes on key relevant metrics, such as the projected available balance of affected items. You don't have to wait for the results of a full replan.

What the Recalculate Process Does

This table shows you how the Recalculate process affects your constrained supply plan when you make changes.

If you change:	The Recalculate process:
A demand date or quantity, or add a demand **Note:** You can perform this change only on end demands, but not dependent demands.	• Updates the projected available balance of the item. • Updates a subset of the order attributes of the demand: Suggested Due Date, Order Quantity, Days Late and Quantity by Due Date. • Doesn't generate any new supplies in response to a demand increase or a new demand.
The supply due date or quantity for a planned order or existing supply **Note:** For existing supplies, such as work orders, you can only set the firm quantity to 0. You can't set the firm quantity value lower or higher than the original supply quantity.	• Updates the projected available balance of the item and the items for which this supply generates dependent demands. • Updates a subset of the order attributes of the supply including Suggested Due Date, Compression days, Days Late, Reschedule Days and others. • Updates a subset of the order attributes of the demands pegged to this supply: Days Late, Quantity by Due Date, Material Available Date. • Recalculates the resource requirement dates and hours based on updated supply dates and quantities. • Recalculates the Consumption Start date attribute and the Material Available date attribute of the pegged supplies one level up and down. • Recalculates the dependent demand dates and quantities based on updated supply dates and quantities. • Doesn't generate any new supplies in response to new or increased quantities of the dependent demands resulting from this supply change.
Add a supply or change the work definition of an existing planned order	• Updates the projected available balance of the item and the items for which the supply generates dependent demands. • Calculates the key order attributes for the new supply. • Calculates new resource requirements for the order if this is a make order. • Calculates new dependent demands for the order. All dependent demands are placed on the start date of the order and not on operation start date. • Doesn't generate any new supplies in response to new or increased quantities of the dependent demands resulting from this supply change.
Add or modify the resource availability	Recalculates these measures: • Net Resource Availability • Cumulative Net Resource Availability • Resource Availability • Resource Utilization Percentage Supplies won't be rescheduled in or out in response to the change in resource availability.
Add or modify supplier capacity	Recalculates these measures: • Net Supplier Capacity Availability • Supplier Capacity Availability • Supplier Capacity Utilization Percentage Supplies won't be rescheduled in or out in response to the change in supplier capacity.

If you change:	The Recalculate process:
Reschedule a resource activity using the Gantt Chart	Assumes that if a resource activity is moved in or moved out by a certain number of days, that the parent supply is also moved in or out by the same number of days. Based on this assumption, the same recalculation logic that's applied to the action of moving a supply is also applied in this case.
Choose an alternate resource for a resource requirement	• Updates the original resource requirement with the new resource. • Calculates the resource hours for the newly-selected resource based on work definition specifications. • Equally apportions the calculated resource hours across the time buckets that are included in the make span of the original resource requirement. • Updates the resource-related planning measures, such as resource requirements and resource utilization percentage, for the old and the new resource. The planning process assumes that the old and new source have approximately the same processing rates.
Choose a substitute component for a planned order	• Updates the dependent demand for the original component to a quantity of 0. • Inserts a new dependent demand for the substitute component. • Updates the supply, demand, and projected available balance measures for the old and the new components.

Differences Between the Recalculate and Run Plan Actions

Let's look at the differences between the Recalculate action and the Run Plan action for constrained supply plans.

Recalculate action	Run Plan action (without a fresh snapshot)
Is a near real-time process	Is a batch process
Performs a local recalculation of plan output	Fully realigns the plan output in response to your changes
Recalculates a subset of planning measures and order attributes	Recalculates all planning measures and order attributes
Doesn't recalculate pegging or exception messages	Recalculates pegging and exception messages
Doesn't generate new supplies in response to demand increase	Generates new supplies in response to demand increase

Comparing the Recalculate and Replan Actions

In a constrained supply plan, there are some change types that the Recalculate action doesn't respond to, and so you can only use the Replan action.

Let's compare the Recalculate and the Replan actions and see which action you can use with respect to different types of changes.

Change Type	Recalculate	Replan
Changes to demand and supply quantities and dates	Yes	Yes
Create a planned order	Yes	Yes
Change the process on an existing planned order	Yes	Yes
Change resource activity timings	Yes	Yes
Change item, item structure, item-supplier, or work definition attributes	No	Yes
Change resource attributes	No	Yes

Recalculate for Process Manufacturing Work Definitions

You can use the Recalculate action to recalculate a subset of your plan output to quickly see the impact of changes to your constrained supply plan.

- You can update the date and quantity of a planned order for primary output item. For existing work orders for the primary item, you can only set the firm quantity to 0.
- If you change the planned order quantity of the primary output item, then the planned orders for co-product and by-product supplies are recalculated proportionally with due dates unchanged.
- If you move in or out the supply due date of primary item, the corresponding dates for co-product and by-product supplies also move in or out by the same offset.
- If you manually create a planned order, the planned order co-product and planned order by-product supplies are also created in proportional quantities based on the work definition of the primary output item. The due dates of co-product and by-product planned order supplies remain the same as of suggested due date of primary item's supply. The suggested completion date will also be same as of suggested due date of primary item's supply.

Related Topics

- Overview of How You Plan Considering Process Manufacturing Work Definitions

Safety Stock in a Constrained Supply Plan

Overview of Using Safety Stock in a Constrained Supply Plan

You can plan safety stock in a constrained supply plan based on user-specified values or days of cover for all items in the organizations associated with your plan.

You can calculate and plan statistical safety stock for end items and plansafety stock in daily buckets and in buckets larger than days, such weeks or periods. You can also:

- Manually override safety stock quantities for items
- Recalculate safety stock quantities
- Override statistical calculation parameters

When in the constraint-based planning mode, the supply planning process fulfills safety stock demand as long as it doesn't violate any constraints. If there isn't enough material or resource capacity to build to safety stock demand, then the supply to meet safety stock demand is shifted out in time until there is enough capacity. The supply planning process calculates the days of cover-based safety stock levels in the absence of any constraints. Then those calculated levels are applied as a target when the plan is run with the constraints turned on. This process provides greater transparency to you regarding how safety stock levels are calculated for items with days of cover-based safety stock.

For more information about safety stock, refer to the Safety Stock in Planning Central and Supply Planning white paper on Oracle Cloud Customer Connect, available at this URL: https://cloudcustomerconnect.oracle.com/posts/e8a4eaff7a

Safety Stock Planning Differences Between Constrained and Unconstrained Supply Plans

There are some differences to planning safety stock in a constrained supply plan compared to an unconstrained supply plan. The way safety stock is calculated for days of cover and the way the supplies are recommended for safety stock in a constrained plan are important to note. In a constrained supply plan:

- Safety stock based on days of cover is calculated based on unconstrained dependent demand instead of constrained dependent demand.
- Orders aren't compressed to meet safety stock when purchasing lead time is enforced.
- Resource and supplier capacity won't be overloaded just to meet safety stock.

Additional Measures for Constrained Supply Plan

For constrained supply plans, the planning process calculates two additional measures for items with days of cover safety stock. These measures are only available for constrained supply plans.

- **Unconstrained Dependent Demand** is the unconstrained demand on the need-by date of a supply. This calculated measure is the sum of production forecast, planned order demand, transfer order demand, nonstandard job demand, and work order demand on the need-by date.

- **Unconstrained Average Daily Demand** is the daily average for unconstrained demand over a user-specified demand period days for the item.

Safety Stock Methods

You can use these safety stock methods in a constrained supply plan:

- Days of Cover
- User-Specified Safety Stock Level
- User-Specified Time Phased Safety Stock Level
- Calculated Safety Stock Levels Based on Forecast Error

Example of Safety Stock Planning with Lead Time Constraints

This example shows how the supply planning process plans safety stock in a constrained supply plan with a lead time constraint.

Safety Stock Planning with Lead Time Constraint

For this example, let's use these parameters:

- Nonworking days: Days 6, 7, 13, and 14
- Purchasing lead time: 3 days
- Enforce Purchasing Lead Time item attribute: Yes

Item	ORG	Measure	Day														
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Item C	M1	Forecast	0	0	0	0	25	0	0	0	0	50	0	0	0	0	0
		Sales Order	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0
		Total Demand	0	0	0	0	40	0	0	0	0	50	0	0	0	0	0
		On Hand	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Planned Order	0	0	0	40	40	0	0	0	0	50	0	0	0	0	0
		Total Supply	0	0	0	40	40	0	0	0	0	50	0	0	0	0	0
		Safety Stock	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
		Projected Availability Balance	10	10	10	50	50	50	50	50	50	50	50	50	50	50	50

In this scenario,

- The constrained supply plan enforced the purchase lead time of Item C.
- The planning process created supply on Day 4, which is the plan start date plus the lead time.
- Safety stock from Day 1 to Day 3 wasn't met because the purchasing lead time was enforced by the plan for Item C.

Example of Safety Stock Planning with a Resource Capacity Constraint

This example shows how the supply planning process plans safety stock in a constrained supply plan with a capacity constraint.

Safety Stock Planning with a Resource Capacity Constraint

For this example, let's use these parameters:

- Item D has a demand on Day 7
- Resource capacity constraint is 80 units per day
- Item D has a safety stock amount of 100 units from Day 1 through Day 7

Item	ORG	Measure	Day 1	2	3	4	5	6	7
Item D	M1	Demand	0	0	0	0	0	0	400
		Capacity Constraint Per Day	80	80	80	80	80	80	80
		Planned Order	80	20	80	80	80	80	80
		Safety Stock	100	100	100	100	100	100	100
		Projected Availability Balance	80	100	180	260	340	420	100

In this scenario,

- The planning process created supply for 80 units only on Day 1.

- The safety stock quantity of 100 units on Day 1 can't be completely satisfied because the plan can't exceed the resource capacity constraint (80 units) to meet the safety stock quantity.

Example of Safety Stock Planning with Primary and Alternate Resources

This example shows how the supply planning process plans safety stock in a constrained supply plan that uses primary and alternate resources.

Safety Stock Planning with Primary and Alternate Resources

For this example, let's use these parameters:

- Item D has a demand on Day 7
- Item D has safety stock of 100 units from Day 1 to Day 7
- Primary resource capacity per day is 80 units
- Alternate resource capacity per day is 160 units

Item	ORG	Measure	Day						
			1	2	3	4	5	6	7
Item D	M1	Demand	0	0	0	0	0	0	400
		Capacity Per Day - Primary Resource	80	80	80	80	80	80	80
		Capacity Per Day - Alternate Resource	160	160	160	160	160	160	160
		Planned Order with Primary Resource	80	0	80	80	80	80	80
		Planned Order with Alternate Resource	20	0	0	0	0	0	0
		Safety Stock	100	100	100	100	100	100	100
		Projected Availability Balance	100	100	180	260	340	420	100

In this scenario,

- To meet the safety stock quantity of 100 units, the planning process created supply for 80 units on the primary resource and 20 units on the alternate resource on Day 1.
- The safety stock quantity of 100 units on Day 1 is satisfied because the plan creates supplies on the primary and alternate resource without violating the capacity constraint.

How Supply Planning Respects Reservations

When you use the constrained planning mode for your supply plan, the planning process respects reservations between supplies and demands. This ensures that reservations of on-hand or on-order supplies to sales orders are honored.

This functionality enables you to allocate available supplies to high priority customers or high value sales orders. There won't be any recommendations to pull-in or push-out supply when there is a change in the sales order schedule date.

The planning process supports reservations for these existing supplies:

- On-hands
- Purchase orders
- Purchase Requisitions
- WIP jobs
- Transfer orders from the Oracle Fusion source system

There are some of the key points for reservations in a constrained supply plan to keep in mind.

- All reserved supplies are considered firm by the planning process but a supply order such as a work order or transfer order for an item is not treated as firm if it’s dependent demand is reserved to an on-hand supply.
- If the supply reserved to dependent or independent demand is other than the on-hand supply, then the supply order such as a work order or transfer order will still be considered as firm and won’t be rescheduled.
- For a reservation, the supply is pegged to the sales orders in the amount of the reserved quantity.
- If the reserved quantity causes resource or supply capacity overloads, the planning process overloads the respective resource or supplier capacity. In this situation, the planning process also creates an overload exception.
- If a supply is partially reserved for a demand, the rest of the supply is eligible to be pegged to other demands.
- If a demand is met only partially with reserved supplies, other unreserved supplies (existing or planned) are used to meet the rest of the demand.
- The planning process respects a demand reservation to a lot without regard to the lot expiration date.
- The planning process uses the reserved supplies and demands in the calculation of Projected Available Balance (PAB). The reserved supplies aren't used to meet safety stock requirements.
- Reservations or reserved supply quantities can't be edited in Supply Planning.

In the Supplies and Demands table, the **Reserved Quantity** column displays the total reserved quantity for a supply of demand. You can't edit this field.

- For a supply, the **Reserved Quantity** column displays the total quantity reserved across all of the demands for which the supply is reserved.

- For a demand, the **Reserved Quantity** column displays the total of all supply quantities reserved for it.
- For back-to-back items, the **Reserved Quantity** column isn't populated by any planned supply quantities.

In the Material Plan table, these columns display information about reservations.

- **Reserved Supply Quantity**: Indicates the total supply quantity that's reserved for demands in a bucket.
- **Reserved Supply Value**: Indicates the monetary value of the total supply quantity that's reserved for demands in a bucket.

11 Project-Specific Supply Planning

Overview of Project-Specific Supply Planning

Project-specific supply planning is one of the features of the Project-Driven Supply Chain solution.

Project-Driven Supply Chain is an end-to-end, integrated solution across the Oracle Fusion Cloud Supply Chain & Manufacturing and Oracle Fusion Cloud Project Management applications that supports business processes to plan supplies based on projects.

Prerequisites

The following points must be true for project-specific supply planning:

- The Project-Driven Supply Chain and Plan Project-Specific Supply features must be enabled. These features can be enabled even if you're not using other Oracle SCM Cloud Applications for your supply chain executions. For details on how to enable these features, refer to the Implementing Supply Chain Planning guide, Enable Supply Chain Planning Features chapter on the Oracle Help Center.
- You can use the Project-Driven Supply Chain feature in the Supply Chain Planning work area by opting in attribute-based planning.

  > **Note:** Opt in Project-Driven Supply Chain to enable attribute-based planning in Oracle Fusion Cloud Supply Chain & Manufacturing.

- You must create your plans in the Unconstrained supply planning mode.
- You must define an attribute-based netting rule so that you can associate the rule to your supply plan.

Project-Specific Supply Planning Capabilities

Project-specific supply planning improves your order fulfillment accuracy by ensuring components availability to build and fulfill orders. It also ensures completion of projects on time without excessive inventory. Here's how you can use project-specific supply planning capabilities:

- Plan project-specific supply based on your project-specific forecast, demand, on-hand supply, and incoming supply.
- Enable attribute-based netting to net project-specific supply or net excess project supply in a project group or a project within the project group or net common supply.
- Create project and task-specific planned orders for hard pegged items. Also, create planned order for items for which the hard pegging level is set to none. You can view the pegging of supplies and demands with project and task attributes.
- Configure attribute-based netting rules to net supplies from certain designated tasks within a project.
- Plan project-specific safety stock.
- Create project-specific manual demands or planned orders and use simulations to analyze what-if scenarios.
- Review order-related exceptions and exceptions related to shortage of supply in a project and task.
- Use Oracle REST API services to manage supply and demand with project references.

- Enable Oracle Transactional Business Intelligence (OTBI) reporting for your project-specific supply plans to analyze key metrics such as planned orders with project group, project, and task details.

Related Topics

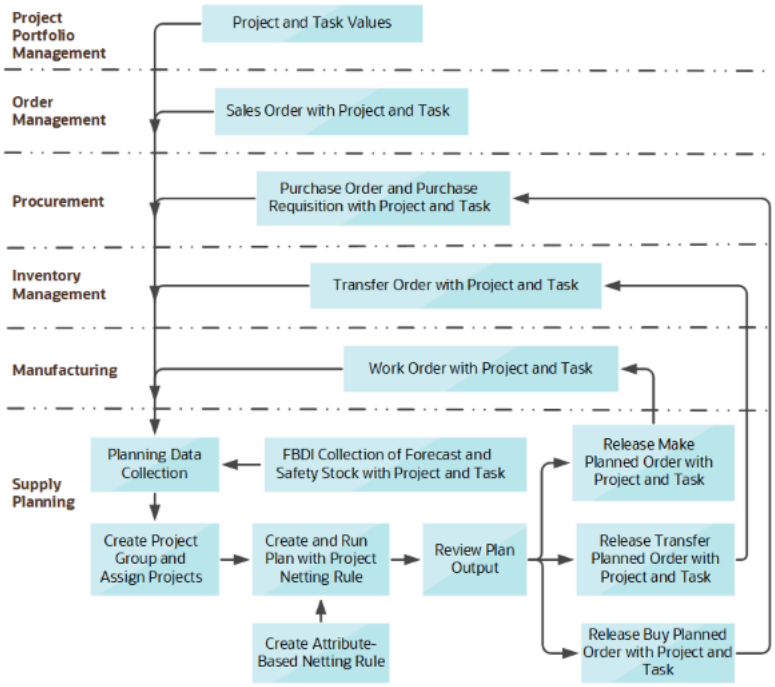
- How to Enable Project-Specific Supply Planning

How You Plan Project-Specific Supply

Let's understand the high-level process flow of project-specific supply planning. You can find more details about these processes in different topics of this chapter.

1. You start your project-specific supply planning with the collection of these entities:
    - Project and task attribute values and their relationships from Project Portfolio Management
    - Supplies and demands with project and task values from Oracle Inventory Management, Oracle Order Management, Oracle Purchasing, and Oracle Manufacturing
    - Forecast and safety stock that are specific to project and task
    - Organization attribute with project references
    - Item attributes, such as Hard Pegging Level and Allow Use of Common Supplies, required for project-specific supply planning
2. You then create project groups and assign projects to the groups. Creating project groups enables the planning process to net supplies within a project group across multiple projects and their tasks.
3. The next step is to create attribute-based netting rules. The planning process uses the netting rule to net and share supplies at the project group, project, and task levels.
4. You create a plan and associate the netting rule to the plan. You then run the plan from the Supply Planning or the Demand and Supply Planning work area.
5. You review your plan output for project-specific supplies and demands and release planned orders with project and task attributes to Manufacturing, Purchasing, or Inventory.

Here's an illustration that explains the high-level process flow of project-specific supply planning:



Data Collection for Project-Specific Supply Planning

Collect these data for project-specific supply planning:

- Project-enabled organization attribute
- Project group, project, and project and task attribute values and their relationships
- Item attribute values required for project-specific supply planning (values for Hard Pegging Level and Allow Use of Common Supplies)
- Supplies and demands with project and task values
- Supply and demand reservations with project and task values

How You Collect Planning Data for Project-Specific Supply Planning

How you collect planning data depends on which one of these two scenarios is applicable to your enterprise:

Scenario	How to Collect
When your supply chain execution products are Oracle Fusion Cloud SCM Applications.	You collect data from the Oracle Fusion source system. To do that, select the **Collect Planning Data** task from a Supply Planning work area or from the Setup and Maintenance work area.
When your supply execution products aren't Oracle Fusion Cloud SCM Applications.	You collect data from an external source system. To do that, select the **Load Planning Data from Files** task from a Supply Planning work area or the Setup and Maintenance work area and upload data using predefined collection templates (XLSM files).

Refer to the Planning Data Collections chapter of this guide for detailed instructions. You can verify and review the collected data using the Plan Inputs page layout.

Note: Ensure that you upload all your XLSM files in one zipped file. In case you upload your XLSM files separately, follow this order:

1. Organization attribute
2. Project and task attribute values and their relationships
3. Item attributes
4. Supplies and demands
5. Supply and demand reservations

Related Topics

- Collect Data Using the Targeted Collection Type
- Collect Data Using the Net Change Collection Type
- Run the Load Planning Data from Files Process
- Verify the Load Planning Data from Files Process

Planning Data for Project-Specific Supply Planning

Project-Enabled Organization Attribute

Select the Organizations entity on the Reference Data tab of the Collect Planning Data page to collect the value of the Project Enabled parameter for your organizations.

This organization-specific parameter appears on the Maintain Supply Network Model page only when your organization is enabled for project-driven supply chain and project-specific supply planning.

The Project Enabled parameter governs whether your inventory organization is enabled for inventory tracking by project. The value for this parameter can be **Yes** or **No** for an organization.

When the value of this parameter is **Yes** for an inventory organization, the organization performs inventory tracking by project. Collection of supplies and demands with project and task is possible, and the project-specific planning releases planned orders with project and task. The value for this parameter is **No** for a supplier-modeled organization or a contract manufacturing organization.

For external source systems, use this XLSM file to upload the value of Project Enabled parameter for your organization:

Planning Data	XLSM File Name	Link in FBDI Guide
Project Enabled	ScpOrganizationImportTemplate.xlsm	Supply Chain Planning Organizations

Related Topics

- Collect Data Using the Targeted Collection Type
- Collect Data Using the Net Change Collection Type
- Run the Load Planning Data from Files Process
- How You Maintain Your Supply Network Model

Project Control Level Attribute

The Project Control Level parameter allows you to:

- Collect the project control level of an external source organization.
- Collect supplies and demands from external source systems at the project or project and task level based on the project control of the organization. For example, if the parameter is set to project and task, you can collect the supplies and demands which contain both project and task attribute values. If the parameter is set to project, you can collect the supplies and demands with only the project attribute value or with the project and task attribute value.
- Plan project supplies for organizations at the project or project and task level.
- Release plan recommendations based on the project control level of the organization.

This feature applies to unconstrained supply planning and demand and supply planning with an attribute-based netting rule using project group, project and task planning attributes.

For external source systems, use this XLSM file to upload the value of Project Control Level parameter for your organization:

Planning Data	XLSM File Name	Link in FBDI Guide
Project Control Level	ScpOrganizationImportTemplate.xlsm	Supply Chain Planning Organizations

Project Group, Project, and Project and Task Attribute Values

Project group, project, and project and task are planning attributes with one of these relationships:

- Parent and child relationship: For example, a project group is the parent for the associated projects, or a project is the parent for its tasks.
- Peer relationship: For example, projects in the same project group are peers or tasks of the same project are peers.

The Planning Attribute Values entity governs the collection of project group, project, and project and task attribute values and their relationships. This entity appears on the Reference Data tab of the Collect Planning Data page when your organization is enabled for project-driven supply chain and project-specific supply planning. You can select this entity for Net change, Targeted, or Automatic selection collection types.

For external source system collection, use this XLSM file:

Planning Data	XLSM File Name
Project group, project, and project and task	ScpPlanningAttributeValuesImportTemplate.xlsm

Here's what you can define in your XLSM file:

- Project group, project, and project and task attribute values and their relationships. The Attribute Set Name for the project and task relationship must be Project_Task_Set only.
- Start date, end date, planner, and the Net Common Supply values of your project groups.
- Attribute-based planning netting sequences to designate tasks and net them to your project demands.

Note: You can also use Planning Attribute Values to purge project group, project, and project and task values and their relationships for a specific instance.

Related Topics

- Collect Data Using the Targeted Collection Type
- Collect Data Using the Net Change Collection Type
- Run the Load Planning Data from Files Process

Item Attributes for Project-Specific Supply Planning

Select the Items entity on the Reference Data tab of the Collect Planning Data page to collect item attribute values for project-specific supply planning. You can collect these item attributes when your organization is enabled for project-driven supply chain and project-specific supply planning.

Let's understand what these item attributes are and how these attributes influence project-specific supply planning.

Hard Pegging Level

This item attribute determines if the item and its supplies and demands can participate in the project-based netting when the plan is associated with an attribute-based netting rule. You can use the hard pegging level to create item segments and segment-specific netting sequences based on the hard pegging level of the item.

In project-specific supply planning, the hard pegging level can have one of these values:

- None: An item with this hard pegging level doesn't participate in the project-based netting. The planning process performs netting of supplies and demands at the item-organization level.
- Project and Task, Project, Project Group: The planning process performs project-based planning for the item's supplies and demands. The attributes for planned orders in the attribute-based netting rule provide the planned order quantity and striping.

Allow Use of Common Supplies

This item attribute is used to segment items and create segment specific netting sequences in attribute-based netting. The common supply is allocated based on the item segments. The common supply can be an on hand, a purchase order, a work order, or a transfer order. The planning process verifies this item attribute while it executes the Net common supply netting sequence during the project-specific planning.

The value of this attribute depends on these hard pegging level values:

Hard Pegging Level	Allow Use of Common Supplies
None	Null
Project and Task	Yes or No
Project	Yes or No
Project Group	Yes or No

Collection of Item Attributes from External Source Systems

For external source systems, use this XLSM file:

Planning Data	XLSM File Name	Link in FBDI Guide
Hard Pegging Level, Allow Use of Common Supplies	ScpItemImportTemplate.xlsm	Supply Chain Planning Items

Related Topics

- Collect Data Using the Targeted Collection Type
- Collect Data Using the Net Change Collection Type
- Run the Load Planning Data from Files Process

Supplies and Demands with Project and Task

Select these entities on the Supply Planning tab to collect supplies and demands with project and task attributes. You can collect supplies and demands with project and task attributes when your organization is enabled for project-driven supply chain and project-specific supply planning.

- Purchase Orders and Requisitions
- Sales Orders
- Transfer Orders
- On Hand

- Work Order Supplies

For external source systems, use these XLSM files:

Planning Data	XLSM File Name	Link in FBDI Guide
Purchase Orders and Requisitions	ScpPurchaseOrderRequisitionImportTemplate.xl	Supply Chain Planning Purchase Order Requisitions
Sales Orders	ScpSalesOrderImportTemplate.xlsm	Supply Chain Planning Sales Orders
Transfer Orders	ScpTransferOrderImportTemplate.xlsm	Supply Chain Planning Transfer Orders
On Hand	ScpOnhandImportTemplate.xlsm	Supply Chain Planning Supply On Hand
Work Order Supplies	ScpWorkOrderSuppliesImportTemplate.xlsm	Supply Chain Planning Work Order Supplies
Safety Stock Levels	ScpSafetyStockLevelImportTemplate.xlsm	Supply Chain Planning Safety Stock Levels
External Forecast	ScpExternalForecastImportTemplate.xlsm	Supply Chain Planning External Forecast

Here are a few things to keep in mind:

- During data collections, project and task of the work order supply is inherited to the work order component demands.
- Both safety stock levels and forecast can be collected at the project level and at the project and task level.

Related Topics

- Collect Data Using the Targeted Collection Type
- Collect Data Using the Net Change Collection Type
- Run the Load Planning Data from Files Process

Supply and Demand Reservation with Project and Task

Select the Reservations entity on the Supply Planning Data tab of the Collect Planning Data page to collect reservations of demand and supplies with project and task attributes.

Here are the key points to keep in mind:

- A sales order with a project and task attribute can be reserved to an on hand, purchase order, transfer order, or work order supply that has the same project and task attribute. For example, a sales order with Project1 and Task1 can be reserved to a supply with Project1 and Task1. This sales order can't be reserved to a supply with Project1 and Task2 or Project2 and Task1.

- A sales order can also be reserved to a common supply if the item in the sales order is allowed to use common supplies. The common supply can be an on hand with no project and task. For example, a sales order with Project1 and Task1 can use common supplies when Allow Use of Common Supplies for the item is **Yes**.

You can collect reservations of demand and supplies with project and task attributes when your organization is enabled for project-driven supply chain and project-specific supply planning.

For external source systems, use this XLSM file:

Planning Data	XLSM File Name	Link in FBDI Guide
Reservations	ScpReservationImportTemplate.xlsm	Supply Chain Planning Reservations

Related Topics

- Collect Data Using the Targeted Collection Type
- Collect Data Using the Net Change Collection Type
- Run the Load Planning Data from Files Process

Attribute-Based Netting Rules with Project Attributes

A key factor in the planning of project-specific supply is the sequence in which the available supplies are allocated to project demands. When you create a netting rule, you define netting sequence steps and attributes for planned orders based on your business needs for project-driven supply planning.

You then assign the rule to one of your project-specific supply plans.

Here's how the planning process uses the netting sequence steps equivalent to the reservation levels that were used when project netting rules could be used instead of attribute-based nettng rules, such as project group, project, and project and task:

- The planning process uses the order in which you defined the netting sequences to allocate available project supplies to project demands.
- The process then refers to the attributes selected in Demand Grouping and Striping in Attributes for Planned Orders in your attribute-based netting rule to group unmet demands to create a planned order and stripe with attributes in a time bucket.

Let's understand the netting sequence in detail.

Attribute-Based Netting Sequence

The netting sequence in your attribute-based netting rule determines how the planning process should net the supplies and demands within the project group, project, and task. The planning process follows the ascending order of sequence numbers of the netting sequences defined in your rule to allocate project supplies and common supplies to project demands.

This table lists the attribute-based netting sequences that you can use in your netting rule and includes a column that references applicable sequence name when project netting rules were applicable.

<table>
<tr><th>Netting Sequence Name in Project Netting Rule</th><th>Project Netting Logic in Attribute-Based Netting Rule</th><th>Equivalent Netting Sequence Step in Attribute-Based Netting Rule</th></tr>
<tr><td>Net project task supply</td><td>Net a supply whose project and task attributions exactly matches the demand attributions.

In the netting sequence step of the attribute-based netting rule, for the Project, Project Group, and Task attributes, select:

• Demand Operator as Any
• Supply Operator as Matches Demand Value

The configuration of the netting sequence step ensures the planning process nets supplies whose project group, project, and task match the project group, project, and task attribute's values of the demand in a netting window.</td><td>Project netting rule sequence step

Net Project Task Supply

Attribute-based netting rule sequence step
<table><tr><th>Demand Attribute</th><th>Demand Operator</th><th>Supply Attribute</th><th>Supply Operators</th></tr><tr><td>Project Group</td><td>Any</td><td>Project Group</td><td>Matches Demand Value</td></tr><tr><td>Project</td><td>Any</td><td>Project</td><td>Matches Demand Value</td></tr><tr><td>Task</td><td>Any</td><td>Task</td><td>Matches Demand Value</td></tr></table></td></tr>
<tr><td>Net excess project supply</td><td>When the reservation level is Project, use supplies from any tasks of the same project for project demands.

When the reservation level is Project Group, use supplies from any tasks or any projects of the same project group for demands across any project in the same project group.

The configuration in the attribute-based netting rule consists of two netting sequence steps.

In the first netting sequence step, select:

• Demand Operator for the Project, Project Group, and Task attributes as Any
• Supply Operator as Matches Demand Value for the Project and Project Group attributes.
• Supply Operator as Any for Task attribute.

This configuration of netting sequence steps ensures the planning process nets supplies whose project and project group match the project and project group attribute's values of the demand in a netting window.

In the second netting sequence step, select:</td><td>Project netting rule sequence step

Net Excess Project Supply

Attribute-based netting rule sequence step
<table><tr><th>Demand Attribute</th><th>Demand Operator</th><th>Supply Attribute</th><th>Supply Operators</th></tr><tr><td>Project Group</td><td>Any</td><td>Project Group</td><td>Matches Demand Value</td></tr><tr><td>Project</td><td>Any</td><td>Project</td><td>Matches Demand Value</td></tr><tr><td>Task</td><td>Any</td><td>Task</td><td>Any</td></tr><tr><th>Demand Attribute</th><th>Demand Operator</th><th>Supply Attribute</th><th>Supply Operators</th></tr><tr><td>Project Group</td><td>Any</td><td>Project Group</td><td>Matches Demand Value</td></tr><tr><td>Project</td><td>Any</td><td>Project</td><td>Any</td></tr><tr><td>Task</td><td>Any</td><td>Task</td><td>Any</td></tr></table></td></tr>
</table>

<table>
<tr><th>Netting Sequence Name in Project Netting Rule</th><th>Project Netting Logic in Attribute-Based Netting Rule</th><th>Equivalent Netting Sequence Step in Attribute-Based Netting Rule</th></tr>
<tr><td></td><td>Demand Operator for the Project, Project Group, and Task attributes as Any
Supply Operator as Matches Demand Value for the Project Group attribute.
Supply operator as Any for Project and Task attributes
This configuration of the netting sequence step ensures the planning process nets supplies whose project group matches the project group attributes values of the demand in a netting window.

The two netting sequence steps in the attribute-based netting rule are similar to netting excess project supplies within a project, tasks, and projects within a project group when the reservation level in the project netting rule is set to the project group.</td><td></td></tr>
<tr><td>Net common supply</td><td>Net a supply that doesn't have any project or task attribution. It can be an on-hand supply, purchase order supply, work order supply, and so on. Such supplies can be used for any project, any task, or any common demand.

In the netting sequence step of the attribute-based netting rule, for the Project, Project Group, and Task attributes, select:
Demand Operator as Any
Supply Operator as Blank
This configuration of netting sequence steps ensures that the planning process nets common supplies project demands in a netting window.</td><td>Project netting rule sequence step
Net Common Supply
Attribute-based netting rule sequence step<table><tr><th>Demand Attribute</th><th>Demand Operator</th><th>Supply Attribute</th><th>Supply Operators</th></tr><tr><td>Project Group</td><td>Any</td><td>Project Group</td><td>Blank</td></tr><tr><td>Project</td><td>Any</td><td>Project</td><td>Blank</td></tr><tr><td>Task</td><td>Any</td><td>Task</td><td>Blank</td></tr></table></td></tr>
<tr><td>Net designator 1 and 2 supply</td><td>Net the supply from the task designated to project demands by selecting a specific task attribute value for a project in the attribute-based netting rule.

The attribute-based netting rules netting sequence step equivalent to Net designator 1 supply or Net designator 2 supply netting sequence of project-based netting rule are as follows.</td><td>Project netting rule sequence step
Net designator1 Supply OR Net designator2 Supply
Attribute-based netting rule sequence step<table><tr><th>Demand Attribute</th><th>Demand Operator</th><th>Demand Attribute Value 1</th><th>Supply Attribute</th><th>Supply Operators</th><th>Supply Attribute Value 1</th></tr><tr><td>Project Group</td><td>Any</td><td></td><td>Project Group</td><td>Matches Demand Value</td><td></td></tr><tr><td>Project</td><td>Equals To</td><td>P1</td><td>Project</td><td>Equals To</td><td>P1</td></tr><tr><td>Task</td><td>Any</td><td></td><td>Task</td><td>Equals To</td><td>T1_Consigned</td></tr></table></td></tr>
</table>

Netting Sequence Name in Project Netting Rule	Project Netting Logic in Attribute-Based Netting Rule	Equivalent Netting Sequence Step in Attribute-Based Netting Rule
	In an attribute-based netting rule, select • Demand Operator as Any for the Project Group and Task attributes. • Demand Operator as Equal To for the Project attribute for which a task designates whose supplies should be used in netting. • Supply Operator as Matches Demand Value for Project Group attribute. • Supply Operator as Equals To for Project and Task attributes and then select the task attribute value that is designated as designator 1 or designator 2 for the project attribute value previously selected. This configuration of netting sequence steps ensures the planning process nets supplies from the task within a project which is designated as designator 1 or designator 2 to project demands in a netting sequence window.	

Netting Steps Equivalent to Reservation Level

When project netting rules were used, reservation level determined the level at which the planning process grouped unmet demands to create planned orders. The combination of netting sequence steps in the attribute-based netting rule is equivalent to reservation levels project group, project, and project and task. For example, if the reservation level was set to Project Group, the unmet demands in a time bucket were grouped at the project group level to create planned orders. The project and task attributions of such planned orders were determined based on the hard pegging level of the item in the planned orders.

You can set one of these reservation levels for your attribute-based netting rule based on your business needs:

Reservation Level in Project Netting Rule	Equivalent Netting Sequence Steps in Attrbute-Based Planning Netting Rule
Project Group	The planning process nets supplies at the project group level. The process nets supplies of one project for demands of another project belonging to the same project group. Any unmet demands in a time bucket are aggregated at the project group level to create planned orders.
Project	The planning process nets supplies at the project level. Excess supplies of a task in a project are netted against demands from another task of the same project. Unmet demands in a time bucket are aggregated at the project level to create planned orders.

Reservation Level in Project Netting Rule	Equivalent Netting Sequence Steps in Attrbute-Based Planning Netting Rule
Project and Task	The planning process nets supplies at the project and task level. The supply at a project and task level is netted against the demand with matching project and task. Unmet demands in a time bucket are aggregated at each project and task level to create planned orders.

Examples of Netting Steps Equivalent to Reservation Level

The following example shows the netting sequence steps of an attribute-based netting rule equivalent to the reservation level of the Project Group attribute:

1. On the Manage Attribute-Based Netting Rules page, click the **Create** icon.
2. Enter a name and description for your attribute-based netting rule.
3. For the **Planning Attributes** field, select the project attributes: Project Group, Project, and Task.
4. In the Netting Sequence for Existing Supplies section, click **Add Netting Sequence** to add the first attribute-based netting sequence step.
5. Click the **Expand** icon to select operators for the first netting sequence.
6. Select the **Supply Operator** for Project Group, Project, and Task as **Matches Demand Value**. This netting sequence step is equivalent to the net project task supply of the project-based netting rule.
7. Click **Add Netting Sequence** to add the second netting sequence.
8. Click the **Expand** icon to select operators for the second netting sequence.
9. Select the **Supply Operator** for Project, Project Group, and Task as **Blank**. This netting sequence step is equivalent to the Net common supply of the project-based netting rule.
10. In the Item Segments and Netting Sequences section, Netting Sequence Common to All Items tab:
    a. In the **Time Window in Days for Applying the Netting Sequence** field, enter your number of days.
    b. In the **Attributes for Planned Orders** field, select the **Demand Grouping** and **Striping** attributes equivalent to reservation level Project and Task of the project-based netting rule.
        i. Select Project, Project Group, and Task as demand grouping attributes to group unmet demands in each time bucket by Project and Task which is equivalent to supply creation when reservation level is project and task in the project-based netting rule.
        ii. Select Project, Project Group, and Task as striping attributes to stripe the planned orders by Project and Task, which is equivalent to supply creation when reservation level is Project and Task in the project-based netting rule.
11. Click **OK** and **Save** to save the attribute-based netting rule for project-based supply planning.
12. Assign the attribute-based netting rule to plan by selecting it from the **Netting Rule** drop-down list.

The following example shows the netting sequence steps of an attribute-based netting rule equivalent to the reservation level of the Project attribute:

1. On the Manage Attribute-Based Netting Rules page, click the **Create** icon.
2. Enter a name and description for your attribute-based netting rule.
3. For the **Planning Attributes** field, select the project attributes: Project Group, Project, and Task.
4. In the Netting Sequence for Existing Supplies section, click **Add Netting Sequence** to add the first attribute-based netting sequence step.
5. Click the **Expand** icon to select operators for the first netting sequence.
6. Select the **Supply Operator** for Project and Project Group as **Matches Demand Value**, and Task as **Any**. This netting sequence step is equivalent to the net excess project supply of the project-based netting rule to net supplies across tasks within a project.
7. Click **Add Netting Sequence** to add the second netting sequence.

8. Click the **Expand** icon to select operators for the second netting sequence.
9. Select the **Supply Operator** for Project as **Matches Demand Value**, and Project Group and Task as **Any**. This netting sequence step is equivalent to the net excess project supply of the project-based netting rule to net supplies across projects within a project group.
10. Click **Add Netting Sequence** to add the third netting sequence.
11. Select the **Supply Operator** for Project, Project Group, and Task as **Blank**. This netting sequence step is equivalent to the net common supply of the project-based netting rule.
12. In the Item Segments and Netting Sequences section, Netting Sequence Common to All Items tab:
    a. In the **Time Window in Days for Applying the Netting Sequence** field, enter your number of days.
    b. In the **Attributes for Planned Orders** field, select the **Demand Grouping** and **Striping** attributes equivalent to reservation level Project and Task of the project-based netting rule.
        i. Select Project Group as the Demand Attribute to group unmet demands by project group in a time bucket to create planned order. This is equivalent to the grouping of unmet demands by reservation level Project Group in the project-based netting rule.
        ii. Select Project Group, Project, and Task attributes for Striping, to stripe planned orders by project and task. This is equivalent to the striping of planned orders by Project and Task when reservation level is Project Group in the project-based netting rule.
13. Click **OK** and **Save** to save the attribute-based netting rule for project-based supply planning.
14. Assign the attribute-based netting rule to plan by selecting it from the **Netting Rule** drop-down list.

The following example shows the netting sequence steps of an attribute-based netting rule equivalent to the reservation level of the Task attribute:

1. On the Manage Attribute-Based Netting Rules page, click the **Create** icon.
2. Enter a name and description for your attribute-based netting rule.
3. For the **Planning Attributes** field, select the project attributes: Project Group, Project, and Task.
4. In the Netting Sequence for Existing Supplies section, click **Add Netting Sequence** to add the first attribute-based netting sequence step.
5. Click the **Expand** icon to select operators for the first netting sequence.
6. Select the **Supply Operator** for Project, Project Group, and Task as **Matches Demand Value**. This netting sequence step is equivalent to the net project task supply of the project-based netting rule.
7. Click **Add Netting Sequence** to add the second netting sequence.
8. Click the **Expand** icon to select operators for the second netting sequence.
9. Select the **Supply Operator** for Project, and Project group as **Matches Demand Value**, and Task as **Any**. This netting sequence step is equivalent to the net excess project supply of the project-based netting rule.
10. Click **Add Netting Sequence** to add the third netting sequence.
11. Select the **Supply Operator** for Project, Project Group, and Task as **Blank**. This netting sequence step is equivalent to the net common supply of the project-based netting rule.
12. In the Item Segments and Netting Sequences section, Netting Sequence Common to All Items tab:
    a. In the **Time Window in Days for Applying the Netting Sequence** field, enter your number of days.
    b. In the **Attributes for Planned Orders** field, select the **Demand Grouping** and **Striping** attributes equivalent to reservation level Project and Task of the project-based netting rule.
        i. Select Project Group as the Demand Attribute to group unmet demands by Project Group in a time bucket to create planned order. This is equivalent to the grouping of unmet demands by reservation level Project Group in the project-based netting rule.
        ii. Select Project Group, Project, and Task attributes for Striping, to stripe planned orders by Project and Task. This is equivalent to the striping of planned orders by project and task when the reservation level is Project Group in the project-based netting rule.
13. Click **OK** and **Save** to save the attribute-based netting rule for project-based supply planning.
14. Assign the attribute-based netting rule to plan by selecting it from the **Netting Rule** drop-down list.

Manage Attribute-Based Netting Rules with Project Attributes

You can manage your netting rules on the Manage Attribute-Based Netting Rules page. You access this page from the Plan Inputs, Supply Planning, or Demand and Supply Planning work area.

Go to the work area, open the Tasks panel, and click the **Manage Attribute-Based Netting Rules** link.

Use the Manage Attribute-Based Netting Rules page to search and edit your existing netting rule or to create a new rule.

You can delete a netting rule only when the rule isn't associated to a plan.

Create an Attribute-Based Netting Rule

You can create an attribute-based netting rule for project-based supply planning with one of the following netting sequences:

- Netting sequence common to all items
- Netting sequence specific to item segments
- Both netting sequences

Use these steps to create a new attribute-based netting rule with a netting sequence common to all items:

1. On the Manage Attribute-Based Netting Rules page, click the **Create** icon.
2. Provide a name and description for your attribute-based netting rule.
3. For the **Planning Attributes** field, select the project attributes: Project Group, Project, and Task.
4. In the Item Segments and Netting Sequences section, **Netting Sequence Common to All Items** tab:
    a. In the **Time Window in Days for Applying the Netting Sequence** field, enter your number of days.
    b. In the **Attributes for Planned Orders** field, select the **Demand Grouping** and **Striping** attributes.
5. In the Netting Sequence for Existing Supplies section, click **Add Netting Sequence** to add the attribute-based netting sequence steps.
6. For each netting sequence, click the **Expand** icon to select **Supply Operators**.
7. Click **Save**.

Use these steps to create a new attribute-based netting rule with netting sequence specific to items segments:

1. On the Manage Attribute-Based Netting Rules page, click the **Create** icon.
2. Provide a name and description for your attribute-based netting rule.
3. For the **Planning Attributes** field, select the project attributes: Project Group, Project, and Task.
4. In the Item Segments and Netting Sequences section, Netting Sequence Specific to Item Segments tab, take these steps for each segment:
    a. Select the value for the **Source System** field.
    b. Search the value for the **Segment Group** field.
    c. Add segments. For each segment, specify the segment name, description, time window in days, and attributes for planned orders. You can add up to ten steps in the netting sequence.
5. In the Netting Sequence for Existing Supplies section, click **Add Netting Sequence** to add the attribute-based netting sequence steps.
6. For each netting sequence, click the **Expand** icon to select **Supply Operators**.

7. Click **Save**.

For an attribute-based netting rule for both sequences, complete the steps for both tabs in a single rule.

Project Groups

Use project groups to group a set of related projects that can share supplies for a project demand in the group. Creating project groups enables the planning process to net supplies across multiple projects and tasks within the group.

You can create project groups on the Manage Project Groups page after collecting the project and task attribute values and their relationships from the Oracle Fusion source system. The page also displays the project groups that you upload from an external source system using CSV files.

Manage Project Groups

You can create, edit, or delete project groups on the Manage Project Groups page. You access the Manage Project Groups page from the Tasks panel of the Plan Inputs, Supply Planning, or Demand and Supply Planning work area.

Go to the work area, open the Tasks panel, and click the **Manage Project Groups** link.

Create a Project Group

Use these steps to create a project group:

1. Add a project group to the Manage Project Groups page.
2. Assign projects to the project groups.

Add a Project Group

Follow these steps to add your project group to the Manage Project Groups page:

1. On the Manage Project Groups page, click the **Add Row** icon.
2. Provide a name and description for your project group.
3. Specify the start or end date for your project group. The start date is required and automatically takes up the current date. You can change the start date to a future date. The end date is optional.
4. Select the planner for the project group.
5. If the attribute-based netting rule you used for the plan is configured to Net common supply, the common supply is netted for project demands belonging to this group. You can ignore common supply netting by creating an attribute-based netting rule that doesn't net common supply.
6. Click **Save**.

Assign Projects to a Project Group

Follow these steps to assign projects to your project group:

1. On the Manage Project Groups page, select the project group and click the **Edit** icon.

2. Click the **Add Row** icon.
3. In the Project list, select a project to assign to your project group.
4. Click **OK**.

Validity of a Project Group

Here are a few things to keep in mind:

- After a project group reaches its end date, the project assignment to the group is considered invalid. The planning process considers the assigned projects as ungrouped.
- The process also ignores the netting sequence associated with the task designators of the expired project group.
- To reassign projects of an expired project group to another project group, you first need to unassign those projects from the expired project group.

How You Configure a Project-Specific Supply Plan

To configure plan options for a project-specific supply plan, follow the standard procedure you use to configure your supply plans. The only additional setup you need to perform for the project-specific supply planning is to associate an attribute-based netting rule with the plan.

You get the option to associate attribute-based netting rules to the plan only when you have the Project-Driven Supply Chain and Plan Project-Specific Supply features enabled.

To plan project-specific supply, your plan must be in Unconstrained supply planning mode.

High-Level Steps to Configure a Project-Specific Supply Plan

Let's look at the high-level steps to configure a project-specific supply plan:

1. Start by creating a new plan or copying an existing plan. Ensure that the supply planning mode for the plan is Unconstrained.
2. Complete the required information on the Scope, Safety Stock, and Supply tabs based on your business needs.
3. To make the plan project-specific, associate a netting rule with the plan. Select the netting rule on the Supply tab. To search a netting rule, ensure that you select planning attribute-based as your netting rule type with other search operators.
4. Save your plan option settings.

You can get more information about how to create a plan, copy a plan, configure different plan options, or run a supply plan in the Supply Plans chapter of the Using Supply Planning guide.

Key Points to Consider for Plan Option Configuration

Here are the key points to consider when you configure your plan:

- A project-based plan is configured to group buy planned orders by project. When you associate a planning attribute-based netting rule with project group, project and task, the Requisition load group by option in the Supply: Advanced Options dialog box is automatically set to Project.
- Safety stock override is possible only for common safety stocks.

Related Topics

- Create a Plan
- Run a Supply Plan or an Integrated Plan
- Attribute-Based Netting Rules with Project Attributes

How Supply Planning Uses Netting Rules

Refer to the Attribute-Based Planning chapter of this guide for more details on operators or other additional configurations in the attribute-based netting rule.

Examples of Project Netting

These examples help you understand how the planning process nets available supplies to project demands and creates planned orders for unmet demands:

- Example 1 explains how the planning process performs project netting across different projects in a project group.
- Example 2 explains how the planning process performs attribute-based netting with multiple project groups.

Example 1: Project Netting Across Different Projects in a Project Group

Let's assume that you have these setups for your attribute-based netting rule, item attributes, and project group:

Item Attributes		
Item Attribute	**Value**	
Hard pegging Level	Project and task	
Allow Use of Common Supplies	Yes	
Attributes for Planned Orders		
Demand Grouping	Striping	
Project Group	Project Group	
Project	Project	
Task	Task	
Project Group		
Project Group	**Project**	**Task**
Project Group 1	Project P1	Task P1T1 Task P1T2

	Project P2	Task P2T1

Sequence Number	Demand Attribute	Demand Operator	Supply Attribute	Supply Operator
1	Project Group	Any	Project Group	Matches Demand Value
	Project	Any	Project	Matches Demand Value
	Task	Any	Task	Matches Demand Value
4	Project Group	Any	Project Group	Blank
	Project	Any	Project	Blank
	Task	Any	Task	Blank

Based on the netting sequences and their order defined in this example, the planning process has these options for project netting:

1. The planning process applies the first netting sequence step of attribute-based netting rule, Net project task supply, defined in your netting rule to allocate supplies to demands with matching project and task attributes. This means that the supplies with project P1 and task P1T1 can only be allocated to a demand with project P1 and task P1T1.
2. When no matching project and task supplies are available, the process applies the second netting sequence step of attribute-based netting rule to allocate the available common supply to project demands.
3. For unmet demands, the process recommends planned orders.

The planning process applies the netting sequences in the same order in each time bucket for attribute-based netting throughout the plan horizon.

Here's a simple plan output that represents pegging of available supplies to demands and recommended planned orders.

Demand, Supplies, and Planned Orders	Project Group	Project	Task	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Demand (common)				10	10			20		10
Demand (PG1, P1, P1T1)	PG1	P1	P1T1		15		5			10
Demand (PG1, P1, P1T2)	PG1	P1	P1T2			20		15		
Demand (PG1, P2, P2T1)	PG1	P2	P2T1		10				15	
Available Supply (common)				40			20			
Available Supply (PG1, P1, P1T1)	PG1	P1	P1T1	20						
Available Supply (PG1, P1, P1T2)	PG1	P1	P1T2		20					
Available Supply (PG1, P2, P2T1)	PG1	P2	P2T1	10				10		
Planned Order (common)										10
Planned Order (PG1, P1, P1T1)	PG1	P1	P1T1							10

Let's analyze the netting of supplies and demands in each time bucket.

Day	Project Netting
Day 1	The planning process pegs 10 units of common supply to 10 units of common demand (a demand without any project and task attributes). The remaining common supply after this pegging is 30 units.
Day 2	The process identifies 20 units of (P1, P1T2) supply. The process pegs 10 units of common supply to 10 units of common demand. The remaining common supply after this pegging is 20 units. The process applies the first netting sequence step of the attribute-based netting rule to identify supplies and demands with matching project and task attributes. It pegs 15 units of (P1, P1T1) supply to 15 units of (P1, P1T1) demand. The remaining (P1, P1T1) supply after this pegging is 5 units. The process also pegs 10 units of (P2, P2T1) supply to 10 units of (P2, P2T1) demand. This pegging completely consumes the (P2, P2T1) supply.
Day 3	The process applies the first netting sequence step of the attribute-based netting rule to peg 20 units of (P1, P1T2) supply to 20 units of (P1, P1T2) demand. This pegging completely consumes the (P1, P1T2) supply.
Day 4	The process identifies an additional common supply of 20 units. The process applies the first netting sequence step of the attribute-based netting rule to peg 5 units of (P1, P1T1) supply to 5 units of (P1, P1T1) demand. This pegging completely consumes the (P1, P1T1) supply.
Day 5	The process pegs 20 units of common supply to 20 units of common demand. The remaining common supply after this pegging is 20 units. The process applies the second netting sequence step of the attribute-based netting rule for 15 units of (P1, P1T2) demand but doesn't find any supplies with matching project and task attributes. The process then applies the second netting sequence step of the attribute-based netting rule and pegs 15 units of the common supply to 15 units of (P1, P1T2) demand. The remaining common supply after this pegging is 5 units.
Day 6	The process applies the first netting sequence step of the attribute-based netting rule to peg 10 units of (P2, P2T1) supply to 15 units of (P2, P2T1) demand. This pegging completely consumes the (P2, P2T1) supply. The process then applies the second netting sequence step of the attribute-based netting rule to peg 5 units of common supply to the remaining 5 units of (P2, P2T1) demand. This pegging completely consumes the common supply.
Day 7	The process applies the second netting sequence step of the attribute-based netting rule for 10 units of (P1, P1T1) demand but doesn't find any supplies with matching project and task attributes. The planning process also applies the Net common supply netting sequence but doesn't find any common supplies. The process then recommends a common planned order for the unmet common demand and a project planned order for the unmet project demand. It then assigns the project and task values to the project planned order.

Example 2: Project Netting with Multiple Projects

Let's assume that you have these setups for your attribute-based netting rule, item attributes, and project groups:

Item Attributes		
Item Attribute	**Value**	
Hard pegging Level	Project and task	
Allow Use of Common Supplies	Yes	
Fixed Order Quantity	20	
Attributes for Planned Orders		
Demand Grouping	Striping	
Project Group	Project Group	
	Project	
	Task	
Project Group		
Project Group	**Project**	**Task**
Project Group 1	Project P1	Task P1T1 Task P1T2
	Project P2	Task P2T1
Project Group 2	Project P3	Task P3T1

Sequence Number	**Demand Attribute**	**Demand Operator**	**Demand Attribute Value 1**	**Supply Attribute**	**Supply Operator**
1	Project Group	Any		Project Group	Matches Demand Value
	Project	Any		Project	Matches Demand Value
	Task	Any		Task	Matches Demand Value
2	Project Group	Any		Project Group	Matches Demand Value
	Project	Any		Project	Matches Demand Value
	Task	Any		Task	Any
3	Project Group	Any		Project Group	Matches Demand Value
	Project	Any		Project	Any
	Task	Any		Task	Any

4	Project Group	Equals	PG1	Project Group	Blank
	Project	Any		Project	Blank
	Task	Any		Task	Blank

Based on the netting sequences and their order defined in this example, the planning process has these options for project netting:

1. The planning process applies the first netting sequence step of the attribute-based netting rule, Net project task supply, defined in your netting rule to allocate supplies to demands with matching project and task attributes. This means that the supplies with project P1 and task P1T1 can only be allocated to a demand with project P1 and task P1T1.
2. When no matching project and task supplies are available, the process applies the second netting sequence step of the attribute-based netting rule. Because the Reservation Level in the rule is Project group, the planning process nets supplies that belong to any task in the same project group. This means that the supplies of any tasks of P1 can be allocated to any tasks of P1 because they're in the same group PG1.
3. When no matching task supplies are available within the same project, the process applies the sequence number 3 netting step of attribute-based netting rule to net the supplies that belong to any project or any task within the same group. This means that the supplies of any tasks of P1 can be allocated to any tasks of P2 because they are in same group.
4. In the absence of any excess supplies within the project group, the process applies the fourth netting sequence step of the attribute-based netting rule to allocate the common supply to project demands.
5. For unmet demands, the process recommends planned orders.

The planning process applies the netting sequences in the same order in each time bucket for attribute-based throughout the plan horizon.

Here's a plan output that represents pegging of available supplies to demands and recommended planned orders.

Demand, Supplies, and Planned Orders	Project Group	Project	Task	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Demand (common)				20				10		
Demand (PG1, P1, P1T1)	PG1	P1	P1T1	10					10	20
Demand (PG1, P1, P1T2)	PG1	P1	P1T2		10					
Demand (PG1, P2, P2T2)	PG1	P2	P2T2		10					5
Demand (PG2, P3, P3T1)	PG2	P3	P3T1		20		10			
Available Supply (common)				25			10			
Available Supply (PG1, P1, P1T1)	PG1	P1	P1T1	25						
Available Supply (PG1, P1, P1T2)	PG1	P1	P1T2							
Available Supply (PG1, P2, P2T1)	PG1	P2	P2T1							
Available Supply (PG1, P2, P2T2)	PG1	P2	P2T2							
Available Supply (PG2, P3, P3T1)	PG2	P3	P3T1		20					
Planned Order (PG1, P1, P1T1)	PG1	P1	P1T1						20	20
Planned Order (PG2, P3, P3T1)	PG2	P3	P3T1				20			

Let's analyze the netting of supplies and demands in each time bucket of this plan.

Day	Attribute-Based Netting
Day 1	The planning process pegs 20 units of common supply to 20 units of common demand (a demand without any project and task attributes). The remaining common supply after this pegging is 5 units. The process applies the first netting sequence step of the attribute-based netting rule to identify supplies and demands with matching project and task attributes. It pegs 10 units of (P1, P1T1) supply to 10 units of (P1, P1T1) demand. The remaining (P1, P1T1) supply after this pegging is 15 units.
Day 2	The process identifies 20 units of (P3, P3T1) supply. The process applies the first netting sequence step of the attribute-based netting rule to peg 20 units of (P3, P3T1) supply to 20 units of (P3, P3T1) demand. This pegging completely consumes the (P3, P3T1) supply. The process then applies the second and third netting sequence steps of the attribute-based netting rule to identify excess supplies from a project and task within the same project group. It pegs 10 units of (P1, P1T1) supply to 10 units of (P1, P1T2) demand. It also pegs 5 units of (P1, P1T1) supply to 10 units of (P2, P2T2) demand. This pegging completely consumes the (P1, P1T1) supply. The process then applies the fourth netting sequence step of the attribute-based netting rule to identify a common supply that it can peg to the remaining 5 units of (P2, P2T2) demand. The common supply is allocated to P2 project demand since it belongs to project group PG1. This project group is allowed to net common supply as per sequence number 4 netting sequence step of the attribute-based netting rule. The process then pegs 5 units of common supply to 5 units of (P2, P2T2) demand. This pegging completely consumes the common supply.
Day 4	The process identifies an additional common supply of 10 units. The process applies the first, second, and third netting sequence steps of the attribute-based netting rule but doesn't find any matching or excess supplies. The process then applies the fourth netting sequence step of the attribute-based netting rule to identify a common supply that it can peg to 10 units of (P3, P3T1) demand. Because P3 belongs to project group PG2, and as per the fourth netting sequence step of the attribute-based netting rule, only project demands of project group PG1 can net common supply. For this 10 units of unmet demand, the process recommends a planned order. Because the fixed order quantity defined for the item is 20, the process creates a planned order of 20 units.
Day 5	The process pegs 10 units of common supply to 10 units of common demand. This pegging completely consumes the common supply.
Day 6	The process applies the first, second, third, and fourth netting sequence steps of the attribute-based netting rule but doesn't find any available supplies. For the 10 units of unmet (P1, P1T1) demand, the process recommends a planned order of 20 units after considering the fixed order quantity defined for the item.
Day 7	The planning process aggregates unmet demands at the project group level to recommend planned orders. Because P1 and P2 belong to the same project group PG1, the process aggregates the unmet (P1, P1T1) demand and (P2, P2T2) demand. The process recommends a planned order of 20 units after considering the fixed order quantity defined for the item based on the attributes selected in Attributes for Planned Orders of the attribute-based netting rules. The process then assigns the project and task attribute to the planned order based on the attribute of the first demand, which is project P1 and task P1T1.

Example of Supply Creation

The planning process aggregates unmet demands based on the attributes selected for Demand Grouping in Attributes for Planned Orders of the attribute-based netting rules. Let's understand this with an example.

Let's assume that the attribute-based netting rule and the item associated with the plan have these configurations:

- Reservation Level: Project group
- Item Hard Pegging Level: Project and Task
- Item Fixed Order Quantity: 40

Attributes for Planned Orders	
Demand Grouping	Striping
Project Group	Project Group
	Project
	Task

Here's the supply recommendation for unmet demands:

Type	Project Group	Project	Task	Day 1	Day 2	Day 3	Day 4
Demand	Project Group 1	P1	T1	10			20
	Project Group 1	P1	T2			10	
	Project Group 1	P2	T3		20	10	
	Project Group 1	P2	T4	10			
Planned Order	Project Group 1	P1	T1	**40**			
	Project Group 1	P1	T2			**40**	

In this example, the planning process identifies an aggregated unmet demand of 20 units at the project group level on Day 1 and Day 3.

The process considers the fixed order quantity and creates a planned order of 40 units for Day 1 and Day 3. The planned orders acquire the project and task attributes of the first project demand.

The process allocates the remaining 20 units from Day 1 to the demand on Day 2 and 20 units from Day 3 to the demand on Day 4.

Project-Specific Safety Stock Planning

Here are some key points about project-specific safety stock planning:

- The project-specific supply planning supports only user-specified safety stock planning.
- Just like any other demand, the planning process allocates supplies to safety stocks with project and task attributes in each time bucket. This allocation depends on the order of netting sequences defined in the attribute-based netting rule that the plan uses.
- In a time bucket that has a safety stock and a demand with the same project and task value, the process nets the supply to the safety stock before the demand. However, if you have sales orders, forecasts, or other demands in a future time bucket, the process allocates safety stock supply from the previous bucket to the demand. After this reallocation, the process either allocates an existing supply to the safety stock or recommends a planned order.
- To recommend planned orders, the planning process aggregates safety stock quantity based on the attributes selected for Demand Grouping in Attributes for Planned Orders of the attribute-based netting rules.
- During planned order recommendation in any time bucket, sales orders, forecasts, or other demands always takes precedence over the safety stock.
- The safety stock override is applicable only to a safety stock that doesn't have any project and task attributes.

Upload safety stock levels using the ScpSafetyStockLevelImportTemplate.xlsm file.

Example of Project-Specific Safety Stock Planning

Let's understand the project-specific safety stock planning with this example. Let's assume that you considered these safety stock level values for your plan:

Sequence Number	Demand Attribute	Demand Operator	Supply Attribute	Supply Operator
1	Project Group	Any	Project Group	Matches Demand Value
	Project	Any	Project	Matches Demand Value
	Task	Any	Task	Matches Demand Value
2	Project Group	Any	Project Group	Matches Demand Value
	Project	Any	Project	Matches Demand Value
	Task	Any	Task	Any
3	Project Group	Any	Project Group	Matches Demand Value
	Project	Any	Project	Any
	Task	Any	Task	Any
4	Project Group	Any	Project Group	Blank

	Project	Any	Project	Blank
	Task	Any	Task	Blank

				Safety Stock Quantity						
Item	Organization	Project	Task	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
CM66254	M1	Null	Null	30	30	30	30	30	30	30
CM66254	M1	P1	T1	20	20	20	20	20	20	20
CM66254	M1	P1	T2	15	15	15	15	15	15	15
CM66254	M1	P2	T1	10	10	10	10	10	10	10
CM66254	M1	P2	T2	0	0	0	0	0	0	0

Here's how the planning process nets supplies for safety stock and the demand of the project group PG1 with the project P1 and Task T1.

Project Group	Project	Task	Demand, Supplies, Planned Order, and Safety Stock	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
PG1	P1	T1	Demand	10					20	
			Scheduled Receipts	30						
			Planned Order						20	
			Safety Stock	20	20	20	20	20	20	20
			Net Safety Stock	0	0	0	0	0	0	0
			Projected Available Balance	20	20	20	20	20	20	20

These are the conditions that the planning process fulfills during the project-specific safety stock planning:

- If you have a safety stock and a demand with the same project and task value in a time bucket, the process nets the supply to the safety stock before the demand. In this example, we have 30 units of supply on day 1. The planning process nets 20 units of supply for the safety stock and nets 10 units of supply for the demand on day 1. The process maintains 20 units of safety stock from day 1 to day 5 to ensure that the net safety stock is zero.
- In case you have sales orders, forecasts, or other demands in a future time bucket, the process allocates safety stock supply from the previous bucket to the demand. In this example, the process identifies a demand of 20 units on day 6 and nets 20 units of supply from Day 1 to the demand.
- After such allocations, the process either allocates an existing supply to the safety stock or recommends a planned order for the safety stock. In this example, the process recommends a planned order of 20 units on day 6 to net the supply to safety stock on day 6 and day 7.

Example of Project-Specific Safety Stock Planning with Days of Cover

You can use days of cover calculations while determining the safety stock used in planning for unexpected changes in project demands. Let's use an example to understand how days of cover are calculated.

Scenario

How Days of Cover Are Calculated

Let's say you're working on a project-based plan with these netting rule specifications:

- Reservation level is Project Group
- Netting sequence order:
  a. Net project task supply
  b. Net excess project supple
  c. Net common supply

Sequence Number	Demand Attribute	Demand Operator	Supply Attribute	Supply Operator
1	Project Group	Any	Project Group	Matches Demand Value
	Project	Any	Project	Matches Demand Value
	Task	Any	Task	Matches Demand Value
2	Project Group	Any	Project Group	Matches Demand Value
	Project	Any	Project	Matches Demand Value
	Task	Any	Task	Any
3	Project Group	Any	Project Group	Matches Demand Value
	Project	Any	Project	Any
	Task	Any	Task	Any
4	Project Group	Any	Project Group	Blank
	Project	Any	Project	Blank
	Task	Any	Task	Blank

Let's also assume these are your item attributes:

- Safety stock planning method is Days of Cover
- Days of Cover Demand period is 5 days

- Days of Cover period is 2 days

This table lists out the daily number of demand units for each task.

Project	Task	Day 1 (Common Demand = 30 units)	Day 2 (Common Demand = 30 units)	Day 3 (Common Demand = 30 units)	Day 4 (Common Demand = 30 units)	Day 5 (Common Demand = 30 units)	Day 6 (Common Demand = 30 units)	Day 7 (Common Demand = 30 units)
P1	T1	10	-	20	20	-	20	20
P1	T2	10	10	25	25	-	25	25
P2	T1	-	-	-	10	10	-	10

Here's how the total demand, average daily demand and safety stock days of cover duration are calculated:

- The total demand is the sum of the common demand and the demand for each project and task combination. For Day 1, the total demand is 30+10+10=50 units.
- The average daily demand is the sum of total daily demands from the day in question divided by the days of cover demand period. For Day 1, it's (50+40+75+85+85)/5 = 67 units.
- The safety stock days of cover is the product of the average daily demand and the days of cover. For Day 1, it's 67*2 = 134 days.

Day	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Total Demand	50	40	75	85	85	85	85
Average Daily Demand	67	74	83	68	51	34	17
Days of Cover	2	2	2	2	2	2	2
Safety Stock Days of Cover	134	148	166	136	102	68	34

How Plans Maintain the Safety Stock Calculated Using Days of Cover

Let's now use the safety stock days of cover calculation to understand how supply plans maintain the safety stock by assessing available on-hand supply and safety stock to determine a projected available balance. When the number of projected available balance units is less than the number of safety stock units, the creation of more supply units is recommended to make up the difference.

- The project-based plan calculates days of cover safety stock levels at common for common and project demands.

- Common on-hand units are used to net common demands and project demands based on the attribute-based netting sequence steps.
- Common on-hand units also satisfy the common safety stock levels throughout the planning horizon.

Project	Task	Day 1 (Common Demand = 30 units)	Day 2 (Common Demand = 30 units)	Day 3 (Common Demand = 30 units)	Day 4 (Common Demand = 30 units)	Day 5 (Common Demand = 30 units)	Day 6 (Common Demand = 30 units)	Day 7 (Common Demand = 30 units)
P1	T1	10	-	20	20	20	20	20
P1	T2	10	10	25	25	25	25	25
P2	T1	-	-	-	10	10	10	10

Demand Type	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Safety Stock	134	148	166	136	102	68	34
On-Hand Common Supply	250 (Common demand on each day plus the demand for all project and tasks on Day 6)	-	-	-	-	-	-
Available On-Hand Common Supply	220	190	160	130	100	30	0
Projected Common Available Balance	220	190	166	136	106	68	38
On-Hand Supply for PG1-P1-T1	100	-	-	-	-	-	-
PO Supply for PG1-P1-T2	85	-	-	-	-	-	-
Planned Order Supply for PG1-P1-T1	-	-	-	-	-	-	55
Planned Order Supply	-	-	6	-	-	32	-

The common on-hand 250 units satisfies the common demand from Day 1 to Day 7. Additionally, the plan maintains sufficient supply to satisfy common safety stock levels calculated based on days of cover. On Day 3, a common supply of 6 units is recommended by the plan to maintain sufficient stock for the common safety stock level calculated using days of cover. On Day 6, the plan nets 40 units of the common on-hand units to project demands based on project- netting sequences. On Day 6, because the common stock isn't sufficient to maintain safety stock level, the plan recommends 32 units of common supply. On Day 7, the planned order supply of 55 units with the project and task is recommended by the plan based on the attributes selected for Demand Grouping in Attributes for Planned Orders of the attribute-based netting rules.

Review Supplies and Demands with Project Pegging

After you run a project-specific supply plan, you can navigate to the plan and review the plan details.

Follow these steps to navigate to the plan:

1. From one of the Supply Chain Planning work areas, click the Task drawer and select **Manage Plans**.
2. Select your project-specific plan, click **Actions**, and then click **Open**.
3. On the Edit Plan page, click **Open**.
4. In the Open Table, Graph, or Tile Set page, search for the **Items**, **Supplies and Demands**, or **Exceptions** table.
5. Select the table and click **OK** to open the table and review plan details.

Review Plan Details

You can review these details of your project-specific plan:

Plan Detail	How You Review the Plan Detail
Pegging relationships between supplies and demands of the item	Navigate to the Supplies and Demands table to review pegging of project demands and supplies. Here's how you can review the plan: • Review how the planning process shared project supplies across demands of the same project or demands of multiple projects of the same project group. • Analyze how supplies of the end item and their components are pegged to sales orders and forecasts. • Select a demand and view supplies pegged to the demand. You can identify the attribution on the pegged supplies for a project demand. • Understand how the planning process applied the netting sequences in your project-specific plan to satisfy project demands.
Sharing of project supplies	The planning process shares project supplies across project demands based on the netting rule associated to the plan. You can select a supply and review its pegged quantity across various project demands. Here's how you can review the plan: • Review how the planning process shared project supplies across demands of the same project or demands of multiple projects of the same project group.

Plan Detail	How You Review the Plan Detail
	• Analyze how the attribute-based netting sequences influenced pegging of supplies across various task demands within the same project or across various project demands within the same project group. You can review the shared quantity for each demand from the pegged quantity of the project supply.
Exceptions	Exceptions are key elements to evaluate and improve your plan. After you run a project-specific plan, view the exceptions to understand the quality of the plan and to get visibility of key problem areas. In the Exceptions table, you can review project group, project, and task details in these order-related exceptions: • Demand Quantity Not Satisfied • Demand at Risk Due to Insufficient Lead Time • Demand at Risk Due to Resource Shortage • Demand at Risk Due to Supplier Capacity Shortage • Late Replenishment for Forecast • Late Replenishment for Sales Order • Late Supply Pegged to Forecast • Late Supply Pegged to Sales Order • Orders to be Canceled • Orders to be Rescheduled In • Orders to be Rescheduled Out • Orders with Insufficient Lead Time • Past Due Orders • Past Due Sales Orders You can search orders in an exception for a specific project group, project, and task. You can include project group, project, and task in your search on the Exceptions table using the **Add Fields** option.
Build Plan view	Capabilities in the Build Plan view for plan supplies and demands in attribute-based planning: • View project group, project and task attributes for orders in the Build Plan view. • Drill to from build plan supports the planning attribute combination to Supplies and Demands or Exception user interfaces. • View the project group, project, and task attributes details for a combination by selecting a cell and clicking **Show Details**. • Options in Highlight Related Cells list in a build plan are supported with the project group, project, and task attribute values.
Order Comparison view	Capabilities in the Order Comparison view for plan supplies and demands in attribute-based planning: • View the project group, project, and task attributes for orders in the Order Comparison view's Changed Demands and Changed Supplies tabs. • Search the project group, project, and task attribute values with query by example for planning attributes. • Drill to other supply planning user interfaces and planning analytics with the project group, project, and task attributes.

Plan Detail	How You Review the Plan Detail
Demand Fulfillment view	Capabilities in the Demands Fulfillment view for plan supplies and demands in attribute-based planning: • View the project group, project, and task attributes for orders in the Demand Fulfillment view for at-risk demands and recommendations. • View the project group, project, and task attributes in Expedite Buy Orders, Expedite Make Orders, and Expedite Transfer Orders in recommendations in the Demand Fulfillment table. • Search the project group, project, and task attribute values with query by example for project group, project, and task attributes. • Drill to other supply planning user interfaces and planning analytics with the project group, project, and task attributes.
Items with a Shortage in a Project Task	The Items with a Shortage in a Project Task exception is a project-specific supply planning exception that evaluates item shortages in a specific project and task. The planning process calculates this exception for a project and its associated tasks for an item and assists in analyzing item shortages and resolving project demand shortages issues. The exception calculation can be controlled by providing threshold details. This exception appears in the same circumstances as the Items with a Shortage exception. However, in this exception, the planning process uses only the supplies and demands that belong to a project and task. You get the following details in this exception: • Organization • Item • From Date: The start date of the planning time bucket with shortage quantity in a project and task. • To Date: The end date of the planning time bucket with shortage quantity in a project task. • Shortage Days • Project group • Project • Task **Note:** To generate this exception, you must include the exception in the exception set that you associate to your project-specific plan.

Analyze Project-Based Plan using Project Dimensions

Here's how you can analyze a project-based plan using project dimensions:

- The project group, project, and task attributes are displayed as levels of a the project hierarchy in a pivot table, graph, or tile for analysis.
- Measure values are aggregated if the values are viewed at aggregate levels in the project hierarchy, such as project or project group.
- Edits performed at the aggregate level in the project hierarchy at project group or project for editable measures are disaggregated to the lowest level combinations available in the plan.
- The supplies and demands with no task and project control level as a project are displayed with the task-level member as NO TASK ASSIGNED in planning analytics.

Refer to the Planning Attributes section of the Attribute-Based Planning chapter for additional information on the association of measures in a measure context and deploying the measures for an attribute-based plan.

Simulate Project Demand and Supply

You can perform simulations by changing or editing data in your project-specific plan to understand impact of changes on your plan and evaluate various what-if scenarios. After simulation, you can use the plan comparison capability to compare the proposed plan with an existing base plan.

You can simulate these aspects of you project-specific plan:

- The effect of editing the project group, project, and task for planned orders. You can use mass editing capabilities to edit a set of planned orders for simulation.
- The effect of date and quantity updates to project-specific supplies such as work order, purchase order, or transfer order.
- The effect of creating a manual demand, planned order, or on hand with project and task attributes. To create the manual order, click the **Create** icon on the Supplies and Demands page, and select the source type in the Create Order dialog box. When you select the project group, project, and task, the planning process retains their relationships for the order.

Run the plan with the **Do not refresh with current data** option selected to see the results of your simulation. The planning process refers to the attribute-based netting rule of the plan to perform netting and creates supplies.

You can use the **Edit in Spreadsheet** option to edit project groups, project, and task for planned orders, manual demand, or on hand and then perform simulation. You can also edit gross forecast, net forecast, planned order, or manual demand measure values in a pivot table. Here's how it works:

- When you edit a cell containing an existing measure value, the spread will be same as prior updates. The updates are spread across underlying combinations irrespective of whether the net forecast, gross forecast, planned order, or manual demand has a project and task or not.
- When you edit a cell containing a null value, planned orders are created without a project and task. You can navigate to supplies and demands view from the pivot table and add project group, project, and task.

Related Topics

- Simulations in Supply Planning

Analyze Calculated Supply and Demand Measures Using Configured Attributes

You can analyze the calculated supply and demand measures using the user-configured planning attributes.

Using attributes such as Project, Task, Country of Origin, or any configured planning attribute, you can gain insight into forecasted inventory for enterprises. You can enable specific planning measures to compute the values at the planning attribute level. The planning measures display the value of the measures in any time bucket either in the planning attribute measure context or by running a project-driven supply chain plan at a project and task level in the pivot table or material plan.

You can use the following supply and demand measures to calculate using the planning attributes.

- Projected Available Balance
- Projected Available Balance Value

- Projected On Hand
- Safety Stock
- Safety Stock Value
- Average Daily Demand
- Project Available Balance Days of Cover
- Safety Stock Days of Cover

Note: You can't archive Projected Available Balance, Projected Available Balance Value, Projected On Hand, Safety Stock, and Safety Stock Value measures dimensioned by planning attribute dimensions, or include them in plan comparison.

You can create user-defined measures with planning attributes using these measures to analyze the attribute-based plan output.

The feature is applicable to unconstrained supply plans and demand and supply plans.

Here's some additional information about this feature:

- You can compute the supply and demand measures by the project group, project, and task attributes in the project measure context.
- You can also compute the measures by project group, project, and task or any user-defined planning attributes. This is based on the planning attributes dimensions deployed to the measure in the planning attributes measure context.
- For an existing attribute-based plan with planning attributes measure context, refresh and rerun the plan after deploying planning attribute dimensions to measures to analyze the plan by user-defined planning attributes.
- For an existing attribute-based plan with project measure context, refresh and rerun the plan to analyze the measures by project and task.
- Supply Planning calculates and displays the supply and demand measures at the product, organization, time, and planning attribute levels.
- You can drill from Supplies and Demands, Exceptions, or any supply planning user interface with planning attributes to a pivot table with the measure values by planning attributes.
- You can drill to the Supplies and Demands view from measures such as Projected Available Balance with planning attributes. The Supplies and Demands view displays supply and demand details with planning attributes.
- You can review and analyze details of measures at aggregate levels with planning attributes in a pivot table, graph, or tile. You can configure filters to review details for measures with planning attributes in a pivot table, graph, or tile.
- A material plan or a pivot table, graph, or tile configured at a higher aggregation level, such as project group or project for a project dimension aggregate, displays the measure values at the higher aggregation level. The manner of aggregation follows the “Aggregate Then Calculate” or “Calculate Then Aggregate” setting for the measure.
- The material plan, pivot table, graph, or tile configured for a subset of planning attribute dimensions of the plan scope aggregates and displays the measure values for the selected planning attributes only. The material plan, pivot table, graph, or tile displays values for measures both for common and planning attribute values.
- For attribute-based plans where the netting rule configuration allows the allocation of supplies across planning attribute values, the attribute transfer supply and attribute transfer demand measure values are included in

the Projected Available Balance and Projected On Hand measure values. The Attribute Transfer Demand and Attribute Transfer Supply measure values are displayed at planning attribute levels in a pivot table, graph, or tile.

- For the existing plans enabled with planning attribute measure context, after the plan rerun, existing pivot tables such as Material Plan display measure values at the item organization for Projected Available Balance, Projected On Hand, Safety Stock, or Average Daily Demand by aggregating measure values at the planning attribute levels.
- You can also load measures from other demand and supply plans with planning attributes or project measure context.

Use the following steps to analyze calculated supply and demand measures using configured attributes:

1. Create an unconstrained supply plan in Supply Planning or Demand and Supply Planning work area.
2. Assign the dimension catalog to a plan with planning attribute dimensions.
3. Assign the measure catalog with supply and demand measures.
4. Select the project or planning attribute measure context.
5. Select an attribute-based netting rule.
6. Run the plan and analyze the calculated supply and demand measures using configured attributes.

Note: Deploy planning attribute dimensions to measures using Change Granularity in the planning attributes measure context only for the set of measures to be analyzed by planning attribute dimensions. This step is not required for project measure context.

Examples

Example 1: This example explains how the Projected Available Balance measure value is computed and displayed at the aggregated level in a pivot table.

- You configure the pivot table with the item, organization, project, and task level in a supply plan. The Projected Available Balance measure values are displayed at the project P1, task T1, project P1, task T2, and common level when you configure the pivot table at the project group, project, and task levels.
- If you configure the pivot table with only item, organization, project group, and project levels, the Projected Available Balance measure values are aggregated at the project level.
- If you configure the pivot table with only item and organization, the Projected Available Balance measure values are aggregated at the item and organization level.

Example 2: This example explains how the Projected Available Balance measure values are computed and displayed with the Attribute Transfer Supply and Attribute Transfer Demand values at the aggregated level in a pivot table.

- An attribute-based netting rule is created with the first netting sequence step to net project supplies with project demands with the same project and task, and the second netting sequence step to net excess project supplies across tasks within the same project demands.
- You configure the pivot table with the item, organization, project, and task levels. The Projected Available Balance is displayed in a pivot table considering the Attribute Transfer Demand from project P1 and task T2 and attribute transfer supply in project P1 and task T1. The excess On Hand supply of 10 units with project P1 and task T2 is allocated to project demand with project P1 and task T1.
- If you configure the pivot table with only item, organization, and project, the Projected Available Balance measure values are aggregated at the project level.

Example 3: This example explains how the Projected Available Balance and Projected On Hand Measure values are displayed by project group, project, and task in a pivot table in an attribute-based plan.

The Projected On Hand, Projected Available Balance, and Projected Available Balance Value measure values are displayed by Project Group as VC_ENG, Project as VC Jet Engine, and Task as Cylinder Assembly in weekly and daily time buckets.

Example 4: This example explains how the Projected Available Balance and Projected On Hand Measure values are displayed by Region and Country of Origin in a pivot table in an attribute-based plan.

The Projected On Hand, Projected Available Balance, and Projected Available Balance Value measure values are displayed by Region as Africa and Country of Origin as South Africa in weekly and daily time buckets.

Example 5: This example explains how to drill from a pivot table with the Projected Available Balance measure by planning attributes to the Supplies and Demands view.

- Select a measure value of 50 units for the measure Projected Available Balance in a pivot table for Region Oceania and Country of Origin Australia. Drill to Supplies and Demands View.
- Drill to respects the context, and the Supplies and Demands View displays on hand for 50 units for the item with Region Oceania and Country of Origin as Australia.

Review Attribute-Based Transfer Recommendations

You can review the recommendations to transfer supply from a combination of values for one set of attributes to another set of attributes.

Using this feature, you can review plan recommendations for change of attribution on supplies. The Attribute-Based Transfer Recommendations view allows you to view the set of supplies across different attributes that are pegged to a demand. You can navigate from supply and see what demands the supply is allocated to, along with the "from" and "to" attributes and Transfer Quantity. This view provides insight to planners into shortages in supplies when certain supplies are set aside with specific attribution.

You can drill to the Attribute-Based Transfer Recommendations view from the:

- Supply Planning and Demand and Supply Planning work areas
- Supplies and Demands table or from a material plan

The view is applicable to unconstrained supply plans and demand and supply plans associated with the attribute-based netting rule.

Here's more information about the Attribute-Based Transfer Recommendations view:

- You can save the search criteria and table layouts in the view.
- You can review the attribute-based transfer recommendations for Project-Driven Supply Planning with the "from" and "to" project group, project, and task attributes.
- You can review the attribute-based transfer recommendations for an attribute-based plan with the "from" and "to" planning attributes.
- The transfer recommendations for supplies can be released only from the Supplies and Demands view, and not from the Attribute-Based Transfer Recommendations view.
- The Attribute-Based Recommendations view displays Item, Organization, Planner Code, demand details, supply details, and the "from" and "to" planning attributes.

- The Attribute-Based Transfer Recommendations view displays Demand Order Type, Demand Order Number, Demand Line Number, Demand Quantity, and Demand Date details for demand, and displays Supply Order Type, Supply Order Number, Supply Line Number, Supply Quantity, and Supply Date details for supply.
- The "from" and "to" planning attributes with transfer quantity are displayed for each supply in the Attribute-Based Transfer Recommendations view.
- The planning attributes columns are displayed with the name of the planning attribute associated with the attribute-based netting rule assigned to the plan.
- The "from" planning attributes columns display attribution of the supply pegged to a demand, and the "to" planning attributes columns display attribution of the demands to which the supplies are pegged.
- The pegged quantity of a supply is displayed as the Transfer Quantity for each supply.
- Each pegging record is displayed as an attribute-based transfer recommendation with its corresponding supply and demand details, "from" planning attributes, "to" planning attributes and Transfer Quantity in the Attribute-Based Transfer Recommendations view.
- Drilling from the Attribute Transfer Demand measure to the Attribute-Based Transfer Recommendations view displays one or multiple supplies and their attributes as “from” attributes and pegged demand attributes as “to” attributes.
- The measure value, which is the total pegged quantity of the supplies from planning attributes to the pegged demands, is displayed with relevant pegged quantity for each supply and demand pegging. Drilling from the Attribute Transfer Demands measure to the Attribute-Based Transfer Recommendations view has the same “from” attribution for all supplies and different attribution for all demands. This means the view has the same “from” planning attributes and different “to” planning attributes.
- Drilling from the Attribute Transfer Supply to the Attribute-Based Transfer Recommendations view displays one or multiple supplies and their attributes as “from” attributes and pegged demands attributes as “to” attributes. The measure value, is displayed with the relevant pegged quantity for each supply and demand pegging.
- Drilling from the Attribute Transfer Supply measure to the Attribute-Based Transfer Recommendations view has the same “to” attributes for all demands and different attributes for all supplies. This means the attribute-based transfer recommendations have the same “to” planning attributes and different “from” planning attributes.
- You can select either a single supply or demand or multiple supplies and demands in the Supplies and Demands view and drill to the Attribute-Based Transfer Recommendations view.
- You can also select a record in the Attribute-Based Transfer Recommendations view and drill to the Supplies and Demands view with the context of attributes to review additional details.
- The Attribute-Based Transfer Recommendations view only shows information for the portion of the plan horizon for which pegging is computed.
- The details are not displayed in the Attribute-Based Transfer Recommendations view beyond the value provided in the plan option Number of Days to calculate pegging until the plan horizon.
- Drilling to the Attribute-Based Transfer Recommendations view is supported only for the Attribute Transfer Demand and Attribute Transfer Supply measures.

Examples

Example 1: This is an example of reviewing the attribute-based transfer recommendations when you drill from the Supplies and Demands view to the On Hand supply.

- The On Hand supply of 25 units with Project 3999C and Task 10 is pegged to the project forecast demand with the Project as 3999A and the Task as 20 with a pegged quantity of 10 units, and another project forecast demand with the Project as 3999B and the Task as 10 with a pegged quantity of 15 units.

- Select the On Hand and drill to the Attribute-Based Transfer Recommendations view. The view displays two records for the supply.
- The first record displays one of the pegging records with the “from” Project as 3999C and Task as 10 of the supply, and the “to” Project as 3999A and Task as 20 of the demand with the transfer quantity for the supply as 10 units.
- The second record displays attribute transfer recommendation for the On Hand supply with the “from” Project as 3999C, Task as 10, the “to” Project as 3999B, and Task as 10 with the Transfer Quantity as 15 units. You can also see the Attribute-Transfer Recommendations view project forecast demand details along with supply details.

Example 2: This is an example of reviewing the attribute-based transfer recommendations when drilling from the attribute transfer demand measure in a pivot table.

- Select the measure value and drill to the Attribute-Based Transfer Recommendations view.
- The Attribute-Based Transfer Recommendations view displays the pegging details for the corresponding supply and demand for which the attribute transfer supply measure value is displayed.
- The view displays the “from” Project as 3999C and Task as 10, and the “to” Project as 3999A and Task as 20 with the Transfer Quantity as 10 units.
- The Transfer Quantity is the same as the pegged quantity and measure value for the Attribute Transfer Demand on January 15th, 2030.

Release Project-Specific Supply Recommendations

Supply chain planning generates plan recommendations with project and task details to suggest actions for balancing supplies and demands. The planning process can either suggest requesting new supplies to fulfill unmet demands or suggest rescheduling or canceling existing supplies to balance excess supplies.

Planned Order Recommendations

When the planning process recommends a new planned order, the order can be released to an Oracle Fusion source system or an external source system, including Oracle E-Business Suite. The planned order can be a make planned order, a buy planned order, or a transfer planned order.

If you have an Oracle Fusion source system, the planning process releases your planned orders with project and task attributes to Oracle Supply Chain Orchestration. The planned orders are validated with additional project-related details and then released to these execution systems:

- Release of a make planned order creates a work order with project and task attributes in Oracle Manufacturing.
- Release of a buy planned order creates a purchase requisition and then a purchase order with project and task attributes in Oracle Procurement.
- Release of a transfer planned order creates a transfer order with project and task attributes in Oracle Inventory Management.

If you have external source systems, the plan release process generates respective CSV files for planned orders with project and task attributes.

For planned orders with the Project hard pegging level value, the planning process recommends supplies only with project. If you release a planned order to a source system without any task attribute, the planning process assigns the first task of the project for supply recommendation.

The planning process can also reschedule in, reschedule out, or cancel a purchase order, transfer order, or work order to balance supplies and demands.

> **Note:** Supplies aren't rescheduled in within the time fence. The project-specific plan nets firm supplies within the time fence by following attribute-based netting sequences.

Planned orders with project and task attributes can't be released for these organizations:

- An organization for which the **Project Enabled** attribute is set to **No** on the Maintain Supply Network Model page.
- A Contract Manufacturing organization.
- An organization for which the Plan External Manufacturer Supplies is enabled.
- A drop ship validation organization.

> **Note:** Publish of order forecasts won't be striped with project and task.

By default, the planning process releases buy planned orders with project and tasks attributes after grouping them at the project level. The process does that by automatically selecting **Project** for the **Requisition load group by** option in the Supply: Advanced Options dialog box when you select a netting rule for your plan.

You can either manually review and release each project-specific planned order recommendation or set up automatic release rules.

Related Topics

- How Plan Recommendations Are Released
- Manually Release Plan Recommendations
- Release Plan Recommendations to an External Execution System

OTBI Analytics for Project-Specific Supply Plans

Oracle Transactional Business Intelligence (OTBI) is a real-time, self-service reporting solution that helps you create user-defined and interactive reports. You can use OTBI reports to analyze key metrics, such as plan recommendations, order details, supply pegging, and so on.

How You Enable OTBI Reporting

To get OTBI reports, configure these setups for your project-specific plans:

- Select the **Enable for OTBI reporting** option when you configure the plan options.

- Set up reporting hierarchies by configuring the Product and Time hierarchies in the dimension catalog named Reporting Catalog. To configure the Product and Time hierarchies, use the Configure Planning Analytics task in your Supply Chain Planning work area.

Predefined and User-Defined OTBI Reports for Project-Specific Supply Planning

To get useful insights about your project-specific supply plan, you can access these predefined reports in the Supply Planning or Demand and Supply Planning work area:

Predefined Report	Description
Plan Recommendations Summary Graph Project Detail	This report provides plan recommendation graph for project-specific plans. You can review and analyze the recommendation type, order number, order quantity, project group, project, and task values for each recommendation in the graph.
Order Details by Item Project Detail	This report is categorized based on items, suppliers, and order types and provides supply and demand details for each item in an organization. You can review and analyze the order quantity, order value, project group, project, and task values for each order of the item in the report.
Pegging Details by End Item Project Detail	This report is categorized based on end items, customers, and order types. You can review and analyze the pegged quantity along with the project group, project, and task values for each end item. You can also review the pegging details of component items in each time bucket with their project group, project, and task values.
Build Plan by End Item Project Detail	This report is categorized based on organizations and end items. You can review and analyze the pegged quantity along with the project group, project, and task values for each end item in an organization. You can also review the pegging details of component items with their project group, project, and task values.

To create user-defined reports or analysis set, navigate to the Reports and Analytics work area. Select the **Supply Chain Planning Real Time** subject area and add **Project**, **Project Group**, and **Task** from the **Order Details** folder in the Data Source pane to your report. Save your user-defined report or analysis set in the path /shared folders/custom/Supply Chain Planning, to view the report or analysis set in the Supply Planning or Demand and Supply Planning work area.

Related Topics

- Enable Plans for OTBI Reporting

Troubleshoot

Checklist to Set Up Project-Specific Supply Planning

Use this checklist to set up your project-specific supply planning correctly:

Item	Details
Collect data required for project-specific supply planning.	Ensure that the Project-Driven Supply Chain and Plan Project-Specific Supply features are opted in to before you collect project-specific planning data. Run collections to collect data from the Oracle Fusion source system or external source systems, including Oracle E-Business Suite, to the planning data repository.
Create Project Groups.	Create project groups on the Manage Project Groups page and associate projects and task designators to the groups. You can also collect project groups using the FBDI file.
Define Attribute-Based Netting Rules.	Define your attribute-based netting rules on Manage Attribute-Based Netting Rules page.
Define assignment set for project-specific supply planning.	Define the assignment set to enable the planning process to: • Search for supplies across various supply sources. • Create make, buy, or transfer planned orders with project and task.
Ensure that the items that take part in project-specific supply planning have the hard pegging level value set to **Project and Task**, **Project**, or **Project Group**.	Items can participate in project-specific supply planning only when the hard pegging level is set to a value other than **None**.
Assign attribute-based netting rule to your project-specific plan.	To make a plan project-specific, you need to assign an attribute-based netting rule to the plan. You can assign the default netting rule or the netting rule you created based on your business needs.

Troubleshoot Common Setup Issues

Use this table to resolve some common setup issues related to project-specific supply planning:

Issue	Cause	How to Resolve
I am unable to collect supplies and demands with project and task details.	Your organization might not be enabled for project-specific planning.	Ensure that the **Project Enabled** parameter is set to **Yes** for the organization on the Maintain Supply Network Model page.
I am unable to find my project group on the Manage Project groups page.	The start date of your project group in the XLSM file might be prior to the collection start date.	Ensure that the start date is either null or later than the collection run date.
I am unable to find any projects to assign to my project group on the Manage Project Groups page.	You might not have collected any projects from the Oracle Fusion source system or external source systems, or your projects might be assigned to a different project group.	Review data in the planning data repository to ensure that you collected valid project values from the Oracle Fusion source system or external source systems.

Issue	Cause	How to Resolve
		Ensure that you removed projects from other project groups before you assign them to a new project group.
I am unable to find supplies and demands with project and task references for an item in the plan output.	You might have collected invalid project and task values and their relationships, or the hard pegging level value of the item might be **None**.	Ensure that the hard pegging level value of the item is set to **Project and Task**, **Project**, or **Project Group**. Collect valid project and task values and their relationships and then run your project-specific plan again.
When I review my plan output, I observe that the **Items with a Shortage in a Project Task** exception isn't calculated.	The exception might not be assigned to the exception set used in your project-specific plan.	Ensure that: • You assign **Items with a Shortage in a Project Task** exception to that exception set that you use in your project-specific plan. • You run your project-specific plan again.
I am unable to release planned orders with project and task attributes.	The **Project Enabled** parameter for the organization might be set to **No**.	Ensure that the **Project Enabled** parameter is set to **Yes** for the organization on the Maintain Supply Network Model page. **Note:** The **Project Enabled** parameter is set to **No** for Contract Manufacturing organizations, drop ship validation organizations, or an organization for which the **Plan External Manufacturer Supplies** is enabled.

12 Attribute-Based Planning

Overview of Attribute-Based Planning

Your enterprise enables attribute-based planning to maximize supply availability for specific planning attributes. As a supply planner who uses attributes in planning, you can control the granularity with which supplies are netted with demands.

Here's an overview of the tasks you need to conduct attribute-based planning:

1. Create segment groups and carry out item segmentation.
2. Create planning attributes and corresponding attribute dimensions.
3. Associate planning attribute values with dimension levels.
4. Add attribute dimensions to measures by configuring attribute measure contexts.
5. Create attribute-based netting rules and add planning attributes.
6. Create an unconstrained plan and associate a measure catalog, measure context, and netting rule to the plan.
7. Run the plan and review planning results.

Note: This chapter calls out the features of planning with attributes, but existing planning setup and processes continue to apply.

The release of planned orders with planning attribute values to Oracle Fusion Cloud SCM flexfield segments is based on the planning attribute mapping. Here's how your planning results are used:

- The release of a make planned order with planning attribute values to Oracle Fusion Cloud SCM creates a work order with attribute values in work order header descriptive flexfield segments.
- The release of a buy planned order with planning attribute values to Oracle Fusion Cloud SCM creates a purchase requisition with attribute values in purchase requisition line descriptive flexfield segments.
- The release of a transfer planned order with planning attribute values to Oracle Fusion Cloud SCM creates a transfer order with attribute values in transfer order line descriptive flexfield segments.

Here's how the release of planned orders with planning attribute values to external sources happens:

- Make or Buy or Transfer planned orders with planning attribute values released from planning creates release CSV files with planning attribute values.
- Planning attribute values are updated in the release CSV files in the planning attribute number column.
- The planning attribute number column updated in the release CSV file will be the attribute number of the corresponding planning attribute in the planned order released.

Segment Groups and Criteria

Define segment groups and criteria for use in attribute-based netting sequences. Use the Manage Segment Groups and Criteria task to set up segment groups.

Define a Segment Group

1. Click the Manage Segment Groups and Criteria task.
2. Click the add icon.
3. In the Create Segment Group dialog box, enter a name and description.
4. Select a source system.
5. Define segment granularity by selecting a dimension and level. Use either the Product or Organization dimensions to define segment groups for attribute-based planning.
6. In the Segments section, select a catalog.
7. Add and define segments.
8. In the Segment Criteria section, define criteria for each segment.
    a. Click the add icon.
    b. Select a dimension.
    c. Click the edit icon in the Plan Name column. Select the plan type and plans to include.
    d. Select a measure evaluation table.
    e. Select an attribute.
    f. Select Operator, From, and To values.
9. Save your segment group and criteria.

Associate Segment Groups with Criteria

After defining your segment group, run the Execute Segmentation process to associate segments to items based on segment criteria. Use the View Segmentation Summary task to review the results of the segmentation and association process.

For more information about segmentation, refer to the Segmentation chapter in the Using Replenishment Planning guide.

Planning Attributes

Overview of Planning Attributes

You use planning attributes for granular supply and demand netting during supply chain planning. Use the Manage Planning Attributes task to define and manage supply chain planning attributes. The first two attributes are, by default, Project and Task.

You can define up to 13 more attributes.

Define a Planning Attribute

Here's how you define a planning attribute:

1. Navigate to the Plan Inputs, Supply Planning, or Demand and Supply Planning work areas.

2. Click the Manage Planning Attributes task.
3. In the Search Results table, click the create icon.
4. In the Create Planning Attribute dialog box, enter details for the new attribute.
    a. Enter an attribute name.
    b. Specify whether the data type is an alphabetic character or a number.
    c. Select the Oracle Fusion value set.
5. Save your attribute.

Attribute Numbers

When you create an attribute, an attribute number is assigned to it, in sequence. Attributes 1 and 2 are Project and Task, respectively, and are predefined. You can create up to 13 more attributes. For project grouping needs you can use the predefined Project Group attribute.

The planning attribute number is used for reference during the preparation of supplies and demands file-based data import files used to collect supplies and demands striped with planning attribute values from an external source system.

Attribute Dimensions

When you create an attribute, corresponding dimension, hierarchy, and level with the planning attribute name will also be created. The selected for Oracle Fusion value set will be associated with the planning attribute.

Considerations for Attribute Name Editing

You can edit an attribute name to consequently update the Oracle Fusion value set. After you edit the name, run a targeted refresh of planning attribute values. You can't edit attribute names when these conditions apply:

- When the planning attribute is assigned to a netting rule.
- When the planning attribute dimension is enabled for the creation of a user-defined measure.
- When the planning attribute dimension is deployed for any predefined or user-defined measure across project or planning attribute measure contexts.
- When collection processes are run for attribute values.
- When attribute mappings are defined for the attribute.

Considerations While Deleting Attributes

Planning attributes can't be deleted when these conditions apply:

- When the planning attribute is assigned to an attribute-based netting rule.
- When the planning attribute dimension is deployed to a predefined or user-defined measure in a project or planning attribute measure context.
- When the planning attribute has attribute values and relationship in collected data
- When a planning attribute mapping has been defined. The mapping must be deleted first.

Define a Planning Attribute Mapping

Use attribute mappings to create supply and demand collection entity-wise mapping for supported Oracle Fusion Cloud SCM flexfields and associated flexfield segments for a planning attribute. You can define a planning attribute mapping in the Plan Inputs, Supply Planning, and Demand and Supply Planning work areas.

1. Open the Manage Planning Attributes task.
2. In the search results, select the attribute you want to define up mapping for.
3. In the Define Planning Attribute Mapping section, complete the mapping details.
    a. In the Collection Entity from Source column, select what type of collected entity you're mapping for. For example, a work order.
    b. In the Entity Additional Details column, select the entity subtype. The subtypes listed are the descriptive or extensible flexfield name for the selected collection entity. If your collection entity is Work Order, your entity additional detail will be Work Order Header.
    c. In the Source Attribute Reference column, search for and select the context for your entity. Your context can be Global or Standard.
    d. In the Source Attribute Name column, search for and select the planning attribute name, based on your reference context.
4. Save your changes.
5. Run a targeted supply planning data refresh.

How You Configure Planning Attributes as Planning Dimensions

When you create a planning attribute, a corresponding dimension-hierarchy-level combination is created for that attribute. Planning attribute dimensions, hierarchies, and levels are supported for unconstrained planning in the Supply Planning and the Demand and Supply Planning work areas.

Use the Create Trees for Dimensions scheduled process to associate planning attribute values as members of a hierarchy level.

For more information about dimensions, refer to the Planning Analytics chapter in this guide

How You Add Attribute Dimensions to Measures

Use the Manage Planning Measures task to add attribute dimensions to measures, from the Plan Inputs, Supply Planning, or Demand and Supply Planning work areas. Measure contexts are of three types:

- Default: All predefined and user-defined measures contain only predefined dimensions, their hierarchies, and their stored levels.
- Project: Predefined measures contain project dimensions and other applicable predefined dimensions. User-defined measures can also have the project dimension selected during creation or the project dimension can be added using Change Granularity.

- Planning Attributes: Predefined measures can be deployed with planning attribute dimensions, including the project dimension, using Change Granularity. User-defined measures can also have planning attributes and the project dimension selected during creation or added with Change Granularity.

1. To find planning attributes dimensions, in the Measure Context menu, select Planning Attributes.
2. To add planning dimensions to a predefined or use-defined measure, click Change Granularity, and use the selector. Change granularity is enabled in non-default measure contexts; and allows deploying planning attribute dimensions including Project in planning attributes measure context, and only project dimension for user-defined measures in project measure context.

Note: A measure can have maximum of 11 dimensions in the planning attribute measure context, counting both predefined and user-defined measures. Measures can also be duplicated.

For more information about planning measures, refer to the Planning Measures chapter in this guide.

Example

Here's an example of how an added measure can contain different combinations of dimensions, hierarchies, and stored levels or granularities across measure contexts. Let's assume that the measure is Planned Orders. This table lists the measure contexts, dimensions, and stored levels.

Measure Context	Dimension	Stored Level
Default	Product, Organization, Time	Item, Organization, Day
Project	Product, Organization, Time, Project	Product, Organization, Time, Task
Planning Attributes	Product, Organization, Time, Country of Origin, Region	Product, Organization, Time, Country of Origin, Region

Predefined Measures for Planning Attribute Dimensions

Here are the predefined measures in the supply planning process to which you can add additional attribute dimensions in the Project and Planning Attributes measure contexts, using the Change Granularity process.

- Attribute Transfer Demand
- Attribute Transfer Supply
- Demand at Risk Value
- Dependent Demand
- Exceptions: Count
- Exceptions: Days
- Exceptions: Quantity
- Exceptions: Ratio

- Exceptions: Value
- Excess On Hand
- Gross Forecast
- In Receiving
- In Transit
- Independent Demand
- Manual Demand
- Net Forecast
- On Hand
- Order Quantity
- Order Value
- Planned Order By-Product Supply
- Planned Order Co-Product Supply
- Planned Orders
- Purchase Order Demand
- Purchase Orders
- Purchase Requisitions
- Reserved Supply
- Sales Orders
- Sales Orders by Request Date
- Sales Orders Value
- Scheduled Receipts
- Scheduled Receipts Value
- Supplies Pegged to Excess
- Total Demand
- Total Supply
- Transfer Order Demand
- Transfer Orders
- Value On Hand
- Work Order By-Product Supply
- Work Order Co-Product Supply
- Work Orders

Attribute-Based Netting Rules

Overview of Attribute-Based Netting Rules

You use attribute-based netting rules to manage the sequence in which supply-demand netting happens for enterprise-specific attributes, such as netting based on the country of origin. With attribute-based netting rules, you can configure which attribute-striped supplies can be used to satisfy specific attribute-striped demands.

While defining attribute-based netting rules, you Specify the sequence in which various attribute-striped existing supplies should be explored in order to meet attribute-striped demands This existing supply netting sequence will be explored one time window at a time. You specify the size in days of this time window. When existing supplies are insufficient to meet the demand, you specify what attribute values should be placed on to the planned orders.

Define an Attribute-Based Netting Rule

Here's how you define an attribute-based netting rule.

1. Navigate to the Plan Inputs, Supply Planning, or Demand and Supply Planning work area.
2. Click the Manage Attribute-Based Netting Rules task.
3. Specify a rule name.
4. Specify a description.
5. Select planning attributes to include in the rule. You can select up to four attributes per rule.
6. Define a netting sequence common to all items or for item segments. Segment-based sequences override common sequences when both are applied.
7. Save your rule.

Define an Attribute-Based Netting Sequence

Your netting sequence can be common to all items or segment-based. A netting sequence can have up to ten steps.

Define a Common Netting Sequence for Items

1. Click the **Netting Sequence Common to All Items** tab.
2. Specify the netting sequence time window.
3. Select attributes for planned orders.
4. In the Netting Sequence for Existing Supplies section, create or delete netting sequences.
    a. Click on a row for an existing sequence.
    b. Select the demand attribute, demand attribute operator, and demand attribute values.
    c. Select the supply attribute, supply attribute operator, and supply attribute values.

Define a Segment-Based Netting Sequence for Items

1. Click the Netting Sequence Specific to Item Segments tab.
2. Select a source system.
3. Select a segment group.
4. Add segments. For each segment, specify the segment name, description, and time window in days, and attributes for planned orders. You can add up to ten steps in the netting sequence.

Example of How You Add a Netting Sequence for Existing Supplies

Let's understand how netting sequences get applied using an example.

Let's assume a two-step sequence. In both steps, the demand attributes are country of origin and region, and the demand operator for both steps is Any. In both steps, the supply attributes are country of origin and region, and the supply operator for country of origin and for region in the first step is Matches Demand Value, and for the second step, the supply operator for country of origin is Any and the supply operator for region is Matches Demand Value.

Here's how the netting happens:

- Existing supplies with the supply attributes Region and Country of Origin are allocated to demands with demand attributes Region and Country Of Origin.
- The planning process explores supplies with supply attributes Region and Country Of Origin, where supply attribute of Country Of Origin can be of any value, and the supply attribute Region value should match attribute value of Region for any demand selected during the allocation process. The demand being allocated can also have any value for the Country Of Origin demand attribute.

Netting Sequence Operators

Here are the netting sequence operators and operator data types you need to use while defining netting sequences.

For the following operators, planning attributes can use the Number or Character data types:

- Any
- Equal to
- Not equal to
- Blank
- Not Blank
- In
- Not In
- Matches demand value

Note: There are two additional operators, Blank and Not Blank, for which you don't specify demand or supply attribute values.

For the following operators, planning attributes can use the Number data type only:

- Less than

- Less than or equal to
- Greater than
- Greater than or equal to
- Between
- Isn't between

Considerations While Specifying the Netting Sequence Time Window

You specify a time window for applying a common or segment-based netting sequence. Within each time window, the sequence is carried out based on the sequence number, for existing supplies.

If your window is larger than the scheduling bucket, future time buckets are explored to find existing supplies that might be a better attribute match for the current time bucket's demand shortfall. But this may result in temporary material shortfalls because the chosen existing supplies may have dates later than the planning time bucket of the demand shortfall.

If you want the netting sequence restarted with every new planning bucket, set the time window as 1 day. This ensures that the demand shortfall is met. But it may result in less-than-perfect netting matches because the plan uses existing supplies that are further down in the netting sequence.

Examples of How the Netting Sequence Time Window Is Used

Let's understand how the time window is used when the window is 1 day.

When the time window value is lesser than the supply planning bucket duration, the planning process creates a netting window for time buckets based on the bucket type that's set in the plan options. So let's say the bucket type is Days, and has a value of 60, and the netting sequence time window is 1 day long, then each daily bucket duration is the same as the netting sequence time window's, 1 day. And if the bucket type is Week, or Period, or Month, and has a value of 5 weeks, and the netting sequence time window is 1 day, then each weekly bucket is a netting window.

Scenario 1

Daily Buckets	Netting Sequence Application	Netting Windows
30	Applied every day for 30 days.	30

Scenario 2

Daily Buckets	Weekly Buckets	Netting Sequence Application	Netting Windows
30	2	Applied every day for the first 30 days and then every week for 2 weeks.	32

Scenario 3

Weekly Buckets	Netting Sequence Application	Netting Windows
1	Applied every week for 10 weeks.	10

Scenario 4

Periodic Buckets	Netting Sequence Application	Netting Windows
5	Applied every period for 5 periods.	5

Now, let's understand how the time window is applied when its duration is 7 days.

Scenario 1

Daily Buckets	Netting Sequence Application	Netting Windows
35	Applied every 7 days in daily buckets.	5

Scenario 2

Daily Buckets	Weekly Buckets	Netting Sequence Application	Netting Windows
35	2	Applied every 7 days in daily buckets for the first 35 days and then every week for 2 weeks.	7

The netting sequence applied for every 7 days for first 35 days and later every week for 2 weeks when the time window for netting sequence is equal to the number of days in a week.

Scenario 3

Weekly Buckets	Netting Sequence Application	Netting Windows
10	Applied every week for 10 weeks.	10

The netting sequence is applied for every weekly bucket for 10 weeks because the time window in days for applying the netting sequence matches the number of days in a week.

Scenario 4

Periodic Buckets	Netting Sequence Application	Netting Windows
5	Applied every period for 5 periods.	5

The netting sequence is applied for every period because the time window in days for applying netting sequence is lesser than the number of days in a period.

Considerations While Creating Planning Orders with Planning Attributes

You select attributes for planned order supplies while defining common or segment-based netting sequences. These attributes may be for demand grouping or for order striping.

- Based on attributes for demand grouping, unmet demands are aggregated for planned order creation in each time bucket. Order modifiers are respected.
- Based on attributes for striping, planned orders created will be striped.

Considerations for Attribute-Based Planning

For attribute-based planning, select the same attributes for demand grouping and for striping.

Considerations for Project-Based Planning

For project-based planning, your attribute selection can vary based on whether you want to create supplies for reservation-level shortfalls or hard-pegging-level shortfalls.

- Attributes for reservation-level considerations: Select Project Group or Project Group and Project for demand grouping and Project Group and Project or Project Group, Project, and Task for striping.
- Attributes for hard-pegging level considerations: Select either Project Group and Project or Project Group, Project, and Task for both demand grouping and striping.

How Supply Planning Uses Attribute-Based Netting Sequences

The planning process nets demand with supply using attribute-based planning rules. Planned orders are recommended for unmet safety stock level values with planning attributes based on Attributes for Planned Orders.

Order modifiers are respected while creating planned orders during aggregating of unmet demands in a time bucket based on the attributes specified in the Demand Grouping tab in the Attributes for Planned Order task.

Settings That Affect Attribute-Based Planning

- The netting rule selected during plan options configuration.
- The items scoped in during plan options configuration.

How Demand and Supply Netting Happens

1. The netting sequence is considered.
    - For items that are supply-planned, the segment-based netting sequence is applied.
    - .For items that aren't associated with item segments, the common netting sequence defined for existing supplies is applied.
    - Items that aren't associated with item segments or existing supply are assigned. at an item-organization assignment level.
2. The safety stock is considered.
    - To meet safety stock, the attributes selected for planned orders are used.
    - To calculate days of cover safety stock, demand for safety-stock enabled items with or without planning attributes are aggregated in each time bucket. While aggregating unmet demand in a time bucket, order modifiers are respected, based on attributes selected for demand grouping
    - Existing common supply is allocated to common safety stock that was created with days of cover calculations using netting sequences.

How You Review Attribute-Based Planning Results

Here's how you can review attribute-based planning results:

- Use the Supplies and Demands table to review netting-based planning results:
    - Review the pegging of supplies and demands with planning attributes. You can examine how the netting sequence impacted your plan.
    - Review how attribute-specific supplies have been shared among demands grouped with those attributes.
    - Review the netting sequence details for item segments. Expand the supply pegging for a demand, select an existing supply, and in the View menu click View Netting Sequence Step. You can also review this in the Items table.
    - Review the pegging of supplies and demands with planning attributes by segments. You can include the segments in the search criteria.
- Use the Exceptions tab to find and review exceptions. The Supply Planning Exceptions folder contains subfolders for your planning attributes.
- Use the Demand Fulfillment tab to review at-risk demands and recommendations. Planning attributes are displayed for expedited buy, expedited make, and expedited transfer orders.
- Use the Order Comparison tab to review changed demands and changed supplies. Planning attributes are displayed for both changed demands and changed supplies.

Here's how you analyze plans by planning attribute dimensions:

- You can edit the measure value for editable measures like Net Forecast, Gross Forecast, Manual Demand or Planned Orders at planning attribute combination level in a pivot table.
- Either edit an existing combination measure value or enter a value for time bucket for a combination at any hierarchy level. Measure values are disaggregated to lowest levels even for planning attribute dimensions
- Drill to from pivot table or material plan to Supplies and Demands or Exceptions or Build Plan. The context of the planning attribute combination will be passed during the drill-to action.
- Format measures.
- Compare plans.
- Project Group, Project and Task are displayed as levels of project hierarchy in a pivot table or graph or tile for analysis.
- Measure values are aggregated if the values are viewed at aggregate levels in project hierarchy like project or project group. Edits performed at aggregate level in project hierarchy at project group or project for editable measures are disaggregated to lowest level combinations available in the plan.
- Supplies and demands with no task with project control level as projects will be displayed with task level member as NO TASK ASSIGNED in analytics.
- Measure Context and Change Granularity are applicable only for the Dimension Parameters section of Aggregation and Disaggregation tab in a measure definition. All other measure parameters are common across any measure context for a given measure.
- Planning measures with planning attribute dimensions can be used in measure expression.
- Load Measures from Other Plans from demand and supply plans to demand plan or sales and operations plans doesn't support measure context and planning measures with planning attribute dimensions.
- You must have a default measure context for the following measures: Projected Available Balance, Projected On Hand, Safety Stock, Project Available Balance Value, Safety Stock Value. Even for plans without a default measure context, these measures are computed by the planning process at item, organization, and time dimensions only.

Analyze Calculated Supply and Demand Measures Using Configured Attributes

You can analyze the calculated supply and demand measures using the user-configured planning attributes.

Using attributes such as Project, Task, Country of Origin, or any configured planning attribute, you can gain insight into forecasted inventory for enterprises. You can enable specific planning measures to compute the values at the planning attribute level. The planning measures display the value of the measures in any time bucket either in the planning attribute measure context or by running a project-driven supply chain plan at a project and task level in the pivot table or material plan.

You can use the following supply and demand measures to calculate using the planning attributes.

- Projected Available Balance
- Projected Available Balance Value
- Projected On Hand
- Safety Stock
- Safety Stock Value

- Average Daily Demand
- Project Available Balance Days of Cover
- Safety Stock Days of Cover

Note: You can't archive Projected Available Balance, Projected Available Balance Value, Projected On Hand, Safety Stock, and Safety Stock Value measures dimensioned by planning attribute dimensions, or include them in plan comparison.

You can create user-defined measures with planning attributes using these measures to analyze the attribute-based plan output.

The feature is applicable to unconstrained supply plans and demand and supply plans.

Here's some additional information about this feature:

- You can compute the supply and demand measures by the project group, project, and task attributes in the project measure context.
- You can also compute the measures by project group, project, and task or any user-defined planning attributes. This is based on the planning attributes dimensions deployed to the measure in the planning attributes measure context.
- For an existing attribute-based plan with planning attributes measure context, refresh and rerun the plan after deploying planning attribute dimensions to measures to analyze the plan by user-defined planning attributes.
- For an existing attribute-based plan with project measure context, refresh and rerun the plan to analyze the measures by project and task.
- Supply Planning calculates and displays the supply and demand measures at the product, organization, time, and planning attribute levels.
- You can drill from Supplies and Demands, Exceptions, or any supply planning user interface with planning attributes to a pivot table with the measure values by planning attributes.
- You can drill to the Supplies and Demands view from measures such as Projected Available Balance with planning attributes. The Supplies and Demands view displays supply and demand details with planning attributes.
- You can review and analyze details of measures at aggregate levels with planning attributes in a pivot table, graph, or tile. You can configure filters to review details for measures with planning attributes in a pivot table, graph, or tile.
- A material plan or a pivot table, graph, or tile configured at a higher aggregation level, such as project group or project for a project dimension aggregate, displays the measure values at the higher aggregation level. The manner of aggregation follows the “Aggregate Then Calculate” or “Calculate Then Aggregate” setting for the measure.
- The material plan, pivot table, graph, or tile configured for a subset of planning attribute dimensions of the plan scope aggregates and displays the measure values for the selected planning attributes only. The material plan, pivot table, graph, or tile displays values for measures both for common and planning attribute values.
- For attribute-based plans where the netting rule configuration allows the allocation of supplies across planning attribute values, the attribute transfer supply and attribute transfer demand measure values are included in the Projected Available Balance and Projected On Hand measure values. The Attribute Transfer Demand and Attribute Transfer Supply measure values are displayed at planning attribute levels in a pivot table, graph, or tile.
- For the existing plans enabled with planning attribute measure context, after the plan rerun, existing pivot tables such as Material Plan display measure values at the item organization for Projected Available Balance,

Projected On Hand, Safety Stock, or Average Daily Demand by aggregating measure values at the planning attribute levels.

- You can also load measures from other demand and supply plans with planning attributes or project measure context.

Use the following steps to analyze calculated supply and demand measures using configured attributes:

1. Create an unconstrained supply plan in Supply Planning or Demand and Supply Planning work area.
2. Assign the dimension catalog to a plan with planning attribute dimensions.
3. Assign the measure catalog with supply and demand measures.
4. Select the project or planning attribute measure context.
5. Select an attribute-based netting rule.
6. Run the plan and analyze the calculated supply and demand measures using configured attributes.

Note: Deploy planning attribute dimensions to measures using Change Granularity in the planning attributes measure context only for the set of measures to be analyzed by planning attribute dimensions. This step is not required for project measure context.

Examples

Example 1: This example explains how the Projected Available Balance measure value is computed and displayed at the aggregated level in a pivot table.

- You configure the pivot table with the item, organization, project, and task level in a supply plan. The Projected Available Balance measure values are displayed at the project P1, task T1, project P1, task T2, and common level when you configure the pivot table at the project group, project, and task levels.
- If you configure the pivot table with only item, organization, project group, and project levels, the Projected Available Balance measure values are aggregated at the project level.
- If you configure the pivot table with only item and organization, the Projected Available Balance measure values are aggregated at the item and organization level.

Example 2: This example explains how the Projected Available Balance measure values are computed and displayed with the Attribute Transfer Supply and Attribute Transfer Demand values at the aggregated level in a pivot table.

- An attribute-based netting rule is created with the first netting sequence step to net project supplies with project demands with the same project and task, and the second netting sequence step to net excess project supplies across tasks within the same project demands.
- You configure the pivot table with the item, organization, project, and task levels. The Projected Available Balance is displayed in a pivot table considering the Attribute Transfer Demand from project P1 and task T2 and attribute transfer supply in project P1 and task T1. The excess On Hand supply of 10 units with project P1 and task T2 is allocated to project demand with project P1 and task T1.
- If you configure the pivot table with only item, organization, and project, the Projected Available Balance measure values are aggregated at the project level.

Example 3: This example explains how the Projected Available Balance and Projected On Hand Measure values are displayed by project group, project, and task in a pivot table in an attribute-based plan.

The Projected On Hand, Projected Available Balance, and Projected Available Balance Value measure values are displayed by Project Group as VC_ENG, Project as VC Jet Engine, and Task as Cylinder Assembly in weekly and daily time buckets.

Example 4: This example explains how the Projected Available Balance and Projected On Hand Measure values are displayed by Region and Country of Origin in a pivot table in an attribute-based plan.

The Projected On Hand, Projected Available Balance, and Projected Available Balance Value measure values are displayed by Region as Africa and Country of Origin as South Africa in weekly and daily time buckets.

Example 5: This example explains how to drill from a pivot table with the Projected Available Balance measure by planning attributes to the Supplies and Demands view.

- Select a measure value of 50 units for the measure Projected Available Balance in a pivot table for Region Oceania and Country of Origin Australia. Drill to Supplies and Demands View.
- Drill to respects the context, and the Supplies and Demands View displays on hand for 50 units for the item with Region Oceania and Country of Origin as Australia.

Review Attribute-Based Transfer Recommendations

You can review the recommendations to transfer supply from a combination of values for one set of attributes to another set of attributes.

Using this feature, you can review plan recommendations for change of attribution on supplies. The Attribute-Based Transfer Recommendations view allows you to view the set of supplies across different attributes that are pegged to a demand. You can navigate from supply and see what demands the supply is allocated to, along with the "from" and "to" attributes and Transfer Quantity. This view provides insight to planners into shortages in supplies when certain supplies are set aside with specific attribution.

You can drill to the Attribute-Based Transfer Recommendations view from the:

- Supply Planning and Demand and Supply Planning work areas
- Supplies and Demands table or from a material plan

The view is applicable to unconstrained supply plans and demand and supply plans associated with the attribute-based netting rule.

Here's more information about the Attribute-Based Transfer Recommendations view:

- You can save the search criteria and table layouts in the view.
- You can review the attribute-based transfer recommendations for Project-Driven Supply Planning with the "from" and "to" project group, project, and task attributes.
- You can review the attribute-based transfer recommendations for an attribute-based plan with the "from" and "to" planning attributes.
- The transfer recommendations for supplies can be released only from the Supplies and Demands view, and not from the Attribute-Based Transfer Recommendations view.
- The Attribute-Based Recommendations view displays Item, Organization, Planner Code, demand details, supply details, and the "from" and "to" planning attributes.
- The Attribute-Based Transfer Recommendations view displays Demand Order Type, Demand Order Number, Demand Line Number, Demand Quantity, and Demand Date details for demand, and displays Supply Order Type, Supply Order Number, Supply Line Number, Supply Quantity, and Supply Date details for supply.
- The "from" and "to" planning attributes with transfer quantity are displayed for each supply in the Attribute-Based Transfer Recommendations view.

- The planning attributes columns are displayed with the name of the planning attribute associated with the attribute-based netting rule assigned to the plan.
- The "from" planning attributes columns display attribution of the supply pegged to a demand, and the "to" planning attributes columns display attribution of the demands to which the supplies are pegged.
- The pegged quantity of a supply is displayed as the Transfer Quantity for each supply.
- Each pegging record is displayed as an attribute-based transfer recommendation with its corresponding supply and demand details, "from" planning attributes, "to" planning attributes and Transfer Quantity in the Attribute-Based Transfer Recommendations view.
- Drilling from the Attribute Transfer Demand measure to the Attribute-Based Transfer Recommendations view displays one or multiple supplies and their attributes as “from” attributes and pegged demand attributes as “to” attributes.
- The measure value, which is the total pegged quantity of the supplies from planning attributes to the pegged demands, is displayed with relevant pegged quantity for each supply and demand pegging. Drilling from the Attribute Transfer Demands measure to the Attribute-Based Transfer Recommendations view has the same “from” attribution for all supplies and different attribution for all demands. This means the view has the same “from” planning attributes and different “to” planning attributes.
- Drilling from the Attribute Transfer Supply to the Attribute-Based Transfer Recommendations view displays one or multiple supplies and their attributes as “from” attributes and pegged demands attributes as “to” attributes. The measure value, is displayed with the relevant pegged quantity for each supply and demand pegging.
- Drilling from the Attribute Transfer Supply measure to the Attribute-Based Transfer Recommendations view has the same “to” attributes for all demands and different attributes for all supplies. This means the attribute-based transfer recommendations have the same “to” planning attributes and different “from” planning attributes.
- You can select either a single supply or demand or multiple supplies and demands in the Supplies and Demands view and drill to the Attribute-Based Transfer Recommendations view.
- You can also select a record in the Attribute-Based Transfer Recommendations view and drill to the Supplies and Demands view with the context of attributes to review additional details.
- The Attribute-Based Transfer Recommendations view only shows information for the portion of the plan horizon for which pegging is computed.
- The details are not displayed in the Attribute-Based Transfer Recommendations view beyond the value provided in the plan option Number of Days to calculate pegging until the plan horizon.
- Drilling to the Attribute-Based Transfer Recommendations view is supported only for the Attribute Transfer Demand and Attribute Transfer Supply measures.

Examples

Example 1: This is an example of reviewing the attribute-based transfer recommendations when you drill from the Supplies and Demands view to the On Hand supply.

- The On Hand supply of 25 units with Project 3999C and Task 10 is pegged to the project forecast demand with the Project as 3999A and the Task as 20 with a pegged quantity of 10 units, and another project forecast demand with the Project as 3999B and the Task as 10 with a pegged quantity of 15 units.
- Select the On Hand and drill to the Attribute-Based Transfer Recommendations view. The view displays two records for the supply.
- The first record displays one of the pegging records with the “from” Project as 3999C and Task as 10 of the supply, and the “to” Project as 3999A and Task as 20 of the demand with the transfer quantity for the supply as 10 units.

- The second record displays attribute transfer recommendation for the On Hand supply with the “from” Project as 3999C, Task as 10, the “to” Project as 3999B, and Task as 10 with the Transfer Quantity as 15 units. You can also see the Attribute-Transfer Recommendations view project forecast demand details along with supply details.

Example 2: This is an example of reviewing the attribute-based transfer recommendations when drilling from the attribute transfer demand measure in a pivot table.

- Select the measure value and drill to the Attribute-Based Transfer Recommendations view.
- The Attribute-Based Transfer Recommendations view displays the pegging details for the corresponding supply and demand for which the attribute transfer supply measure value is displayed.
- The view displays the “from” Project as 3999C and Task as 10, and the “to” Project as 3999A and Task as 20 with the Transfer Quantity as 10 units.
- The Transfer Quantity is the same as the pegged quantity and measure value for the Attribute Transfer Demand on January 15th, 2030.

Release Planned Supplies from the Attribute-Based Transfer Recommendations View

The Attribute-Based Transfer Recommendations view enables you to release, reschedule, and cancel recommendations for planned supplies with user-defined planning attributes to the source systems.

Here’s what you can release from the Attribute-Based Transfer Recommendations view:

- Transfer recommendations to create transfer orders to move supply from one designation specified by a set of values to another designation specified by a different set of values for the same set of attributes.
- Reschedule in, reschedule out, and cancel the recommendations for common and attribute-specific supplies to the source systems.
- Recommendations for transfers based on project and task attributes on hand, purchase orders, work orders, and transfer orders to Oracle Fusion Cloud SCM.
- Planned order recommendations to Oracle Fusion Cloud SCM and external source systems.
- Partial common and project on hand for attribute transfers.

The feature is applicable to unconstrained supply plans and demand and supply plans.

The following is additional information about the Attribute-Based Transfer Recommendations view:

- You can mark and unmark plan recommendations for the release and see the relevant release status.
- If you peg the on hand to two project demands, the new lot acquires the new attribution, and the existing lot (with the remaining on hand quantity) retains the existing attribution.
- You can peg the common and project on hand across multiple project demands. You can select specific recommendations for transfer based on project and task attributes common and project on hand that is allocated partially to multiple demands and release recommendations to Oracle Fusion Cloud SCM.
- The release status of a partial released on hand is set to “Partially released” in Attribute-Based Transfer Recommendations and Supplies and Demands views. The remaining recommendation for transfer based on

project and task attributes for a partially released on hand can be released from the Attribute-Based Transfer Recommendations view.

- The transfer recommendations can also be released from the Supplies and Demands view.

Examples of releasing supplies from the Attribute-Based Transfer Recommendations view

Example 1: This example shows how to release common and project supplies from one project and task to another:

Consider 2 projects with on hand 10 and 20 units pegged to project forecast demands of 50 units. The transfer recommendation for the two on hand supplies is released to Oracle Inventory Management to initiate project transfer based on the pegged quantity and pegged demand's project and task.

For a purchase order pegged to the project demand, a transfer recommendation can be released to update project and task attributes and either reschedule in or reschedule out recommendation in Oracle Purchasing.

Example 2: This example shows how to release the transfer recommendation for a project work order.

Consider a work order allocated to project demands with different project and task attributes. Select one or all transfer recommendations to release the recommendation for transfer based on project and task attributes for the work order to Oracle Manufacturing.

The work order's project and task attributes are updated with the pegged demand's project and task in Oracle Manufacturing.

Example 3: This example shows how to release the recommendation for transfer based on the project on hand.

Consider a project on hand that is pegged to multiple project demands with different projects and tasks. Select a transfer recommendation for the project on hand which corresponds to one of the on hand pegged to a project demand. Release the recommendation to initiate a recommendation for transfer based on project and task attributes in Oracle Inventory Management.

The release recommendation transfers the pegged on hand to the demand's project and task in Oracle Inventory Management.

Example 4: This example shows how to release the reschedule recommendation for a work order supply with user-defined planning attributes.

Consider a work order supply with a user-defined planning attribute with a priority that is pegged to a demand with a different priority. Releasing the recommendation only reschedules the work order. The planning attribute priority value for the work order is not updated during the release.

How You Simulate Changes to Attribute-Based Planning Results

Use the Create Order dialog box in the Supplies and Demands tab to assess alternative planning scenarios.

- Modify the firm date and firm quantity and review the change impact on attribute-specific supplies.
- Modify attribute values and review the change impact.

- Create a manual demand, a planned order, or on-hand supply and review the change impact.
- Compare results of your simulated plan with an existing plan.

You can also update attribute values for supplies and demands in a simulation set in the Plan Inputs work area and associate them to a plan, to explore a simulation.

13 Aggregate Production Plans

Overview of Aggregate Production Plans

As a supply planner, you can simulate various production scenarios interactively for end item assemblies from a viewpoint of critical material and resource availability for manufacturing plants.

You can create production plans, adjust production plans with interactive analysis of critical material and resource requirements, publish production plans, and receive published production plans into supply plans.

The starting point for aggregate production planning is a tactical supply plan. You can create production plans that integrate with a supply plan and focus on a subset of plan organizations, end item assemblies, and near-term weekly time buckets. The demand and supply data comes from the integrated supply plan. The most recent tactical plan data is retrieved when you open a production plan.

You use aggregate bills of resources for end item assemblies to define the critical materials and resources needed to interactively recalculate the plan when there are changes. You can quickly and interactively plan without needing batch processes to recalculate the impact on the consumption of inventory and resources. As you adjust the production plan cell by cell at the finished goods level, these top-level changes automatically use bills of resources to recalculate upstream requirements for shared resources and components. Upstream recalculations factor in total demand, on hand, and scheduled receipts to net components and apply lead time offset. The production plan leverages segments that group manufactured end items sharing critical components and resources loaded in bills of resources.

After the aggregate production plan analysis is complete, you can publish your changed production plan to the tactical supply plan. The weekly firm, make planned orders are used for replanning.

Aggregate Production Planning with Segment Groups

To create aggregate production plans, you must define segments to group the assembly items for finished goods that share critical components and resources.

You must add the segment group containing these segments to the dimension catalog used by the supply plans connected to your aggregate production plans.

On the Production Plans page, you can view only the segment groups that are members of the supply plan's dimension catalog in the Finished Goods Segment Group drop-down list. Only groups with Product and Organization dimensions as Segment Granularity are supported for the production plans.

> **Note:** You need to run a supply plan fully after adding a segment group to the dimension catalog before you can connect the supply plan to an aggregate production plan.

For additional information on segment groups, refer to the Segmentation chapter in this guide.

Aggregate Production Planning with Bills of Resources

You must define bills of resources for assembly items to generate requirements for critical components and resources.

A bill of resources includes the critical components, subassemblies, and resources you need to plan for an end item assembly.

Use the Scheduled Processes work area to run the Create Bills of Resources scheduled process. The process looks at only components that are critical and resources that are bottlenecks. Use the Production Plan Analysis template in the Create Bills of Resources scheduled process to generate bills of resources for aggregate production plans. The scheduled process outputs your bills of resources in a simulation set. You use the Aggregate Bill of Resource tab in the simulation set in the Plan Inputs work area to review the bills of resources that the scheduled process creates.

Automatically Generate Bills of Resources

You can generate bills of resources through a scheduled process that uses collected work definitions and item and resource attributes.

Use the Create Bills of Resources scheduled process to create bills of resources for planning assembly items for finished goods in the aggregate production plan.

The Create Bills of Resources scheduled process:

- Uses collected work definition data in the form of routings and item structures as the primary source of input data.

  Routings are required input data. You can't run the Create Bills of Resources process with only bills of materials.
- Uses an assignment set with Make at and Transfer from sourcing rules as input data. For example, the Create Bills of Resources scheduled process uses a sourcing assignment at an item or product category level with a Make at sourcing rule.

  The planning process considers the Transfer from sourcing rule for subassemblies manufactured in upstream organizations.
- Considers critical components and bottleneck resources to narrow the scope of the work definitions and ensures that constrained supply can meet strategic needs.
- Writes bills of resources data to the Aggregate Bill of Resources table in the output simulation set that you can associate with aggregate production plans.

> **Note:** You can also collect the bills of resources using the file-based data import (FBDI) template, ScpBillOfResourcesImportTemplate.xlsm.

You can schedule and automate the Create Bills of Resources process. For example, define a job set that automates a scheduled process in which the Create Bills of Resources scheduled process runs after data collections.

After you submit the scheduled process, refer to the log file associated with the Create Bills of Resources Process ID in Search Results on the Scheduled Processes page.

When the scheduled process completes, you can open the Aggregate Bill of Resources table in the output simulation set in the Plan Inputs work area to review and modify the process output.

Create Bills of Resources Scheduled Process Prerequisites

The Create Bills of Resources scheduled process creates bills of resources for planning manufactured end items in an aggregate production plan.

Before you can run the Create Bills of Resources scheduled process, you must do the following:

1. Identify assembly and subassembly items.

   You must first identify which assembly items for finished goods to consider in the Create Bills of Resources process. Mark assembly and subassembly items in manufacturing organizations using the **Critical Component** attribute in the Items table in an input simulation set, unless already set in plan inputs. You can use the **Make or Buy** attribute to filter for make items in the Items table.
2. Identify which component items to include in the bills of resources for your assembly items.

   In an input simulation set, use the **Critical Component** attribute in the Items table to mark critical component items consumed in manufacturing organizations, unless already set in plan inputs. The **Critical Component** item attribute can be marked and collected from a Fusion source. You can use the **Make or Buy** attribute to filter for buy items in the Items table.

   A subassembly consumed in an assembly item should be modeled as a component in the assembly item's bill of resources if using up the scheduled receipts of its inventory is critical for aggregate production planning.
3. Identify resources to include in the bills of resources in your assembly items.

   Mark critical resources in manufacturing organizations using the **Bottleneck** attribute in the Resources table in the input simulation set, unless already set in plan inputs.

Configure the Create Bills of Resources Scheduled Process

Use these steps to configure the Create Bills of Resources Scheduled Process.

1. Open the Process Details dialog box for the Create Bills of Resources scheduled process.
2. From the Bills of Resources drop-down list, select the **Production Plan Analysis** predefined template to generate bills of resources for aggregate production plans.
3. In the Organizations section, select the source system and level members to use. You must select at least one level member.
4. In the Items section, select the catalog, level, and level members to use.
   - Oracle recommends that you select the level that's the category parent of the item.
   - You must select at least one level member.

5. In the Input Parameters section, select parameters for the following:
    - **Assignment Set**: Select the assignment set for the scheduled process to use.

      Oracle recommends that the catalog selected in the Items section is also used for sourcing assignments configured in the assignment set.
    - **Input Simulation Set**: Select the name of the input simulation set for the Create Bills of Resources scheduled process to use. An input simulation set is a set of adjustments to plan inputs read by the scheduled process, such as defining a resource as Bottleneck or a component as Critical.

      > **Note:** You don't need to add Routings and Item Structures entities to the input simulation set.

    - **Attribute Used to Include Components**: For the Production Plan Analysis template, Critical Component is selected automatically.
    - **Attribute Used to Include Resources**: For the Production Plan Analysis template, Bottleneck is selected automatically.
6. In the Output Parameters section, select parameters for the following:
    - **Bill of Resources Structure**: For the Production Plan Analysis template, **Across organizations** is selected automatically.
    - **Planning Product Level**: The planning product level is set to Item automatically.
    - **Output Simulation Set**: You must select an output simulation set to contain the bills of resources created during the scheduled process. The output simulation set can be the same as the input simulation set.
7. Submit the scheduled process.

   Refer to the log file associated with the Create Bills of Resources Process ID in Search Results on the Scheduled Processes page.

   When the scheduled process completes, you can open the Aggregate Bill of Resources table in the output simulation set in the Plan Inputs work area to review and modify the process output.

Manage Aggregate Production Plans

Create a Production Plan

You must first create production plans to use them to perform planning activities.

Steps to create a new production plan:

1. In the Supply Planning work area, click the **Tasks** panel tab.
2. In the **Tasks** panel drawer, click the **Manage Production Plans** link.
3. Click **Create Plan**.

4. On the New Production Plan page, complete the general information for the plan:
    a. Enter a **Name**.
    b. (Optional) Provide a description for the plan.
    c. Select a **Supply Plan**.
    d. In **Number of Time Buckets to Display**, enter a number.
    e. Select one or more organizations in **Finished Goods Organizations**.
    f. In the **Simulation Set for Bills of Resources** drop-down list, select the simulation set containing the bills of resources for aggregate production plans. If left empty, collected bills of resources in plan inputs are used.
    g. Select a segment group from the **Finished Goods Segment Groups** drop-down list.
    h. Select one or more segments in **Finished Goods Segments**.
5. Click **Create**.

Duplicate a Production Plan

You can create plans and then duplicate them to save time and perform planning activities incrementally. You can create only a copy of the plan options.

Steps to duplicate a production plan:

1. In the Production Plans page, enter the search parameters and click the **Search** icon.
2. In the Search Results region, select the plan you want to copy and select **Duplicate**.
3. On the New Production Plan page, modify the **Name**. The planning process copies plan options to the duplicate plan but not the plan data.
4. Modify plan scope if needed.
5. Click **Create**.

View a Production Plan

If you have an existing production plan, you can open the plan from the Manage Production Plans task.

Steps to view a production plan:

1. In the Production Plans page, click the plan name link to open the plan.
2. From the **Select a segment to analyze** drop-down list, select the segment to open.
3. Click **Open**.

Delete a Production Plan

If you no longer need a production plan, you can delete it.

Steps to delete a production plan:

1. In the Production Plans page, enter the search parameters and click the **Search** icon.
2. In the Search Results region, select the plan you want to copy.
3. Click **Delete**.

Aggregating Production Plan Measures

You can adjust the production plans for end assembly items with interactive analysis of critical material and resource requirements.

When you open the production plan, it retrieves measure data from the connected supply plan for the selected segment of end assembly items. For example, Total Demand, Planned Orders, On Hand and Scheduled Receipts. It also retrieves their components and resources from bills of resources. The multi-level bills of resources for those assembly items are used to retrieve additional measure data such as On Hand and Scheduled Receipts for components and Resource Availability for resources from the supply plan and calculate the start-state requirements. These calculations consider both the Lead Time Offset in Days in the bills of resources and working days for organization-specific calendars, if defined. As you adjust the production plan for finished goods, multi-level net requirements are recalculated. You can quickly review both component use-up and resource requirements.

When you perform the interactive plan analysis, you need to decide which finished goods to produce. One consideration is to base the amount of finished goods production on leveling the days of supply across finished goods. For example, Days of Cover might be too low or too high depending on the selected finished good segment being analyzed.

Edit Measure Data

You can edit the Planned Orders and Total Demand measures for end assembly items in an aggregate production plan.

For example, you can simulate changes in demand such as promotions by using the Total Demand measure. No measure edits can be made for component items and resource requirements.

View Component Requirements

You can focus your analysis on how adjusting the production plans impacts the component item requirements.

Click **Show Components** to view the shared components that are used across the assembly items.

You can choose which finished goods to produce based on the consumption of work-in-process and scheduled receipts at upstream production stages. For example, net new requirements of Planned Orders for a subassembly or a component might be problematic if the goal is to use up the planned supplies within manufacturing or purchasing lead times.

View Resource Requirements

You can focus your analysis on how adjusting the production plans impacts the resource requirements.

Click **Show Resources** to review the utilization of your key resources associated with the produced items through bills of resources.

You can base the amount of finished goods production on setting batches that are well-sized. For example, if a complete shift is 8 hours, then you might adjust production so that resource hours are a multiple of that shift size.

Setting the Default Manufacturing Calendar

The default Manufacturing calendar is used as the time hierarchy to retrieve measure data from the supply plan and publish measure data in weekly buckets from a production plan.

You must set the default Manufacturing Calendar in the supply plan's dimension catalog. If not set, the first manufacturing calendar listed in Selected Hierarchies is used.

Note that organization-specific manufacturing calendars are used for calculating multi-level component item and resource requirements but aren't used in the publish process.

Publish a Production Plan

You can publish the production plan to generate a payload containing the adjusted planned orders for the finished goods in the selected segment.

You can specify the time range to publish. The time range is a continuous range from the first bucket to the selected period.

Steps to publish a production plan for a segment:

1. In the Plan Analysis page, click **Actions** and then select **Publish plan**.
2. In the Publish plan window, select the time range to publish the planned orders from the first bucket to the **To** bucket drop-down list.
3. Click **Publish plan** to publish the production plan.

Receive and Accept a Production Plan

You must receive and accept the published production plan segments in the supply plan.

Receive a Production Plan

Steps to receive a production plan in the supply plan:

1. In the Supply Planning work area, open the supply plan connected to the aggregate production plan.
2. Click **Actions** and select **Receive Production Plan** to open the Published Plans page. The Published Plans page opens filtered by the specific supply plan from which you navigated.

Accept a Published Production Plan

You can select a published plan segment and accept it. This submits a scheduled process that runs in the background to load the published payload and firm the adjusted planned orders for the finished goods segment in the supply plan. When accepted, you rerun the supply plan with the **Do not refresh with current data** option.

Steps to accept a published production plan segment:

1. In the Published Plans page, select a published plan segment. You can accept a published plan segment if the **Status** is **Published**.
2. In the **Accept plan** drawer, click **Accept**. This submits a scheduled process and the **Status** is updated as **Processing**. When the process completes successfully, the **Status** is updated as **Accepted** for the selected plans. If the **Status** is updated as **Error**, refer to the log file associated with **Request ID** in Search Results on the Scheduled Processes page.

14 Archive Plans

Overview of Plan Archival

Supply Chain Planning provides two archival types, one that a planner can run for a plan and another archive type that only an administrator with proper security privileges can set up for MAPE statistics.

For a planner, plan archival enables you to archive measures in a plan with plan context and save multiple versions of a plan's archived measures over time. When you archive a plan, you archive a set of measures contained in the measure catalog that you chose as the archive measure catalog for the plan.

> **Note:** You can create archives for demand, supply, integrated demand and supply, and sales and operations plans. Archival isn't available for Oracle Planning Central.

Plan Archives

Plan archival enables you to save multiple versions of the plan where you archive the key measures at a point in time. The Waterfall Analysis and Trend Analysis tables and graphs use the plan archive to compare the current plan's data to past versions of the plan. When viewing past versions of the plan, you can see the impact of strategic and tactical changes made to the plan. You can also compare the individual archives to the plan by selecting **Compare** > **Archive** from the **Actions** menu in a plan.

For example, you archive a plan in May and then market conditions in September cause adjustments to be made to the plan. You can analyze the impact of the adjustments on the plan by viewing the changes in the key performance indicators between the plan version archived in May and the current plan.

A supply chain planner can run the archiving process from an open plan by selecting the Archive option from the Actions menu. A planner can also run the archiving process by selecting the **Archive plan** check box on the Run Plan page. Alternatively, you can run the archive process independently of running the plan by selecting the **Archive** option from the **Actions** menu on the Manage Plans page.

Before you can archive a plan, you must enable the plan for archiving and set up the archiving parameters. The parameters that you configure determine the time hierarchy, time level, and the measure catalog to use for the archives. Set up the archiving parameters in the Scope: Advanced Options dialog box, which you navigate to from the Plan Options page, Scope tab.

It's good practice to back up your archive data by making a full copy of your plan that includes archives. You can access the backup plan data in the event of any temporary issue with the plan of record. On the other hand, if you want to create a standalone plan to simulate a business scenario, you probably don't need to include archived measures.

MAPE Archives

An administrator with the correct security privileges can create an archive for MAPE statistics by running the **Build Plan Archive** scheduled process from the Tools work area. Generally, a supply chain planner doesn't have the privileges to create a MAPE archive. However, an administrator with the required privileges can see the **Enable for MAPE calculations** check box in the Build Archive dialog box. The administrator can create archives at weekly, monthly, or quarterly time levels. The archive level pertains to the planning time level, so the administrator would archive a quarter-level plan at the quarter level.

Note: To calculate predefined measures for demand plans and sales and operations plans that use archived data, you must use a MAPE archive. The statistics calculated for the MAPE archive are used to generate the Waterfall Analysis and Trend Analysis tables and graphs.

Related Topics

- Configure Archiving Parameters
- Copy a Plan

Configure Archiving Parameters

Before you can archive plans, you must enable the archiving options.

Note: You can create archives for demand, supply, demand and supply, and sales and operations plans. Archival isn't available in Oracle Planning Central.

To configure the archiving plan options:

1. In a work area for Oracle Fusion Cloud Supply Chain Planning, open a plan and then select **Edit Plan Options** from the **Actions** menu.
2. On the Plan Options page, Scope tab, click the **Select Advanced Options** button.
3. In the Scope: Advanced Options dialog box, Archive Options section, review and make changes to the archive parameters for the plan.

Parameter	Description
Enable for archiving	Select to set parameters used to archive measure data for your plan. When selected, the archiving options are enabled.
Archive Time Hierarchy	Select the time hierarchy to use to archive the measure data for the plan, such as Gregorian calendar. For a demand plan that uses a hybrid time hierarchy, the field value is defaulted to the hybrid time hierarchy that you selected as the planning calendar and can't be changed.
Archive Time Level	Select the time level to archive measure data for the plan, such as day or week. The time level is based on the selection made for the archive time hierarchy. For a demand plan that uses a hybrid time hierarchy, the field value is defaulted to the Hybrid time level corresponding to the hybrid time hierarchy that you selected as the planning calendar and can't be changed.
Measure Catalog for Archival	Select the measure catalog to use for archiving.

Parameter	Description
	Note: Oracle recommends that you create a measure catalog containing only measures that provide insight to the plan's changes instead of archiving every measure in the plan.
Do not delete archives	Select if you don't want to delete any archives for the plan.
Delete archives automatically	Select to automatically delete archives when the archives are older than the **Most Recent Days to Keep** parameter.
Most Recent Days to Keep	Enter the number of days for which to retain archives. Archives older than this number of days are automatically deleted.

4. Click **Done**.

Related Topics

- Overview of Plan Archival in Supply Chain Planning

Overview of Archival for Calculating MAPE Statistics

A Supply Chain Planning administrator with the Manage Rolling Archives security privilege can create archives for the calculation of the MAPE statistics at a week or month level.

These archives are used to calculate predefined measures for demand plans and sales and operations plans that use archived data. The administrator runs the Build Plan Archive scheduled process from the Tools work area.

Shipments or bookings measures are required in the archive for MAPE statistics calculations, based on the measure used to create the forecast. If your plan forecasts shipments data, then only the shipments forecast measures are needed. If your plan forecasts bookings data, then only the bookings measures are needed. The following shipments or bookings measures are required:

- Final Shipments Forecast
- Final Shipments Forecast 3 Months Ago
- Final Shipments Forecast 3 Months Ago Latest Archive
- Final Bookings Forecast
- Final Bookings Forecast 3 Months Ago
- Final Bookings Forecast 3 Months Ago Latest Archive

To use the archives in a waterfall or trend analysis, select the **Use MAPE calculations** check box in the Selector Tool Comparison Options tab.

MAPE archives created on a rolling basis can be referenced in a user-defined measure expression that uses the Archive function. The archive type is a parameter of this function. The valid values for archive type are "Rolling" and "Adhoc."

Related Topics

- Archival for Calculating MAPE Statistics

Archival for Calculating MAPE Statistics

A Supply Chain Planning administrator with the Manage Rolling Archives security privilege can create archives for the calculation of the MAPE statistics at a week or month level.

Perform the following steps to run the Build Plan Archive schedule process:

1. In the Navigator, under the Tools section, click the **Scheduled Processes** link to access the Scheduled Processes page.
2. Access the Process Details page for the Build Plan Archive process:
    a. On the Schedule Processes page, click the **Schedule New Process** button.
    b. In the Schedule New Process dialog box, click the **Name** list, and then click the **Search** link.
    c. In the Search and Select: Name dialog box, enter Build Plan Archive and click **Search**.
    d. Select Build Plan Archive and click **OK** to return to the Schedule New Process dialog box.
    e. In the Schedule New Process dialog box, click **OK**.
3. In the Process Details dialog box, select the plan to archive and then click the **Advanced** button.
4. On the Parameters tab, select Do not delete archives or Delete archives automatically.

    If you select to delete archives automatically, enter a number in the Most Recent Days to Keep field. The archive process automatically deletes older archives based on this parameter.
5. Select the **Enable for MAPE calculations** check box and enter or select the following parameters:
    a. **Archive Time Hierarchy**: Select the calendar to use for the archive.
    b. **Archive Time Level**: Select the time level to use for the archive.
    c. **Measure Catalog for Archival**: Select the measure catalog to use when archiving.

    > **Note:** Oracle recommends that you create a measure catalog for archived measures instead of archiving every measure in the plan.

    d. **Use default archive name**: Select to use the default archive name.
    e. **Use user-defined archive name**: Select to overwrite the default name with a user-defined name.
6. Click the Schedule tab to set up the frequency parameters.
    - To run the plan immediately, select **As soon as possible**.
    - To run the plan in the background at a set time, select **Using a schedule**. Next, select a **Frequency**, such as **Monthly** or **Weekly**, to create MAPE rolling archives for use in waterfall and trend analyses.
7. Click **Submit**.

Related Topics

- Overview of Archival for Calculating MAPE Statistics

Delete Archives

A planner can automatically delete plan archives by setting parameters in the Scope: Advanced Options dialog box, accessed from the Plan Options page, Scope tab.

Only a Supply Chain Planning administrator with the Manage Rolling Archives security privilege can delete MAPE archives. In the Tools work area, the administrator can use the Delete Plan Archive schedule process to clean up unwanted archived data versions. You can delete the archives of a plan based on an archive version, a time range, or all archives for a plan.

> **Note:** When you use the Delete Plan action, the process not only deletes the plan, but it also deletes all of the archive versions associated with that plan.

Perform the following steps to run the Delete Plan Archive schedule process:

1. In the Navigator, under the Tools section, click the **Scheduled Processes** link to access the Scheduled Processes page.
2. Access the Process Details page for the Delete Plan Archive process:
    a. On the Schedule Processes page, click the **Schedule New Process** button.
    b. In the Schedule New Process dialog box, click the **Name** list, and then click the **Search** link.
    c. In the Search and Select: Name dialog box, enter **Delete Plan Archive** and click **Search**.
    d. Select Delete Plan Archive and click **OK** to return to the Schedule New Process dialog box.
    e. In the Schedule New Process dialog box, click **OK**.
3. In the Process Details dialog box, select the plan that you want to delete the archives for and then click the **Advanced** button.
4. On the Parameters tab, in the Plan section, select one of the following options, which are only available to administrators with the Manage Rolling Archives security privilege:
    a. Include MAPE archives
    b. Delete MAPE archives only
5. On the Parameters tab, in the Archive Parameters section, configure the following parameters:
    a. Archives to delete
    b. Delete archives with time range

    The Delete Plan Archive process filters the selected archive parameters by which MAPE archiving option you selected in the Plan section.
6. Click the Schedule tab to set up the frequency parameters.
    a. To run the plan immediately, select **As soon as possible**.
    b. To run the plan in the background at a set time, select **Using a schedule** and then select a frequency, such as **Monthly** or **Weekly**.
7. Click **Submit**.

15 Extract Plan Data

Overview of Planning Measure Data Extractions from Plan Output

Planning information is an important component of supply chain analytics. It's important to extract planning measure data from any plan to build offline reports or integrate with any external system.

Planners can use the Export Plan Data action from the Manage Plans page to run the Prepare Supply Chain Planning Data for Export scheduled process. You can also run the process or schedule as a job from the Scheduled Processes page under the Tools menu in the Navigator.

When analyzing a plan, you can extract detail supply chain planning multidimensional plan output data, including measures and hierarchies. The extract is based on the measure catalog and dimension catalog assigned to the plan. The Prepare Supply Chain Planning Data for Export scheduled process extracts plan output data into a set of files for external reporting and analysis.

The extract process exports plan data to WebCenter Content in the comma-separated value (CSV) data format. This extract includes measure data, including any measures that you configured that are either stored or calculated. For calculated measures, the planning process extracts the data after evaluating the measure expressions. The extract is based on the measure catalog and dimension catalog assigned to the plan and includes user-defined hierarchies and levels. Supporting information such as hierarchies for multidimensional analysis is also exported.

Before you can run the **Prepare Supply Chain Planning Data for Export** scheduled process for a plan, you must:

1. As a one-time setup, create an application integration with login credentials.
    a. Navigate to the Setup and Maintenance work area and select the Manage Setup Content task.
    b. On the Manage Integration of Additional Applications page, set up the following:
        - Application Name: SCP_BICC_REST_CREDENTIALS
        - Full URL: Enter the host name of the application. For example: **https://example.fa.app.oraclecloud.com**
        - Partner Name: SCP_BICC_REST_CREDENTIALS
        - Security Policy: oracle/wss_username_token_over_ssl_client_policy
2. Ensure that the user running the extract has access to the Upload and Download Data from On-Premise System to Cloud System role (OBIA_EXTRACTTRANSFORMLOAD_RWD).
3. Configure the extract options for your plan. Navigate to the Plan Options page, Scope tab and click the Advanced Options button. In the Scope: Advanced options dialog box, in the Extract Options section, configure the extract parameters.
4. Navigate to the Manage Plans page and select a plan. Select Export Plan Data to run the Prepare Supply Chain Planning Data for Export scheduled process.

You can extract data at the lowest level from any of these plan types:

- Demand plan
- Demand and Supply plan
- Replenishment plan

- Sales and Operations plan
- Supply plan

Configure Plan Extract Parameters

Before you can select the Export Plan Data action from the Manage Plans page, you must configure the extract options for your plan.

1. Navigate to the Plan Options page, Scope tab and click the **Select Advanced Options** button.
2. In the Scope: Advanced options dialog box, in the Extract Options section, select the **Enable for extract** check box to enable plan data to be extracted.
3. Configure the extract parameters for the plan.

Dimension Catalog for Extract

Select a dimension catalog to use for the extract process. The list of values includes all dimension catalogs valid for the plan type. The list of hierarchies included in this list must be a subset of the hierarchies available in the dimension catalog associated with the plan. The list of hierarchies includes preconfigured and user-defined hierarchies. Note the following:

- The maximum number of levels per hierarchy is limited to 10 levels.
- The maximum number of hierarchies in the segment dimension is limited to two hierarchies.

Measure Catalog for Extract

Select a measure catalog to use for the extract process. The list of values includes all measure catalogs valid for this plan type. The measure catalog must contain only the measures that are part of the measure catalog for the plan. The planning process evaluates measures with expressions and includes the results in the extract.

Extract Time Hierarchy

Select a time hierarchy to use for the extract process. Data extraction is done only at the lowest level for all dimensions except for the time dimension. You can have only one time hierarchy per plan and it must be part of the dimension catalog used for the extract process. If it contains other time hierarchies, the extract process ignores them for extract.

The extract time hierarchy depends on the plan type, the planning calendar associated with the plan, and the planning time level. Validation rules apply for the **Extract Time Hierarchy** field, based on the type of plan.

When the planning calendar options are			Extract Time options must be	
Plan Type	Planning Calendar Type	Planning Time Level	Extract Time Hierarchy	Extract Time Level
Supply Plan	Greogorian Calendar	Month	Gregorian Calendar	Month, Quarter or Year
		Day	Any valid time hierarchy in plan	Any supported time levels
	Manufacturing Calendar	Week or Period	Same Manufacturing Calendar of the plan	Planning Time Level or above
		Day	Any valid time hierarchy in plan	Any supported time levels
Demand Plan	Greogorian Calendar	Month	Gregorian Calendar	Month, Quarter or Year
	Manufacturing Calendar	Week or Period	Same Manufacturing Calendar of the plan	Planning Time Level or above
	Fiscal Calendar	Month	Same Fiscal Calendar of the plan	Month or Quarter
		Day	Any valid time hierarchy in plan	Any supported time levels
Sales and Operations Plan	Greogorian Calendar	Month	Gregorian Calendar	Month, Quarter or Year
		Quarter	Gregorian Calendar	Quarter or Year
	Manufacturing Calendar	Week or Period	Same Manufacturing Calendar of the plan	Planning Time Level or above
	Fiscal Calendar	Month	Same Fiscal Calendar of the plan	Month or Quarter
		Quarter	Same Fiscal Calendar of the plan	Quarter
Replenishment Plan	Greogorian Calendar	Month	Gregorian Calendar	Month, Quarter or Year
	Manufacturing Calendar	Week or Period	Same Manufacturing Calendar of the plan	Planning Time Level or above
		Day	Any valid time hierarchy in plan	Any supported time levels

For a demand plan that uses a hybrid time hierarchy, the value in the **Extract Time Hierarchy** field is automatically set to the hybrid time hierarchy that you selected as the planning calendar and can't be changed.

Extract Time Level

Select a specific time level to extract. The list of values includes all levels based on the plan type and your selection in the **Extract Time Hierarchy** field. The valid values and defaults are as follows:

- Manufacturing calendar: Week, Period (Default is Week)
- Fiscal Calendar: Month, Quarter (Default is Month)
- Gregorian Calendar: Month, Year (Default is Month)

The extract time level depends on the plan type, the planning calendar associated with the plan, and the planning time level. The Extract Time Level selection is subject to validation for each plan type.

Plan Type	Rule
Supply plan	Largest supply planning bucket or above. For example: • If Supply Planning Buckets are 0 days, 52 weeks, then the Extract Time Level can be Week or Period. • If Supply Planning Buckets are 365 days, 13 Periods, then the Extract Time Level can only be Period.
Demand plan	Planning time level of the plan or above.
Demand and Supply plan	Largest supply planning bucket or above. For example: • If Supply Planning Buckets are 0 days, 52 weeks, then the Extract Time Level can be Week or Period. • If Supply Planning Buckets are 365 days, 13 Periods, then the Extract Time Level can only be Period.
Sales and Operations plans	Planning time level of the plan or above.
Replenishment plan	Planning time level of the plan or above.

For a demand plan that uses a hybrid time hierarchy, in the **Extract Time Level** field, you can select a parent of the Hybrid time level for the hybrid time hierarchy that you selected as the planning calendar. For a manufacturing hybrid hierarchy, you can select the Week or Period level. For a Gregorian hybrid hierarchy, you can select the Month, Quarter, or Year level. For a fiscal hybrid hierarchy, you can select the Month, Quarter, or Year level.

Files Created by the Plan Extract Process

The plan extract process generates a set of files. Some files have file names that begin with DATA and have a .csv.gz file extension. These files are compressed, comma-separated value (CSV) files.

The extract process also generates a set of files with file names that begin with META and have a .mdcsv.gz extension for its internal use. You can ignore the META files.

Every plan extract results in the following DATA files:

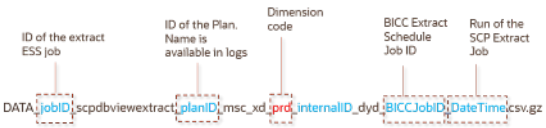
File generated	Description of file
Dimension Data	The plan extract process generates one dimension data file for each dimension selected for the extract process. This file contains all of the level members with their associated relationships for all hierarchies in that dimension.
Dimension Definition	The plan extract process generates one dimension definition file for each extract and contains the names of the hierarchies and levels.
Measure Data	The plan extract process generates one measure data file for each set of measures that share the same dimensionality. This file contains the measure values by the different dimensions.
Measure Definition	The plan extract process generates one measure definition file for each extract and contains the names, data types, expressions, granularity, and aggregation rules of the measure.

The extract process generates the dimension definition and measure definition files to help you understand the content of the data files, but they aren't essential for reporting or analysis. These files contain translatable strings in the language of the planner performing the extract.

Naming Conventions for Extracted DATA Files

In addition to the DATA prefix and .csv.gz file extension, the data file names follow a specific naming pattern. You can search the content server for this name pattern to get the required files for download.

- **Dimension file name patterns**
  - Dimension data file:

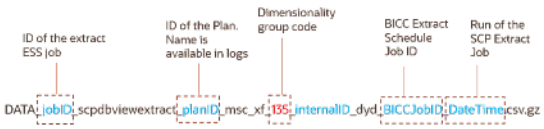


  - Dimension definition file:

DATA_jobID_scpdbviewextract_planID_msc_xtr_hierarchy_map_v-BICCJobID_DateTime.csv

Dimension file name parts	Description
jobID	The job ID of the extract scheduled process.
planID	The ID of the plan. This name is available in log files.
Dimension code	The dimension code that the hierarchies in the file belong to. Used in the dimension data file, but not the dimension definition file.
BICCJobID	The job ID of the extract scheduled job of the BI Cloud Connector (BICC) tool.
DateTime	Date and time the extract scheduled process began.

- **Measure file name patterns**
  - Measure data file:



  - Measure definition file:

DATA_jobID_scpdbviewextract_planID_msc_xtr_measure_map_v-BICCJobID_DateTime.csv

Measure file name parts	Description
jobID	The job ID of the extract scheduled process.
planID	The ID of the plan. This name is available in log files.
Dimensionality group code	Name of the dimensionality group code. Used in the measure data file, but not the measure definition file.
BICCJobID	The job ID of the extract scheduled job of the BI Cloud Connector (BICC) tool.
DateTime	Date and time the extract scheduled process began.

Dimension Data Files Created by the Plan Extract Process

The plan extract process generates one dimension data file for each dimension and contains all of the hierarchies in that dimension. Each dimension file contains information for all of the selected hierarchies.

For example, if the planner selects two product hierarchies, an item appears twice--once for each hierarchy.

Column name	Content
HIERARCHY_ID	Internal hierarchy identifier
[dimension]_LVL_MEMBER_ID	ID of the lowest-level member. Each dimension file contains its own lowest level member. For example: • *PRD*_LVL_MEMBER_ID • *ORG*_LVL_MEMBER_ID
BASE_MBR_NAME	Name of the lowest level member
L2-MBR_ID	Level 2 member ID
L2_MBR_NAME	Level 2 member name
L3-MBR_ID	Level 3 member ID
L3_MBR_NAME	Level 3 member name
L4-MBR_ID	Level 4 member ID
L4_MBR_NAME	Level 4 member name
L5-MBR_ID	Level 5 member ID
L5_MBR_NAME	Level 5 member name
L6-MBR_ID	Level 6 member ID
L6_MBR_NAME	Level 6 member name
L7-MBR_ID	Level 7 member ID
L7_MBR_NAME	Level 7 member name

Column name	Content
L8-MBR_ID	Level 8 member ID
L8_MBR_NAME	Level 8 member name
L9-MBR_ID	Level 9 member ID
L9_MBR_NAME	Level 9 member name
L10-MBR_ID	Level 10 member ID
L10_MBR_NAME	Level 10 member name
SR_BASE_MBR_ID	Internal use only

Dimension Definition Files Created by the Plan Extract Process

The dimension definition file contains information for all of the dimensions and hierarchies specified in the dimension catalog for extract. The plan extract process creates only one file per extract.

Column name	Description
DIMENSION_ID	Unique ID of the dimension
HIERARCHY_ID	Unique ID of the hierarchy
BASE_LEVEL_ID	Lowest level (Level 1) ID
LEVEL_2_ID	Level 2 ID
LEVEL_3_ID	Level 3 ID
LEVEL_4_ID	Level 4 ID
LEVEL_5_ID	Level 5 ID
LEVEL_6_ID	Level 6 ID

Column name	Description
LEVEL_7_ID	Level 7 ID
LEVEL_8_ID	Level 8 ID
LEVEL_9_ID	Level 9 ID
LEVEL_10_ID	Level 10 ID
DIMENSION_CODE	Unique code for the dimension
DIMENSION_NAME	Dimension name
HIERARCHY_NAME	Hierarchy name
BASE_LEVEL_NAME	Base level name
LEVEL_2_NAME	Level 2 name
LEVEL_3_NAME	Level 3 name
LEVEL_4_NAME	Level 4 name
LEVEL_5_NAME	Level 5 name
LEVEL_6_NAME	Level 6 name
LEVEL_7_NAME	Level 7 name
LEVEL_8_NAME	Level 8 name
LEVEL_9_NAME	Level 9 name
LEVEL_10_NAME	Level 10 name

Measure Data Files Created by the Plan Extract Process

The plan extract process generates one measure data file for each set of measures that share the same dimensionality or granularity. Use the measure definition file to obtain more details about the measure, including its full name, description, aggregation methods, and so on.

The following table is an example measure data file for a specific dimensionality with a selected list of measures. The actual format depends on the dimensionality and the measures selected by users for extract.

Column name	Description
PLAN_ID	ID of the plan
PRD_LVL_MEMBER_ID	Product dimension lowest level member ID
ORG_LVL_MEMBER_ID	Organization dimension lowest level member ID
TIM_LVL_MEMBER_ID	Time dimension lowest level member ID
FACT_DATE	Date
AVG_DAILY_DMD	Value of this measure
GROSS_MARGIN_PCT	Value of this measure
IN_TRANSIT	Value of this measure
INV_TURNS	Value of this measure
ITEM_STD_COST	Value of this measure
ONHAND	Value of this measure
PAB	Value of this measure
PAB_VALUE	Value of this measure
PO_QTY	Value of this measure
PR_QTY	Value of this measure
PROJECTED_ONHAND	Value of this measure

Column name	Description
SCHED_RCPT	Value of this measure
SS	Value of this measure
TF_QTY	Value of this measure
TOTAL_DEMAND	Value of this measure
TOTAL_DEMAND_VALUE	Value of this measure
TOTAL_SUPPLY	Value of this measure
TTL_END_ITEM_CST	Value of this measure
GROSS_MARGIN	Value of this measure

The extract process generates one measure data file for each set of measures that share the same dimensionality or granularity. The measure data files contain information for all measures that share that same dimensionality. A list of predefined dimensionality groups is listed in the Dimensionality Group Codes Used by the Plan Extract Process topic. The lowest level of each of these dimensions appears in each file. They will be different for each dimensionality, based on the dimensions that are part of that group. Each measure column name is a measure code from the measure definition file. Use the measure definition file to obtain more details about the measure, including its full name, description, aggregation, and so on.

Measure Definition Files Created by the Plan Extract Process

The measure definition file contains information for all of the measures specified in the measure catalog for extract. The plan extract process creates only one file per extract.

Column name	Description
GRANULARITY_ID	Dimensionality group ID
POSITION	Internal use only
MEASURE_CODE	Used as the column name in measure data files

Column name	Description
MEASURE_ID	ID that uniquely identifies a measure
NAME	Name of the measure
DESCRIPTION	Brief description of the measure
DATA_TYPE	Data type
EXPRESSION	Internal use only
AGGR_ORDER	Aggregation rule: 1 = Calculate, then aggregate 2 = Aggregate, then calculate
AGGR_METHOD_OTHER	Aggregation method on dimensions other than the Time dimension
AGGR_METHOD_TIME	Aggregation method on the Time dimension
WEIGHTED_BY	ID of the measure to be used when aggregation method is WAVG (weighted average)

The MEASURE_CODE column in this file contains all the measure codes for all measures. The actual measure data files use this measure code as data column name. Using this code, you can look up additional information about the measure in the definition file. Note that the expression indicated is only for internal use and is already evaluated before the extract. Aggregation methods (Sum, Latest, Average, Weighted Average, and so on) can be used to configure your analytics to aggregate these measures across various dimensions.

Dimension Codes Used by the Plan Extract Process

The plan extract process uses preconfigured dimension codes related to a list of valid dimension.

Code	Dimension name
tim	Time
res	Resource
cus	Customer
prd	Product

Code	Dimension name
org	Organization
dcs	Demand Class
sup	Supplier
fcm	Forecasting Method
cto	Configure to Order
src	Source
exp	Exception Type
ord	Order Type
cig	Decomposition Method
seg	Segment

Dimensionality Group Codes Used by the Plan Extract Process

The extracted files use codes related to a list of valid dimensionality groups. Dimensionality group codes shown in this topic list all of the valid preconfigured dimension groups.

For example, code 125 is for all measures that are dimensioned only by the Organization, Product, and Time dimensions. The measure data file for that dimensionality contains all measures extracted for that dimensionality.

Dimensionality Group Code	Dimensionality Group
10	org, prd, tim, cus, cto
15	org, prd
20	org, res, tim
25	tim

Dimensionality Group Code	Dimensionality Group
35	org, prd, tim, cus
40	org, prd, res, tim, cus, sup, exp
45	org, prd, tim, sup
50	org, prd, tim, cus, sup, src
55	org, prd, tim, cus, dcs, ord
60	org, prd, tim, ord
65	org, prd, tim, cus, sup, dcs, ord
70	org, prd, tim, sup, ord
75	org, prd, dcs
95	org, prd, cus, dcs, fcm, clg, tim, cto
100	org, prd, tim, cus, dcs, cto
105	org, prd, cus
110	org, prd, cus, dcs
125	org, prd, tim
130	org, prd, tim, cus
135	org, prd, tim, cus, dcs
145	prd, tim, cus
150	prd, tim, cus, dcs
155	org, prd, tim, cus, sup, dcs
160	prd, cus
165	org, prd, tim, exp

Dimensionality Group Code	Dimensionality Group
170	org, tim
175	prd
180	org, prd, tim, cus, dcs, fcm, clg
185	org, prd, cus, dcs, fcm, clg
190	org, prd, cus, fcm, clg

16 Supply Network Model

How You Maintain Your Supply Network Model

Use the Maintain Supply Network Model page to view your collected data that includes details of organizations, customers, suppliers, carriers, and interlocation shipping networks.

To open the Maintain Network Model page, navigate to a Supply Chain Planning work area. Click the Tasks panel tab and then select the **Maintain Supply Network Model** link.

You use organizations to represent your business facilities or functions. Typically, if your business has a single physical facility that performs two different functions, then you model it as two organizations. For example, you have one facility that's a manufacturing plant and a distribution center. You can model them as two separate organizations. Additionally, if your business has one function located in two separate physical facilities, you can model those as one organization. If you modeled your facilities as one organization, you can create separate subinventories to represent inventory for each facility.

Review the Collected Data

Based on your search results, use the Organization tab to do the following:

- Review organizations, including the time zones associated with the organizations, for all source systems.
- Create customer and supplier associations to organizations. This is used when creating the buy-sell transfers.
- Select the drop ship validation organization. For each source system, you can select only one organization as the drop ship validation organization. You can also assign a calendar to a drop ship validation organization.
- Set past due parameters for each organization, which include:
    - Past due forecast days
    - Past due sales order days
    - Past due supply days
- Set up organizations for subinventory-level replenishment planning by selecting **Yes** under **Plan Subinventories**.

Use the Customers and Supplier tabs to review collected data and assign time zones to customer sites and supplier sites. If the customer site or supplier site doesn't have an associated time zone, then the customer site or supplier site is assumed to be in the same time zone as the organization that's associated with the demand or supply.

Use the Carriers and Interlocation Shipping Networks tabs to review collected data on carriers, shipping methods, and transit times.

Manage Organization Groups

Click the **Manage Organization Groups** button on the Organizations tab to create and manage organization groups. Organization groups are managed within the source systems and are used to:

- Limit the net change data collection from a source system to specific organizations.

- Load planning data from files for a specific organization group when collection type is Targeted.

Enable Inventory Organization Tracking by Project

This parameter appears on the Maintain Supply Network Model page only when your organization is enabled for project-specific supply planning.

The Project Enabled parameter governs whether your inventory organization is enabled for inventory tracking by project. The value for this parameter can be Yes or No for an organization.

When the parameter value is Yes for an organization, the data collection process collects project-and-task-specific supplies and demands, and the project-specific planning releases planned orders to the organization. The value for this parameter is No for a supplier-modeled organization or a contract manufacturing organization.

Buy and Sell Transfers

You can conduct material transfers between two organizations in a single Oracle Fusion source system by using the purchase order and sales order documents. The sales order at the source organization is used to ship the transfer. The purchase order at the destination organization is used to receive the transfer.

In the supply network model for the purchase order supply at the receiver organization:

- Define the supplier to source organization relationship and for the sales order demand at the shipping organization.
- Define the customer to destination organization relationship.

To model an organization as a supplier, update the Supplier and Supplier Site columns of the associated organization.

To model an organization as a customer, update Customer and Customer Site columns of the associated organization.

Forecast and Consume Internal Orders

To forecast and consume internal orders, assign a customer and customer site to the organization that's the destination of the transfers. Use a customer name that makes sense for the destination organization, such as M1 Transfers. After you assign a customer and customer site on the Organizations tab, select the **Use Customer and Customer Site for Interorganization Transfers** check box for the organization.

Note: To complete the setup to forecast and consume internal orders, you must also do the following:

- On the Collect Planning Data page, Parameters tab, Demand Planning Data subtab, select the **Organization - Consumption Inventory Transactions to Include** check box.
- In the plan options for your plan, select the **Include transfer orders** check box in the Demand: Advanced Options dialog box. This check box is only available from a Demand Management, Planning Central, or Demand and Supply Planning work area.

Related Topics

- Overview of Data Collections for Supply Chain Planning
- How You Collect Different Data Types for Supply Chain Planning
- How You Load Planning Data from Files
- How You Define the Approved Supplier List for Supply Chain Planning
- Set Up Forecast Consumption for Transfer Orders

Publish Order Forecasts to Suppliers

You publish order forecasts to your suppliers to enable them to commit supply and indicate their ability to meet the demand. Collaborating with suppliers by publishing an order forecast enables:

- Suppliers to send supply commits to the Original Equipment Manufacturer (OEM)
- OEMs to receive supply commits as supplier capacity

Collaboration enables suppliers to get an insight into the demand that the OEMs forecast and plan supply chain activities to meet the demand. Additionally, collaboration with suppliers enables OEMs to plan their downstream activities in the supply chain more efficiently.

Use the Collaboration Basis column in the Suppliers tab on the Maintain Supply Network Model page to indicate the basis on which you want to publish the order forecast to your suppliers. You can choose to publish the order forecast at the supplier and supplier site levels based on one of the following dates:

- **Start date**: Suppliers use the start date to know when they need to start manufacturing an order to fulfill the order on time
- **Dock date**: Suppliers use the dock date to know the date by which they need to fulfill the order

How You Define the Approved Supplier List for Supply Chain Planning

An approved supplier list (ASL) is a repository of information that links items to the suppliers and supplier sites that provide them to either a specific ship-to organization or the entire enterprise.

An ASL can be global or specific to an organization; however, supply planning only recognizes global ASLs.

To determine the supplier and supplier sites for items, the planning process collects ASLs from the CSV file upload, Oracle Fusion Cloud Procurement, or both.

- Use the Load Planning Data from Flat Files process to load data directly into the planning ASL by using the Approved Supplier List CSV template (ScpApprovedSupplierListImportTemplate.xlsm).
- You can also define some ASL attributes in Oracle Procurement and then upload a CSV file that defines the attributes that you want supply planning to use. For example, define the following item-to-supplier relationships and order modifiers in Oracle Procurement:
    - Supplier

- Supplier site
- Minimum order quantity
- Fixed lot multiple

To upload additional attributes for supply planning to use, you can create and collect the ASL from purchasing. You can then use the CSV file upload to define additional attributes such as the following:

- Item-supplier lead time
- Supplier capacity calendar
- Daily supplier capacity

Oracle Fusion Cloud Supply Planning supports the approved supplier list for a base model. However, approved supplier lists aren't supported for configured items and won't be copied into a supply plan.

Related Topics

- Supplier Capacity Options
- How You Maintain Your Supply Network Model

Associate Calendars with Supplier Sites

Use a supplier site calendar to measure processing lead times for purchases from a supplier site. You can associate a Supply Chain Planning calendar with a supplier site to use for all items sourced from that supplier site.

The calendar is in the collected planning data.

You can associate a calendar with supplier sites to use if there is no calendar defined through the Approved Supplier List upload for a supplier site-item combination. From a Supply Chain Planning work area, navigate to the Maintain Supply Network Model page, Suppliers tab. In the **Supplier Site Calendar** column for a supplier, select a calendar name from the list of collected calendars. You can only edit this field if the supplier row contains a supplier site.

When you run the plan, the planning process uses the selected calendar on the Maintain Supply Network Mode page if the approved supplier list calendar for the supplier site-item is blank. If the approved supplier list calendar for the supplier site-item is blank, and you do not associate a calendar with a supplier site on the Maintain Supply Network Model page, then the planning process uses the 24/7 calendar.

Related Topics

- How You Define the Approved Supplier List for Supply Chain Planning

Assignment Sets, Sourcing Rules, and Bills of Distribution

You use assignment sets in a Supply Chain Planning work area to link sourcing rules and bills of distribution to items.

Using sourcing rules, bills of distribution, and assignment sets together, you can specify how material is supplied, manufactured, and transferred across a supply chain.

> **Note:** This topic is applicable to only the Planning Central, Sales and Operations Planning, Supply Planning, Demand and Supply Planning, and Replenishment Planning work areas.

When you create sourcing rules and bills of distribution, you create descriptions of the means by which you can replenish items. However, items aren't specified anywhere on the definition forms, and so a defined sourcing rule or bill of distribution can later be assigned to any item or group of items. Use assignment sets to associate specific items, categories, or organizations with the sourcing rules and bills of distribution.

You must use sourcing to describe the supply chain to the planning process. Use the following three structures to do so:

- Sourcing rules
- Bills of distribution
- Assignment sets

Sourcing Rules

Sourcing rules and bills of distribution determine the movement of material between organizations. These organizations include supplier, manufacturing, and distribution facilities. You can navigate to a Supply Chain Planning work area and click **Manage Sourcing Rules** from the **Tasks** drawer to create or search for an existing sourcing rule.

The three types of sources are:

- Transfer From: Interorganization shipping functionality accomplishes the transfer between internal organizations. Enter the source organization in the Organization column.
- Make At: The item is manufactured at this internal organization. Enter the manufacturing organization in the Organization column.

  Oracle Fusion Replenishment Planning doesn't support make at sourcing rules.
- Buy From: Purchase the item from an external enterprise. Data entry in the Supplier and Supplier Site columns is enabled, and the Organization column is disabled.

Allocation Percent and Rank: The total allocation percentage for all sources within a rank must add up to 100 percent. The sources with the highest rank (lowest numeric value) get the highest priority in allocations. Unconstrained supply planning and Replenishment Planning only consider sources of rank one. Replenishment Planning also doesn't support sourcing splits.

Bills of Distribution

When material flows through three or more organizations, bills of distribution describe supply chain links more efficiently than sourcing rules. However, any relationship that can be described by bills of distribution can also be described by a set of sourcing rules. Typically, most users use sourcing rules rather than bills of distribution. You can navigate to a Supply Chain Planning work area and click **Manage Bills of Distribution** from the **Tasks** drawer to create or search for existing bills of distribution.

Replenishment Planning supports bills of distribution of only rank one and doesn't support split bills of distribution.

Sales and Operations Planning doesn't support bills of distribution.

Note: Despite the name, bills of distribution don't describe an outward bound or push type of sourcing relationship. Both sourcing rules and bills of distribution are used only to pull material from sources to destinations.

Assignment Sets

You use assignment sets to link sourcing rules and bills of distribution to items. In other words, you use assignment sets to link sourcing rules, items and supply nodes. The assignment set creates the sourcing and transfer links between organizations for each item involved in a supply chain plan. Alternative supply chains can be modeled by creating alternative assignment sets. You can navigate to a Supply Chain Planning work area and click **Manage Assignment Sets** from the **Tasks** drawer to create or search for existing assignment sets.

For more information, see *Create an Assignment Set*.

Sourcing Assignment Hierarchy

The planning process uses a sourcing assignment hierarchy to determine the actual source of a specific item. You can assign replenishment sources at the following levels. Specific sourcing assignments override general assignment levels. If the planning process doesn't find any sourcing assignment, then the make or buy item attribute is used to determine sourcing.

The following table lists the supply sourcing hierarchy.

Rank	Item or Category	Applies to
1	Item - Organization	1. Sourcing rule
2	Category - Organization	1. Sourcing rule
3	Item	1. Bill of distribution 2. Global sourcing rule
4	Category	1. Bill of distribution 2. Global sourcing rule
5	Organization	1. Global sourcing rule
6	Global	1. Bill of distribution 2. Global sourcing rule

When entering sourcing assignments at the category level, the catalog associated with the assignment set is used to determine the list of available categories.

When you source supplies for sales orders and forecasts (independent demands), then order promising and planning use a more detailed hierarchy. This hierarchy includes the demand class, customer, and customer site which are dimensions of independent demand.

The following table lists the demand sourcing hierarchy.

Rank	Item or Category
1	Item - Customer / customer site
2	Item - Customer
3	Item - Demand Class
4	Item - Region
5	Category - Customer / customer site
6	Category - Customer
7	Category - Demand Class
8	Item
9	Category - Region
10	Category
11	Customer / customer site
12	Customer
13	Demand Class
14	Region
15	Global

Using the demand sourcing hierarchy, if a demand line includes a value for demand class, then if no sourcing rule exists for Item - Customer / customer site or Item - Customer, but a rule exists for Item-Demand Class, then that rule is used to determine supply sources for the demand line.

When using the sourcing hierarchy, if two rules conflict, the more granular rule is used. To verify which source is used for an assignment set, from within the set, click the **View Sourcing** button after entering the following required parameters:

- Assignment set
- Organization
- Item
- Date

The dialog box displays which assignments apply to the item-organization-date that you selected. If multiple rules apply, then the Active Rule is marked in the form.

Related Topics

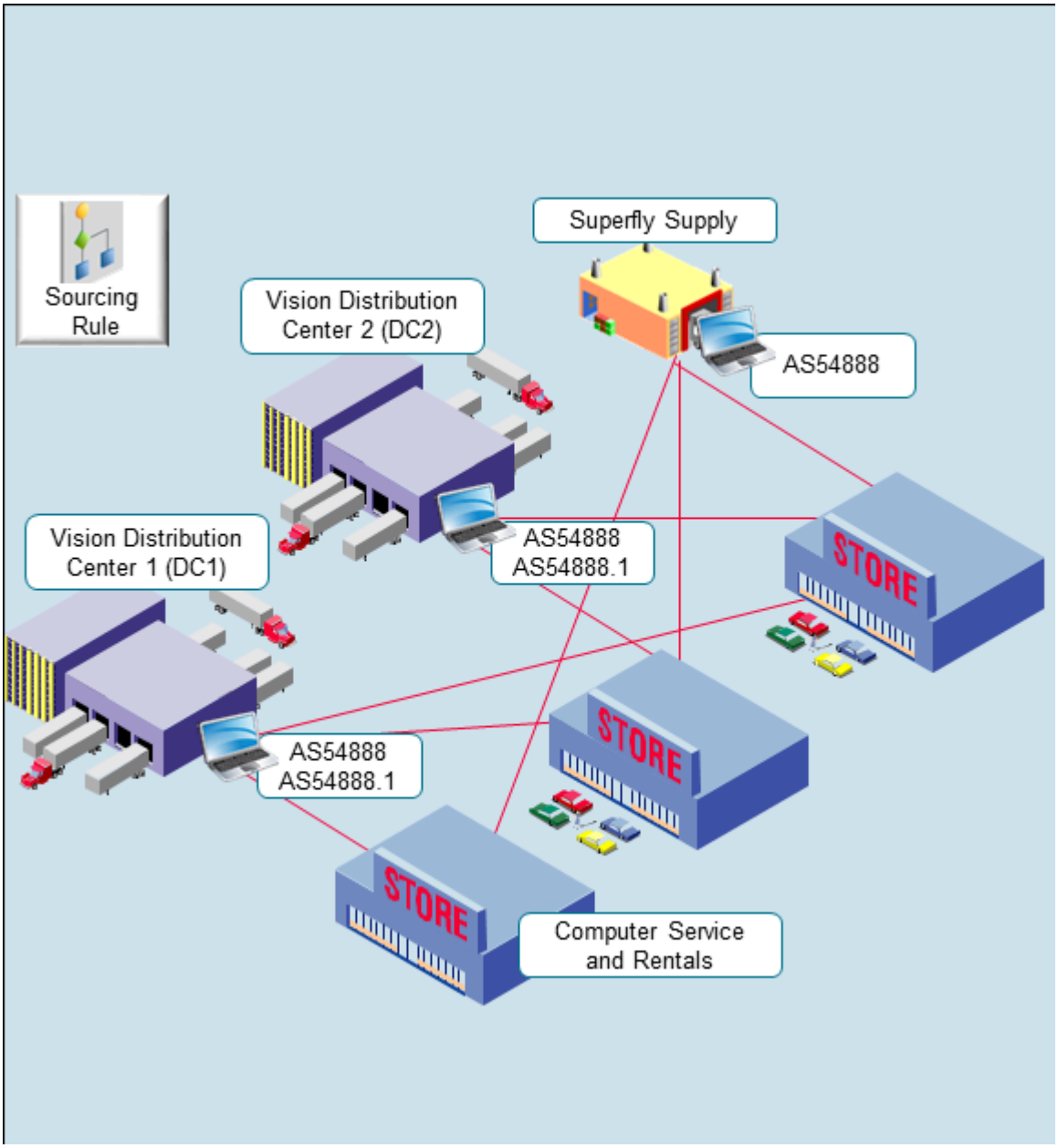
- Item Attributes and Order Modifiers for Supply Planning
- Support for Sourcing Rules and Bills of Distribution in Oracle Replenishment Planning

Create an Assignment Set

Learn how to create an assignment set.

Assume you sell the AS54888 Computer. You're releasing a new version of it, AS54888.1 to all your customers, but you want to make sure your highest valued customer, Computer Service and Rentals, gets first dibs on it.

Here's your supply chain.



Note

- You are in the Vision Operations organization.
- You fulfill all computers that you have in the Computers category from:
-
    - Vision Distribution Center 1 (DC1)
    - Vision Distribution Center 2 (DC2)
    - Superfly Supply (S1)

You will create one sourcing rule to meet this need:

- You fulfill the AS54888.1 only from Distribution Center 1 and Distribution Center 2.

You will create a second sourcing rule to meet this need:

- You fulfill sales orders from Computer Service and Rentals that have the AS54888.1 only from Distribution Center 1.

You will create a third sourcing rule to meet this need:

- You fulfill all items that are in the Computers category from Distribution Center 1, Distribution Center 2, or Superfly.

So you need to implement this set up.

Sourcing Rule	Item Category	Item	Fulfillment Source
1	Computers	-	Vision Distribution Center 1 (DC1) Vision Distribution Center 2 (DC2) Superfly Supply (S1)
2	-	AS54888.1	Vision Distribution Center 1 (DC1) Vision Distribution Center 2 (DC2)
3	-	AS54888.1	Vision Distribution Center 1 (DC1)

Summary of the Setup

1. Create your sourcing rules.
2. Assign your sourcing rules.

Create Your Sourcing Rules

1. Go to the Global Order Promising work area, then click **Tasks > Manage Sourcing Rules**.
2. Create your first sourcing rule.
    - On the Manage Sourcing Rules page, click **Actions > Create**.
    - On the Create Sourcing Rules page, set the values.

Attribute	Value
Name	Transfer Computers From D1, D2, and S1
Description	Sourcing rule to transfer supply for all items that are in the Computers category from our distribution centers and from Superfly Supply.
Organization Assignment Type	Global

    - In the Sourcing Rule Effective Dates, click **Actions > Add Row**, then set the Start Date to today's date. You want this rule to last forever, so leave the End Date attribute empty.

      If you ever need to stop using this rule, you can always come back and set the end date.
    - In the Sources area, use **Actions > Add Row** 3 times to add these rows.

Type	Organization	Allocation Percent	Rank
Transfer From	D1	100	1
Transfer From	D2	100	1
Buy From	S1	100	1

3. Create your second sourcing rule.
    - Repeat step 2, but with these values.

Attribute	Value
Name	Transfer Computers from D1 and D2
Description	Sourcing rule to transfer supply for the AS54888.1 item from our distribution centers.
Organization Assignment Type	Global

    - Add these sources.

Type	Organization	Allocation Percent	Rank
Transfer From	D1	60	1
Transfer From	D2	40	1

4. Create your third sourcing rule.
    - Repeat step 2, but with these values.

Attribute	Value
Name	Transfer Computers from D1
Description	Sourcing rule to transfer supply for the AS54888.1 item from our D1 distribution center.
Organization Assignment Type	Global

    - Add this source.

Type	Organization	Allocation Percent	Rank
Transfer From	D1	100	1

5. Click **Save and Close**.

Assign Your Sourcing Rules

Now you create a set of assignments to assign your sourcing rules. Your set will have three assignments.

1. Click **Tasks > Manage Assignment Sets**.
2. On the Manage Assignment Sets page, click **Actions > Create**.
3. On the Create Assignment Set page, set the values.

Attribute	Value
Name	Assign My Computers
Description	Assign the sourcing rules that we're using to source all of our computers.
Catalog	GOP_Catalog For details about catalogs and categories, see *How Catalogs Work Together*.

4. Click **Actions > Add Row**, then assign your first sourcing rule.

Attribute	Value
Assignment Level	Category
Category	Computers
Sourcing Rule or Bill of Distribution	Transfer Computers From D1, D2, and S1

5. Click **Actions > Add Row**, then assign your second sourcing rule.

Attribute	Value
Assignment Level	Item
Item	AS54888.1
Sourcing Rule or Bill of Distribution	Transfer Computers from D1 and D2

6. Click **Actions > Add Row**, then assign your third sourcing rule.

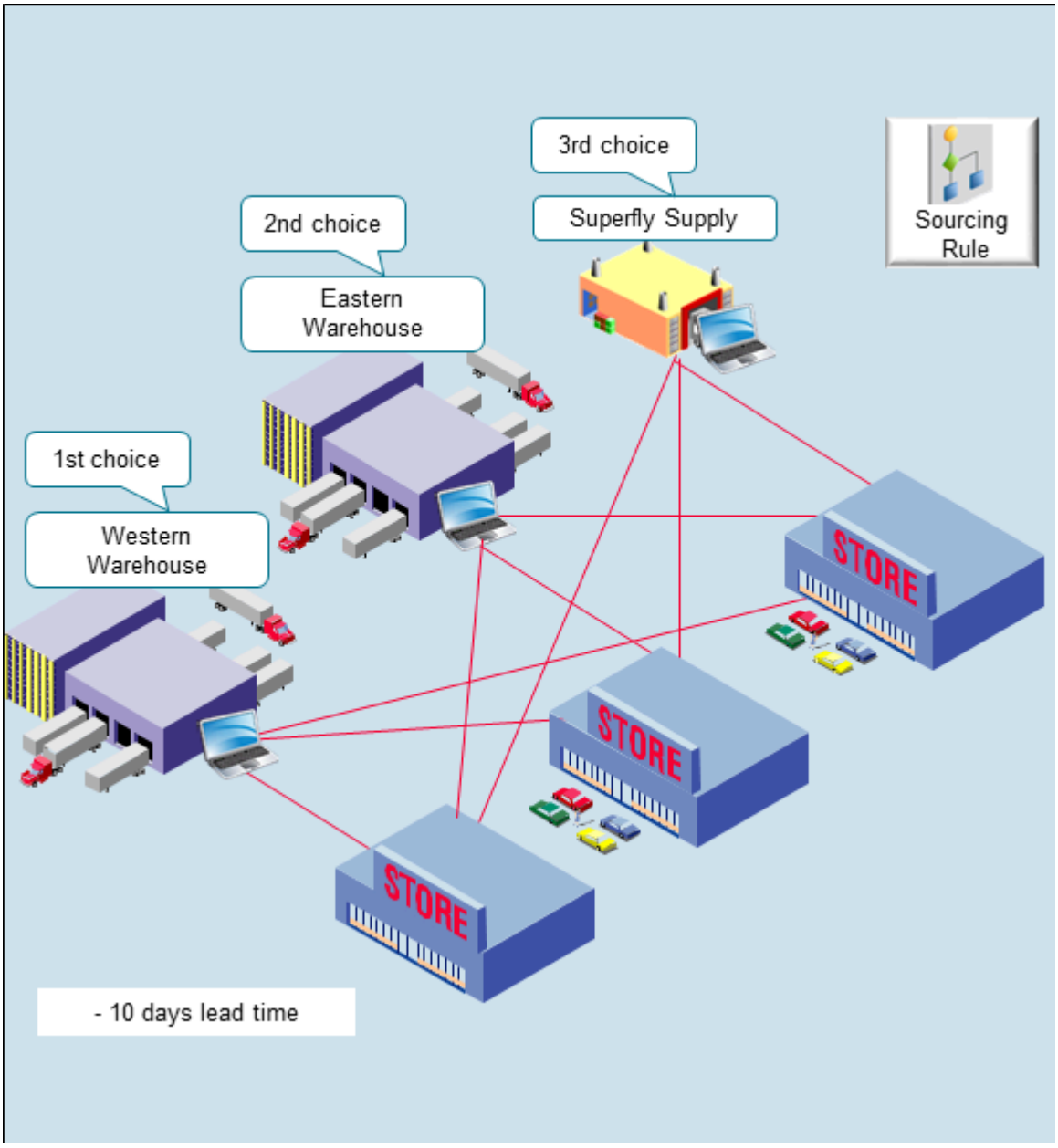
Attribute	Value
Assignment Level	Item and Customer
Item and Customer	Computer Service and Rentals
Item	AS54888.1
Sourcing Rule or Bill of Distribution	Transfer Computers from D1

7. Click **Save and Close**.

Another Example of Creating an Assignment Set

Create an assignment set that Promising can use when your first choice for supply can't fulfill the demand.

Consider this supply chain.



Assume:

- You're in the Vision Operations organization.
- You sell the AS54888 Computer item, and its in the Vision Pro category of computers.
- The Western Warehouse and the Eastern Warehouse are each an organization in Vision Corporation.

- You want to ship from Western first.
- If Western can't fulfill demand in time to meet the requested delivery date, then ship from Eastern.
- If Eastern can't fulfill demand in time to meet the requested delivery date, then use Superfly Supply to fulfill demand. Superfly is your 3rd party supplier. You use the acronym SFS to identify the Superfly organization.
- You need 10 days lead time to fulfill the item.

Summary of the Setup

1. Create your sourcing rules.
2. Assign your sourcing rules.
3. Create your ATP rules.

Create Your Sourcing Rules

1. Create your first sourcing rule.
    - Go to the Global Order Promising work area, then click **Tasks > Manage Sourcing Rules**.
    - Create a new sourcing rule.

Attribute	Value
Name	Sourcing Rule for Vision Pro Computers
Description	We use this sourcing rule to source all items in a category from our Western Warehouse. If Western can't fulfill the item in time, then it sources from Eastern Warehouse.
Organization Assignment Type	Global

    - Set the start date to today's date. Don't enter an end date.
    - Add your sources.

Type	Organization	Allocation Percent	Rank
Transfer From	Western Warehouse	100	1
Transfer From	Eastern Warehouse	100	2

2. Create your second sourcing rule.

Attribute	Value
Name	Sourcing Rule for a Vision Pro Item
Description	We use this sourcing rule to source an item from our Western Warehouse. If Western can't fulfill the item in time, then it sources from Eastern Warehouse.
Organization Assignment Type	Global

    - Set the start date to today's date. Don't enter an end date.
    - Add your sources.

Type	Organization	Allocation Percent	Rank
Transfer From	Western Warehouse	100	1
Transfer From	Eastern Warehouse	100	2

3. Create your third sourcing rule.

Attribute	Value
Name	Sourcing Rule for Superfly Supply
Description	We use this sourcing rule to source an item from our Superfly Supply supplier.
Organization Assignment Type	Local
Organization	SFS

   - Set the start date to today's date. Don't enter an end date.
   - Add your source.

Type	Organization	Allocation Percent	Rank
Buy From	Superfly Supply	100	1

Assign Your Sourcing Rules

1. Click **Tasks > Manage Assignment Sets**.
2. On the Manage Assignment Sets page, click **Actions > Create**.
3. On the Create Assignment Set page, set the values.

Attribute	Value
Name	Assign My Vision Pro Computers
Description	Assign the sourcing rules that we're using to source all of our computers in the Vision Pro category.
Catalog	GOP_Catalog

4. Click **Actions > Add Row**, then assign your first sourcing rule.

Attribute	Value
Assignment Level	Category
Category	Vision Pro

Attribute	Value
Sourcing Rule or Bill of Distribution	Sourcing Rule for Vision Pro Computers

5. Click **Actions > Add Row**, then assign your second sourcing rule.

Attribute	Value
Assignment Level	Item
Item	AS54888
Sourcing Rule or Bill of Distribution	Sourcing Rule for a Vision Pro Item

6. Click **Actions > Add Row**, then assign your third sourcing rule.

Attribute	Value
Assignment Level	Organization
Organization	SFS
Sourcing Type	Sourcing Rule
Sourcing Rule or Bill of Distribution	Sourcing Rule for Superfly Supply

7. Click **Save and Close**.

Create Your ATP Rules

1. Click **Tasks > Manage ATP Rules**.
2. Create your first ATP rule.
   Click **Actions > Create**, then set the values.

Attribute	Value
Name	ATP Rule for the AS54888
Description	ATP rule that we're using to promise the AS54888 item.
Promising Mode	Lead-Time Based
Lead Time Considered	User-Defined Lead Time
User-Defined Lead Time in Days	10
Assignment Basis	Item
Assigned-to Item	AS54888

3. Create your second ATP rule.

Click **Actions > Create**, then set the values.

Attribute	Value
Name	ATP Rule for the Vision Pro Category
Description	ATP rule that we're using to promise items that are in the Vision Pro category.
Promising Mode	Lead-Time Based
Lead Time Considered	User-Defined Lead Time
User-Defined Lead Time in Days	10
Assignment Basis	Category
Assigned-to Item Category	Vision Pro

Specify Catalogs for Assignment Sets

A catalog is a group of categories that you can use to classify an item. Use it to organize your item into a hierarchy.

A catalog can have a flat or a one level structure of categories. You can also have a hierarchical structure of categories.

You must specify a catalog for each assignment set when you create the set. You associate the set with a catalog to:

- Use categories associated to that catalog in your assignment set.
- Link the sourcing assignments to the categories.

Use the Manage Assignment Sets task in the Global Order Promising work areas to create an assignment set and specify the catalog. Don't use assignment sets in the Demand Management work area.

If you don't specify a catalog, then the assignment set uses the Catalog for Sourcing Assignments (MSC_SRC_ASSIGNMENT_CATALOG) profile option as the catalog. To modify it, see *Manage Promising Profiles*.

A catalog is a collection of categories that you can use to classify your item. For example, you can assign the Floral Dress item to the Summer category in the Ladies Wear catalog. For details about catalogs and categories, including how to create a catalog and add categories and items to it, see *Assign Catalogs and Categories Using Item Rules*.

Create a Sourcing Rule

Learn how to create a sourcing rule.

1. Collect the reference data that you need to create your sourcing rule, such as organizations, items, and so on. Make sure the collected data is up to date on the server.

   For details, see *Collect Data for Global Order Promising*.

2. Go to the Global Order Promising work area, then click **Tasks > Manage Sourcing Rules**.
3. On the Manage Sourcing Rules page, click **Actions > Create**.
4. On the Create Sourcing Rule page, enter a name and description.
5. Set the Organization Assignment Type attribute to Global or Local.

   If you set it to Local, then set a value in the Organization attribute. Select the one organization that you will apply this sourcing rule to.
6. In the Sourcing Rule Effective Dates section, click **Actions > Add Row**, then set the dates when you want the sourcing rule to be in effect.
7. In the Sources section, click **Actions > Add Row**, then set the values.

Attribute	Value
Type	Choose one: o Transfer From o Make At o Buy From

8. Set other attribute values depending on the type that you selected. The page will help you. It will make some attributes available depending on the type.
9. Click **Save and Close**.

Related Topics

- How You Collect Different Data Types for Supply Chain Planning
- Support for Sourcing Rules and Bills of Distribution in Oracle Replenishment Planning

Export Planning Data to CSV Files

You can replicate sourcing rules and assignment set data from your Oracle Fusion Cloud Supply Planning instance to another instance. When exporting data to CSV files, you can export a subset of the measures that are listed in a plan's measure catalog.

Replicate Sourcing Rules and Assignment Set Data

You can replicate sourcing rules and assignment set data from your Oracle Fusion Cloud Supply Planning instance to another instance or application without manually reentering data. For example, you can replicate the sourcing rules in your Oracle Supply Chain Planning production instance into a reporting system or a test instance.

Use the Export Supply Chain Planning Data scheduled process job to extract sourcing rules and assignment set data into a comma-delimited values (CSV) file format. The generated file is in the standard file-based import (FBDI) file format that you can then use to do the following:

- Check for missing or incorrect sourcing rules or sourcing assignments. For example, does a particular item-organization have a valid sourcing assignment?
- Replicate and then modify existing sourcing rules and assignment sets in a spreadsheet. You can then upload the new setups into another instance or application to create new sourcing rule and assignment set setups.

- Copy the sourcing rule and assignment set setups from one instance to another instance or application, such as from a test instance to a production instance.

The format of the CSV files, including the header content, is the same as the format of the corresponding files in the source instance. This enables you to import the same data directly into another production or test instance. Use the Load Planning Data from Files process to upload your imported files to staging tables.

The following steps show you how to export sourcing rules and assignment set data to a CSV file:

1. In the Scheduled Processes work area, click the **Schedule New Process** button on the Overview page.
2. In the Schedule New Process dialog box, search for and select **Export Supply Chain Planning Data** and then click **OK**.
3. In the Process Details dialog box, Basic Options section, select **Sourcing Rules and Assignment Sets** from the **Entities to Export** drop down list.
4. Optionally, click the **Filter** button to filter your export with specific assignment sets. If you don't select any filters, then the process exports all sourcing rules and assignment sets.
5. In the Process Details dialog box, click the **Submit** button to submit the scheduled process job.

   After you submit your job, you will receive a confirmation with a confirmation number. The planning process appends the confirmation number to the extracted CSV file names, such as AssignmentSets_65960.csv and SourcingRules_65960.csv, where 65960 is the confirmation number.

Export Measures Along With Planning Data

While exporting planning data, you can include a subset of measures that are part of a plan's measure catalog.

You can assign a measure catalog other than a plan's extract measure catalog defined in Plan options, in the Manage Plans UI. This improves the versatility and quality of data extracts required for planning.

Depending on your planning cycle and data needs, extract only those measures that are most relevant for the planning activity. For example, for a given plan you can export demand related measures early in a planning cycle and supply related measures later in the cycle.

You can also assign a measure catalog when running the Prepare Planning Data for Export scheduled process.

Item Attributes and Order Modifiers for Supply Planning

Items represent the material that you use in manufacturing and distribution processes and store in inventory. Item attributes specify properties of each item. You set the item attributes for supply planning through the Product Information Management work area.

Use these steps to set item organization attributes for supply planning:

1. Navigate to the Product Information Management work area and open the **Manage Items** task from the Tasks drawer.
2. Search for your items.
3. Select an item and edit attributes on the specification tab. You can locate the Planning attributes under the planning section.

This table lists the attributes related to supply planning.

Item Attribute	Item Structure
Item Overview	Unit of Measure
Manufacturing	Structure Item Type
Manufacturing	Base Model
Manufacturing	Autocreated Configuration
Manufacturing	Assemble to Order
Manufacturing	Build in WIP
Manufacturing	Supply Type
Inventory	Inventory Item
Inventory	Stockable
Inventory	Transactable
Order Management	Customer Orders Enabled
Order Management	Transfer Orders Enabled
Planning	Make or Buy
Planning	Safety Stock Method
Planning	Planner Code
Planning	Planning Method
Planning	Forecast Control
Planning	Time Fences: Demand
Planning	Time Fences: Release
Planning	Time Fences: Planning
Planning	Cost

Item Attribute	Item Structure
Planning	Carrying Percentage
Planning	Shrinkage Rate
Planning	Acceptable Early Days
Planning	Lead Times: Processing
Planning	Lead Times: Preprocessing
Planning	Lead Times: Postprocessing
Planning	Lead Times: Fixed
Planning	Lead Times: Variable
Planning	Minimum Order Quantity
Planning	Maximum Order Quantity
Planning	Fixed Order Quantity
Planning	Fixed Lot Multiplier
Planning	Fixed Days Supply
Planning	Rounding
Purchasing	Purchasable
Purchasing	Approved Supplier List

You can use these attributes for specific purposes:

- Make or Buy: This attribute is used by default if no sourcing rule is present.
- Planning Method: Use either MRP planned or MPS planned as the planning method.
- Time Fences: All are used by planning.
- Buy items use the processing lead times. Make items use fixed and variable.
- Make, buy, transfer all use preprocessing lead time. Buy and transfer use post processing lead time.
- Acceptable Early Days is used if you need to reschedule existing supplies. If the supply due date is within the acceptable early days, then no reschedule out recommendation is issued.

Order Modifiers

You use order modifiers to obtain planned orders that you're more likely to use in your environment. For example, you may purchase an item from a supplier who only provides it on pallets of quantity 100. If you're short in some quantity, say 72, you can set the planned order quantity to 100 instead of 72 to support your requirement. You can't apply order modifiers to phantoms and back-to-back items.

These are the order modifiers that you can use:

- Minimum Order Quantity
- Maximum Order Quantity
- Fixed Order Quantity
- Fixed Lot Multiplier
- Fixed Days Supply
- Rounding

Material planning uses a priority sequence (precedence) of order modifiers. It applies certain order modifiers before others and rules out certain order modifiers based on it using certain other order modifiers. The order modifier precedence is:

1. Fixed Days Supply: One planned order for this item must cover all the shortages for the number of days specified in the value. For example, if the net requirements are 50 on Monday, 100 on Wednesday, 70 on Thursday, and you've set Fixed Days Supply to 5, the planning process creates one planned order, with a quantity of 220 (50 + 100 + 70) and due on Monday. The period start dates aren't fixed. In the example, the next period of 5 days would not always start on the following Monday but would start on the next day after Friday that has net requirements. You can adjust the Fixed Days Supply value using the other order modifiers. Therefore, the next period of 5 days could be the following Wednesday through the second Tuesday.

   > **Note:** In Supply Planning, if there's a Fixed Days Supply, then the application doesn't split supplies based on sourcing rule percentages.

2. Fixed Order Quantity: You must always set the planned order quantity with this value. For example, if the net requirements are 1 and you've set Fixed Order Quantity to 200, the planning process creates one planned order with a quantity of 200. If set, the planning process skips to the Rounding order modifier.
3. Fixed Lot Multiplier: You must always have the planned order quantity with this value. For example, if the net requirements are 400 and you've set Fixed Lot Multiplier to 150, the planning process creates one planned order with a quantity of 450.
4. Minimum Order Quantity: The planned order quantity may never be less than this value. For example, if the net requirements are 100 and you've set Minimum Order Quantity to 150, the planning process creates one planned order with a quantity of 150. If set, the planning process skips to the Rounding order modifier.
5. Maximum Order Quantity: One planned order for this item may not have a quantity more than this value. For example, if the net requirements are 200 and you've set Maximum Order Quantity to 150, the planning process creates two planned orders, one with a quantity of 150 and the other with a quantity of 50.
6. Rounding: The planned order quantity must always be a whole number; the planning process always rounds fractional quantities up to the next highest whole number. For example, if the net requirements are 99.2 and you've selected Rounding, the planning process creates one planned order with a quantity of 100.

Drop Shipment

Drop Shipments in Supply Planning

Drop shipments are direct shipments of material from a supplier to a customer. It's an order fulfillment strategy where the seller doesn't keep products in inventory.

Instead, the seller relies on suppliers or contract manufacturers to build, store, and then ship orders directly to customers. The internal organization manages the process but never handles the material. In a drop shipment flow, there is one sales order to one supplier purchase order. Customer information is shared with the supplier. The internal organization bills the customer and pays the supplier.

To properly plan for drop shipments in Supply Planning, you must define the drop shipment supply chain network.

- Define drop shipment sourcing rules that determine which supplier sites support drop shipments.
- Define transit times between supplier and customer sites.
- Set up a drop ship validation organization.
- Enable the Drop Ship Validation item organization for collections.

How Drop Shipments Are Processed in Supply Planning

Supply planning recommends new planned orders for drop shipments and manages drop shipment purchase orders.

The planning process pegs supply to a sales order when both of the following conditions are met:

- A sales order line is marked as a drop shipment.
- There's an existing purchase order that's shipped directly to the customer site on the sales order.

Although not actually a reservation, the supply planning process treats the drop shipment purchase order as a reservation. In this case, the drop shipment purchase order can't be used for any other demand.

Set Up a Drop Shipment Validation Organization

The supply planning process uses a special organization called drop shipment organization for drop ship demands and supplies.

Use the drop shipment validation organization to get various item organization attributes, such as lead times and time fences, for drop ship items. You must specify a drop shipment validation organization for each source system that supports drop shipments. Specify the drop shipment validation organization value on the Manage Organizations page in the Maintain Supply Network Model task.

> **CAUTION:** Supply Planning sources all demands against the drop shipment validation organization with drop shipment planned orders. For this reason, the drop shipment validation organization should not be a standard inventory organization with transactions, as there could be unexpected results.

Use the drop shipment validation organization for the following purposes:

- As the source for organization-item attributes when creating drop shipment planned orders.
- As a proxy for the organization for drop shipment forecasts and manual demands.
- As a proxy for the organization during the collections of drop shipment sales orders and drop shipment history.

Specify the drop shipment validation organization when you generate a forecast or create a manual demand. Drop shipment sales order bookings and shipments history are collected with the drop shipment validation organization when items are shipped from the warehouse. Demand forecasting can create forecasts for the drop shipment validation organization and release the forecasts for planning supplies. The drop shipment validation organization can be the item master for a source system, but it's not required.

The drop ship validation organization can be the item master for a source system, but it's not required.

> **Note:** The drop shipment validation organization must be an item organization. When you set up the drop shipment validation organization, if the item master holds any transactions, create a new drop shipment validation organization.

To set up a drop shipment validation organization:

1. Define an item organization in the Product Information Management work area.
2. Enable the new item organization for collection from the Oracle Fusion source system.
3. Run collections to collect organization entities.
4. Perform the following steps in a Supply Chain Planning work area to complete the drop shipment sourcing setup:
    a. Navigate to a Supply Chain Planning work area.
    b. Click the **Tasks** panel tab.
    c. In the Tasks panel, click **Maintain Supply Network Model**.

    > **Note:** You can enable only one organization for each source system as the drop shipment validation organization.

    d. In the Organizations region, select the **Drop Ship Validation Organization** option.

    You have completed the drop shipment validation organization setup.

Set Up Drop Shipment Sourcing Rules

To properly plan for drop shipments, you must first define the drop shipment sourcing rules that determine which supplier sites support drop shipments.

These are sourcing rules with a buy from supplier and supplier site source. When defined, you can assign the drop shipment sourcing rule to various aggregate levels of item and customer location. Valid item levels are item and category. Valid customer location levels are customer site, region/zone, and all locations. When you assign a drop shipment sourcing rule, you determine which supplier sites can drop ship to which customer sites.

You can apply drop shipment sourcing rules only to the independent demands. The demand sourcing hierarchy is applied for drop ship cases. If a level 1 rule is found for an item and customer or customer site, then that rule is used. Otherwise, if the highest level rule is assigned to a category-customer level, then that rule is used.

The following table lists the ranking of various demand sourcing hierarchies:

Rank	Demand Sourcing Hierarchy
1	Item - Customer or Customer Site
2	Item - Customer
3	Item-Demand Class
4	Item - Region
5	Category - Customer or Customer Site
6	Category - Customer
7	Category - Demand Class
8	Item
9	Category - Region
10	Category
11	Customer or Customer Site
12	Customer
13	Demand Class
14	Region
15	Global

If an assignment set contains drop shipment rules that are already assigned to an item or a category, then you must define organization-specific rules for an item or category that's both drop shipped and also shipped to an inventory organization. If the sourcing rule for the drop ship demand includes a transfer from source or a make at, the transfer from source and make at is ignored. If there are multiple buy from sources, then the buy from sources are reapportioned to equal 100%.

Create Drop Shipment Sourcing Rules

To create drop shipment sourcing rules:

1. Define a global sourcing rule and specify a buy from supplier, supplier site, and supplier source system.

2. In the assignment set, assign the global sourcing rule to an assignment level that includes an item or a category. Assign the global sourcing rule to a customer or a zone as required, but you can't assign the rule to an organization.

Define Transit Times Between Supplier and Customer Sites for Drop Shipment

After you create your drop shipment sourcing rules, you must define transit times between supplier and customer sites. There are multiple ways to define transit times between a specific supplier and a specific customer, all created in the Define Transit Times page.

Constraint-based supply planning supports the following transit time lane combinations for drop shipments:

- External location to external location
- External location to region/zone
- Region/zone to region/zone

Set Up a Drop Shipment Plan

When you set up a plan for drop shipment, you can include both drop shipment sales order and standard sales orders (forecasts and supplies) from a direct shipment organization in the same plan.

To set up your plan for drop shipment:

1. From a Supply Chain Planning work area, open your supply plan or demand and supply plan.
2. From your plan, click **Actions** > **Edit Plan Options**.
3. On the Edit Plan Options page, click the Supply tab and then click **Select Advanced Options**.
4. On the Supply: Advanced Options page, select **Include drop ship demands and supplies**.
5. Optionally, you can include other direct shipment organizations.
6. Set the other plan parameters, as needed.

   For example, select **Create time fence** to apply time fences to drop shipment forecasts.
7. Save the plan.
8. Run the plan to include the drop shipments in the plan output.

> **Note:** In your drop shipment plan, search for supplies and demand in the drop shipment validation organization. Note that the customer information appears on the purchase order and the supplier information appears on the sales order.

Drop Shipment Forecast

Create a drop shipment forecast based on the drop shipment shipping history or booking history. You can also create plans using drop shipment forecasts to see the projected drop shipment planned orders.

To enable the drop shipment history, the collections process sets the ship from organization value of drop ship shipments and bookings history to the drop ship validation organization.

Drop shipment history has an organization reference to the drop shipment validation organization. Collecting and using the history facilitates creating a forecast for future drop ship shipments or bookings. The forecast uses the drop shipment validation organization. You can use this forecast as a demand schedule for a supply plan that includes drop shipments.

Plan Outside Processing Operations

Overview of Outside Processing

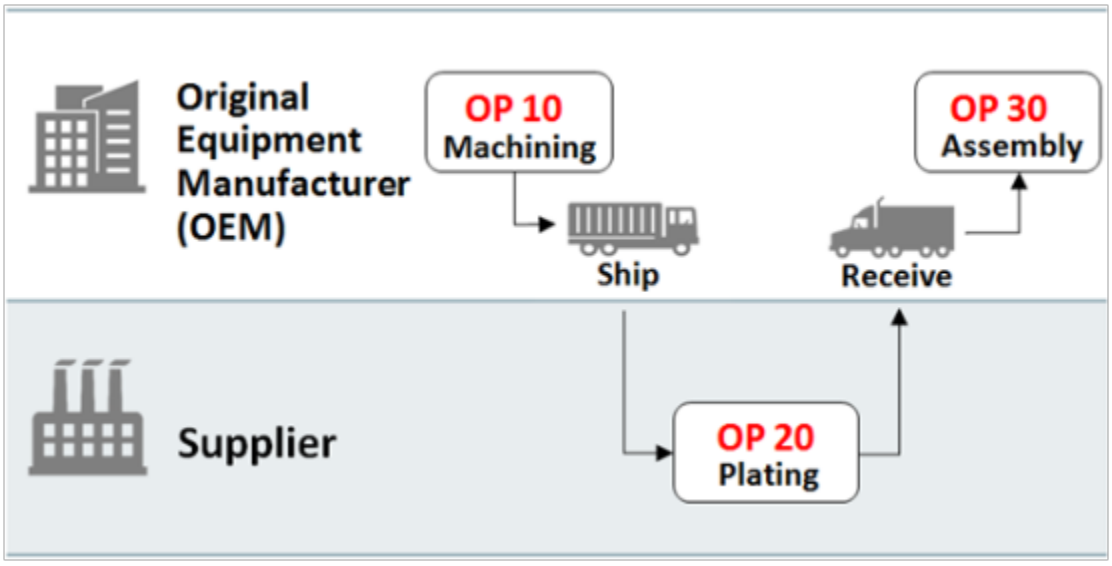
Outside processing is a business process where one or more operations of a work order are outsourced to a supplier who provides specialized manufacturing services.

These services may vary depending on the nature of the industry.

Outside processing is often adopted as a strategic alternative to in-house manufacturing for the following reasons:

- To lower manufacturing costs due to production costs
- To leverage state of the art manufacturing technology
- To increase capacity to overcome production bottlenecks
- To focus on core competencies

Here's a figure which explains a business flow where three operations are required to complete a work order. Operation 10 which is machining, followed by operation 20 which is plating, and operation 30 which is assembly. Operation 20 is a supplier operation performed by outside processing.



- An Original Equipment Manufacturer (OEM) performs the first operation in-house and ships the machined parts to a supplier for plating.
- The supplier performs the plating operation and sends the plated parts to the Original Equipment Manufacturer (OEM).

- The OEM receives the plated parts and pays the supplier for performing the value added services.

In the entire process, the OEM retains the ownership of the goods that are sent to and received back from the supplier.

Note: The outside processing flow is supported for both discrete and process manufacturing.

Plan Outside Processing Operations

For constrained and unconstrained supply planning, you can plan one or more operations that are outsourced to suppliers. These operations are part of routings of items that are manufactured in-house.

The outsourced supplier operations are part of manufacturing a product, where the rest of the operations are processed in-house.

Outside Processing Calculations for Constrained and Unconstrained Supply Planning

The planning process for constrained supply planning calculates duration of outside processing operations based on fixed and variable lead times:

Fixed Lead Time + (Variable Lead Time multiplied by Lead Time Lot Size)

The planning process for unconstrained supply planning calculates duration of outside processing operations a little differently:

Fixed Lead Time + (Variable Lead Time multiplied by Operation Quantity)

Here's some additional information about outside processing calculations in Supply Planning:

- The fixed and variable lead times are the operation level attribute values.
- The lead time lot size is the item level attribute value. If there are no operation yields on the subsequent operations in the work definition, the lead time lot size is the same as the supply quantity.
- The operation duration is equal to the fixed lead time when the lead time lot size is zero or null.
- The supplier operation duration is based on the organization manufacturing calendar.

  For example, the duration of an operation is 7.5 hours and the organization manufacturing calendar has Saturday and Sunday on nonworking days. A supplier operation that starts on Friday at 23:00 will complete on Monday at 6:30. A supplier operation that starts on Monday at 23:00 will complete on Tuesday at 6:30.

Planning Work Orders with Outside Processing Operations

The following describes the supply planning behavior for firm and non-firm work orders.

- Firm work orders: The collected values for operation start date and operation end date of the outside processing operation within the work order is treated as firm.

- Non-firm work orders: If the supply planning process must reschedule a non-firm work order, it reschedules the operation based on the following:
    - For a constrained plan, the planning process reschedules the operation based on the fixed and variable lead times at the operation level and the lead time lot size.
    - For an unconstrained plan, the planning process reschedules the operation based on the fixed and variable lead times at the operation level and the operation quantity.

Planning Data Collections for Outside Processing Operations

Planning Data Collections collects these outside processing operation attributes for work orders and work definitions.

- Operation type: Either in-house or supplier
- Supplier
- Supplier site
- Fixed lead time
- Variable lead time
- Operation cost: Operation cost must be collected as the standard cost of the outside processing item that's associated with the outside processing operation.

If the operation type is In-House, then the Supplier, Supplier Site, Fixed Lead Time, and Variable Lead Time attributes aren't collected.

It's important to collect the operation attributes at the work order level. A nonstandard work order in Oracle Fusion Manufacturing Cloud can include an outside processing operation that's been previously defined as a standard operation. Such operations can exist only in the context of specific nonstandard work orders and can't be part of any item work definition.

Back-to-Back Fulfillment

Promise Sales Orders In Your Back-To-Back Flow

Back-to-back is a supply chain management technique where you receive supply at a warehouse then ship it directly to your customer. You can use Global Order Promising to help fulfill a back-to-back order.

You typically use back-to-back fulfillment to fulfill a high cost or a slow moving item. You usually don't stock the item in inventory but instead build it in reply to demand.

Here's the general flow:

- You create a sales order and submit it to fulfillment.
- Promising creates and schedules supply for the order.
- You procure and receive supply in your warehouse.
- Supply Chain Orchestration reserves supply, then Inventory Management manages it in inventory during shipping.

You set up your implementation to automatically do this work, including selecting the source, reserving supply until its fulfilled, and automatically adjusting fulfillment when supply or demand changes.

For details, see *Overview of Back-to-Back Fulfillment*.

How Back-to-Back Fulfillment Is Processed in Supply Planning

Use back-to-back fulfillment to improve revenues and margins by increasing on time fill rates while reducing your inventory levels. Back-to-back ordering is a special type of ordering that matches each supply order with each sales order on a one-for-one basis.

Typically, back-to-back is a purchase order matched to a sales order and cross-docked at the warehouse. Order Promising recommends a supply source and the recommendation is sent to Supply Chain Orchestration. Supply Chain Orchestration creates the supply and always creates a reservation between the supply and the sales order line.

Supply planning collects back-to-back demands and supplies, and respects the reservations between them. The planning process generates exceptions if back-to-back supplies fall short of demands or cause resource or supplier capacity overloads. Constrained supply planning generates planned supply for back-to-back orders that are missing supplies, but these planned orders can't be released from the plan. You can notify Order Management to check the order line and use Order Promising to promise the line and send the supply recommendation to Supply Chain Orchestration.

To properly plan for back-to-back orders in Supply Planning, you must define the back-to-back supply chain network.

- Set the item-organization attribute **Back-to-Back Enabled** to **Yes** in the Product Information Management work area.
- Set the item-organization attribute **Planning Method** to either **MRP Planned** or **MPS Planned**.
- Specify sourcing rules for the item, which tells supply planning how to:
    - Determine the ship from organization for sales orders.
    - Determine the supply sources for bringing material in to the ship from organization.
- Add the sourcing rules to the Order Promising assignment set.
- Set up your supply plan to plan for drop shipments.
    - In the Advanced Plan Options dialog box, set the **Include drop ship demands and supplies** attribute to **Yes**.
    - Optionally, select a demand schedule that represents a drop shipment forecast.

17 Simulation Sets

Simulations in Supply Planning

Use simulations to analyze the what-if scenarios in the Supply Planning work area.

The scenarios you re-create and analyze can be for improving the supply chain, to handle an increased demand for a product, or to mitigate an impediment.

Here are some example scenarios that you can analyze using simulations:

- What can be the impact if the processing lead time for an item is reduced from 10 days to 7 days?
- What if the resource capacity is increased to 45 hours per week?
- What's the effect of a delay from a supplier for an existing supply?
- Can we fulfill on time delivery of items when demand increases due to a large sales opportunity?

Ways to Simulate

You can simulate in two ways:

- **By in-plan edits**: In this approach, you edit data of an existing plan, with the **Do not refresh with current data** option selected. You won't be refreshing the plan. The advantage of this approach is you can forecast a temporary scenario without having to make permanent changes to the plan. If needed, you can save the changes to a simulation set so you can use it in the future.
- **By using simulation sets**: Use this approach when your changes are long term and need to remain across plan runs. In this approach, you create a simulation set and save it your plan. You'll need to refresh the plan so that the simulations are saved to the plan and can be used anytime in the future.

Simulation Sets

Simulation sets are a collection of changed data that you would want to include in plan options before running a plan. A simulation set enables you to override the collected data that's copied into the plan during plan run and see the effect of the changed data. For example, you can test planning results by changing item lead times or order modifiers. You can add simulation sets in Plan Options.

You can add simulation sets in Plan Options and edit the attributes of the following entities before running a simulation:

- Items
- Item Structures
- Resources
- Resource Availability
- Routings
- Routing Resources
- Supplies and Demands
- Suppliers

- Supplier Capacity

Create a Simulation Set

Perform the following steps to create a simulation set from the Plan Inputs work area:

1. In the Navigator, click the Plan Inputs work area link.
2. On the Plan Inputs page, click the **Open** button.
3. In the Open Table, Graph, or Tile Set dialog box, do the following:
    a. In the **Search** drop-down list, select: **Name**.
    b. In the **Search** text box, enter the name of a table, such as **Items** or **Resources**.
    c. Click the **Search** icon button.
    d. Select the **Items** (or **Research**) table and click **OK**.
4. On the Plan Inputs page, Items tab (or Resources tab), click the **Search** button.
5. In the Search Results region, select one or more rows and do the following:
    a. Click **Actions** and then select **Add to Simulation Set**.
    b. In the Add to Simulation Set dialog box, click the **Search: Simulation Set** down arrow for a list of values, and then click **Create Simulation Set**.
    c. In the Create Simulation Set dialog box, in the **Simulation Set** field, enter the name of the simulation set you want to create.
    d. Click **Save and Close**.
    e. In the Add to Simulation Set dialog box, click **Save and Close**.

Related Topics

- Simulations in Supply Planning
- Edit a Simulation Set
- Copy Data to Simulation Sets in Supply Planning
- Add Data from Plan Inputs to Simulation Sets
- Overview of Simulation Sets

Edit a Simulation Set

Perform the following steps to edit a simulation set from the Plan Inputs work area:

1. In the Navigator, click the Plan Inputs work area link.
2. On the Plan Inputs page, click the Plans panel tab.
3. In the Plans panel drawer, do the following:
    a. Expand the list of Simulation Sets.
    b. Select a simulation set, right-click on it and select **Open**.
4. On the Simulation Set page, click **Open** and then select **Full Pane**.
5. In the Open Table, Graph, or Tile Set dialog box, select a table, such as **Resources** or **Items**, and then click **OK**.

On the Simulation Set page, a new tab opens for the table that you selected, such as the Resources tab or the Items tab.

6. In the Search region, click **Search**.
7. In the Search Results region, select one or more rows. Click **Actions** and then select **Edit** from the drop-down list.
8. In the edit dialog box, you can edit some of the attributes and drill down to additional tables, depending on the table that you accessed. For example:
    - For the Resources table, you can change the Bottleneck value. You can also drill down to the Resource Availability table.
    - For the Items table, you can change the Processing Lead Time value. You can also drill down to the Suppliers table.
9. When done, click **OK** to return to the Simulation Set page. Changed rows and fields are marked with small colored dots.

Related Topics

- Create a Simulation Set
- Edit a Simulation Set from a Spreadsheet
- Overview of Simulation Sets
- Simulate Demand and Supply Changes

Edit a Simulation Set from a Spreadsheet

You can download simulation set data into a spreadsheet, make edits, including certain updates, additions, and deletions, and then upload it back to the simulation set.

In the Plan Inputs work area, while working with the Items or Supplies and Demands table in a simulation set, use the Edit in Spreadsheet option in the Actions menu to download the table rows into a Microsoft Excel file.

> **Note:** Before working with spreadsheets, you must download and install the desktop integration installer that is available under **Navigator** > **Tools**. Otherwise, you can't download information into or upload information from spreadsheets.

To edit the data in the Items or Supplies and Demands table of the simulation set in a Microsoft Excel spreadsheet, follow these steps:

1. In the Plan Inputs work area, click the Plans panel tab.

    > **Note:** The simulation set can also be edited from the Planning Central, Sales and Operations Planning, and Supply Planning work areas. However, the Supplies and Demands table is available in the simulation set only when it is edited in the Supply Planning work area.

2. In the Plans panel drawer, do the following:
    a. Expand the list of simulation sets.
    b. Select the simulation set that you want to edit, right-click, and click **Open**. The simulation set opens.
3. In the **Open** menu, select **Full Pane**. The Open Table, Graph, or Tile Set dialog box opens.

4. Select the Items or Supplies and Demands table, and click **OK**. The table opens in a page in the simulation set.
5. Perform a search for the table rows in the simulation set.
6. In the **Actions** menu for the table, click **Edit in Spreadsheet**. A dialog box opens and prompts you to save or open a Microsoft Excel file.
7. Open the spreadsheet. The Connect dialog box opens and prompts you to connect to the URL for the application.
8. Click **Yes**. A dialog box opens and prompts you to type your credentials.
9. Sign in with your credentials for the Oracle Fusion Cloud Applications Suite. The spreadsheet is refreshed with the data in the simulation set.
10. Edit the data.

Task	Steps
To add an item to the Items table of the simulation set	Click the **Add Item** icon in the **Items** menu of the spreadsheet, and provide values in the Add Item dialog box that opens. You can add an existing item or create an item that is based on an existing item.
To create an order in the Supplies and Demands table of the simulation set	Click the **Create Order** icon in the **Supplies and Demands** menu of the spreadsheet, and provide values in the Create Order dialog box that opens. (Not applicable to sales and operations planning.)
To edit a row	Modify the values in the row cells that are not grayed out. A symbol appears in the cell under the Changed column for the row.
To delete a row	Click the corresponding cell in the Mark for Deletion column. A symbol appears in the cell to mark the table row for deletion. To deselect the row, click the cell again.

11. Click the **Upload** icon in the **Items** or **Supplies and Demands** menu. In the Upload Options dialog box that appears, select the check boxes for the options that you want to use, and click **OK**. The data is uploaded to the simulation set.
12. Save the simulation set. The changes are displayed and marked with colored symbols.
13. Save and close the spreadsheet.

Copy Data to Simulation Sets

If you have updated any data, then you can add the changed data to a simulation set. After you copy the data to a simulation set, you can run the simulation to verify your data.

Then, you can include this changed data to subsequentplan runs.

Follow these steps to copy plan data to a simulation set:

1. In the Navigator, click the Supply Planning work area.
2. Click the Plans panel drawer, right-click **Plan Inputs**, and click **Open**.
3. In the Open, Table, Graph or Tile Set dialog box, search the entity that has the edited data. For example, search the items that you edited.

4. Select the rows that you have edited and saved.
5. Click the **Actions** menu in the Items tab and click **Copy to Simulation Set**.
6. Select one of the copy options:

   Copy Selected: Copies data from the selected cells.

   Copy All: Copies all the data in a row.
7. Add the highlighted changes to an existing simulation set or click **Create Simulation Set** in the Copy to Simulation Set dialog to create a new simulation set.
8. Click **Save and Close**.
9. Add this simulation set in **Plan Options**, **Scope** tab of the plan.

Add Data from Plan Inputs to Simulation Sets

You can make changes to data in Plan Inputs without running the plan and then include the data directly into simulation sets. You can verify the result of the simulation after the plan is run.

Follow these steps to add plan data from plan inputs to a simulation set:

1. In the Navigator, click the **Supply Planning** work area.
2. Click the **Plans** panel drawer, right-click **Plan Inputs**, and click **Open**.
3. On the **Open, Table, Graph or Tile Set** page, search the entity that you want to edit. For example, search the items that you want to edit..
4. Edit the data on the required rows and save the data.
5. Select the rows of edited data, click the **Actions** menu in the Items tab and click **Add to Simulation Set**.
6. Add the highlighted changes to an existing simulation set or click **Create Simulation Set** in the Copy to Simulation Set dialog to create a new simulation set.
7. Click **Save and Close**.
8. Add this simulation set in **Plan Options**, **Scope** tab of the plan.

18 Troubleshooting

Resolve Error MSC-2806379

This topic guides you on how you can resolve error MSC-2806379 that may be displayed when you view a table or graph.

The error is displayed when you view a table or graph that you don't own for your Oracle Fusion Cloud Supply Chain Planning product, and the table or graph contains too much data.

The error text is as follows: "You can't view this table or graph because the underlying data or analysis produces too much data. (MSC-2806379)

"To resolve this issue, make a copy of the table or graph because you aren't the owner of it, change configurations to reduce the data set, and try again. For example, limit the use of measures with different dimensionalities, reduce the number of measures with complex expressions, such as lead or lag functions, or check measure filter configuration. Refer to Incident ID <number> on <server name> server."

Follow these steps to resolve the error:

1. If the table or graph is open, in the toolbar, click **Actions** > **Save Table As** or **Actions** > **Save Graph As**.
   Otherwise, do the following:
   a. Click **Actions** > **Manage Tables, Graphs, and Analysis Sets**.
   b. In the Manage Tables, Graphs, and Analysis Sets dialog box, search for your table or graph, and select it.
   c. Click **Actions** > **Duplicate**.
2. In the dialog box, provide the name and description for the copied table or graph.
   Provide other details for the copied table or graph.
3. Click **Save and Edit**.
4. In the Configure Table or Configure Graph dialog box, do the following:
   - On the Measures tab, on the Selected Measures pane, select the measures that you can remove from the table or graph, and move them to the Available Measures pane.

     For example, limit the use of measures with complex expressions.
   - On the Members tab, on the Selected Members pane, select the members that you can remove from the table or graph, and move them to the Available Members pane.

     For example, on the Selected Members pane, retain only one organization or a few products according to your business requirements. You can use the Advanced Filter dialog box to reduce the number of members that are displayed by the table or graph.
   - On the Measure Filters tab, add filters to reduce the amount of data returned by your table or graph.
   - On the Layout tab, add filters to your table or graph.

     For example, if your table includes the Organization level, you can use the level as a filter that restricts the returned data to the selected member.
5. Click **Save and Close**.

Related Topics

- Overview of Tables, Graphs, Analysis Sets, Tiles, and Tile Sets
- Use Advanced Options in the Selector Tool
- Configure Filters for Graphs

Resolve Error MSC-2806380

This topic guides you on how you can resolve error MSC-2806380 that may be displayed when you view a table or graph.

The error is displayed when you view a table or graph that you own for your Oracle Fusion Cloud Supply Chain Planning product, and the table or graph contains too much data.

The error text is as follows: "You can't view this table or graph because the underlying data or analysis produces too much data. (MSC-2806380)

"To resolve this issue change configurations to reduce the data set, and try again. For example, limit the use of measures with different dimensionalities, reduce the number of measures with complex expressions, such as lead or lag functions, or check measure filter configuration. Refer to Incident ID <number> on <server name> server."

Follow these steps to resolve the error:

1. If the table or graph is open, in the toolbar, click **Actions** > **Configure Table** or **Actions** > **Configure Graph**. Otherwise, do the following:
    a. Click **Actions** > **Manage Tables, Graphs, and Analysis Sets**.
    b. In the Manage Tables, Graphs, and Analysis Sets dialog box, search for your table or graph, and select it.
    c. Click **Actions** > **Edit**.
2. In the Selector Tool, do the following:
    - On the Measures tab, on the Selected Measures pane, select the measures that you can remove from the table or graph, and move them to the Available Measures pane.

      For example, limit the use of measures with complex expressions.
    - On the Members tab, on the Selected Members pane, select the members that you can remove from the table or graph, and move them to the Available Members pane.

      For example, on the Selected Members pane, retain only one organization or a few products according to your business requirements. You can use the Advanced Filter dialog box to reduce the number of members that are displayed by the table or graph.
    - On the Measure Filters tab, add filters to reduce the amount of data returned by your table or graph.
    - On the Layout tab, add filters to your table or graph.

      For example, if your table includes the Organization level, you can use the level as a filter that restricts the returned data to the selected member.
3. Click **Save and Close**.

Related Topics

- Overview of Tables, Graphs, Analysis Sets, Tiles, and Tile Sets
- Use Advanced Options in the Selector Tool
- Configure Filters for Graphs