Oracle® Demantra

Demand Management User Guide

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Oracle Demantra Demand Management User Guide, Release 7.3

Part No. E05179-08

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Preface

Intended Audience

Welcome to Release 7.3 of the *Oracle Demantra Demand Management User Guide.*

See Related Information Sources on page viii for more Oracle E-Business Suite product information.

Deaf/Hard of Hearing Access to Oracle Support Services

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Structure

1 Introduction to Demand Management
2 Demand Management Overview
3 Running Simulations
4 Demand Management Worksheets
5 Configuring Demand Management

A Demand Management Levels and Series

Related Information Sources

This is the Release 7.3 of the Oracle Demantra Demand Management User's Guide. This manual describes the features that are available when you access Oracle Demantra Demand Management as a Demand Planner, Demand Plan Manager, or Demand Administrator. If this guide refers you to other Oracle Demantra Applications documentation, use only the 7.3 versions of those guides.

Online Documentation

All Oracle Applications documentation is available online (HTML). Online help patches are available on Oracle*MetaLink*.

Oracle Demand Signal Repository User Guide

Oracle Demand Signal Repository is used by manufacturers to collect detailed retailer point-of-sale and other demand data, and analyze the data to identify issues and opportunities. Typical retail data sources include daily point-of-sale, on-hand inventory, store orders and receipts, distribution center withdrawals, returns, store promotions and sales forecasts.

Oracle Service Parts Planning Implementation and User Guide

Oracle Service Parts Planning is used by repair service operations to ensure that the right parts are available at the right locations and at the right times, in usable condition. It allows planners to forecast and manage the distribution of individual parts in the

most efficient manner possible.

Do Not Use Database Tools to Modify Oracle E-Business Suite Data

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

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

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

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

1

Introduction to Demand Management

This chapter covers the following topics:

- Introduction
- What is Demand Management?
- Why Manage Demand?
- Typical Tasks in Demand Management

Introduction

Oracle Demantra Demand Management is a configurable Web-based product to help your organization perform demand planning and forecasting. Your system has been configured to support you and others in your company. Oracle Demantra Demand Management provides access to your historical sales data, returns, and other reference data organized into multiple hierarchies that reflect the needs of your organization. An underlying spreadsheet provides a set of calculated (and input) values that you can use at any hierarchy level.

The process of demand planning generally consists of studying historical sales data and trying to predict future demand as closely as possible. The goal is to achieve an appropriate balance between meeting customer demands as quickly as possible and making or buying only as much of each product as required. Oracle Demantra Demand Management and Demand Planner give you insight into both sides of this trade-off.

A demand plan is based on a forecast, which in turn is a prediction of tendencies in the supply chain over a period of time, influenced by seasonal and other predictable factors. The result of a forecast is a projected curve that has been smoothed to show tendencies and deemphasize the exceptional variations.

In general, the demand plan and forecast are used in downstream operations such as production planning. Depending on how your system has been configured, it either exports such data automatically or contains reports that you use for that purpose.

What is Demand Management?

Demand Management is used to enable organizations to produce unconstrained forecasts for future demand and generate tactical, operational, and strategic business plans. Demand Management captures and processes information from multiple sources and consolidates demand so that it can be summarized by item, product line, region, time, and organization.

There are three key areas of focus in improving Demand Management processes. They are: achieving consensus, improving accuracy, and reducing process cycle time. Getting an entire organization to one expression of "the forecast" is the most important goal of a good Demand Management process. This requires the ability to gather and consolidate all the sources of demand information. It also requires providing secure, portal based access to receive, analyze, and submit forecast data, and the ability to express the data in the right format. For example, view forecast by region in dollars, forecast in units by shipping facility, and so on.

Why Manage Demand?

While demand is inherently variable and some inaccuracy is inherent, improving accuracy is also critical. Improving accuracy requires improvements in several areas. For example, organizations use statistics to better estimate patterns, they consolidate quantitative and qualitative judgment, and use performance management to drive continuous improvement over time. Perhaps the most important area is reducing the cycle time of the demand management process. The longer the process takes, the more inaccurate it will be, the further in advance of actual events the prediction will be, and the process will also become less frequent. Cutting time out requires powerful analytic tools to quickly assess and understand demand and automating processes to allow for management by exception.

Typical Tasks in Demand Management

At a very high level, you might work with Oracle Demantra Demand Management as follows:

1. Log on.
2. Open a worksheet.
3. View the forecast series and other data and work with it in any of the following ways, as needed:
   - Edit data manually
   - Perform a simulation.

- Perform data approval.
- Export data for downstream use.

4. Log off.

2

Demand Management Overview

This chapter covers the following topics:

- Oracle Demantra Demand Management Overview
- Product Family Forecasting Overview
- Configure to Order Overview
- Service Parts Planning and Service Parts Forecasting Overview

Oracle Demantra Demand Management Overview

Oracle Demand Management is a configurable web-based product to help your organization perform demand planning and forecasting. Demand Management is built around collaboration, and takes advantage of work flows to automate the Demand Management process.

The process of demand planning generally consists of studying historical sales data and trying to predict future demand as closely as possible. The goal is to achieve an appropriate balance between meeting customer demands as quickly as possible and making or buying only as much of each product as required.

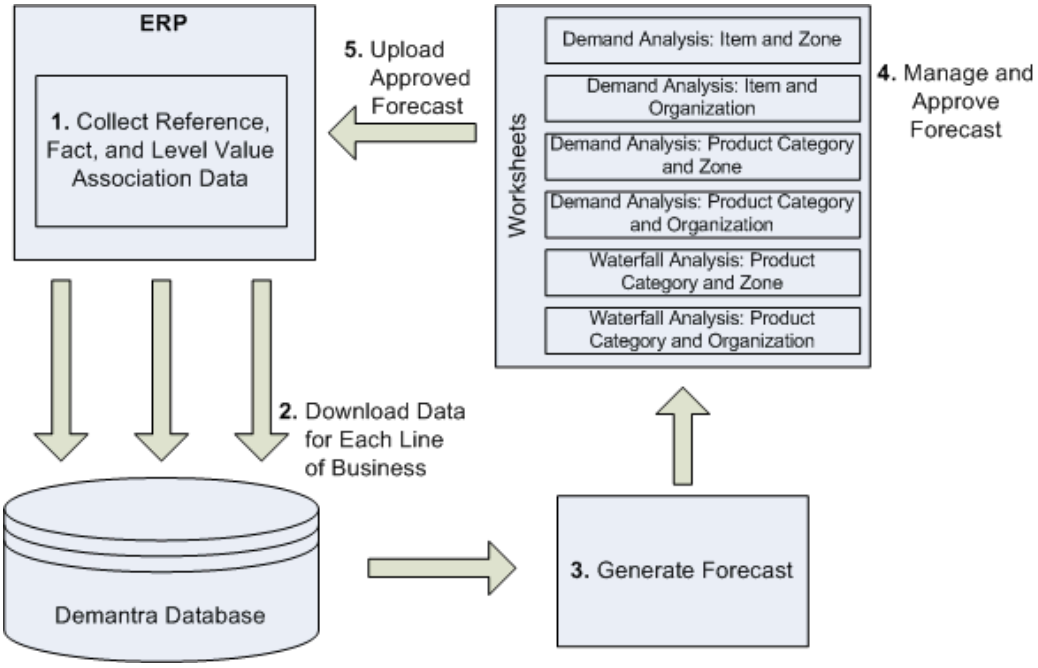
A demand plan is based on a forecast, which in turn is a prediction of tendencies in the supply chain over a period of time, influenced by seasonal and other predictable factors. The result of a forecast is a projected curve that has been smoothed to show tendencies and deemphasize the exceptional variations.

In general, the demand plan and forecast are used in downstream operations such as production planning. Depending on how your system has been configured, it either exports such data automatically or contains reports that you use for that purpose.

The Demand Management Process

Demand Management is an iterative process, that typically takes place in the weekly, biweekly or monthly cycles. This process includes:

1. Collecting the appropriate data from an ERP or other system of record.
2. Downloading the appropriate data to the Demantra database.
3. Generating a forecast and then sending a notification to demand analysts.
4. Demand analysts work with the forecast and making any corrections or adjustments.
5. Demand manager or designated forecast owner approves the forecast.
6. The approved forecast is uploaded to your ERP system.



Collect and Download Data

Most businesses have a regularly scheduled Demand Management process that can be monthly, weekly or, in a few cases, daily. During this period, data from various sources are loaded into the Demand Management system for use in forecasting future demand. The source systems can be an ERP system, legacy system or another Oracle APS (Advanced Planning Suite) module such as Advanced Supply Chain Planning, Inventory Optimization, Global Order Promising or Collaborative Planning.

Once loaded, the administrator ensures that planners have access to the data they require. For example, each planner may be responsible for planning the demand for a particular region or product line. Although planners can view data for all lines of business they are given access to, they are only able to modify data for which they have permissions.

Generate the Forecast and Send Notifications

After the download is complete, the administrator (or an automated process) runs the forecast and resets the approval series. After successful calculation of the forecast, the appropriate users are automatically notified that their forecast is available for review. The forecast, forecast accuracy measures and Demand Priority information are available in predefined worksheets for analysis for all users.

> **Note:** In the event of an unsuccessful download or forecast generation, the Administrator can check the batch log for information on problems that arose during processing and forecast generation.

Manage and Approve the Forecast

The approval process is built around two user-types: the Demand Administrator and Demand Analyst. During implementation, Demand Administrators configure the approval process by specifying a reviewer who has final approval of the forecast. Each group of Demand Analysts should have one final approver.

At the start of the approval process, a notification appears in the My Tasks window informing Demand Analysts that a forecast is available for the current planning cycle. Analysts can review their planning data (including the forecast) using one of the pre-seeded worksheets:

- Waterfall Analysis: Product Category and Zone
- Waterfall Analysis: Product Category and Organization
- Demand Analysis: Product Category and Organization
- Demand Analysis: Product Category and Zone
- Demand Analysis: Item and Organization
- Demand Analysis: Item and Zone

Using the graphs and reports found in these worksheets, analysts view and adjust their forecast data. They analyze history to understand shipped, booked and customer orders, inventory levels and other factors. For example, an analyst may consider any upcoming events or promotions that may impact the demand as well as their customer and sales forecast.

Based on this information, analysts modify the forecast and can run a simulation that repopulates the worksheet with the changed data. Once their analysis and modifications are complete, the analyst saves the changes and selects Done for the relevant notification in the Collaborator Workbench's My Tasks view, which notifies the demand plan manager or administrator.

These changes to the forecast are available for review by an approver. One or more

people can do the review. For example, if the analysts are responsible for demand by region, a regional manager may approve or change the analyst's changes. Or, if an analyst's responsibility is broken down into product lines, then the product line manager may have final approval. Demand Management's pre-seeded approval process is setup for one level of review. Additional levels of review require changes to the pre-seeded Approval workflow.

The final approver can lock the forecast at any time by checking the Final Approval column. After review, the final approver accepts the forecast by selecting the Done button in My Tasks for the forecast notification.

Upload the Forecast

Once approved, the Demand Administrator uploads the consolidated forecast for use in other systems (for example, Oracle Advanced Supply Chain Planning) where the unconstrained demand is used to drive the constrained demand.

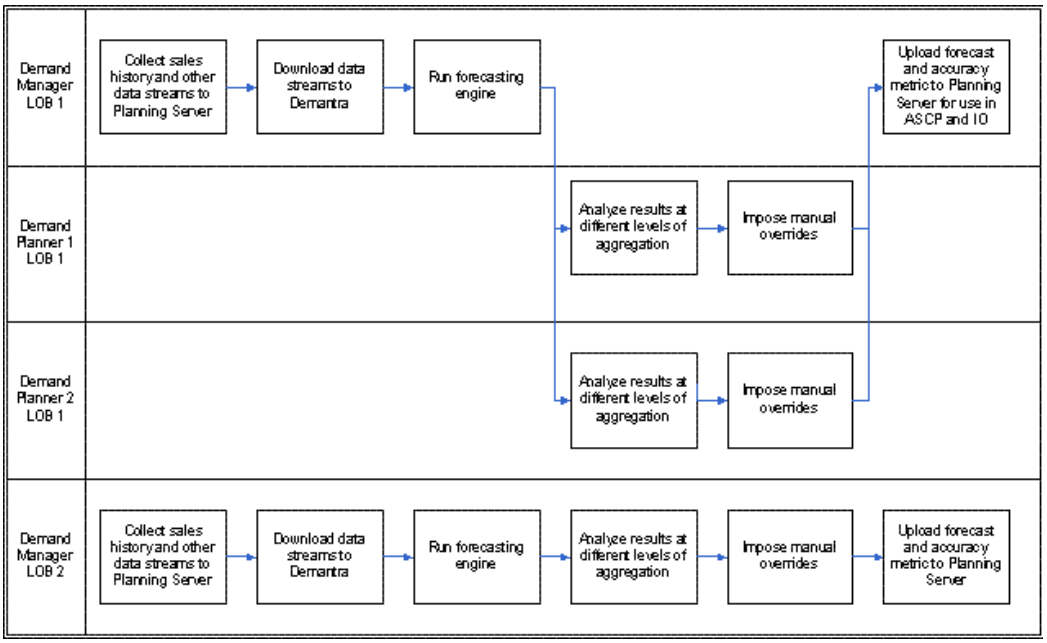
Demand Management for Multiple Lines of Business

An organization's data is typically divided into several Lines of Business (LOB). For example, a printer manufacturer may have Printers and Copiers lines of business. Different lines of business generally have different demand management processes. The difference in the planning process may be due to the following reasons:

- Each line of business may have different planning cycles (such as weekly or monthly) and may use different calendars (such as manufacturing or fiscal).
- Each line of business may have different business requirements, such as model-options forecasting, product family level forecasting, service parts forecasting, and so on.
- The lines of business may be in different geographical locations or may otherwise have varying business practices.
- Each line of business may have its separate group of planners who need to look at the demand data pertaining to their respective line of business only.
- A line of business demand plan refers to limiting the scope of a demand plan to include only those level values (such as items, organizations, customers' ship to locations, sales representatives) that pertain to the line of business.

When an organization has multiple LOBs, the data is often assigned to specific users (for example based on product line or region), and the analyst is responsible for determining the demand for that slice of data. When each analyst has reviewed and approved his or her forecast, a master approver is notified and approves the forecast as a whole.

The following diagram illustrates the demand management process with multiple lines of business:



Product Family Forecasting Overview

A product family bill of material is typically made up of a product family item at the top level and items (children) one level down

This is a sample product family bill of material,

Automobiles

. Sedan

. Coupe

. Sports

For product family planning, all the family members of a product family must:

- Be either planned individually or as product family.
- Have the same value for item attribute Forecast Control: Either None or Consume & Derive
- Be standard items

If the item level does not have enough data to produce an accurate forecast, Oracle Demantra Demand Management forecasts at the Product Family level and allocates the product family forecast down to the children.

Configure to Order Overview

Configure to order products are configurations of components depending on the customer's preference. In most cases, this includes a selected base product (the model) and multiple optional (the options) and mandatory components.

Configure to order works on the principle of dependent demand forecasting. Dependent Demand Forecasting is the capability to forecast demand for partially or fully dependent products whose demand depends wholly or partially on the demand for another product. Some of the typical questions that are addressed by dependent demand forecasting are:

- To an automobile manufacturer: How many alloy wheels or V6 engines would be sold?
- To the personal computer manufacturer: How many total hard disks would need to be manufactured? Of those, how many would sell as part of a new personal computer and how many would sell individually?

Configure to order products are also known as models. They are products, for example personal computers, whose:

- Optional items are assembled to customer requirements: For example, personal computer options may include monitors and keyboards
- Options' demand is dependent on the model's demand: For example, desktop personal computers may require monitors

The probability of an option is the likelihood that an item will be purchased when another item is purchased. For:

- Mandatory items, the probability is 100%
- Options, the probability comes from the sales history.

These inter-item probabilities can also vary across regions and across sales channels as customer preferences vary.

The probabilities become planning percentages on the mandatory components and options that help derive the forecasted demand for them.

The demand planning process for configure to order includes these processes:

- Demand Planning and Management for Finished Goods: The process to agree to the future unconstrained demand plan for the models, based on inputs from management of new activities, Sales, Marketing, and historical data.
- Demand Planning and Management for Components: The process that predicts the mix of the mandatory components and options. It multiplies the final consensus

plan for the models by the planning percentages on the mandatory components and options. This process is not part of the supply planning process because these relationships are characteristic of the demand planning process, for example, the effects of promotions and other demand planning activities on the option mix and the effect of the option mix on revenue.

Generally, if you are operating with configurable models and options, you follow the typical Oracle Demantra Demand Management process with some changes for configure to order products. In general, the business flow is:

- Derive a model forecast from the sales histories of models
- Calculate item-level forecasts for options and mandatory items by applying planning percentages to the model forecast.
- Analyze and update item-level forecasts as required in multiple dimensions to reach a consensus
- Publish the final forecast for supply planning.

Configure to Order Structure

The configure to order structure is typically:

. Base Model

..Option Classes

… Options (Buildable items)

..Mandatory Components (Buildable items)

A base model bill of material is typically made up of

- The base model
- Options that are grouped into option classes: An option class is not a buildable or saleable item. For each option class, the customer may choose one or more of the options. An option can be another model.
- Mandatory components/included items: These are included as part of all models

This is a sample base model bill of material.

Sedan

.. Tires

… Standard

… Long Life

.. Seats

… Cloth

… Leather

… Vinyl

.. Roof Rack

… Luggage Style

… Bicycle Style

.. Operating Manual

The base model is Sedan. In the Sedan bill of material, the:

- Option classes are Tires, Seats, and Roof Rack
- Options are Standard, Long Life, Cloth, Leather, Vinyl, Luggage Style, and Bicycle Style
- Mandatory component is Operating Manual

Base models can be of these types:

- Assemble to order: The manufacturer or distributor assembles the components and ships the configured item, for example, an automobile.
- Pick to order: The components are shipped separately and assembled by the recipient, for example, a children's outdoor play set.

Planning Percentages

The makeup of the modular products is represented both by model bills and the ratio of the sales of options to the sales of models.

Oracle Demantra generates the independent demand forecast for an item, typically the base model, on the basis of the independent history for the item.

Each component item in a model bill of material has a planning factor. The planning factors are the attach rates, or ratios of options to model demand, that is, the percentage of time that customers order that component item when they order the model.

These ratios, called planning percentages, express the relationship of options to the models. They need to be derived in the demand planning process where changes in product mix can affect the revenue related to a forecast. Also, promotions and other demand planning activities can change the options that are being sold.

Estimating model demand is not enough but predicting the mix of options or features based on their relative sales is necessary using historical percent--the average historical sales of options to models:

Note: Refer to system parameters "CTO_Enable_Worksheet_Calculations" and "CTO_PLANNING_PERCENTAGE_CHOICE" documented in the *Oracle Demantra Implementation Guide*.

Bill of Material Explosion

Oracle Demantra calculates the dependent demand forecast for a dependent item (option class, option, mandatory component) by exploding the forecast from its respective parents using the corresponding bills of material. Dependent demand for an item is calculated by multiplying its planning percentage by the demand at the next highest level in the bill of material. Dependent demand items can also have an independent demand forecast, for example, the service parts portion of their demand

The total demand for any item is the sum of the dependent and independent components of demand. For example, the demand for computer monitors is a composite of its direct (independent) demand and the demand deriving from the sale of personal computer systems (dependent demand).

This table shows a sample base model bill of material with the items, the planning percentages, and the results from the model bill of material explosion

Bill of Material Item	Planning Percentage	Demand	Explosion Calculation
. Sedan	-	. 500 (forecast)	-
.. Tires	..100%	.. 500	..500 * 1
… Standard set	.. 75%	… 375	… 500 * 0.75
… Long Life set	.. 25%	… 125	… 500 * 0.25
.. Seats	..100%	.. 500	.. 500 * 1
… Cloth	… 10%	50	… 500 * 0.1
… Leather	… 45%	… 225	… 500 * 0.45
… Vinyl	… 45%	… 225	… 500 * 0.45
.. Roof Rack	.. 35%	.. 175	.. 500* 0.35
… Luggage Style	… 60%	… 105	… 175 * 0.6
… Bicycle Style	… 40%	… 70	… 175 * 0.4
.. Operating Manual	.. 100%	.. 500	.. 500 * 1

Moving Configure to Order Data from Oracle e-Business Suite to Oracle Demantra

Data that moves from Oracle e-Business Suite to Oracle Demantra includes:

- Item master information
- Option attributes

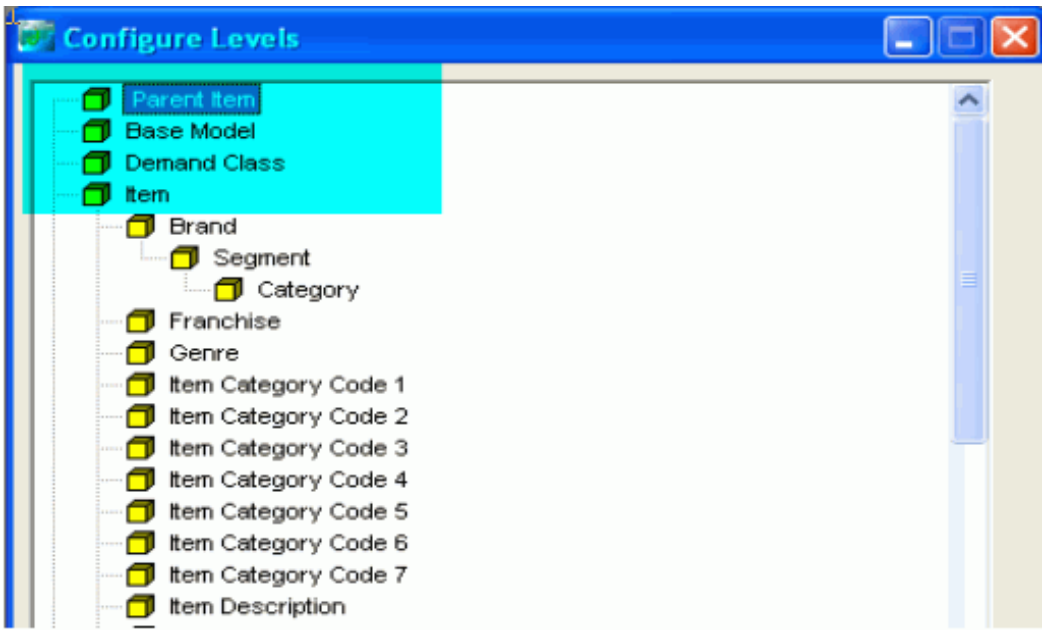
To move configure to order data from Oracle e-Business Suite into Oracle Demantra, use a two-stage process:

- Collections: Collect Shipment and Booking History process
- Download: EBS Full Download and Import Integration Profiles process

Configure to Order Levels

Configure to order structures work with these levels:

- Item: Item lowest level for non-configure to order
- Demand Class: Item lowest level for classifying non-configure to order demand
- Base Model: Configure to order item lowest level that allows demand for multiple (Item, Parent) combinations to be planned for multiple root models.
- Parent Item: Configure to order item lowest level that allows demand for the same item to be planned in the context of multiple parents (Item, Parent). Oracle Demantra derives parent item, it is not part of the bill of material.



For example, there is a bill of material structure

Computer Package A

. Laptop A1

.. Option Class HardDisk

... Harddisk 120G

... Harddisk 150G

.. Option Class Processor

... Processor Pentium 2GHz

... Processor AMD 2 GHz

The level load contains these entries

Level1: Parent Item	Level2: Item	Level3: Base Model
Computer Package A	120G + Pentium 2 GHz	Computer Package A
Computer Package A	120G + AMD 2 GHz	Computer Package A
Computer Package A	150G + Pentium 2 GHz	Computer Package A
Computer Package A	150G + Pentium 2 GHz	Computer Package A
Computer Package A	Computer Package A	Computer Package A

Configure to Order Options

If a base model has history, all its options are loaded into Oracle Demantra.

Option information for Oracle e-Business Suite is dimensioned by the item and organization level. This information needs to be associated to the other dimensions, for example site and demand class, when stored and planned in Oracle Demantra.

Configure to Order Sales History

The Collect Shipment and Booking History process includes configure to order history.

It uses profile option MSD_DEM: Include Dependent Demand. Set it to Yes for the process to collect the bills of material for configure to order.

The process collects bills of material that are active within the Shipment History time span (or the time span of other selected series). The bill of material start date is required, but not the end date.

It calculates dependent demand through the bill of material effective end date, if there is a value on the bill of material.

It loads the History Dependent Demand series from the history of options. The series that is loaded into History Dependent Demand is determined by the independent demand history series in Oracle Demantra. The default is Shipment History - requested items - shipped date.

Note: Refer to system parameter "CTO_HISTORY_PERIODS" documented in the *Oracle Demantra Implementation Guide*.

The series available for configure to order collections are:

- Dependent Booking - booked items – booked date
- Dependent Booking – requested items – booked date
- Dependent Booking – booked items – requested date e
- Dependent Booking – requested items - requested date
- Dependent Shipping - requested items – shipped date (default)
- Dependent Shipping – shipped items – requested date
- Dependent Shipping – requested items - requested date

For every series that you mark Yes on the Collections parameter window, it loads the shipment and booking history of the options as follows:

- The name of the series is the same as the marked series with – Dependent Demand appended, for example, you select series Booking History, the dependent demand is in series Booking History – Dependent Demand
- The exception is for the default series; its dependent demand is in series History – Dependent Demand

The process only includes configured items with these attributes:

- Autocreated Configuration: No; this excludes configuration items
- Assemble to Order: Yes
- Pre-specified popular configurations

For example, there is a bill of material structure

Computer Package A

. Laptop A1

.. Option Class HardDisk

... Harddisk 120G

... Harddisk 150G

.. Option Class Processor

... Processor Pentium 2GHz

... Processor AMD 2 GHz

The sales history load contains these entries

Item	Parent Item	Base Model	Date	Quantity
120G	Harddisk	Computer Package A	1/1/2008	1
Pentium 2 GHz	Processor	Computer Package A	1/1/2008	1
Harddisk	Laptop A1	Computer Package A	1/1/2008	1
Processor	Laptop A1	Computer Package A	1/1/2008	1
Laptop A1	Computer Package A	Computer Package A	1/1/2008	1
Computer Package A	Computer Package A	Computer Package A	1/1/2008	1

Viewing Bill of Material Information in Worksheets

To include a bill of material tree in a worksheet, follow these steps:

1. In the Aggregation tab, select the Base Model and Item
2. In the Layout tab, right-click and select Show BOM Tree.

The system uses a parent level and a child level to display the bill of materials tree in the worksheet. You can see these levels in the Aggregation Tab:

- CTO Parent
- CTO Child

However, if you select these levels in the Worksheet Designer and then attempt to enable the Show BOM Tree option, the following error message displays:

Error: The Show BOM Tree option cannot be enabled when either of the following levels are selected: CTO Parent, CTO Child. To display the BOM Tree, remove these levels.

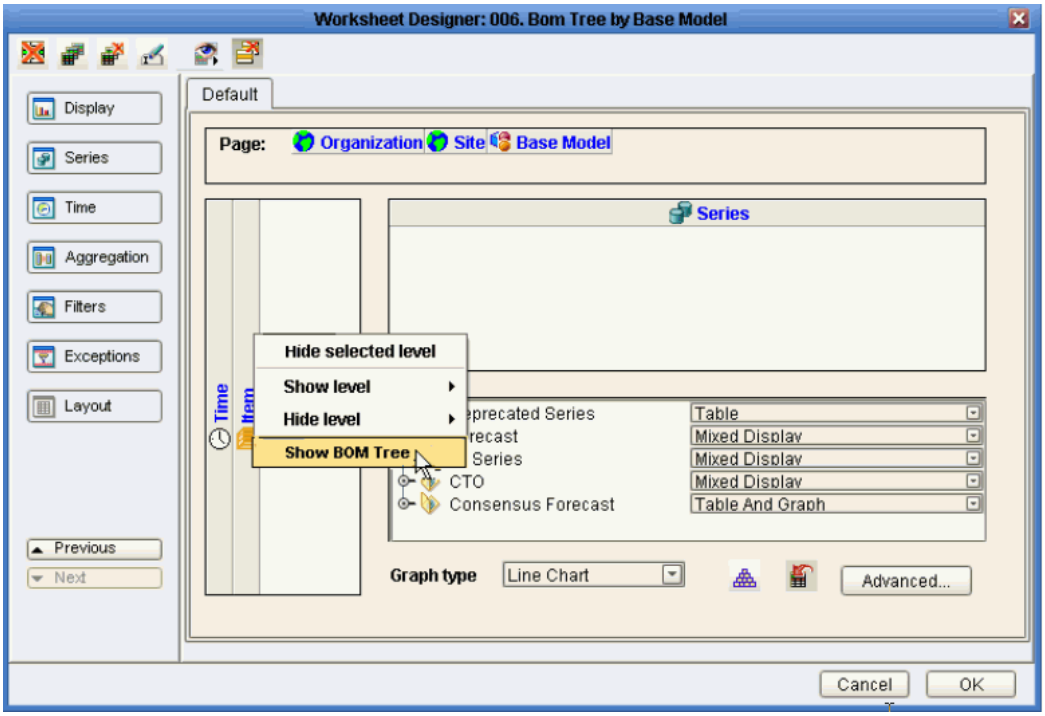
In any worksheet with the Show BOM Tree option enabled, you can create additional views. The bill of materials tree is then enabled in every additional view. Conversely, if you disable the Show BOM Tree option in any view, it is disabled in every view in the worksheet.

You can add notes to any item that is an option or option class displayed in the bill of materials tree. When you right-click and select Notes for an option or option class in the bill of materials tree, the note appears on that option or option class when the bill of materials tree is displayed.

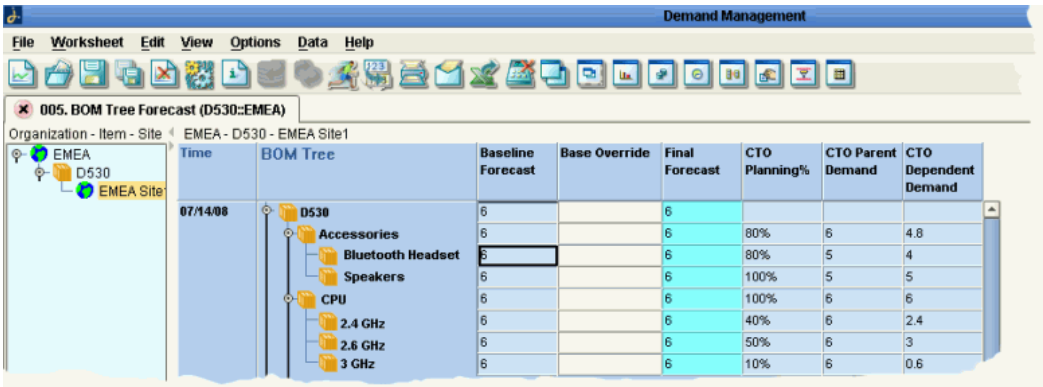
If the item is not displayed in the bill of materials tree format (for example, item's dependant demand across all base models and independent demand), all notes assigned to that item in the bill of materials tree is visible.

In all display formats, the display:

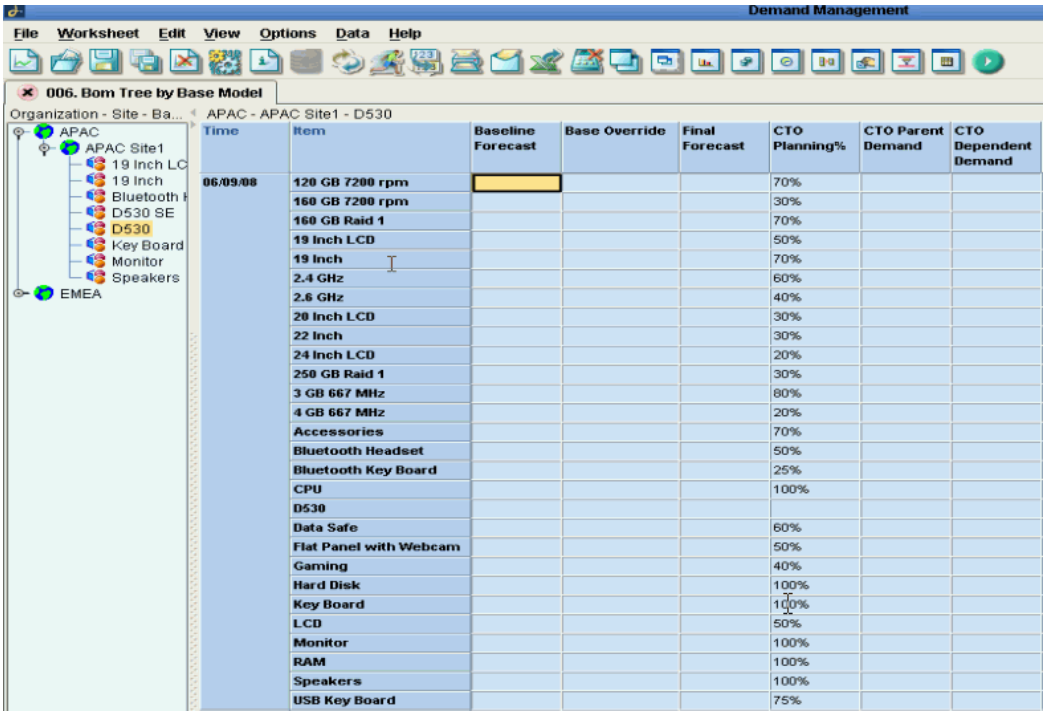
- Always includes independent demand
- Includes dependent demand when it is a calculation that depends on the parent demand relationships in the bill of material



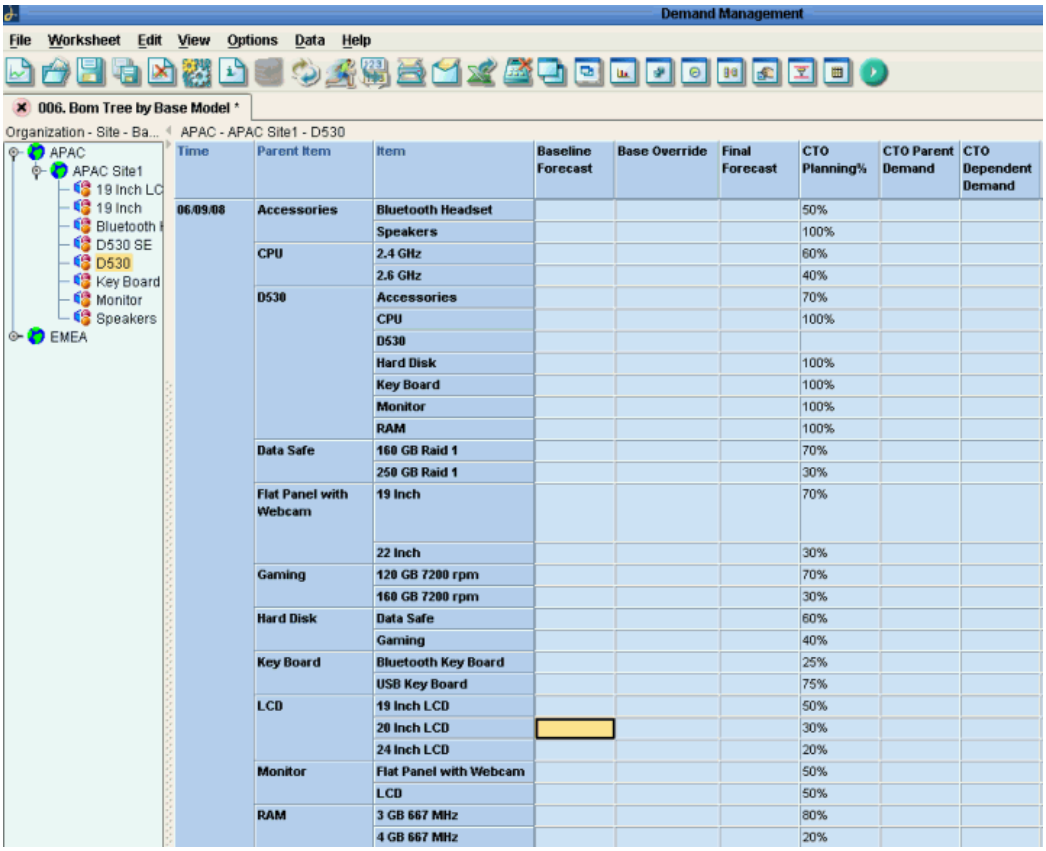
If you do select Show BOM Tree, you see the bill of material in indented fashion.



If you do not select Show BOM Tree and Item is on the crosstab, you see the bill of material as a flattened list of all levels.



If you do not select Show BOM Tree and both Item and Parent Item are on the crosstab, you see a typical crosstab without multi-level recursion of the bill of material.



Time	Parent Item	Item	Baseline Forecast	Base Override	Final Forecast	CTO Planning%	CTO Parent Demand	CTO Dependent Demand
06/09/08	Accessories	Bluetooth Headset				50%		
		Speakers				100%		
	CPU	2.4 GHz				60%		
		2.6 GHz				40%		
	D530	Accessories				70%		
		CPU				100%		
		D530						
		Hard Disk				100%		
		Key Board				100%		
		Monitor				100%		
		RAM				100%		
	Data Safe	160 GB Raid 1				70%		
		250 GB Raid 1				30%		
	Flat Panel with Webcam	19 Inch				70%		
		22 Inch				30%		
	Gaming	120 GB 7200 rpm				70%		
		160 GB 7200 rpm				30%		
	Hard Disk	Data Safe				60%		
		Gaming				40%		
	Key Board	Bluetooth Key Board				25%		
		USB Key Board				75%		
	LCD	19 Inch LCD				50%		
		20 Inch LCD				30%		
		24 Inch LCD				20%		
	Monitor	Flat Panel with Webcam				50%		
		LCD				50%		
	RAM	3 GB 667 MHz				80%		
		4 GB 667 MHz				20%		

If you want to display information grouped by level, a new level can be added to the CTO levels. For example, you can add a new level if you want to view all the BOMs for base models in the Product Family server, a CTO level called BM Product Family can be created during implementation and placed to the right of the BOM tree (associating the base models to the Product Family server is also an implementation task).

To view level information in the BOM tree

A level is usually placed to the right of the BOM tree for information purposes, such as viewing associated level values. You can do this by creating a series on the level in the Business Modeler.

1. In the Business Modeler, click the Series icon.
2. Click the New icon.
3. In the General Properties tab, enter the following:
   - Enter the Series name
   - Editable = No
4. In the Display Properties tab, enter the following:

- Table only
- No summary

5. In the Data Properties tab, enter the following:
   - Data Table = Level. For example:

     <Level> Product Family
   - Aggregation Function = MIN

6. In the Expression Properties tab, enter the following:
   - Server Expression = Select relevant table for MIN function. For example:

     min (t_ep_ebs_prod_family.ebs_prod_fmly_desc)

7. Click Save.

Editing Planning Percentages in a Worksheet

An option-class item combination may be part of the configuration of more than one base model.

After the initial download of planning percentages, the planning percentage for an option class-item combination in multiple base models is the same.

If you use a worksheet to edit an option class-item combination that is in multiple base models, the planning percentages that result can be different depending on whether or not the base model in included in or excluded from the worksheet.

Note: Refer to system parameter "CTO_Enable_Worksheet_Calculations" documented in the *Oracle Demantra Implementation Guide*.

This example shows two central processing unit base models after the initial download of planning percentages.

Bill of Material Item	Planning Percentage	Bill of Material Item	Planning Percentage
. CPU 1 (model)	-	. CPU 2 (model)	-
.. Drives (option class)	..100%	.. Drives (option class)	100%
… Hard drive 120g	.. 40%	… Hard drive 120g	… 40%
… Hard drive 220g	.. 60%	… Hard drive 220g	… 60%

In this example:

- The worksheet levels are Base Model, Option Class, and Item
- You change the planning percentage for Model CPU 1 > Option class Drives > Hard Drive 220g from 60% to 80%

Bill of Material Item	Planning Percentage
. CPU 1 (model)	-
.. Drives (option class)	..120%
… Hard drive 120g	.. 40%
… Hard drive 220g	.. 80%

Continuing with this example where base model is a worksheet level:

- Since base model is an included level in the worksheet, the planning percent for Model CPU 2 > Option class Drives > Hard Drive 220g remains at 60%
- For exporting the option class-item combination to Oracle Advanced Supply Chain Planning, Oracle Demantra averages the multiple planning percentages and exports the average. In this case, it exports 70% for Option class Drives > Hard Drive 220g [(80 + 60) / 2 = 140 / 2].

Bill of Material Item	Planning Percentage	Bill of Material Item	Planning Percentage
. CPU 1 (model)	-	. CPU 2 (model)	-
.. Drives (option class)	..120%	.. Drives (option class)	100%
… Hard drive 120g	.. 40%	… Hard drive 120g	… 40%
… Hard drive 220g	.. 80%	… Hard drive 220g	… 60%

In this example:

- The worksheet levels are Option Class and Item
- You change the planning percentage for Option class Drives > Hard Drive 220g from 60% to 80%

Bill of Material Item	Planning Percentage
.. Drives (option class)	..120%
… Hard drive 120g	.. 40%
… Hard drive 220g	.. 80%

Continuing in this example where base model is not a worksheet level:

- Since base model is not an included level in the worksheet, the planning percent for Model CPU 2 > Option class Drives > Hard Drive 220g also changes to 80%
- For exporting the option class-item combination to Oracle Advanced Supply Chain Planning, Oracle Demantra exports the common planning percentage. In this case, it exports 80% for Option class Drives > Hard Drive 220g.

Bill of Material Item	Planning Percentage	Bill of Material Item	Planning Percentage
. CPU 1 (model)	-	. CPU 1 (model)	-
.. Drives (option class)	..120%	.. Drives (option class)	100%
… Hard drive 120g	.. 40%	… Hard drive 120g	… 40%
… Hard drive 220g	.. 80%	… Hard drive 220g	… 80%

Simulations

You can run simulations to get an approximate forecast based only on the current worksheet as opposed to all the data.

When you make a change to Dep Demand - History that affects the forecast, for example overriding the history of a model or an option and accept the simulation, the simulation process:

- Generates a new forecast
- Recalculates the planning percentage
- Recalculates dependent demand for affected cells

When you make a change to Dep Demand - Existing that affects the forecast, for example overriding the history of a model or an option and accept the simulation, the

simulation process:

- Generates a new forecast
- Keeps the planning percentage
- Recalculates dependent demand for affected cells

Overrides

You can make changes to the planning percentages, dependent demand and, independent demand (forecast) by overriding any of these three series via the corresponding override series, for example, Planning Percentage Override.

You can make changes at any depth level of the bill structure. The changes propagate through the entire bill structure; you do not have to make any additional manual changes.

Configure to Order Worksheets

See Configure to Order Worksheets

Configure to Order Series

See Configure to Order Series

Settings for Planning Percentages and Dependent Demand

You must instruct e-Business Suite to collect configure to order structures, demand, and history.

- You can specify source of the planning percentages
- Oracle Demantra calculates them

You can specify the number of history periods to use when calculating planning percentages based on the history of the options.

You can specify upon what entities to calculate planning percentages:

You can specify where to calculate dependent demand and derive planning percentages:

- Each organization
- Globally

For more information, see Setting up Configure to Order in *Oracle Demantra Implementation Guide*.

Planning Percentage Calculation Based on Sales History Options

The historical planning percentages do not change with time and the same planning percentages are used for all the forecasting periods.

For example, if there is a forecast for January 2009 and February 2009 based on history,

the calculation of the options' dependent demand for both January 2009 and February 2009 use the same planning percentages.

Planning Percentage – History =

```
History of the item during the past CTO_HISTORY_PERIODS / History of its
parent item during the past CTO_HISTORY_PERIODS.
```

The process does not calculate planning percentages prior to an item's BOM Effective Start Date or after an item's BOM Effective End Date.

It calculates planning percentage for all the active items to the lowest levels of the bill of material.

Dependent Demand Calculation Based on Planning Percentages

The dependent demand calculation for options and items is based on the base model's information.

It occurs at the following stages:

- After the forecast engine process generates the base models
- Any time that you change base model information

The calculation propagates changes in the intermediate level data to all the children of that level.

Dep Demand – Existing =

```
Plng Pct- Existing * Immediate parent forecast
```

Dep Demand – History =

```
Plng Pct- History * Immediate parent forecast
```

Forecast Dependent Demand =

```
Final Plng Pct  * Immediate parent forecast
```

Final Forecast Dependent Demand =

```
If there is a value in Forecast Dependent Demand Override, it is the
Forecast Dependent Demand Override value. Otherwise, it is the value of
Forecast Dependent Demand.
```

Forecast Calculations

For global forecasting:

- Calculate planning percentages at the global level.
- Aggregate the sales history of the parent item or base model across all the organizations
- Calculate planning percentages at the All Organization level
- Use the same planning percentages for all the organizations

- If the dependent demand or the planning percentages are modified in a worksheet for an organization, the demand for all other organizations is affected.

For product family forecasting:

- Generate a statistical product family forecast using product family demand
- Allocate the product family forecast to the member item forecasts

Configure to Order MAPE Calculation

The series MAPE CTO holds the results of the MAPE CTO procedure that calculates the accuracy statistics for Consensus Total Demand. This provides the information Inventory Optimization requires to calculate Safety Stock. The calculation is:

```
sum(abs(Total History - Archived Consensus Total Demand))/sum(History)

where

- Total History = History + Final Forecast Dependent Demand  for the 13
week period of the archived forecast

- Consensus Total Demand = Independent Demand + Dependent Demand
```

Moving Configure to Order Data from Oracle Demantra to Oracle e-Business Suite

Data that moves from Oracle Demantra to Oracle e-Business Suite includes:

- Consensus Total Demand, Final Plng Pct, MAPE CTO, and Demand Priority for all models and options to Oracle Advanced Supply Chain Planning
- Independent Demand for options with a forecast control of NONE to Oracle Advanced Supply Chain Planning; these options do not have dependent demand
- Consensus Total Demand & MAPE CTO for base models to Oracle Inventory Optimization

To move configure to order data from Oracle Demantra into Oracle e-Business Suite, use upload workflows:

- For uploading Consensus Forecast and Final Forecast Dependent Demand, MAPE CTO, and Demand Priority (information for models and their options), use the CTO Upload workflows
- For uploading product family and item level Consensus Forecast and Product Family ratios, MAPE CTO, and Demand Priority (information for product families and their children), use the CTO Upload Product Family workflows

For more information on the CTO Upload and CTO Upload Product Family workflows, see Setting up Configure to Order in *Oracle Demantra Implementation Guide*.

Oracle Advanced Supply Chain Planning loads and processes the data for Consensus Total Demand and Planning Percentage information for models and their options as follows:

- Model Forecast Control = Consume or Consume & Derive
- Options Forecast Control = None
- Oracle Advanced Supply Chain Planning explodes the forecast from model to option using the Oracle Demantra Demand Management planning percentages

Oracle Advanced Supply Chain Planning loads and processes the data for Consensus Total Demand and Planning Percentage information for product families and their children as follows:

- Model Forecast Control = Consume or Consume & Derive
- Options Forecast Control = Consume or Consume & Derive
- Oracle Advanced Supply Chain Planning explodes the option's Consensus Total Demand to find its independent and dependent demand.

Oracle Demantra calculates Plng Pct- History at the lowest level for all levels.

When you upload planning percentages to Oracle Advanced Supply Chain Planning, you do so at the level Item-Organization for items with item attribute Forecast Control set to None. Oracle Advanced Supply Chain Planning uses the Oracle Demantra planning percentages to explode demand from model to option class to model.

When you upload dependent demand to Oracle Advanced Supply Chain Planning, you do so at levels Item, Organization, Zone, and Demand Class for items with item attribute Forecast Control set to Consume or Consume & derive. Oracle Advanced Supply Chain Planning uses the Oracle Demantra dependent demand and does not use the Oracle Demantra planning percentages

Data in the seeded export workflows matches the worksheet data when you view it at the viewed at the lowest levels Item, Organization, Week, Demand Class, and Zone.

Service Parts Planning and Service Parts Forecasting Overview

Service Parts Planning

Repair service operations need service parts planning systems to ensure that the right parts are at the right locations, at the right times, and in the right (usable) condition, while being consistent with inventory budgets and service level targets.

Service parts inventory management differs from product inventory management; hence the need for functionality designed to handle special service parts situations such as: supersession and intermittent demand.

The Oracle Service Parts Planning solution supports the following forecasting modes:

- Traditional

  A demand planning system generates a demand forecast that serves as a demand

schedule input to the service parts plan, and where implemented, also to the inventory optimization plan. The demand planning system also generates a returns forecast that serves as a supply schedule input to the service parts plan.

- Inline

  Service Part Planning uses Oracle Demantra Demand Management functionality to generate the service parts demand.

In either mode, forecasts can be based on usage history or shipment history.

In the case of new product introductions or similar situations where there is insufficient history for a reliable basis, the inline mode provides the ability to base forecasts on the item's install base population and average failure rate.

This document describes the inline scenario, in which Demantra generates the service parts forecast and it is then exported for use in Oracle Service Parts Planning or other legacy application.

For more information about Oracle Service Parts Planning, Oracle Field Service Spares Management, or Oracle Depot Repair, refer to the appropriate Oracle product documentation.

Service Parts Forecasting

Demantra forecasts demand for service parts using two methods. One method uses analytical models, and the other method is calculated using install base data and failure rates. Demantra generates forecasts using both methods and then allows you to select the preferred forecast based on past experience, industry-specific knowledge, or other information.

By applying a service part specific failure rate to the projected install base at an organization, it is possible to project future demand for service parts.

Failure Rates

Failure rates are based on a comparison of the supported units for the finished good and a specific quantity of service parts that are used to service them. A seeded process calculates the ratio between the number of supported base models and usage. The result of the process is the failure rate.

The level at which these values are calculated can vary by business requirement and is configurable as part of an implementation. It is possible to calculate failure rates at very granular levels. This results in planning percentages that closely reflect part usage for a specific spare and location. However, this method is also susceptible to large variations in demand over time that are due to inherent intermittent part usage. It is also possible to calculate failure rates at more aggregate levels; here the rates generated are more generic but are less susceptible to variation.

When generated in aggregation all underlying combinations are assigned the same failure rate.

For more information about how to configure the failure rate calculation, refer to *Oracle*

Demantra Implementation Guide.

Process Overview

The following example describes a typical Service Parts Forecasting cycle:

- Data, such as service items, usage history, install base details, and details, are imported from a source system (for example, Oracle Service Parts Planning) into Demantra.

- The Demantra analytical engine generates a forecast at the spare/org level and another forecast is calculated based on projected install base information and failure rates.

- Demantra stores the new forecast values in the following series:
  - SPF Baseline Forecast
  - SPF Calculated Forecast

- Using values stored in the series above, Demantra automatically calculates values for the following series:
  - SPF Forecast MAPE (In Sample)
  - SPF Forecast MAPE (Out of Sample)
  - SPF Forecast Volatility
  - SPF Average Demand

  These series are described in Service Parts Forecasting Series, page A-13 in Appendix A.

  > **Note:** Forecast accuracy measures can be viewed at any aggregation level, but by default they are calculated at the Spare/Organization level. When viewed above this level in a worksheet the values will be aggregated to the selected level.

- Using predefined or custom worksheets, demand analysts review the values these series, analyze the install base and failure rate values, optionally make adjustments, and run simulations to model different scenarios. When the desired scenario is achieved, the user saves changes to the worksheet and accepts the simulation results.

  During this process, the following series can be overridden:
  - SPF Item Usage or SPF Item Shipments (historical demand)

- SPF Failure Rate %
- SPF Install Base
- SPF Calculated Forecast
- SPF Baseline Forecast

Changes to the failure rate or install base are immediately reflected in a revised SPF Calculated Forecast value.

- An analyst optionally changes the default value of the "SPF Forecast Method" series. This setting controls which forecast populates the "SPF Final Forecast" series and will eventually be exported to downstream applications, such as Oracle Service Parts Planning (SPP).
- An analyst may manually upload incremental changes made in a worksheet to the Demantra staging tables and from there to Service Part Planning; this is done by invoking a method from within a worksheet. For more information about this method, refer to the *Oracle Demantra Implementation Guide*.
- The preferred (final) forecast and other metrics are exported to the Demantra staging tables using workflows.
- An administrator from the external system executes the required process(es) to import the final forecast and metrics from the Demantra staging tables into the external system's database tables.
- The forecast and metrics are used by the external system, such as to trigger exceptions or as an input to other custom processes.

For more information about Service Parts Forecast worksheets, refer to Service Parts Forecasting (SPF) Worksheets, page 4-17.

3

Running Simulations

Overview of Forecasting

The process of forecasting depends on the following implementation-specific factors:

- How often the Analytical Engine has been set up to run and generate the forecast series
- Which series your organization uses
- Which users have access to those series

However, the general process is roughly as follows:

1. Periodically, after the engine has run, open worksheets that contain the forecast series and any related series
2. View the demand and forecast series that were created for your implementation. Make adjustments as needed.

Viewing Forecast Details

When the Analytical Engine is run, Oracle Demantra records information about the engine run.

To view forecast details

1. Click Data > Forecast Detail.

   Oracle Demantra Demand Management displays a popup window that contains details about the most recent times it generated the forecast. The upper part of the window lists the recent runs of the Analytical Engine.

Forecast Detail					
Run Date	Total Run Time	Status	History Start Date	History End Date	Forecа
06/24/03 09:35:39	N/A	Success	01/01/95	08/04/03	
04/13/03 11:54:58	N/A	Success	12/06/99	03/03/03	
04/13/03 11:40:47	N/A	Success	12/06/99	03/03/03	
04/11/03 13:51:56	N/A	Success	11/22/99	03/03/03	
04/11/03 13:50:00	N/A	Success	11/22/99	03/03/03	

This table includes the following information:

- Date when the Analytical Engine was run
- Total length of time during which the Analytical Engine ran
- Status of the engine run
- Starting and ending date of the history used to generate the forecast
- Starting date, ending date, and number of base time buckets within the forecast

2. Click a row in the upper part of the window.

   The lower part of the window displays further details about the selected forecast.

Performing Advanced Analytics (Nodal Tuning)

Typically during the implementation process, Oracle Demantra consultants tune the Analytical Engine to get the best possible results for your data. In some cases, however, you might want to adjust those settings for specific combinations.

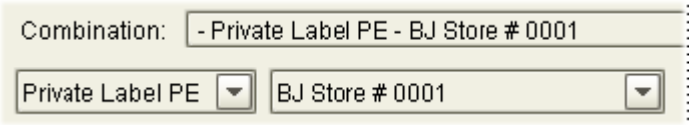
> **Note:** Advanced Analytics is only available to customers who have purchased the Advanced Forecasting and Demand Modeling license.

> **Caution:** Only advanced users should make these changes.

To view analytics details for a specific combination

1. Open a worksheet that includes the item-location combination.
2. Click File > Open Analytics. Or click the Open Analytics button.

   Except for the case when your worksheet is completely aggregated, the upper part of this new view includes the Combination selection area.



Oracle Demantra Demand Management displays a new worksheet view, which has the same name as the original, with "-Analytics" appended to it.

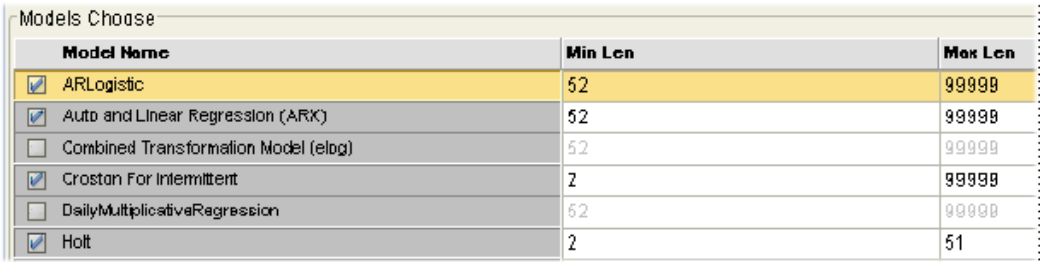
3. Use these dropdown lists to specify which item-location combination you want to look at. You can see any of the combinations that are in the worksheet. Do either of the following:

   - Select a specific combination from the Combination list.
   - Select specific items and locations from the other dropdown lists.

   This rest of the view is updated with information for the selected combination.

To select the forecasting models to use

The Models Choose area lists all the mathematical models that the engine uses.



Models Choose

Model Name	Min Len	Max Len
ARLogistic	52	99999
Auto and Linear Regression (ARX)	52	99999
Combined Transformation Model (elog)	52	99999
Croston For Intermittent	2	99999
DailyMultiplicativeRegression	52	99999
Holt	2	51

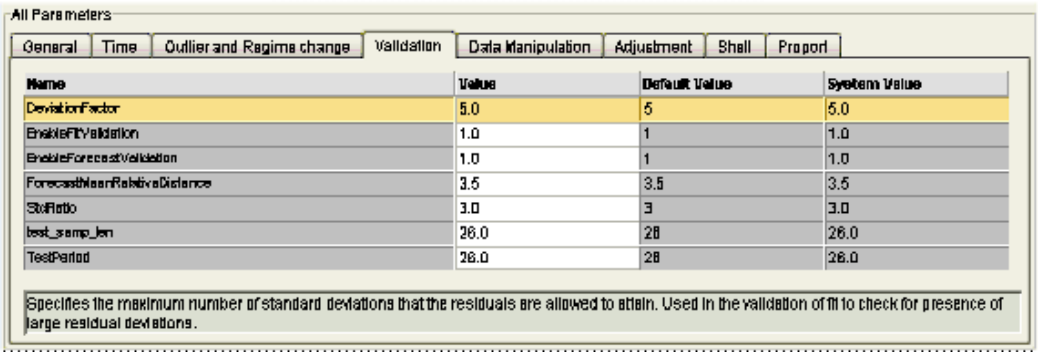
The check boxes indicate the models that the Analytical Engine used for this combination during the last engine run.

- To enable the Analytical Engine to use this model for this combination, make sure the Active check box is checked. For details on these models, see the Oracle Demantra Implementation Guide.
- The other two settings control the minimum and maximum number of nonzero observations that a combination must have in order for the Analytical Engine to consider using this model. To specify these values, type integers into the Min Len and Max Len fields.

  Note: Min Len must be equal to or greater than the number of causal factors in the forecast, except for the HOLT and FCROST models, which do not use causal factors.

To specify the analytical configuration

The All Parameters area lists parameters that apply to all engine models. These parameters are grouped onto different tabs according to their general purpose.



Each tab includes the following information for each parameter:

Value	Current Value
Default Value	Default value as specified by Oracle Demantra installer
System Value	Default as specified by your implementors

Also note the parameter description in the bottom part of the screen.

1. Optionally edit these parameters. For information, see the Oracle Demantra Implementation Guide.
2. To reset the parameters to their default values, click the Revert To Defaults button.
3. When you are done, close this view as usual.

Running Simulations

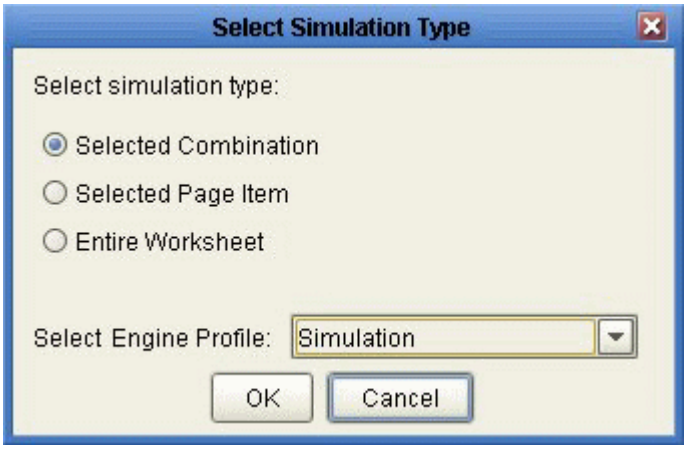
You can run simulations to get an approximate forecast based only on the current worksheet. (In contrast, when the Analytical Engine runs, it considers all the data in the system.)

To run a simulation

1. Make sure the engine process (in Simulation mode) is running on the server. Also note that an error will occur if the Analytical Engine has not been run previously.
2. Run a worksheet.
3. Optionally make a change that could affect the forecast.

4. Click Data > Run Simulation. Or click the Simulation button.

   The Select Simulation Type page appears.



Note: Select one of the following simulation types:

5. Select one of the following simulation types:

Option	Generates a simulation for...	Notes
Selected Page Item	Combination that you have currently selected in the Members Browser or selector lists.	If a level is on a worksheet axis, these two options are different. Otherwise they are the same.
Selected Combination	Combination that you have currently selected within the worksheet table.	If a level is on a worksheet axis, these two options are different. Otherwise they are the same.
Whole Worksheet	All combinations in the worksheet.	This option takes longer to run.

6. Select the engine profile that includes the engine settings to use during this simulation run. For details on the engine profiles in your system, contact your Oracle implementor.

7. Do one of the following

   - Click OK to run the simulation.

- Click Cancel to close the page without running the simulation.

8. When the simulation is complete, Oracle Demantra Demand Management displays a message.

9. Do one of the following:

   - To accept the results, click Data > Accept Simulation. Oracle Demantra copies the data from the Simulation series into the Sales Forecast series, where they are visible to other users.

   - To reject the results, click Data > Reject Simulation. Oracle Demantra clears the data from the Simulation series.

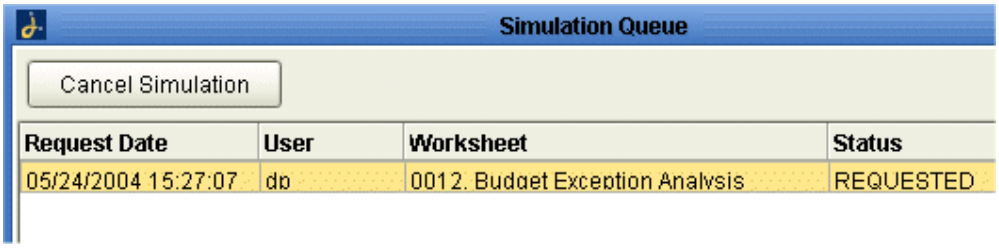
Checking the Simulation Queue

When you start a simulation, Oracle Demantra Demand Management adds it to an internal queue, which processes all simulations in the order they are submitted. You can view this queue and you can cancel a simulation that you submitted.

To check the simulation queue

1. Click Data > Simulation Queue.

   Oracle Demantra Demand Management displays the Simulation Queue dialog box.



The Status field indicates the status of each simulation request. The status can be one of the following:

Requested	A user has submitted this simulation request, which has not yet started running.
Running	Oracle Demantra is preforming this simulation.
Completed	Oracle Demantra has completed this simulation successfully.

Stopping	A user asked to cancel this simulation request, which Oracle Demantra has not yet fully canceled.
Stopped	A user has canceled this simulation request and Oracle Demantra has fully canceled it.
Failed	Oracle tried to run this simulation, but an error occurred.

Canceling a Simulation

To cancel a simulation

1. Click Data > Simulation Queue.
2. Click simulation and then click Cancel Simulation.

4

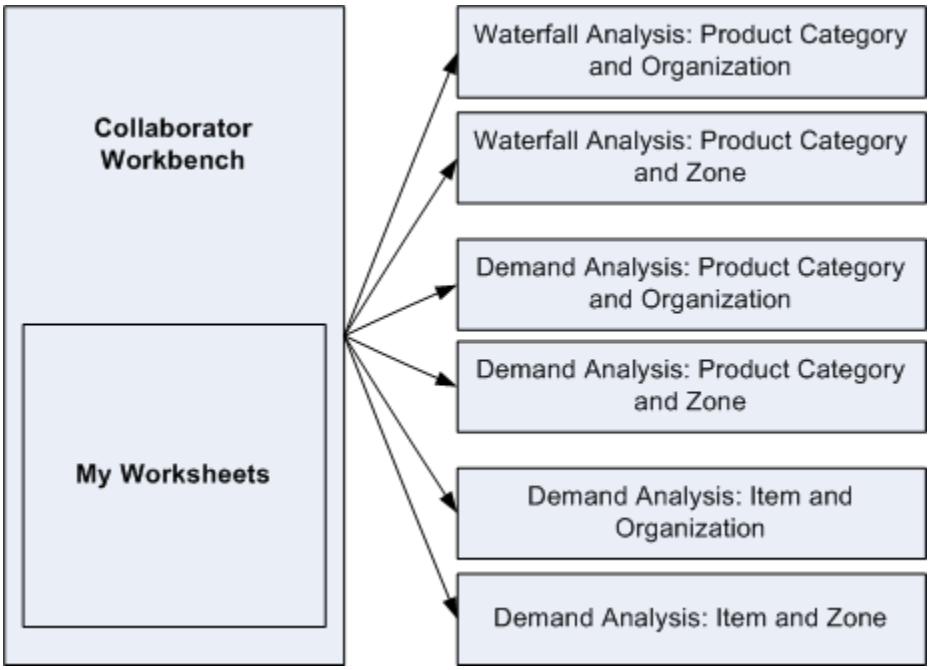
Demand Management Worksheets

This chapter covers the following topics:

- Worksheets Overviewworksheetsoverview
- Configure to Order Worksheets
- Service Parts Forecasting (SPF) Worksheets

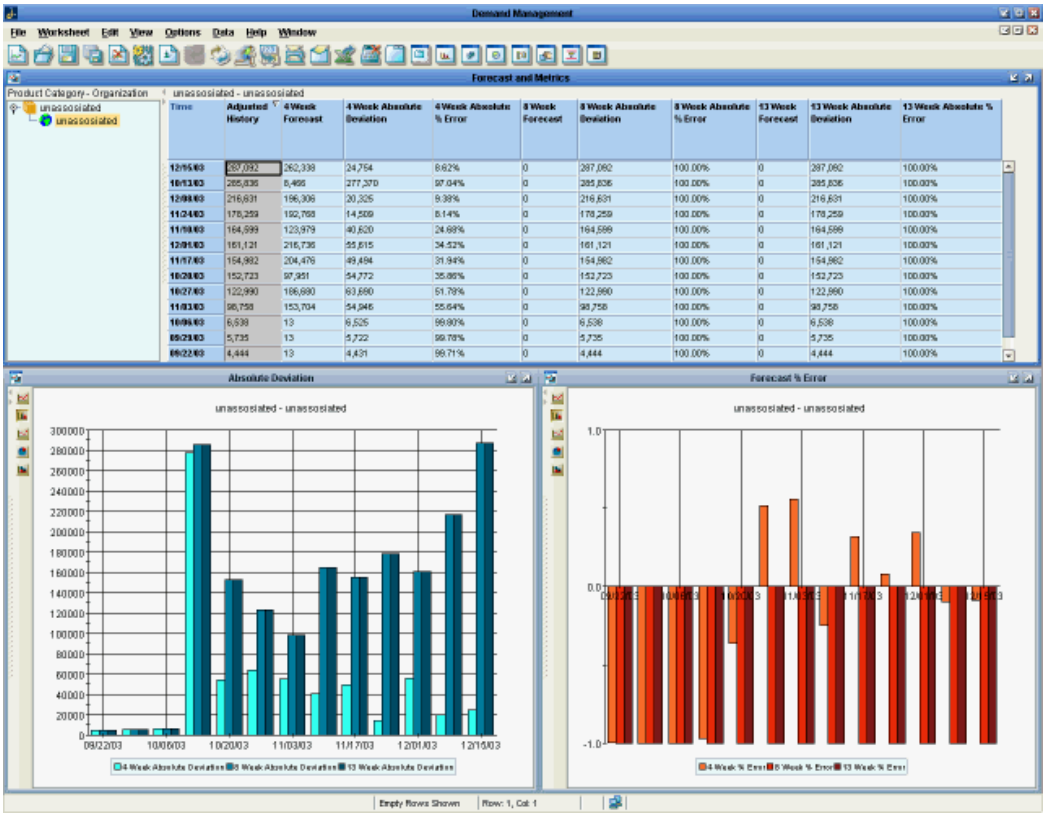
Worksheets Overview

To manage or view forecasts and demand, you start in the Collaborator Workbench and launch any of the relevant Demand Management worksheets. Worksheets with the necessary series for analysis and modification of the forecast are available for the analyst at the beginning of each cycle.



Worksheet	Description
Waterfall Analysis: Product Category and Organization	Compare actual versus forecast demand, aggregated by product category and organization, to determine prior periods forecast accuracy.
Waterfall Analysis: Product Category and Zone	Compare actual versus forecast demand, aggregated by product category and zone, to determine prior periods forecast accuracy.
Demand Analysis: Product Category and Organization	Compare history and demand data in weekly time buckets, aggregated by product category and organization. Use this worksheet to manage and approve the forecast.
Demand Analysis: Product Category and Zone	Compare history and demand data in weekly time buckets, aggregated by product category and zone. Use this worksheet to manage and approve the forecast.
Demand Analysis: Item and Organization	Compare history and demand detailed data in weekly time buckets, by item and organization. Use this worksheet to manage and approve the forecast.
Demand Analysis: Item and Zone	Compare history and demand detailed data in weekly time buckets, by item and zone. Use this worksheet to manage and approve the forecast.

Waterfall Analysis Worksheet



The first step in the Demand Management process is to look at your previous cycle and determine how accurate your forecasts were. Using the Waterfall Analysis worksheets you can compare actual versus forecast demand for individual product categories, organizations, and regions (zones). By comparing actuals to forecast, demand planners can identify problem areas, and deduce why forecast demand did better (or worse) than planned.

For example, a retailer notices that some of their seasonal product categories did not perform well during December. Using this data, your demand analyst deduces that an unseasonably mild winter was to blame. Since this anomaly was restricted to December, the demand analyst decides to not make any changes in future demand for those products. Based on the results in the Forecast Accuracy worksheet, demand analysts can make the required adjustments and take those lessons learned and apply them to the next forecast.

The Waterfall Analysis worksheet is aggregated to the following levels, which allows you to view and slice data depending on the details in which you're interested:

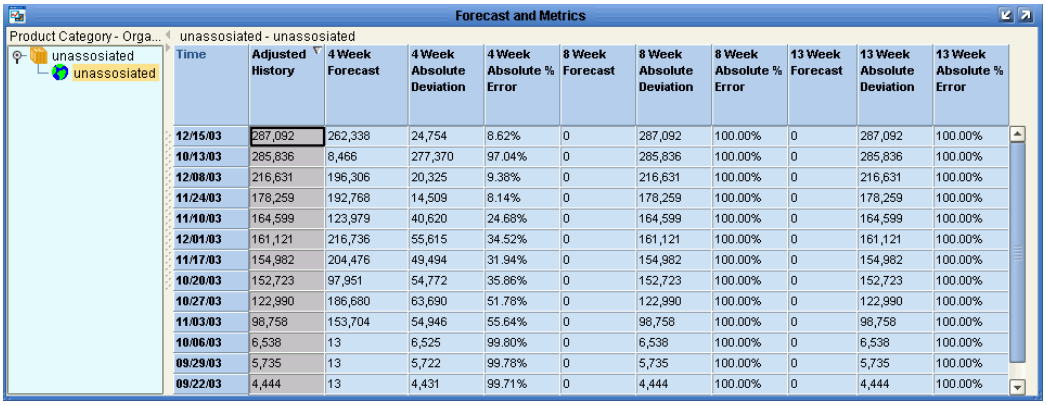
- Product Category and Zone
- Product Category and Organization

The following archived forecasts are used in these worksheets:

- **4 Week Lag Forecast:** The forecast series for the four weeks prior to the current week.
- **8 Week Lag Forecast:** The forecast series for the eight weeks prior to the current week.
- **12 Week Lag Forecast:** The forecast series for the 12 weeks prior to the current week.
- **4, 8, and 12-Week Lag Absolute Percentage Error:** A measure of forecast accuracy, which is calculated as actual demand minus forecast demand, and displayed as a percentage.
- **4, 8, and 12-Week Lag Absolute Deviation:** A measure of forecast accuracy, and represents the average amount that the actual demand varies from forecast demand.

About the Forecast and Metrics View

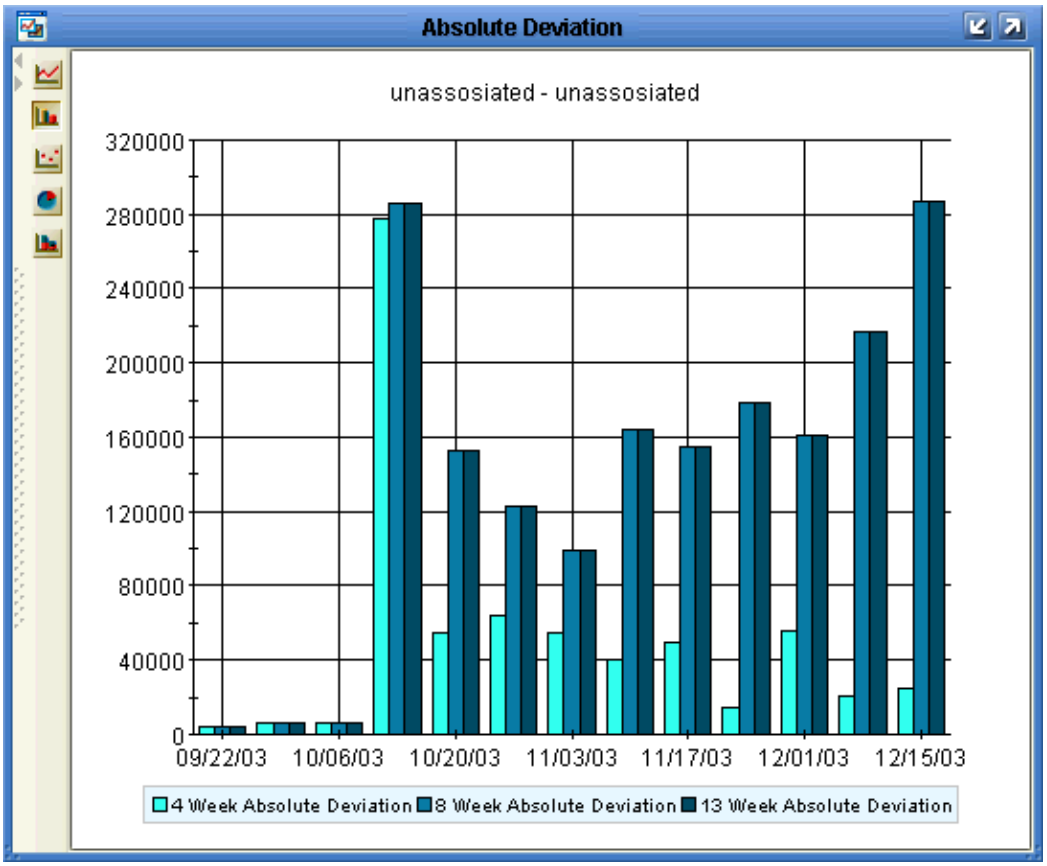
The Forecast and Metrics view displays a table showing demand and forecast values for individual products, broken down by weekly time buckets.



Time	Adjusted History	4 Week Forecast	4 Week Absolute Deviation	4 Week Absolute % Error	8 Week Forecast	8 Week Absolute Deviation	8 Week Absolute % Error	13 Week Forecast	13 Week Absolute Deviation	13 Week Absolute % Error
12/15/03	287,092	262,338	24,754	8.62%	0	287,092	100.00%	0	287,092	100.00%
10/13/03	285,836	8,466	277,370	97.04%	0	285,836	100.00%	0	285,836	100.00%
12/08/03	216,631	196,306	20,325	9.38%	0	216,631	100.00%	0	216,631	100.00%
11/24/03	178,259	192,768	14,509	8.14%	0	178,259	100.00%	0	178,259	100.00%
11/10/03	164,599	123,979	40,620	24.68%	0	164,599	100.00%	0	164,599	100.00%
12/01/03	161,121	216,736	55,615	34.52%	0	161,121	100.00%	0	161,121	100.00%
11/17/03	154,982	204,476	49,494	31.94%	0	154,982	100.00%	0	154,982	100.00%
10/20/03	152,723	97,951	54,772	35.86%	0	152,723	100.00%	0	152,723	100.00%
10/27/03	122,990	186,680	63,690	51.78%	0	122,990	100.00%	0	122,990	100.00%
11/03/03	98,758	153,704	54,946	55.64%	0	98,758	100.00%	0	98,758	100.00%
10/06/03	6,538	13	6,525	99.80%	0	6,538	100.00%	0	6,538	100.00%
09/29/03	5,735	13	5,722	99.78%	0	5,735	100.00%	0	5,735	100.00%
09/22/03	4,444	13	4,431	99.71%	0	4,444	100.00%	0	4,444	100.00%

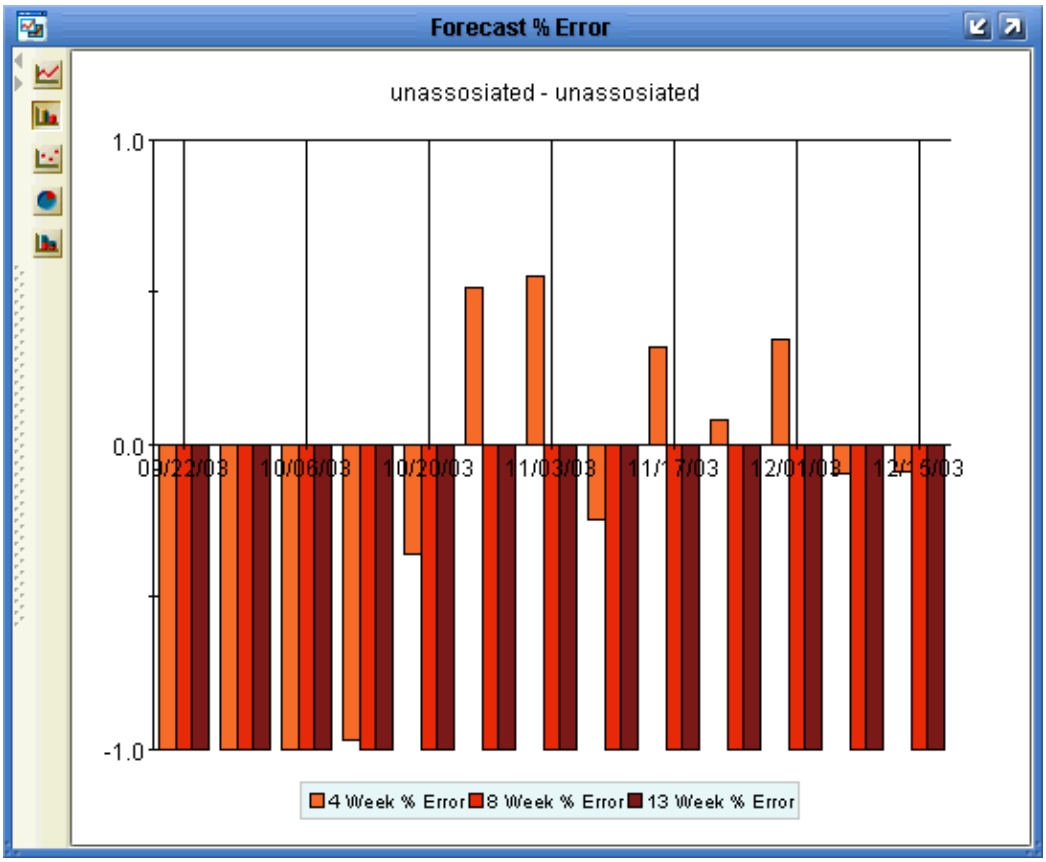
About the Absolute Deviation View

The Absolute Deviation view graphically represents the amount of deviation that exists in your forecast at the four, eight and 13 week level, represented as total units. Use the Absolute Deviation view to determine how much real demand differs from the forecast.



About the Forecast Percentage Error View

The Forecast Percentage view graphically represents the amount of deviation that exists in your forecast at the four, eight and 13 week level, represented as a percentage of the demand. Use the Forecast Percentage view to determine how much real demand differs from the forecast.



Reference

Basics:

Accessing this Worksheet	Do one of the following: 1. In My Worksheets (in Collaborator Workbench), click either DM: Waterfall Analysis Product Category and Org or DM: Waterfall Analysis Product Category and Zone. 2. If a worksheet is currently open, click either DM: Waterfall Analysis Product Category and Org or DM: Waterfall Analysis Product Category and Zone and then click Open.
Levels you can select	Either: • Product Category and Zone • Product Category and Organization

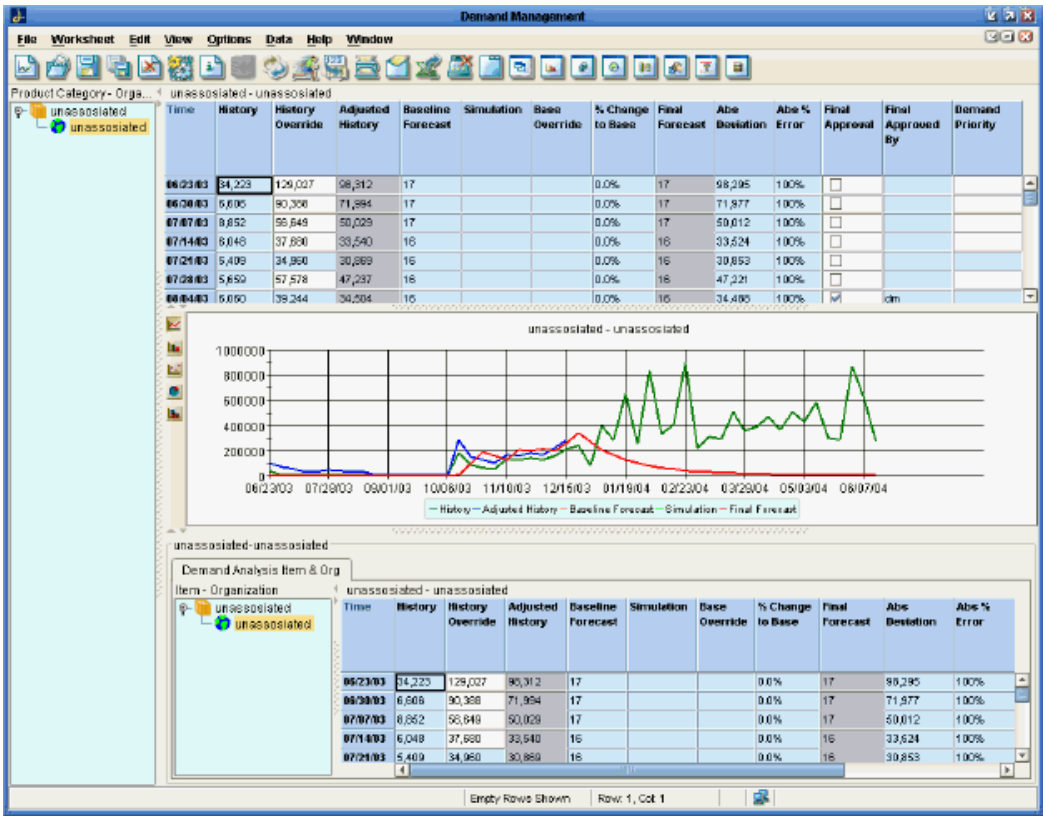
Time Aggregation	Weekly

Business Data:

Series Group	Series	Description
Forecast Accuracy	4 Week Lag Forecast	Forecast for the four weeks prior to the current time bucket.
	8 Week Lag Forecast	Forecast for the eight weeks prior to the current time bucket.
	13 Week Lag Forecast	Forecast for the 13 weeks prior to the current time bucket.
	4 Week Lag Absolute Deviation	Absolute Deviation for the four weeks prior to the current time bucket.
	4 Week Lag Absolute % Error	Absolute percentage error for the four weeks prior to the current time bucket.
	4 Week Lag % Error	Percentage error for the four weeks prior to the current time bucket.
	8 Week Lag % Error	Percentage error for the eight weeks prior to the current time bucket.
	13 Week Lag % Error	Percentage error for the 13 weeks prior to the current time bucket.
	8 Week Lag Absolute % Error	Absolute percentage error for the eight weeks prior to the current time bucket.
	8 Week Lag Absolute Deviation	Absolute Deviation for the eight weeks prior to the current time bucket.
	13 Week Lag Absolute Deviation	Absolute Deviation for the 13 weeks prior to the current time bucket.
	13 Week Lag Absolute % Error	Absolute percentage error for the 13 weeks prior to the current time bucket.

Historical Demand	Demand	Unconstrained demand. Purple if out of stock.
Sales	Demand	Unconstrained demand. Purple if out of stock.

Demand Analysis Worksheet



Once you have reviewed your forecast from previous cycles to determine how accurate it was, the next step is to review the forecast for the current planning cycle. The Demand Analysis worksheets are available at the start of the planning cycle, and display historical data, forecasted demand accuracy statistics and demand priority at various levels of aggregation.

You can use the Demand Analysis worksheets to view, edit, and approve the forecast for individual weekly time buckets. The Demand Analysis worksheet is aggregated to the following levels, which allows you to view and slice data depending on the details in which you're interested:

- Product Category and Organization
- Product Category and Zone

- Item and Organization
- Item and Zone

About the Demand Tracking Table

The Demand Tracking table compares sales and demand figures, at your chosen aggregation level, in weekly time buckets. It gives analysts a side-by-side view of their actual sales, demand and forecasted sales, along with Absolute Deviation and Absolute Percentage Error for comparison.

Time	History	History Override	Adjusted History	Baseline Forecast	Simulation	Base Override	% Change to Base	Final Forecast	Abs Deviation	Abs % Error	Final Approval	Final Approved By	Demand Priority
06/23/03	34,223	129,027	98,312	17			0.0%	17	98,295	100%	☐		
06/30/03	6,506	90,388	71,994	17			0.0%	17	71,977	100%	☐		
07/07/03	6,652	56,649	50,029	17			0.0%	17	50,012	100%	☐		
07/14/03	6,048	37,680	33,540	16			0.0%	16	33,524	100%	☐		
07/21/03	5,409	34,960	30,869	16			0.0%	16	30,853	100%	☐		
07/28/03	5,659	57,578	47,237	16			0.0%	16	47,221	100%	☐		
08/04/03	6,060	39,244	34,504	16			0.0%	16	34,488	100%	☑	dm	
08/11/03	5,433	38,185	33,018	16			0.0%	16	33,002	100%	☐		
08/18/03	5,586	36,232	31,718	16			0.0%	16	31,702	100%	☐		
08/25/03	5,241	908	6,149	16			0.0%	16	6,133	100%	☐		
09/01/03	4,927	840	5,767	13			0.0%	13	5,754	100%	☐		

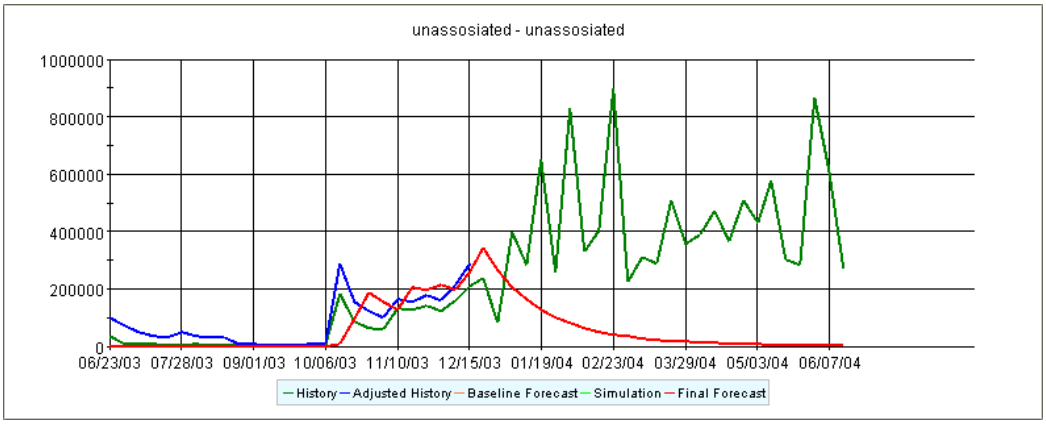
This table tracks the following on a weekly basis:

- History
- History Override
- Adjusted History
- Baseline Forecast
- Simulation
- Base Override
- % Chg to Base
- Final Forecast
- Absolute Deviation
- Absolute Percentage Error
- Demand Priority

This table also enables users to track final approval for each line in the forecast. For more information, see Approving the Forecast, page 4-11.

About the Demand Tracking Graph

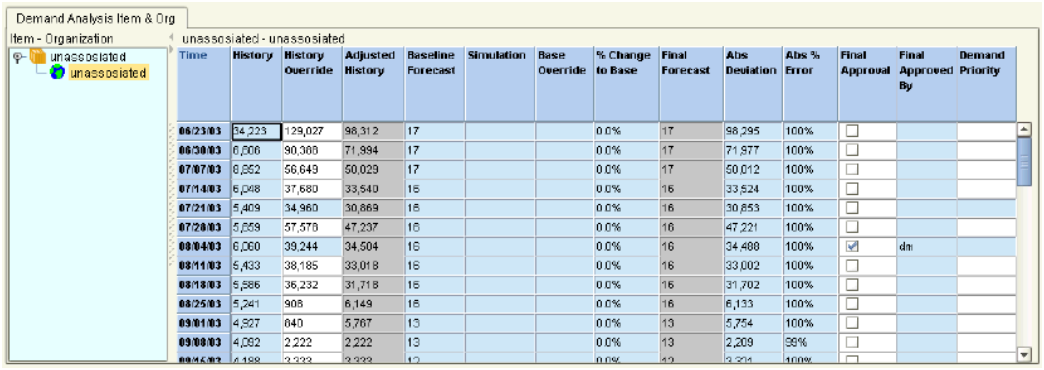
The Demand Tracking graph displays the Sales, Demand, Sales Forecast, Simulation, and Final Forecast values for the chosen product category over time.



About the Detail Demand Analysis Embedded Worksheet

The Detail Demand Analysis table is an embedded worksheet that compares sales and demand figures for your chosen aggregation level, in weekly time buckets. It gives analysts a side-by-side view of their historical sales, and forecasted sales, along with Absolute Deviation and Absolute Percentage Error for easy comparisons.

Use this worksheet to look at the item level detail for the category. Analysts often look at a higher level first and if the data is not what they expect, they drill down to lower levels to see the detail. As you click on different categories, the detail level worksheet reflects the items for the category, allowing you to review details for that particular item.



Time	History	History Override	Adjusted History	Baseline Forecast	Simulation	Base Override	% Change to Base	Final Forecast	Abs Deviation	Abs % Error	Final Approval	Final Approved By	Demand Priority
06/23/03	34,223	129,027	98,312	17			0.0%	17	98,295	100%	☐		
06/30/03	6,006	90,360	71,994	17			0.0%	17	71,977	100%	☐		
07/07/03	6,852	56,649	50,029	17			0.0%	17	50,012	100%	☐		
07/14/03	6,048	37,680	33,540	16			0.0%	16	33,524	100%	☐		
07/21/03	5,409	34,960	30,869	16			0.0%	16	30,853	100%	☐		
07/28/03	5,859	57,578	47,237	16			0.0%	16	47,221	100%	☐		
08/04/03	6,060	39,244	34,504	16			0.0%	16	34,488	100%	☑	dm	
08/11/03	5,433	38,185	33,018	16			0.0%	16	33,002	100%	☐		
08/18/03	5,586	36,232	31,718	16			0.0%	16	31,702	100%	☐		
08/25/03	5,241	908	6,149	16			0.0%	16	6,133	100%	☐		
09/01/03	4,927	840	5,767	13			0.0%	13	5,754	100%	☐		
09/08/03	4,082	2,222	2,222	13			0.0%	13	2,209	99%	☐		
09/15/03	4,188	2,333	2,333	13			0.0%	13	2,321	100%	☐		

Modifying Sales Override Values

1. In My Worksheets (in Collaborator Workbench), click Demand Analysis. Or if a worksheet is currently open, click File > Open. Click Demand Analysis and then

click Open.

2. If the worksheet does not show data immediately, click Data > Rerun. Or click the Run button.

   This launches the Demand Analysis worksheet.

3. Enters data in the History Override field for history or base override and/or the % Chg to Base field for the Forecast.

   The results are shown in the Adjusted History and Final Forecast columns.

   Note: You can select and edit multiple cells.

4. From the Data menu, choose Save Data. Or click the Save Data button.

5. From the Data menu, choose Rerun.

   The worksheet updates to display the edited values.

Setting the Demand Priority

Note: This setting is only applicable for Demantra integrations with EBS.

1. In My Worksheets (in Collaborator Workbench), click Demand Analysis. Or if a worksheet is currently open, click File > Open. Click Demand Analysis and then click Open.

2. If the worksheet does not show data immediately, click Data > Rerun. Or click the Run button.

   This launches the DM: Demand Analysis worksheet.

3. In the Demand Priority field, double-click the cell for which you want to set a demand priority.

4. Enter the desired (numerical) priority.

5. From the File menu, choose Save Worksheet.

Approving the Forecast

Approvers are notified in the My Tasks window that a new forecast is available for the current planning cycle.

1. In My Tasks (in Collaborator Workbench), click Demand Analysis. Or if a

worksheet is currently open, click File > Open. Click Demand Analysis and then click Open.

2. If the worksheet does not show data immediately, click Data > Rerun. Or click the Run button.

   This launches the Demand Analysis worksheet.

3. Do one of the following:
   - To approve a line item in the forecast, click the appropriate check box in the Approve column.
   - To final approve a line item in the forecast, click the appropriate check box in the Final Approve column.

4. From the File menu, choose Save Worksheet.

5. In My Tasks (in Collaborator Workbench), select the Demand Analysis worksheet and then click Done.

   Demand Management notifies the final approver when all analysts have approved the current forecast.

Reference

Basics:

Accessing this Worksheet	Do one of the following: 1. In My Worksheets (in Collaborator Workbench), click the relevant worksheet. 2. If a worksheet is currently open, click File >Open. Click on the relevant worksheet.
Levels you can select	One of: • Product Category and Zone • Product Category and Organization • Item and Organization • Item and Zone

Time Aggregation	Weekly unless Oracle Demantra was implemented with a monthly or daily time period.

Business Data:

Series Group	Series	Description
EBS Input	Demand Priority	The allocated demand priority (note that this is series is only applicable for EBS integrations).
Forecast	% Change to Base	Factor override on sales forecast.
	Base Override	Manual override on sales forecast.
	Final Forecast	Final forecast (this appears in yellow if the difference between final forecast and final partner forecast does not meet the requirements of sales forecast tolerance).
	Baseline Forecast	Analytical sales forecast including user simulations.
	Simulation	Analytical re-forecast triggered by a user simulation.
Forecast Accuracy	Abs Deviation	Absolute deviation for the fit forecast.
	Abs % Error	Absolute percentage error for the fit forecast.
	Final Approval	When checked indicates that the forecast has received final approval.
	Final Approved By	User who final approved the forecast.
Historical Demand	Adjusted History	Shipment History – Request Date is the default.
	History	Historical actual sales/shipments. Shipment History – Request Date is the default.
	History Override	Manual override of historical actual sales/shipments.
Sales	Adjusted History	Unconstrained demand. Purple if out of stock.

	History	Historical actual sales/shipments.
	History Override	Manual override of historical actual sales/shipments.

Configure to Order Worksheets

Predefined Worksheets

Worksheets with the necessary series for analysis and modification of the forecast and historical data will be available for the planner at the beginning of each cycle. These are the same worksheets available in Oracle Demantra Demand Management. For each set, there are four predefined high level worksheets and one base level worksheet that is launched from the high level worksheet. The worksheets are:

- Demand Analysis for Product Category & Zone
- Demand Analysis for SKU & Zone Entity
- Demand Analysis for Product Category & Org
- Demand Analysis Detail for SKU & Org

Worksheets for Demand by Base Model, Option, and Item

There are configure to order seeded worksheets for the review of the bill of material dependent demand. The purpose of these worksheets is to support the demand planning process by analyzing the dependent demand for all the options and items that belong to a base model. This analysis can be accomplished either across all the location dimensions such as organization and site or for a specific organization and site. Some worksheets display the information an indented bill of material layout.

This table shows information about worksheet CTO: Item Demand by BOM by Week (Crosstab). This worksheet is similar to worksheet CTO: Item Demand by BOM by Month (Crosstab). However, it is at the week time level.

Selected series:

- History
- Consensus Forecast
- Forecast Dependent Demand
- Final Plng Pct
- Forecast Dependent Demand Override

- Plng Pct Override
- Final Forecast Dependent Demand
- Final Plng Pct
- Planning Percentage Option

Worksheets for Demand Forecast for All Items of an Option and Base Model

These seeded worksheets are for the dependent demand review of all the items for an option-model combination. The purpose of these worksheets is to support the demand planning process by analyzing the dependent demand for all the dependent items for an option and base model. This analysis can be accomplished either across all the location dimensions such as organization and site or for a specific organization and site. There are two seeded worksheets--one across all the organizations and sites and the other by organization and site. If the worksheet display is across all organizations, Final Planning Percentage is not in the display.

This table shows information about worksheet CTO: Demand for All Items of an Option & Base Model. This worksheet is similar to worksheet CTO: Demand for All Items of an Option & Base Mode across Org and Site. However, it does not have Organization and Site selected for Levels in the page section and does not display Final Planning Percentage.

Selected series:

- History
- Final Forecast Dependent Demand
- Forecast Dependent Demand
- Consensus Total Demand

Worksheet CTO: Demand for All Items of an Option & Base Model across Org and Site is similar to worksheet CTO: Demand for All Items of an Option & Base Model. However, this worksheet has Organization and Site selected for Levels in the page section and displays Final Planning Percentage.

Worksheets for Total Demand and Amount by Option Across All Models

These seeded worksheets are for the review of option demand across all base models. The purpose of these worksheets is to support the demand planning process by analyzing the demand generated for the options across base models. This analysis can be accomplished either across all the location dimensions such as organization and site or for a specific organization and site. There are two seeded worksheets--one across all the organizations and sites and another by organization and site.

This table shows information about worksheet CTO: Total Demand & Amount by Option Across All Models. This worksheet is similar to worksheet CTO: Total Demand

& Amount for Options by Base Model. However, it does not have Base Model selected for Levels in the page section.

Selected series:

- History
- Final Forecast Dependent Demand
- Final Forecast Dependent Demand Amount
- Consensus Total Demand
- Consensus Total Demand Amount

Worksheet CTO: Total Demand & Amount for Options by Base Model is similar to worksheet CTO: Total Demand & Amount by Option Across All Models. However, this worksheet has Base Model selected for Levels in the Page section.

This table shows information about worksheet CTO: Item Demand by BOM by Month (Crosstab). This worksheet is similar to worksheet CTO: Item Demand by BOM by Week (Crosstab). However, it is at the month time level.

Selected series:

- History
- Final Forecast Dependent Demand
- Forecast Dependent Demand Override
- Plng Pct - Existing

This table shows information about worksheet CTO: Total Demand and Amount by Item and Week

Selected series:

- Final Forecast Dependent Demand
- Consensus Total Demand
- Final Forecast Dependent Demand Amount
- Consensus Total Demand Amount

Filtering Data on CTO Worksheets

By default, CTO worksheets are filtered to only display items with CTO data. This includes items that are CTO-only, as well as items with both CTO and sales data. CTO worksheets can be configured to also display general sales data through the Advanced

Worksheets Options dialog box.

To see the Advanced Worksheet Options dialog box, go to Worksheet Designer, navigate to section Aggregation, and click button Advanced. You can click button Advanced if either:

- The worksheet includes a series that is based on a general level
- You select a general level as an aggregation level or filter

These are the settings:

- Include SALES_DATA combinations only: The worksheet displays all of the combinations that have historical demand (that exist in table SALES_DATA).
- Include CTO combinations only: The worksheet displays only combinations that have historical demand for the specified base models.
- Both options: The worksheet displays all combinations that have historical demand or for the specified base models.
- Neither option: The worksheet displays all combinations that have historical demand and for the specified base models.
- All General Levels: Available only when you select neither of the other options. The Neither option displays but uses the lowest level of aggregation for the specified members as criteria for displaying combinations

> **Caution:** Overriding the Base Override series for the Option and Option Classes series may cause unexpected results when viewing worksheet data and creates extraneous combinations in the `SALES_DATA` table. To prevent this, Oracle strongly recommends adding an Edit-Lock expression to the Base Override series and any other `SALES_DATA` series that are not relevant to Options and Option Classes.
>
> For more information, see Creating an Edit-Lock Expression in the *Oracle Demantra Implementation Guide*.

Service Parts Forecasting (SPF) Worksheets

The following Demantra Service Parts Forecasting worksheets are available:

- SPF: Analyze Forecast Organization Latest Revision
- SPF: Analyze Forecast Latest Revision
- SPF: Analyze Organization Base Model Spare

SPF: Analyze Forecast Organization Latest Revision Worksheet

Use this worksheet to review and modify the forecast for a specific Latest Revision/Organization. You can view the inputs used for both forecasting methods (statistical and calculated) and review both the forecasts and MAPE values for each.

You can then modify the historical demand and analytical settings and run simulations. Reject a simulation to roll back the changes and start over. Accept a simulation if you prefer the results over the original values.

You can also toggle between different forecast methods or override the forecast manually. The series SPF Final Forecast displays results of any changes.

The SPF: Analyze Forecast Organization Latest Revision worksheet uses the following series:

- SPF Item Usage
- SPF Item Usage Override
- SPF Item Usage Final
- SPF Baseline Forecast
- SPF Simulation
- SPF Calculated Forecast
- SPF Forecast Method
- SPF Forecast Override
- SPF Final Forecast
- SPF Failure Rate % Final
- SPF Forecast MAPE (Out of Sample)
- SPF Calculated Forecast MAPE
- SPF Average Demand

For details about these series, see Service Parts Forecasting Series, page A-13.

SPF: Analyze Forecast Latest Revision Worksheet

This worksheet provides an aggregated view of item usage, statistical and calculated forecasts, and accuracy metrics for a Latest Revision consisting of one or more spares across all organizations. You can easily modify the worksheet to display specific spares,

organizations, or tiers. When more detailed analysis of Latest Revision is necessary, use the SPF: Analyze Forecast Spare/Organizations worksheet.

This worksheet does not provide the SPF Forecast Override series by default, but you can add it if desired.

The SPF: Analyze Forecast Latest Revision worksheet includes the following series:

- SPF Item Usage Final
- SPF Baseline Forecast
- SPF Simulation
- SPF Calculated Forecast
- SPF Forecast Method
- SPF Forecast Override
- SPF Final Forecast
- SPF Forecast MAPE (Out of Sample)
- SPF Analytical Forecast MAPE
- SPF Calculated Forecast MAPE
- SPF Analytical Forecast BIAS %
- SPF Calculated Forecast BIAS %
- SPF Final Forecast MAPE 1 Month Lag

For details about these series, see Service Parts Forecasting Series, page A-13.

SPF: Analyze Organization Base Model Spare Worksheet

This worksheet displays the Base Model, Spare, and the Latest Revisions servicing the Base Model at the Organization level. This view allows you to carefully examine historical install base and the projected install base. In this view you can override or simulate changes to install base and see how it will affect the forecast across spares that are associated with the base model.

The worksheet uses the BOM tree with Base Model displayed followed by all spares that are part of the base model. Modifications which result in changes of values shown in the SPF Install Base Final or SPF Failure Rate % Final series are propagated to the SPF Calculated Forecast series.

The SPF: Analyze Organization Base Model Spare worksheet includes the following

series:

- SPF Latest Rev
- SPF Install Base under Contract
- SPF Install Base Forecast
- SPF Install Base Simulation
- SPF Install Base Override
- SPF Install Base Final
- SPF Item Usage
- SPF Item Usage Override
- SPF Item Usage Final
- SPF Engineering Estimated Failure Rate %
- SPF Failure Rate % Calculated
- SPF Failure Rate % Generation Method
- SPF Failure Rate % Override
- SPF Failure Rate % Final
- SPF Calculated Forecast
- SPF Baseline Forecast
- SPF Forecast Method
- SPF Forecast Override
- SPF Final Forecast

For details about these series, see Service Parts Forecasting Series, page A-13.

5

Configuring Demand Management

This chapter covers the following topics:

- Overview of the Configuration Process
- Configuring Demand Management Users
- Configuring Approval Workflows
- Configuring the Base Time Unit and Time Bucket Start Day
- Configuring the Item Short Name and Description
- Controlling System and Engine Maximum Sales Dates
- Purging Historical Sales Data

Overview of the Configuration Process

Demand Management works with supply chain planning data from external systems. Ultimately, those systems own most of the data; and Demand Management is responsible only for producing unconstrained forecasts for future demand and for generating tactical, operational, and strategic business plans.

Demand Management is designed for minimum amount of configuration, and comes with pre-seeded worksheets, users and groups, and workflows. To configure Demand Management, the general steps are as follows:

1. Demand Management utilizes users and user groups to facilitate the forecast review process. Pre-seeded users are provided in the Business Modeler. The Administrator should modify these users to reflect the names of the analysts, forecast approver and administrator. Forecasts from each analyst require approval from the final approver.

   In deployments using multiple lines of business, the Administrator should also assign product lines, families, and so on to analysts using Demantra User Security settings in the Demantra Business Modeler.

For more information, see Configuring Demand Management Users, page 5-2.

2. Demand Management uses the Archive Forecast, Demand Forecast, and Planning Group workflows to facilitate approval process. These workflows must be configured to include the user names of your Demand Analysts, Demand Manager, and Demand Administrators.

   For more information, see Configuring Approval Workflows, page 5-5.

3. By default, Demand Management uses a weekly base time resolution with a 4-4-5 weekly fiscal calendar hierarchy. This time resolution is fully configurable and may be changed to either days or months. As well, you can configure forecast start day, which is set to Monday by default.

   For more information, see Configuring the Base Time Unit and Time Bucket Start Day, page 5-13.

4. You can optionally configure the Demand Management worksheets to display item short names and descriptions.

   For more information, see Configuring the Item Short Name and Description, page 5-17.

5. You can configure how Demantra handles future data using the MaxSalesGen parameter. This parameter determines how data after the end of history is populated. Demand Management uses a configurable MaxSalesGen parameter to control how the EP_LOAD process loads future data.

   For more information, see Controlling System and Engine Maximum Sales Dates, page 5-18.

6. Demand Management uses automated workflows to import sales and other referenced data from external corporate systems. These workflows provide integration to external systems such as Oracle EnterpriseOne and EBusiness Suite. The actual workflows used depend on your ERP system configuration, and must be modified. As well, you may be required to make certain changes within your ERP environment.

Configuring Demand Management Users

During installation, Demand Management adds pre-seeded users and user groups that are required by the application and used for the approval process. During the configuration process, administrators should modify these users and groups to reflect the analysts and approvers who will be performing approval tasks. The Administrator also edits a pre-seeded Planning Group Workflow to specify the ID of the Final Approver who will be notified when the Analysts forecasts are ready for review. For more information on modifying user details, see Creating or Modifying a User in the Oracle Demantra Implementation Guide.

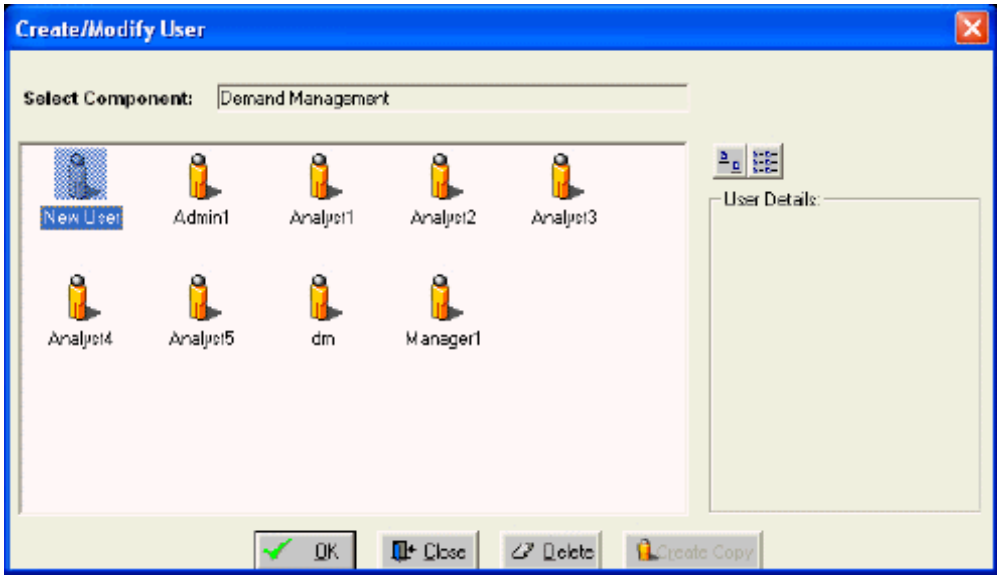
Demand Management adds the users Analyst 1-5, to the system; these users belong to the new user group Demand Analyst. Admin1 and Manager1 are also added. These users are used within the Demand Management workflows. For more information on configuring these workflows, see Configuring Approval Workflows, page 5-5.

Filtering User Data

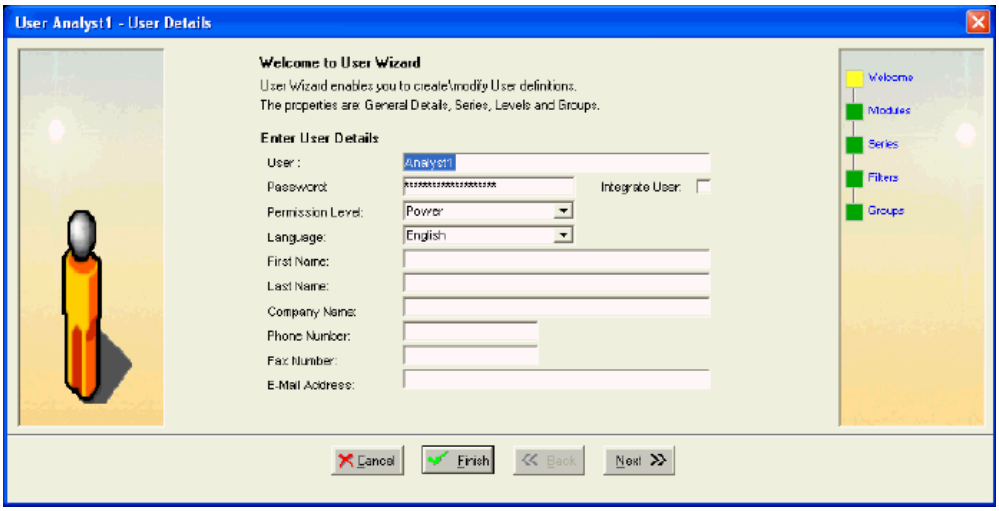
Note: Predefined users come with the ability to see all the data loaded into the system. If there is a requirement to limit this, a data filter can be applied to the users. For more information on filtering user data, see " Creating or Modifying a User" in the Oracle Demantra Implementation Guide.

1. Log on to the Business Modeler.
2. From the Security menu, choose Create/Modify User.

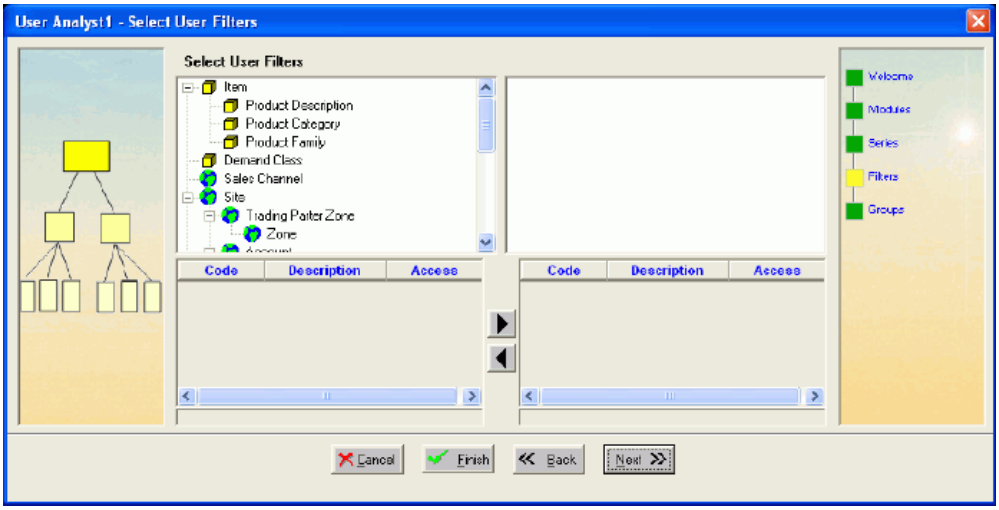
   The Create/Modify User dialog box appears.



3. Double-click the user icon for which you want to filter user data.
4. The User wizard appears.



5. Click the Next button until the Select User Filters dialog box appears. This dialog box lets you filter the data that the user can see; specifically, you control which levels and members the user can see.

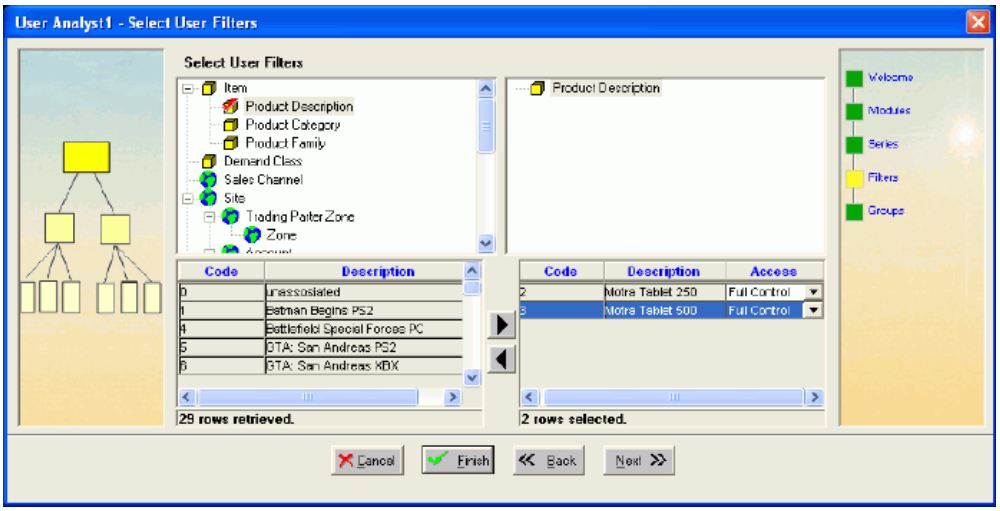


6. Filter the data that the user can see, as follows:

   - Click a level in the left side of the dialog box and drag it to the box on the right. Or double-click a level in the left side.

   - Now specify which members of this level the user can see. To do so, click a member in the list, and then click the right arrow button. Or double-click the member you want to filter out.

   The system moves the selected members to the box on the lower right side.



7. Repeat the preceding steps for each filter you want to add. Each filter automatically limits the choices available in subsequent filters.

8. When you have appropriately filtered data for the user, click Finish.

Configuring Approval Workflows

Oracle Demand Management uses the Archive Forecast, Demand Forecast and Planning Group workflows to automate the approval process. These workflows are pre-seeded to manage batch forecasting and facilitate the forecast approval process.

The workflows should be scheduled to run regularly by the Administrator. Specifically, the workflows:

- Reset the Final Approval and Final Approve By series to null.
- Run the Analytical Engine to generate a statistical forecast.
- Notifies all users in the Demand Analyst group that the forecast is available.
- Notifies the Manager (the final approver), when all analysts have approved the forecast or when the process has exceeded an allotted time.
- Periodically rolls forecast data, based on engine profiles that are configured and activated in the Business Modeler.

Although these workflows do not generally require customization, the Administrator must ensure the Demand Analyst group contains the user names of the users who modify the forecast and the Manager1 and Admin1 users have also been specified.

Note: Before configuring your approval workflows, you should configure the users you plan to use for approvals.

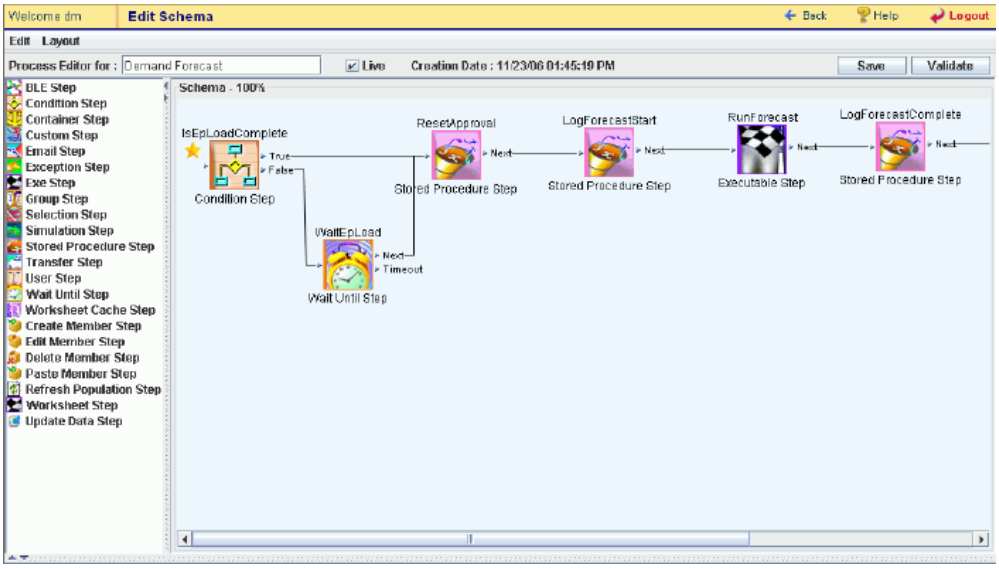
Configuring the Demand Forecast Workflow

The Demand Forecast workflow runs when the EP_LOAD process has completed, and resets the forecast approval status, generates a new forecast, and initiates the approval process.

1. Log into the Workflow Manager.

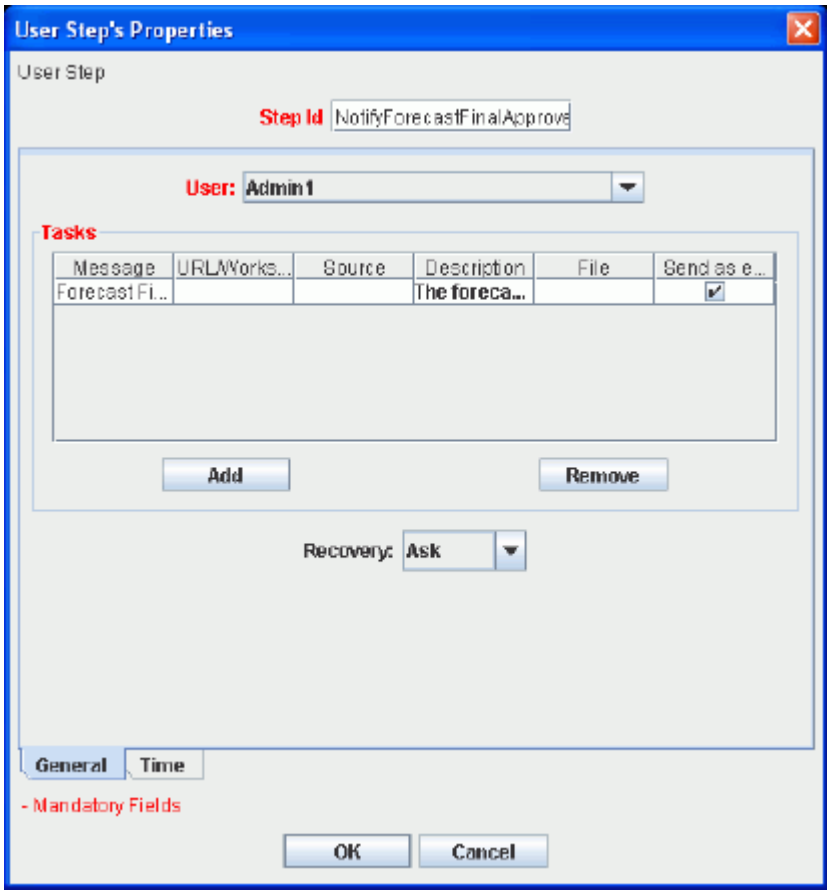
2. Locate the Demand Forecast workflow, and click the corresponding Edit button.

   The Edit Schema window opens, showing the Demand Forecast definition.



3. Double-click the NotifyForecastFinalApproved user step.

   The User Step's Properties dialog box appears.



4. In the User drop-down list box, choose the Demand Management Administrator account that you want to notify when the forecast has been approved. The default is Admin1.

5. Click OK.

6. In the Workflow Editor, click the Save button.

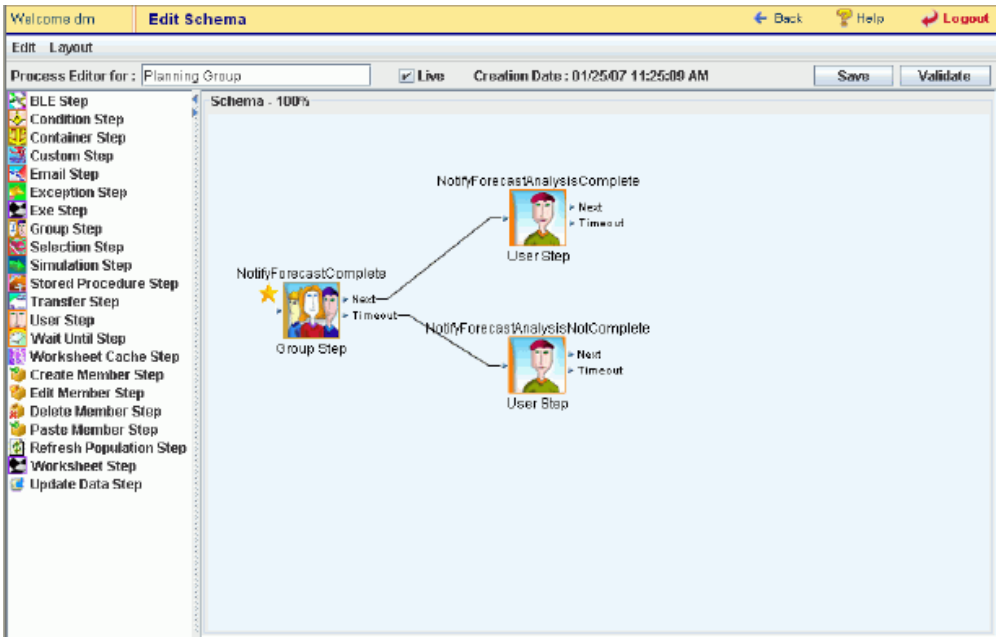
Configuring the Planning Group Workflow

The Planning Group workflow is responsible for sending notifications to Demand Analysts and Demand Managers when forecasts have been approved or a set time-out condition is met.

1. Log into the Workflow Manager.

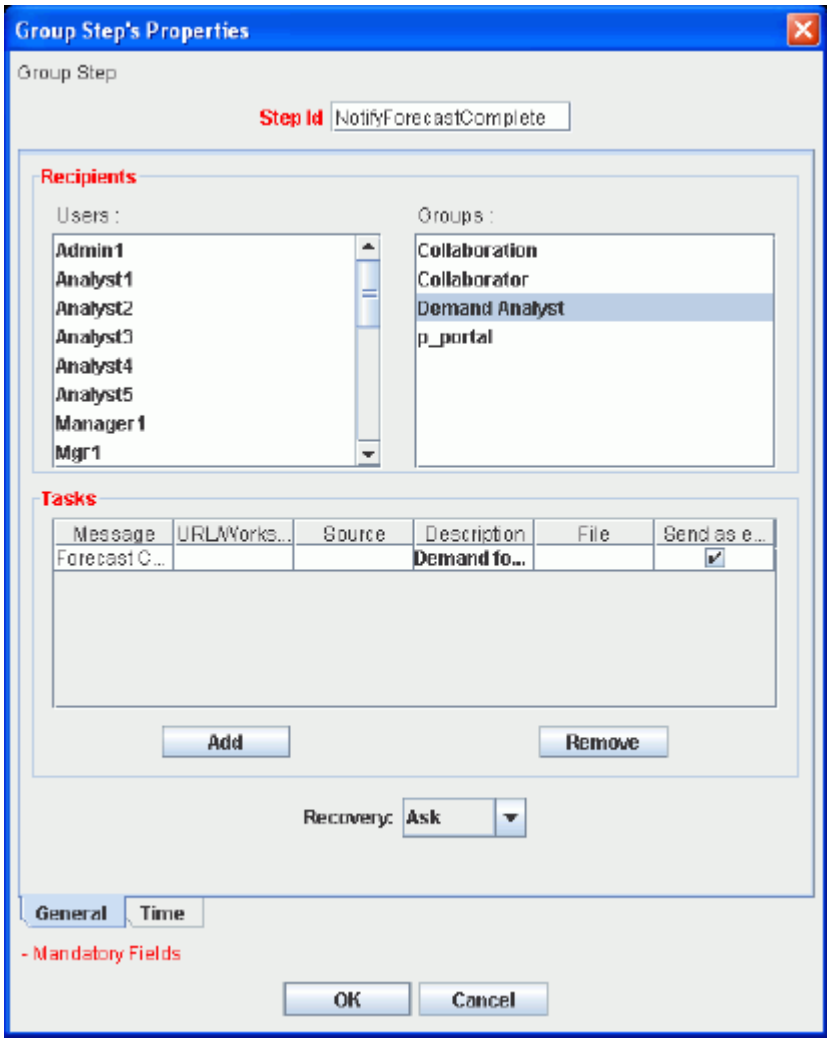
2. Locate the Planning Group workflow, and click the corresponding Edit button.

   The Edit Schema window opens, showing the Planning Group definition.



3. Double-click the NotifyForecastComplete group step.

   The User Step's Properties dialog box appears.



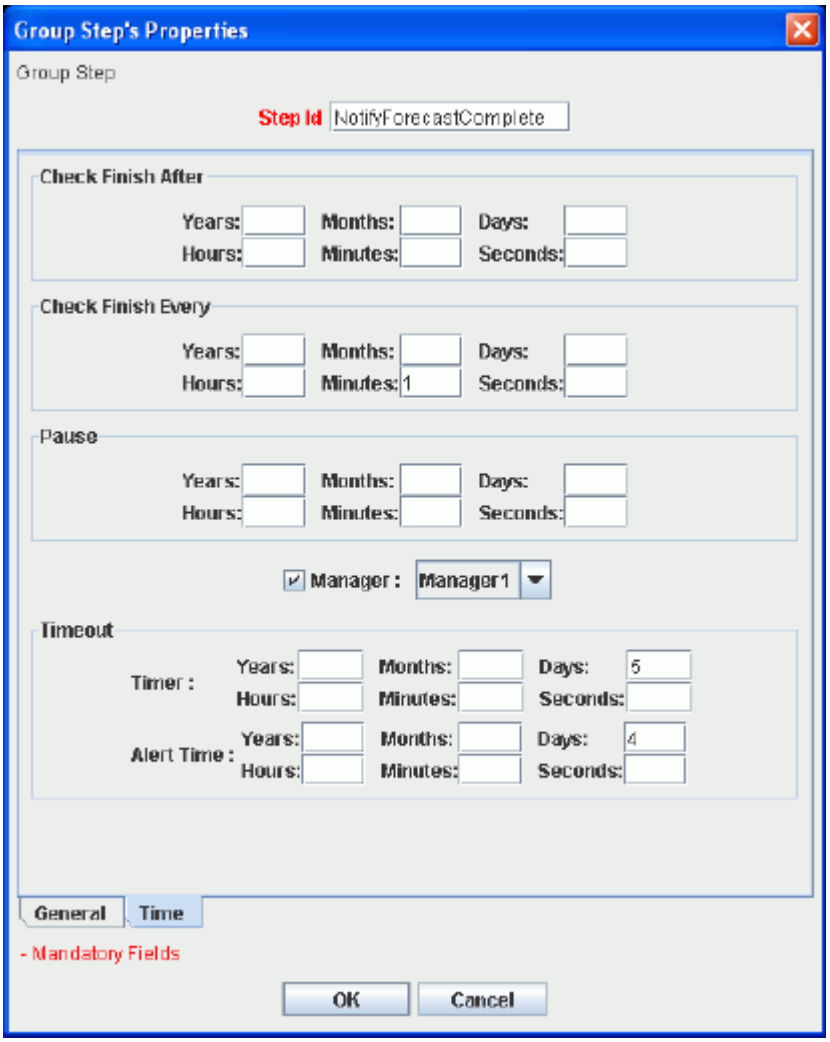
4. Do one of the following:

   - From the Users list, select the users that you want to notify when the forecast is generated. To select more than one user, press and hold the Ctrl key while clicking users.

   - From the Groups list, select the user group that you want to notify when the forecast is generated. To select more than one user, press and hold the Ctrl key while clicking groups.

5. Click the Time tab.

6. The Group Step's Properties dialog box appears.



7. In the Manager field, specify the user to notify if analysts' reviews are not completed on time. The default user is Manager1.

   By default, the workflow's timeout is set to five days and the alert is set to four days. Depending on your planning cycle, you may want to increase or decrease this value.

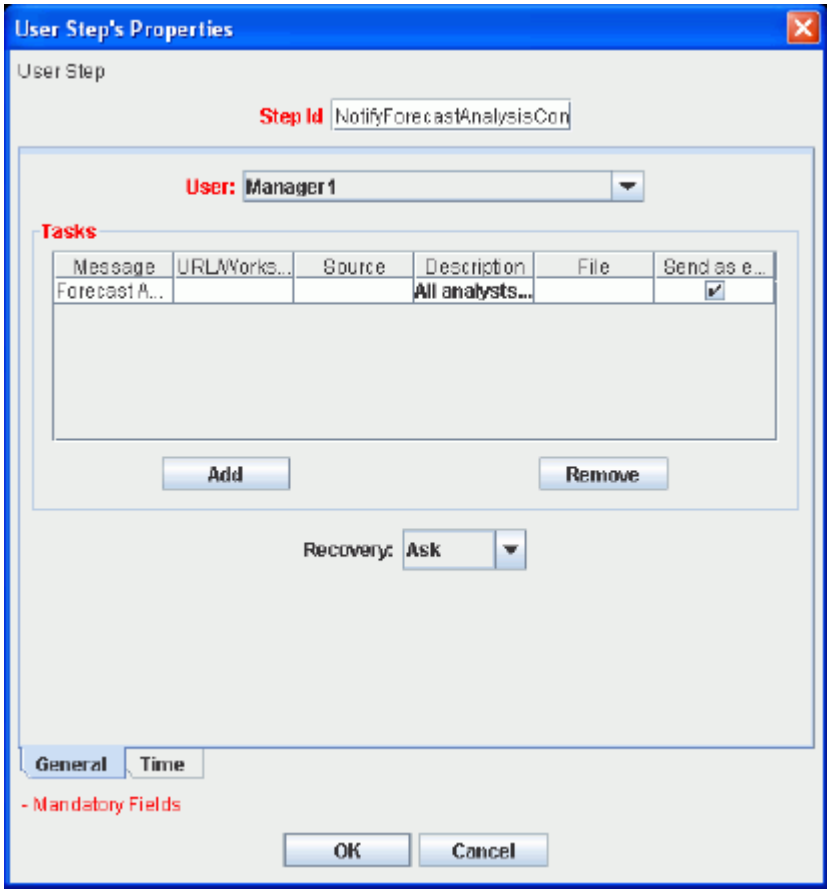
8. In the Timer section, enter a value (in days) at which point the workflow expires. When this time is reached, the user specified in the NotifyForecastAnalysisNotComplete step is initiated and the manager is notified that some of the Analysts have not reviewed their forecasts.

9. In the Alert Time section, enter a value (in days) at which point the workflow should send a reminder.

10. Click OK.

11. Double-click the NotifyForecastAnalysisComplete User Step.

    The User Step's Properties dialog box appears.



12. In the User drop-down list box, choose the user that you want to notify when all approvals are completed; the default is Manager1.

13. Click OK.

14. Double-click the NotifyForecastAnalysisNotComplete User step.

    The User Step's Properties dialog box appears.

15. In the User drop-down list box, choose the user that is to be notified that the Analysts' reviews are complete before the specified timeout. The default value is Manager1.

16. Click OK.

17. In the Workflow Editor, click the Save button.

Configuring the Approve Forecast Workflow

The Approve Forecast workflow rolls forecast data, based on the engine profiles configured and activated in the Business Modeler.

1. Log in to the Workflow Manager.
2. Locate the Approve Forecast workflow, and click the corresponding Edit button.

   The Edit Schema window opens, showing the Approve Forecast definition.
3. Double-click the User step.
4. In the User drop-down list box, enter the user name for the Demand Administrator that you want to notify when the forecast is rolled; the default is Admin1.
5. Click OK.
6. In the Workflow Editor, click the Save button.

Configuring Approval Workflows for Multiple User Groups

If there is more than one group of Analysts and Managers (Final Approver) that review and modify the forecast, then the Administrator must change the pre-seeded workflows to handle the additional groups. Specifically, you must:

1. Duplicate Planning Group workflow with the following modifications for each additional group:
   1. Log in to the Workflow Manager.
   2. Edit the Planning Group workflow.
   3. In the Planning Group workflow's Group Step dialog box, add the additional group and users that are part of the approval process.
   4. Click the Time tab.
   5. Check the Manager check box and select the Manager's ID from the list of values.
   6. Modify Timeout settings, if required.
   7. Click OK.
2. Modify the Demand Forecast workflow to add additional ApproveForecast steps:
   1. Log in the Workflow Manager.

2. Edit the Demand Forecast workflow.

3. Double click the Custom Step icon to add an additional custom step.

4. In the Class Name field, enter the class name. This should be the same as in the original step. (For example, com.demantra.workflow.step.WorkflowLauncherStep).

5. In the Parameters section, click Add.

6. Add the schema_id parameter, and assign it the same value as the schema_id parameter in the duplicate Planning Group workflow created in step 1.

7. Add the user_id parameter, and assign it the same value as the user_id parameter in the duplicate Planning Group workflow created in step 1.

8. Add the sync parameter, and assign it the same value as the sync parameter in the duplicate Planning Group workflow created in step 1.

9. Click OK.

Configuring the Base Time Unit and Time Bucket Start Day

The default Demand Management time hierarchy is a 4-4-5 (week) fiscal calendar. You can change this configuration to suit your business needs. If you change the base time unit from Week to either Day or Month, then all worksheets and integration profiles need to be re-configured. The data model must be upgraded for the changes to take effect.

The base time bucket start day is Mondays by default, with the week ending Sunday. The Demand Administrator may change this base time unit after initial installation using the Business Modeler's Data Model wizard.

> **Note:** This change will affect all users in the system and should be coordinated through the Demantra system administrator. In addition, changing this setting will clear all time dependant information in the system and require a full historical refresh.

If the time bucket is changed from weekly to either daily or monthly, then the corresponding series has to be created for the lagged forecast series used in the Waterfall Analysis worksheets. For example, it may no longer be appropriate to use the last 13 lagged forecast cycles as a base for the worksheet.

Changing the Base Time Unit and Time Bucket Start Day

1. Log into the Business Modeler. If you do not have access to this, contact your

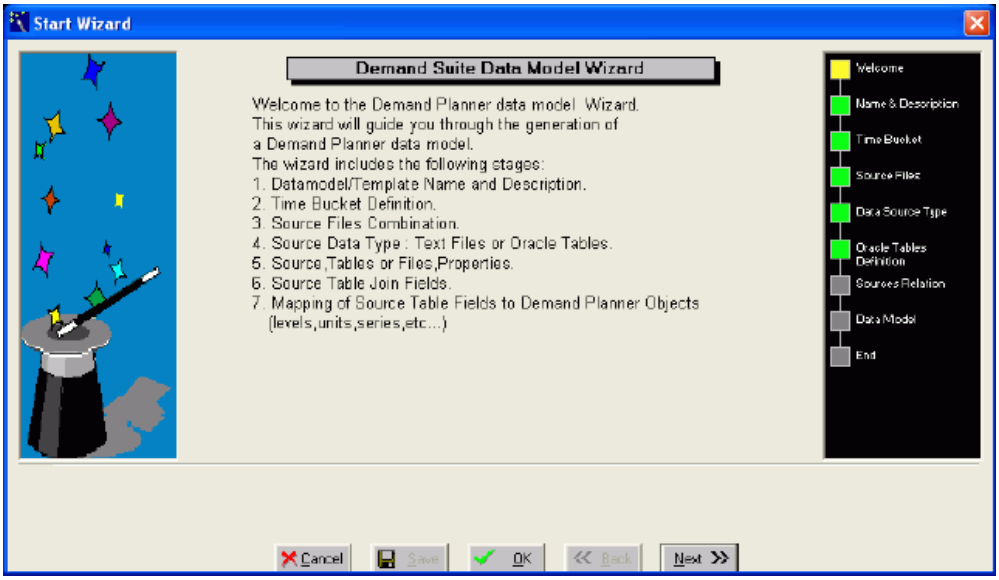
Demantra system administrator.

2. From the Data Model menu, choose Open Data Model.

   The Open Existing Data Model/Template dialog appears

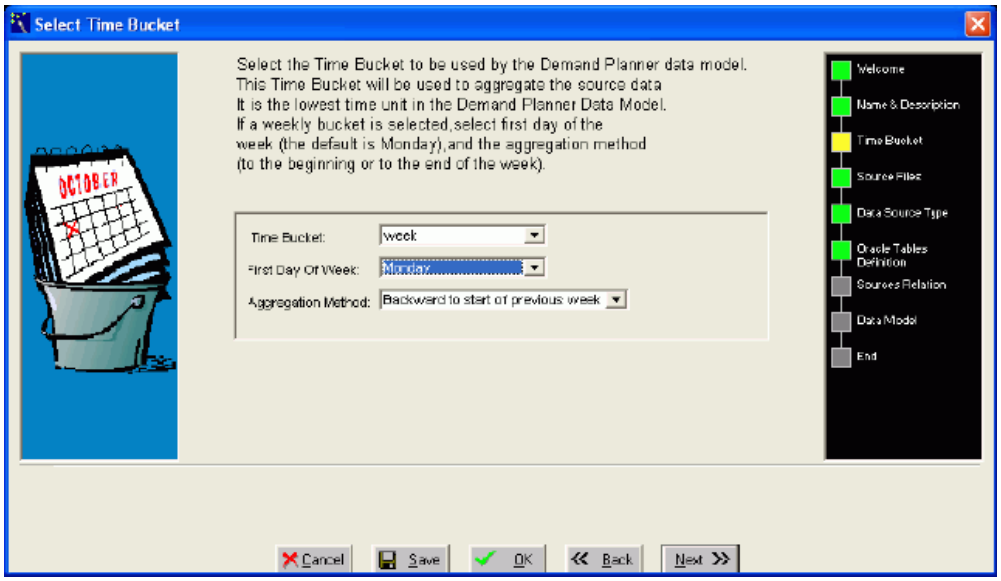
3. Double-click the Demand Management model icon.

   The Data Wizard appears.



4. Click the Next button twice.

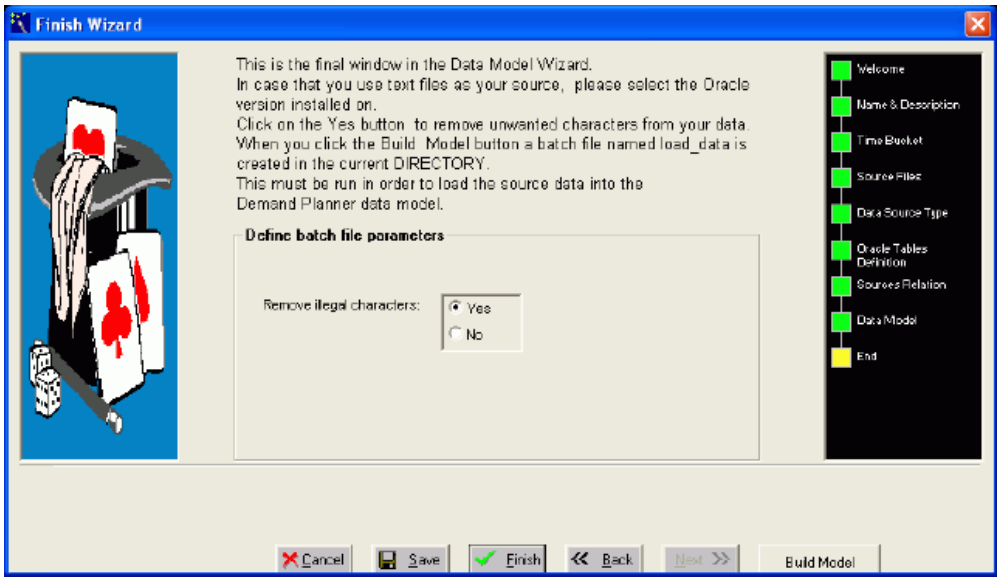
   The Select Time Bucket dialog box appears.



5. In the Time Bucket field, choose the level at which you want your time buckets.

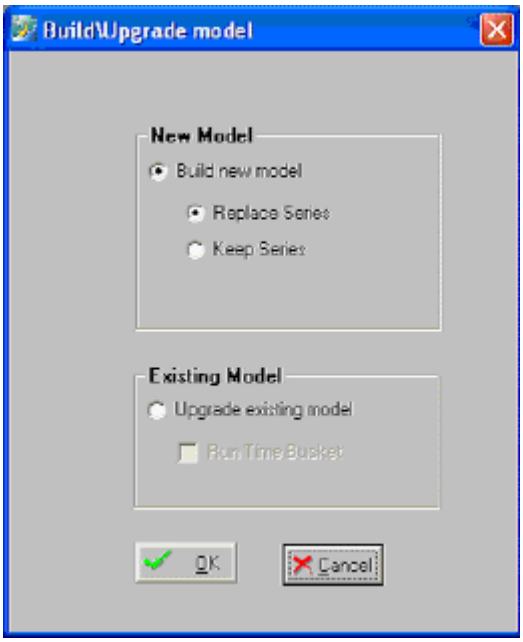
6. In the First Day of Week field, choose the day of the week on which you want to start the time bucket.

7. Click the Next button until you reach the Finish Wizard dialog box.



8. Click the Build Model button.

   The Build/Upgrade Model dialog box appears.



9. Now you can select whether to completely replace the existing data model or just modify it:

   - If you want to completely replace the existing data model, choose Build New Model and select one of the, following options:

     - Replace Series: Click this to completely replace the existing series definitions.

     - Keep Series: Click this if you do not want to make any changes to the existing series. This option is suitable if you are in the process of working on the data model but do not want to spend the time updating the series definitions right now.

       Note: This option will delete all worksheets, integrations and other aspects of the Demand Management application.

   - Alternatively, if you are just modifying an existing data model, select Upgrade Existing Model. In this case, if you have made changes to the base time unit, select Run Time Bucket.

10. Click OK.

    The process of building the data model begins. This may take a few minutes.

- Demantra highly recommends upgrading an existing model, rather than building a new model. For more information, see Building the Data Model in the Oracle Demantra Implementation Guide.
- You will need to redefine integration profiles and worksheets if the time levels specified therein are now invalid.

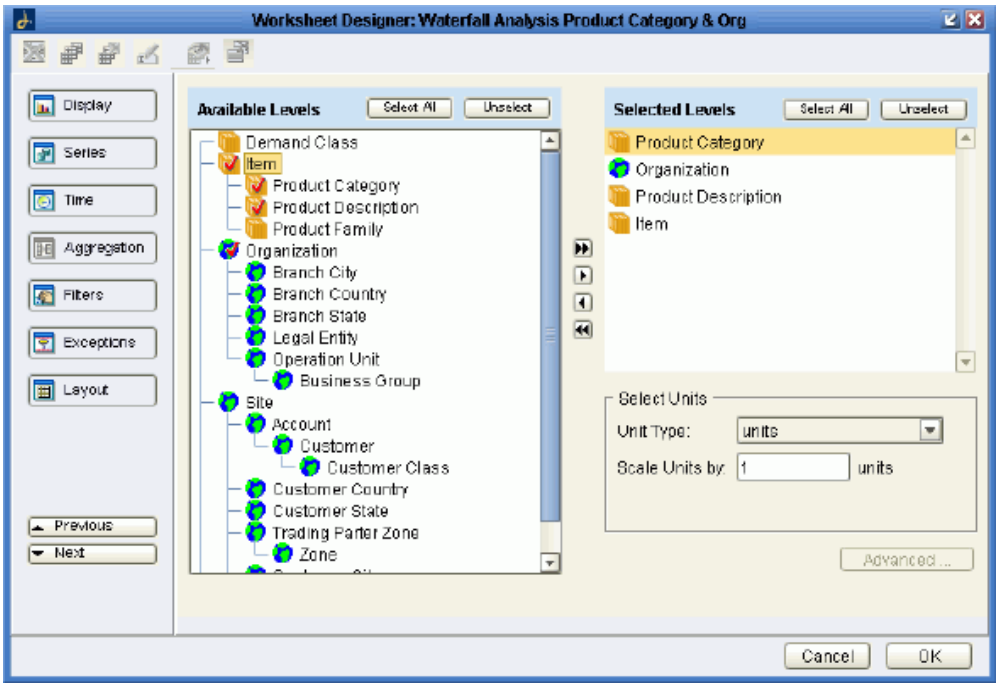
Configuring the Item Short Name and Description

Use the following procedure to configure your worksheets to display item short names (for example, AS63311) and descriptions (for example, Vision Pad Gold Item 1).

1. Log on to the Collaborator Workbench.
2. In My Tasks, click the worksheet to which you want to add item short names and descriptions.

   Or if a worksheet is currently open, click File > Open. Click the worksheet to which you want to add item short names and descriptions, and then click Open.
3. From the Worksheets menu, choose Layout Designer.

   The Worksheet Designer appears.
4. Click the Aggregation button.



5. Do one or more of the following to add item short names and descriptions to the worksheet:
   - To display the item short name, select Item.
   - To display the item description, select Item Description.
6. Click the Filters button.
7. Do one or more of the following to add item short names and descriptions to the worksheet:
   - To display the item short name, select Item.
   - To display the item description, select Item Description.
8. Click OK.
9. From the Data menu, choose Rerun.

Controlling System and Engine Maximum Sales Dates

Traditionally, only historical information was loaded into Demantra using the EP_LOAD process. All future information (that is, forecast data) is loaded using integration profiles or other loading mechanisms. This mechanism controlled the dates

marked as end of history for the Forecasting Engine and the Collaborator Workbench.

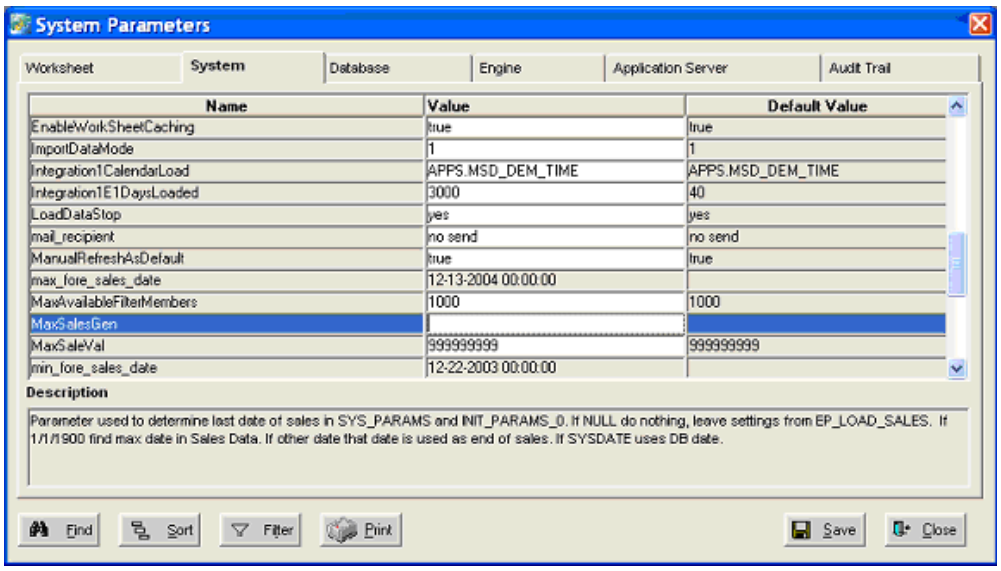
With the addition of the MaxSalesGen parameter, you can now use the EP_LOAD process to load future dates into Demantra. This parameter determines how data after the end of history is populated.

> **Note:** When populating the MaxSalesGen parameter, its important to enter all dates in the MM-DD-YYYY 00:00:00 format.

Populating the MaxSalesGen Parameter

1. Log into the Demantra Business Modeler.
2. From the Parameters menu, choose System Parameters.

   The System Parameters dialog box appears.
3. Click the System tab.



4. In the MaxSalesGen field, enter one of the following values:
   - **Null:** If you leave this parameter blank, Demantra compares the last date loaded into the system to the current last system date. The latest of the two dates is set to the last date of history.

     Use this setting when only historical dates are being loaded.
   - **Sysdate:** Use this value to base the last date of history on the period containing today's date. For example, in a weekly system with weeks beginning Monday, if

run on Feb 16th 2007 the last date of history would be set to the previous Monday 2/12/2007. For a monthly system run on the same date the end of history would be set to 2/1/2007.

Use this value where the system date should match current date while allowing future information to be loaded.

- **01-01-1900 00:00:00:** Use this date to set the end of history to the last date in the sales_data table where the actual_quantity column>0.

  Use this value in production environments where future information is being loaded but there is a lag in historical information availability. It is critical that the data used to drive the engine be stored in the actual_quantity column. Note that using this setting can potentially increase loading times for large deployments.

- **Any date other than 01-01-1900 00:00:00:** Any other date will cause the last date of history to be based on the entered date. In a weekly system with weeks beginning Monday, if date entered is Jan 16th 2007 the last date of history would be set to the previous Monday 1/15/2007. For a monthly system run with the same parameter setting the end of history would be set to 1/1/2007.

  Use this value to test systems where the desired end of history date does not match executed date. Allows users full control on dates assigned as end of history and beginning of forecast.

5. Click the Save button.

Purging Historical Sales Data

When purging historical sales data, Demantra uses the following operators to select date ranges:

- For Date From, Demantra selects the first available date that is greater than or equal to (>=) the specified Date From value.

- For Date To, Demantra selects the last available date that is less than or equal (<=) to the specified Date To value.

  Note: When choosing date ranges to purge, the collection date range should align with the time unit start date.

A

Demand Management Levels and Series

Demand Management Levels

The following is a list of the available levels in the Demand Management application:

Available EBS Levels

For Item dimensions:

- Demand Class
- Item
  - Product Category
  - Product Description
  - Product Family

For Location dimensions:

- Organization
  - Legal Entity
  - Operation Unit
    - Business Group
- Sales Channel
- Site
  - Account

    - Customer
        - Customer Class

- Trading Partner Zone
    - Zone

Available EnterpriseOne Levels

For Item dimensions:

- Item
    - Item Category Code 1
    - Item Category Code 2
    - Item Category Code 3
    - Item Category Code 4
    - Item Category Code 5
    - Item Category Code 6
    - Item Category Code 7
    - Product Description

For Location dimensions:

- Organization
    - Item Category Code 1
    - Item Category Code 2
    - Item Category Code 3
    - Item Category Code 4
    - Item Category Code 5
    - Branch City
    - Branch Country

    - Branch State

- Site
    - Account
    - Customer Category Code 1
    - Customer Category Code 2
    - Customer Category Code 3
    - Customer Category Code 4
    - Customer Category Code 5
    - Customer Category Code 6
    - Customer Category Code 7
    - Customer City
    - Customer Country
    - Customer State
    - Trading Partner Zone

Available Configure to Order Levels

Level	Level Type	Parent Level	Data Table	Population Attribute	Description
CTO	General Level		T_EP_CTO	t_ep_cto	Contains information for each link in the BOM tree.
Parent Item	General Level		T_EP_CTO_PARENT_ITEM Synonym to T_EP_ITEM	-	Alias level to Item, contains the parent items in the BOM tree.

Level	Level Type	Parent Level	Data Table	Population Attribute	Description
Base Model	-		T_EP_CTO_BASE_MODEL	-	Contains the Base Model items in the BOM tree.
Demand Type	-		T_EP_CTO_DEMAND_TYPE	-	Identifies whether a link is a Base Model or an Option.

Available Service Parts Forecasting Levels

For information about SPF Item levels, refer to the Available EBS Levels, page A-1.

SPF Location levels:

- Organization Type
- Organization Tier
- Country Virtual
- Region Virtual
- Time Zone Virtual
- Global Virtual

SPF General Levels

The table below provides information about general SPF levels.

Level	Level Type	Parent Level	Data Table	Population Attribute	Description
SPF	General Level	SPF Base Model	T_EP_SPF	t_ep_spf	Contains information about each item in the service BOM tree.

Level	Level Type	Parent Level	Data Table	Population Attribute	Description
SPF Base Model	General Level	-	T_EP_SPF_BASE_MODEL	-	Contains information about the Base Model (root item) of the service BOM.
SPF Child	General Level	-	T_EP_SPF_CHILD_ID	-	Internal level used to map BOM structure.
SPF Demand Type	General Level	-	T_EP_SPF_DEMAND_TYPE	-	Level indicating whether selected member stores dependant or independent demand.
SPF Latest Revision	General Level	-	T_EP_SPF_LATEST_REV	-	Level that groups different spares in the same supersession. Level can be used for forecasting items serving the same role for a base model together.
SPF Parent	General Level	-	T_EP_SPF_PARENT	-	Internal level used to map BOM structure.

Level	Level Type	Parent Level	Data Table	Population Attribute	Description
SPF Parent Item	General Level	-	T_EP_SPF_PARENT_ITEM	-	Internal level used to map BOM structure.

Demand Management Series

The following is a list of series used by the Demand Management application:

Series	Description
% Change to Base	Factor Override on Sales Forecast
1 Week Lag Forecast	Forecast as of 1 Week ago.
10 Week Lag Forecast	Forecast as of 10 Weeks ago.
11 Week Lag Forecast	Forecast as of 11 Weeks ago
12 Week Lag Forecast	Forecast as of 12 Weeks ago
13 Week Lag Absolute Dev	Absolute Deviation of 13 Week Lagged Forecast (abs(13 Week Lag Forecast - Adjusted History))
13 Week Lag Absolute Pct Err	Absolute Pct Error of 13 Week Lagged Forecast (abs(13 Week Lag Forecast - Adjusted History)/ Adjusted History)
13 Week Lag Forecast	Forecast as of 13 Weeks ago
13 Week Lag Pct Err	Pct Error of 13 Week Lagged Forecast ((13 Week Lag Forecast - Adjusted History)/Adjusted History)
2 Week Lag Forecast	Forecast as of 2 Weeks ago
3 Week Lag Forecast	Forecast as of 3 Weeks ago

4 Week Lag Absolute Dev	Absolute Deviation of 4 Week Lagged Forecast (abs(4 Week Lag Forecast - Adjusted History))
4 Week Lag Absolute Pct Err	Absolute Pct Error of 4 Week Lagged Forecast (abs(4 Week Lag Forecast - Adjusted History)/ Adjusted History)
4 Week Lag Forecast	Forecast as of 4 Weeks ago
4 Week Lag Pct Err	Pct Error of 4 Week Lagged Forecast ((4 Week Lag Forecast - Adjusted History)/Adjusted History)
5 Week Lag Forecast	Forecast as of 5 Weeks ago
6 Week Lag Forecast	Forecast as of 6 Weeks ago
7 Week Lag Forecast	Forecast as of 7 Weeks ago
8 Week Lag Absolute Dev	Absolute Deviation of 8 Week Lagged Forecast (abs(8 Week Lag Forecast - Adjusted History))
8 Week Lag Absolute Pct Err	Absolute Pct Error of 8 Week Lagged Forecast (abs(8 Week Lag Forecast - Adjusted History)/ Adjusted History)
8 Week Lag Forecast	Forecast as of 8 Weeks ago
8 Week Lag Pct Err	Pct Error of 8 Week Lagged Forecast ((8 Week Lag Forecast - Adjusted History)/Adjusted History)
9 Week Lag Forecast	Forecast as of 9 Weeks ago
Abs % Error	Absolute % Error for Fit Forecast
Abs Deviation	Absolute Deviation for Fit Forecast
Adjusted History	Final History data including adjustments
Base Override	Manual Override on Sales Forecast
Baseline Forecast	Analytical Sales Forecast Including User Simulations

Booking - Req Qty - Req Date	Booking History - Requested Quantity - Requested Date
Booking - Book Qty - Book Date	Booking History - Booked Quantity - Booked Date
Booking - Book Qty - Req Date	Booking History - Booked Quantity - Requested Date
Booking - Req Qty - Book Date	Booking History - Requested Quantity - Booked Date
Demand Class Destination Key	Demand Class Destination Key
Demand Priority	Demand Priority
EBSPRICELIST0 to EBSPRICELIST129	Price lists
Final Approval	Final Approved if Checked
Final Approved By	User who finally approved the forecast
Final Forecast	Final Forecast
History	Historical Actual Sales/Shipment
History Override	Historical Manual Override on Sales
Item Destination Key	Item Destination Key
Mean Absolute Pct Err	Mean Absolute Pct Err
Organization Destination Key	Organization Destination Key
Pct Bias	Pct Bias
Relative Err	Relative Err
Return History	Returns History

Return History Site Source Key	Returns History Site Source Key
Root Mean Squared Err	Root Mean Squared Err
Sales Channel Destination Key	Sales Channel Destination Key
Shipping - Req Qty - Req Date	Shipping History - Requested Quantity - Requested Date
Shipping - Ship Qty - Req Date	Shipping History - Shipped Quantity - Requested Date
Shipping - Ship Qty- Ship Date	Shipping History - Shipped Quantity - Shipped Date
Simulation	Analytical Re-Forecast Triggered by a User Simulation
Site Destination Key	Site Destination Key

This is a list of the series for Configure to Order

Series	Description
Archived Consensus Total Demand	Consensus Total Demand for each of the most recent 13 historical weeks.
BOM Eff End Date	Effective end date of the option Sourced from Oracle e-Business Suite.
BOM Eff Start Date	Effective start date of the option. Sourced from Oracle e-Business Suite.
Consensus Forecast	Weighted combination of the Final Forecast, Sales Forecast, and Marketing Forecast . Oracle Demantra Sales and Operations Planning series, available to Oracle Demantra Demand Management.
Consensus Forecast Amount	Monetary value of Consensus Forecast Calculated: Consensus Forecast * Item price

Consensus Total Demand	Demand represented by the sum of Final Forecast Dependent Demand and Consensus Forecast of an item. Calculated: Final Forecast Dependent Demand + Consensus Forecast
Consensus Total Demand Amount	Monetary value of Consensus Total Demand Calculated: Forecast Dependent Demand Amount + Consensus Forecast Amount
Constrained Forecast	Indicates how much of the consensus demand can be filled given supply chain constraints. Oracle Demantra Sales and Operations Planning series, imported from Oracle Advanced Supply Chain Planning or Oracle Strategic Network Optimization, available to Oracle Demantra Demand Management.
Dep Demand – Existing	Dependent demand calculated based on series Plng Pct– Existing. Calculated: Plng Pct-Existing of item* If Parent = BaseModel, Consensus Forecast of Parent. Otherwise, series Final Forecast Dependent Demand of Parent.
Dep Demand – History	Dependent demand calculation based on Plng Pct– History. Calculated: Plng Pct-History of item* (If Parent = BaseModel, Consensus Forecast of Parent). Otherwise, series Final Forecast Dependent Demand of Parent.
Final Forecast Amount	Monetary value of Final Forecast Calculated: Final Forecast * Item price
Final Forecast Dependent Demand	Based on the override and Forecast Dependent Demand Calculated: Use Forecast Dependent .Demand.Override; if it is null, use Forecast Dependent Demand
Final Forecast Dependent Demand Amount	Monetary value of Final Forecast Dependent Demand Calculated: Final Forecast Dependent Demand * Item price
Final Plng Pct	Final planning percentage based on series Plng Pct Choice. Value can be overriden by series Plng Pct Override. Use Plng Pct Override; if it is null, use Plng Pct Choice

Final Plng Pct – Aggregated	Final Plng Pct at levels higher than Item/Org Calculated: Server expression
Forecast Dependent Demand	Based on series Final Plng Pct. Calculated: Final Plng Pct * If Parent = BaseModel, Consensus Forecast of Parent. Otherwise, series Final Forecast Dependent Demand of Parent.
Forecast Dependent Demand Override	Override of the item's Forecast Dependent Demand Manual entry
Dependent History	Historical dependent demand for the default History series Default is Shipping History, requested items, shipped date Loaded at levels PRD for Item, TIM: for Day, ORG for Organization, GEO for Site, CHN for Sales Channel, and DCS: Demand Class
History series (seeded)	Historical dependent demand for the series - Dependent Booking - booked items – booked date - Dependent Booking – requested items – booked date - Dependent Booking – booked items – requested date - Dependent Booking – requested items - requested date - Dependent Shipping - requested items – shipped date (default) - Dependent Shipping – shipped items – requested date - Dependent Shipping – requested items - requested date Loaded at levels PRD for Item, TIM: for Day, ORG for Organization, GEO for Site, CHN for Sales Channel, and DCS: Demand Class For each seeded history series, there is a corresponding dependent demand series. For example, seeded history series Booking - booked items – booked date corresponds to dependent demand series Dependent Booking - booked items – booked date.
Marketing Forecast	Forecast from Marketing Department. Oracle Demantra Sales and Operations Planning series, available to Oracle Demantra Demand Management.

MAPE CTO	Mean Absolute Percentage Error used for Forecast Accuracy Statistic Calculated: Results of the MAPE CTO procedure that calculates the accuracy statistics for Consensus Total Demand. Calculatedsum(abs(Total History – Archived Forecast))/sum(History)
Plng Pct– Existing	Planning percentage from the source Sourced from Oracle e-Business Suite
Plng Pct– History	Planning Percentage calculated based on the sales history of items and their parents. Calculated: Averaged over the number of periods in parameter CTO_HISTORY_PERIODS, default is 52. Total(History Dependent Demand over CTO_History_Periods) / If Item's Parent = BaseModel, Total(History of Parent over CTO_History_Periods). Otherwise, Total(History Dependent Demand of Parent overCTO_History_Periods)
Plng Pct Choice	Planning percentage used to calculate Forecast, Dependent Demand, and Final Forecast Dependent Demand. Select from dropdown list, stored in paraeater CTO_PLANNING_PERCENTAGE. Valid values • Pln Pct-Existing • Plng Pct-History • Multiple: Displays at higher levels when items in lower levels have different choices.
Plng Pct Override	Override of planning percentage value from series Plng Pct – Existing, Plng Pct – History, or Plng Pct - Forecast. Manually entered.
Quantity Per Parent	Number of this item used for one parent. Sourced from Oracle e-Business Suite.
Sales Forecast	Forecast from Sales Department. Oracle Demantra Sales and Operations Planning series, available to Oracle Demantra Demand Management.

Service Parts Forecasting Series

The following table displays the series used by Service Parts Forecasting.

Series Name	Definition
SPF Analytical Forecast Archive 1	Analytical forecast generated and archived for 1 forecasting cycles prior to the current cycle.
SPF Analytical Forecast Archive2	Analytical forecast generated and archived for 2 forecasting cycles prior to the current cycle.
SPF Analytical Forecast Archive3	Analytical forecast generated and archived for 3 forecasting cycles prior to the current cycle.
SPF Analytical Forecast BIAS %	Accuracy measure that indicates whether the forecast is above or below demand. Calculated by comparing shipments to SPF Analytical Forecast.
SPF Analytical Forecast Bias % 1 Month lag	Bias of the analytical forecast one month into the future.
SPF Analytical Forecast MAPE 1 Month lag	Accuracy of the analytical forecast one month into the future.
SPF Analytical Models	Series displaying which analytical models were used to generate the Spares forecast.
SPF Analytical Models Min	For Internal Use. Displays whether different models were used to forecast different combinations under the level displayed in worksheet.
SPF Analytics Forecast MAPE	Accuracy measure that indicates how accurately the forecast matches demand. Calculated by comparing shipments to SPF Analytics Forecast.
SPF Average Demand	Indicates the average historical demand for a spare/org. Calculated by the proport mechanism.

Series Name	Definition
SPF Baseline Forecast	Latest forecast generated by the analytical engine.
SPF Best Forecast	Series displays whether calculated or analytical forecast is more accurate.
SPF Calculated Forecast	Latest forecast generated by multiplying install base under contract and final failure rate %. This series' values will automatically be updated when SPF Install Base Final and SPF Failure Rate % Final are modified.
SPF Calculated Forecast Archive1	Analytical forecast generated and archived for 1 forecasting cycles prior to the current cycle.
SPF Calculated Forecast Archive2	Analytical forecast generated and archived for 2 forecasting cycles prior to the current cycle.
SPF Calculated Forecast Archive3	Analytical forecast generated and archived for 3 forecasting cycles prior to the current cycle.
SPF Calculated Forecast BIAS %	Accuracy measure that indicates whether the forecast is above or below demand. Calculated by comparing shipments to SPF Calculated Forecast.
SPF Calculated Forecast Bias % 1 Month lag	Bias of the calculated forecast one month into the future.
SPF Calculated Forecast MAPE	Accuracy measure that indicates how accurately the forecast matches demand. Calculated by comparing shipments to SPF Calculated Forecast.
SPF Calculated Forecast MAPE 1 Month lag	Accuracy of the calculated forecast one month into the future.
SPF Child Spares	For Internal Use. Contains child information for Spares BOM.
SPF Consensus Forecast	The consensus forecast values imported into Demantra. Based on the forecast made at Base Model/All Orgs.

Series Name	Definition
SPF Demand Type	For Internal Use. Contains demand type information for Spares BOM.
SPF Depth	For Internal Use. Contains Spares BOM information regarding depth in BOM.
SPF Engineering Estimated Failure Rate %	A manual estimate of the Failure Rate for a new part.
SPF Engineering Estimated Failure Rate % MAPE	MAPE measure of last three months, comparing calculated forecast based on SPF Engineering Estimated Failure Rate %.
SPF Failure Rate % Calculated	Result of the failure rate calculation.
SPF Failure Rate % Calculated MAPE	MAPE measure of last three months, comparing calculated forecast based on SPF Failure Rate % Calculated.
SPF Failure Rate % Final	Failure rate value used for propagation and calculation. Based on Override, Calculated, and Engineering Estimates. When the value of this series change, the change propagates to the SPF Calculated Forecast series.
SPF Failure Rate % Generation Method	Indicates whether the calculated or the statistical forecast will be used in the SPF Final Forecast series.
SPF Failure Rate % Override	Manual override of failure rate calculation, displayed as a percentage.
SPF Final Forecast	Forecast series that will be exported to other systems. Generated by taking into account user overrides and selected forecasting method. User overrides are applied if available; otherwise selected method is used.
SPF Final Forecast Archive1	Analytical forecast generated and archived for 1 forecasting cycles prior to the current cycle.
SPF Final Forecast Archive2	Analytical forecast generated and archived for 2 forecasting cycles prior to the current cycle.

Series Name	Definition
SPF Final Forecast Archive3	Analytical forecast generated and archived for 3 forecasting cycles prior to the current cycle.
SPF Final Forecast Bias % 1 Month lag	Bias of the final forecast one month into the future.
SPF Final Forecast MAPE 1 Month lag	Accuracy of the final forecast one month into the future.
SPF Forecast MAPE (In Sample)	In Sample accuracy measure, generated by the analytical engine.
SPF Forecast MAPE (Out of Sample)	Accuracy measure that indicates how accurately the forecast matches demand. Calculated by comparing shipments to SPF Final Forecast.
SPF Forecast Method	Indicates whether to use either the analytical or the calculated forecast to drive final forecast. Default is Analytical.
SPF Forecast Method Min	For Internal Use. Displays whether different forecast methods are configured for different combinations under the level displayed in worksheet.
SPF Forecast Override	Override value that serves as the final forecast.
SPF Forecast Volatility	Forecast volatility metric.
SPF Install Base Final	Value used to drive calculated forecast. In history will display historical values while in the future will display the forecast for install base. Install base overrides will supersede historical and forecasted values.
SPF Install Base Forecast	Displays future forecast associated with install base under contract. When the value of this series changes, the change will be propagated to the SPF Calculated Forecast series.

Series Name	Definition
SPF Install Base Override	Allow user override of install base information.
SPF Install Base Simulation	Displays values associated with simulated install base under forecast.
SPF Install Base Under Contract	Amount of Base Model units being supported for a specific Organization.
SPF Item Shipment Final	Displays the final shipments. Displays user override if available, otherwise shows imported shipments.
SPF Item Shipment Override	User override of shipments imported into Demantra.
SPF Item Shipments	Stores the item shipments imported into Demantra.
SPF Item Usage	Stores the item usage imported into Demantra.
SPF Item Usage Final	Final usage value. Displays user override if available, otherwise shows loaded shipments.
SPF Item Usage Override	User override of item usage imported into Demantra.
SPF Latest Rev	Displays the latest revision information in worksheets using Spares BOM.
SPF Parent Install Base	For Internal Use. Propagates Install Base information to Spares BOM child nodes.
SPF Parent Spares	For Internal Use. Contains parent node Install Base information in Spares BOM. Used in data propagation.
SPF Simulation	Latest forecast generated running a simulation.

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