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# EnterpriseOne Supply Chain Planning Demand Management 8.12.1 Forecast Studio Implementation Guide

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EnterpriseOne Supply Chain Planning Demand Management 8.12.1 Forecast Studio Implementation Guide
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# Contents

# About This Documentation Preface

JD Edwards EnterpriseOne implementation guides provide you with the information that you need to implement and use JD Edwards EnterpriseOne applications from Oracle.

This preface discusses:

- JD Edwards EnterpriseOne application prerequisites.
- Application fundamentals.
- Documentation updates and printed documentation.
- Additional resources.
- Typographical conventions and visual cues.
- Comments and suggestions.
- Common fields in implementation guides.

**Note.** Implementation guides document only elements, such as fields and check boxes, that require additional explanation. If an element is not documented with the process or task in which it is used, then either it requires no additional explanation or it is documented with common fields for the section, chapter, implementation guide, or product line. Fields that are common to all JD Edwards EnterpriseOne applications are defined in this preface.

## JD Edwards EnterpriseOne Application Prerequisites

To benefit fully from the information that is covered in these books, you should have a basic understanding of how to use JD Edwards EnterpriseOne applications.

You might also want to complete at least one introductory training course, if applicable.

You should be familiar with navigating the system and adding, updating, and deleting information by using JD Edwards EnterpriseOne menus, forms, or windows. You should also be comfortable using the World Wide Web and the Microsoft Windows or Windows NT graphical user interface.

These books do not review navigation and other basics. They present the information that you need to use the system and implement your JD Edwards EnterpriseOne applications most effectively.

## Application Fundamentals

Each application implementation guide provides implementation and processing information for your JD Edwards EnterpriseOne applications.

For some applications, additional, essential information describing the setup and design of your system appears in a companion volume of documentation called the application fundamentals implementation guide. Most product lines have a version of the application fundamentals implementation guide. The preface of each implementation guide identifies the application fundamentals implementation guides that are associated with that implementation guide.

The application fundamentals implementation guide consists of important topics that apply to many or all JD Edwards EnterpriseOne applications. Whether you are implementing a single application, some combination of applications within the product line, or the entire product line, you should be familiar with the contents of the appropriate application fundamentals implementation guides. They provide the starting points for fundamental implementation tasks.

# Documentation Updates and Printed Documentation

This section discusses how to:

- Obtain documentation updates.
- Download and order printed documentation.

## Obtaining Documentation Updates

You can find updates and additional documentation for this release, as well as previous releases, on Oracle's PeopleSoft Customer Connection website. Through the Documentation section of Oracle's PeopleSoft Customer Connection, you can download files to add to your Implementation Guides Library. You'll find a variety of useful and timely materials, including updates to the full line of JD Edwards EnterpriseOne documentation that is delivered on your implementation guides CD-ROM.

**Important!** Before you upgrade, you must check Oracle's PeopleSoft Customer Connection for updates to the upgrade instructions. Oracle continually posts updates as the upgrade process is refined.

### See Also

Oracle's PeopleSoft Customer Connection, http://www.oracle.com/support/support_peoplesoft.html

## Downloading and Ordering Printed Documentation

In addition to the complete line of documentation that is delivered on your implementation guide CD-ROM, Oracle makes JD Edwards EnterpriseOne documentation available to you via Oracle's website. You can:

- Download PDF files.
- Order printed, bound volumes.

### Downloading PDF Files

You can download PDF versions of JD Edwards EnterpriseOne documentation online via the Oracle Technology Network. Oracle makes these PDF files available online for each major release shortly after the software is shipped.

See Oracle Technology Network, http://www.oracle.com/technology/documentation/psftent.html.

### Ordering Printed, Bound Volumes

You can order printed, bound volumes of selected documentation via the Oracle Store.

See Oracle Store, http://oraclestore.oracle.com/OA_HTML/ibeCCtpSctDspRte.jsp?section=14021

# Additional Resources

The following resources are located on Oracle's PeopleSoft Customer Connection website:

| Resource | Navigation |
|---|---|
| Application maintenance information | Updates + Fixes |
| Business process diagrams | Support, Documentation, Business Process Maps |
| Interactive Services Repository | Support, Documentation, Interactive Services Repository |
| Hardware and software requirements | Implement, Optimize + Upgrade; Implementation Guide; Implementation Documentation and Software; Hardware and Software Requirements |
| Installation guides | Implement, Optimize + Upgrade; Implementation Guide; Implementation Documentation and Software; Installation Guides and Notes |
| Integration information | Implement, Optimize + Upgrade; Implementation Guide; Implementation Documentation and Software; Pre-Built Integrations for PeopleSoft Enterprise and JD Edwards EnterpriseOne Applications |
| Minimum technical requirements (MTRs) | Implement, Optimize + Upgrade; Implementation Guide; Supported Platforms |
| Documentation updates | Support, Documentation, Documentation Updates |
| Implementation guides support policy | Support, Support Policy |
| Prerelease notes | Support, Documentation, Documentation Updates, Category, Release Notes |
| Product release roadmap | Support, Roadmaps + Schedules |
| Release notes | Support, Documentation, Documentation Updates, Category, Release Notes |
| Release value proposition | Support, Documentation, Documentation Updates, Category, Release Value Proposition |
| Statement of direction | Support, Documentation, Documentation Updates, Category, Statement of Direction |
| Troubleshooting information | Support, Troubleshooting |
| Upgrade documentation | Support, Documentation, Upgrade Documentation and Scripts |

# Typographical Conventions and Visual Cues

This section discusses:

- Typographical conventions.
- Visual cues.
- Country, region, and industry identifiers.
- Currency codes.

## Typographical Conventions

This table contains the typographical conventions that are used in implementation guides:

| Typographical Convention or Visual Cue | Description |
|---|---|
| **Bold** | Indicates PeopleCode function names, business function names, event names, system function names, method names, language constructs, and PeopleCode reserved words that must be included literally in the function call. |
| *Italics* | Indicates field values, emphasis, and JD Edwards EnterpriseOne or other book-length publication titles. In PeopleCode syntax, italic items are placeholders for arguments that your program must supply.<br>We also use italics when we refer to words as words or letters as letters, as in the following: Enter the letter *O*. |
| KEY+KEY | Indicates a key combination action. For example, a plus sign (+) between keys means that you must hold down the first key while you press the second key. For ALT+W, hold down the ALT key while you press the W key. |
| `Monospace font` | Indicates a PeopleCode program or other code example. |
| “ ” (quotation marks) | Indicate chapter titles in cross-references and words that are used differently from their intended meanings. |
| . . . (ellipses) | Indicate that the preceding item or series can be repeated any number of times in PeopleCode syntax. |
| { } (curly braces) | Indicate a choice between two options in PeopleCode syntax. Options are separated by a pipe ( \| ). |

| Typographical Convention or Visual Cue | Description |
|---|---|
| [ ] (square brackets) | Indicate optional items in PeopleCode syntax. |
| & (ampersand) | When placed before a parameter in PeopleCode syntax, an ampersand indicates that the parameter is an already instantiated object.<br>Ampersands also precede all PeopleCode variables. |

# Visual Cues

Implementation guides contain the following visual cues.

## Notes

Notes indicate information that you should pay particular attention to as you work with the JD Edwards EnterpriseOne system.

---

**Note.** Example of a note.

---

If the note is preceded by *Important!,* the note is crucial and includes information that concerns what you must do for the system to function properly.

---

**Important!** Example of an important note.

---

## Warnings

Warnings indicate crucial configuration considerations. Pay close attention to warning messages.

---

***Warning!*** Example of a warning.

---

## Cross-References

Implementation guides provide cross-references either under the heading "See Also" or on a separate line preceded by the word *See.* Cross-references lead to other documentation that is pertinent to the immediately preceding documentation.

# Country, Region, and Industry Identifiers

Information that applies only to a specific country, region, or industry is preceded by a standard identifier in parentheses. This identifier typically appears at the beginning of a section heading, but it may also appear at the beginning of a note or other text.

Example of a country-specific heading: "(FRA) Hiring an Employee"

Example of a region-specific heading: "(Latin America) Setting Up Depreciation"

## Country Identifiers

Countries are identified with the International Organization for Standardization (ISO) country code.

### Region Identifiers

Regions are identified by the region name. The following region identifiers may appear in implementation guides:

- Asia Pacific
- Europe
- Latin America
- North America

### Industry Identifiers

Industries are identified by the industry name or by an abbreviation for that industry. The following industry identifiers may appear in implementation guides:

- USF (U.S. Federal)
- E&G (Education and Government)

## Currency Codes

Monetary amounts are identified by the ISO currency code.

# Comments and Suggestions

Your comments are important to us. We encourage you to tell us what you like, or what you would like to see changed about implementation guides and other Oracle reference and training materials. Please send your suggestions to your product line documentation manager at Oracle Corporation, 500 Oracle Parkway, Redwood Shores, CA 94065, U.S.A. Or email us at appsdoc@us.oracle.com.

While we cannot guarantee to answer every email message, we will pay careful attention to your comments and suggestions.

# Common Fields Used in Implementation Guides

| | |
|---|---|
| **As of Date** | The last date for which a report or process includes data. |
| **Business Unit** | An ID that represents a high-level organization of business information. You can use a business unit to define regional or departmental units within a larger organization. |
| **Description** | Enter up to 30 characters of text. |
| **Effective Date** | The date on which a table row becomes effective; the date that an action begins. For example, to close out a ledger on June 30, the effective date for the ledger closing would be July 1. This date also determines when you can view and change the information. Pages or panels and batch processes that use the information use the current row. |

| | |
|---|---|
| **Once, Always,** and **Don't Run** | Select Once to run the request the next time the batch process runs. After the batch process runs, the process frequency is automatically set to Don't Run.<br>Select Always to run the request every time the batch process runs.<br>Select Don't Run to ignore the request when the batch process runs. |
| **Process Monitor** | Click to access the Process List page, where you can view the status of submitted process requests. |
| **Report Manager** | Click to access the Report List page, where you can view report content, check the status of a report, and see content detail messages (which show you a description of the report and the distribution list). |
| **Request ID** | An ID that represents a set of selection criteria for a report or process. |
| **Run** | Click to access the Process Scheduler request page, where you can specify the location where a process or job runs and the process output format. |
| **SetID** | An ID that represents a set of control table information, or TableSets. TableSets enable you to share control table information and processing options among business units. The goal is to minimize redundant data and system maintenance tasks. When you assign a setID to a record group in a business unit, you indicate that all of the tables in the record group are shared between that business unit and any other business unit that also assigns that setID to that record group. For example, you can define a group of common job codes that are shared between several business units. Each business unit that shares the job codes is assigned the same setID for that record group. |
| **Short Description** | Enter up to 15 characters of text. |
| **User ID** | An ID that represents the person who generates a transaction. |

# EnterpriseOne Demand Management Forecast Studio Preface

This preface discusses:

- Related documentation.
- Typographical Conventions and Visual Cues.

**Note.** This Implementation Guide documents only page elements that require additional explanation. If a page element is not documented with the process or task in which it is used, then it either requires no additional explanation or is documented with the common elements for the section, chapter, or Implementation Guide.

## Related Documentation

This section discusses how to:

- Obtain documentation updates
- Order printed documentation

### Obtaining Documentation Updates

The EnterpriseOne Demand Management Forecast Studio Implementation Guide provides you with information about how to implement and use the EnterpriseOne Demand Management Forecast Studio system. Additional essential information describing deployment and supplemental third-party software options resides in the Supply Chain Planning Hardware and Software Requirements Guide. You should be familiar with the contents of this guide.

### Ordering Printed Documentation

You can order printed, bound volumes of the complete Oracle documentation that is delivered on the Implementation Guides CD-ROM. Oracle makes printed documentation available for each major release shortly after the software is shipped. Customers and partners can order the documentation in the following ways:

- Electronic mail: appsdoc_us@oracle.com
- FAX: 650–506–7200 Attn: Oracle EnterpriseOne Demand Management Manager
- Postal Service:

  Oracle EnterpriseOne Demand Management Manager

  Oracle Corporation

  500 Oracle Parkway

  Redwood Shores, CA 94065

  USA

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

# Typographical Conventions and Visual Cues

This section discusses:

- Typographical conventions
- Visual cues

## Typographical Conventions

The following table contains the typographical conventions that are used in Implementation Guides:

| Typographical Convention or Visual Cue | Description |
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| " " (quotation marks) | Indicate chapter titles in cross-references and words that are used differently from their intended meanings. |
| { } (curly braces) | Indicate a choice between two options in code syntax. Options are separated by a pipe ( \| ). |
| [ ] (square brackets) | Indicate optional items in code syntax. |
| Cross-references | Implementation Guides provide cross-references either following the heading "See Also" or on a separate line preceded by the word See. Cross-references lead to other documentation that is pertinent to the immediately preceding documentation. |

## Visual Cues

Implementation Guides contain the following visual cues.

### Notes

Notes indicate information that you should pay particular attention to as you work with the EnterpriseOne system.

**Note.** Example of a note.

A note that is preceded by Important! is crucial and includes information that concerns what you must do for the system to function properly.

**Note.** Example of an important note.

### Warnings

Warnings indicate crucial configuration considerations. Pay close attention to warning messages.

**Note.** Example of a warning.

## Comments and Suggestions

Your comments are important to us. We encourage you to tell us what you like, or what you would like to see changed about Implementation Guides and other Oracle reference and training materials. Please send your suggestions to:

Oracle EnterpriseOne Demand Management Documentation Manager

Oracle Corporation

500 Oracle Parkway

Redwood Shores, CA 94065

USA

Or email comments to: appsdoc_us@oracle.com.

While we cannot guarantee to answer every email message, we will pay careful attention to your comments and suggestions.

# CHAPTER 1

# Getting Started with EnterpriseOne Demand Forecasting

This chapter provides an overview of EnterpriseOne Demand Forecasting and discusses:

- EnterpriseOne Demand Forecasting business processes.
- EnterpriseOne Demand Forecasting integrations.
- EnterpriseOne Demand Forecasting implementation.

## EnterpriseOne Demand Forecasting Overview

EnterpriseOne Demand Forecasting enables you to plan for and meet future demand by creating on accurate business forecasts. Accurate forecasts ensure that you have sufficient stocks of products available when you need them.

A forecast is based on a demand model, which contains:

- Historical information on sales - for example, sales at specific locations and during specific periods.
- Historical demand for parts, components, or materials from suppliers.
- Information about promotions, sales campaigns, or other initiatives that can affect demand.

Without accurate forecasts, you leave yourself vulnerable to a variety of problems, including higher inventory, transportation, and production costs; increased levels of safety stock; and unexpected changes in the inventory balance across your enterprise. With EnterpriseOne Demand Forecasting, you can create meaningful schedules, production plans, and financial plans to meet that demand.

### Forecast Studio

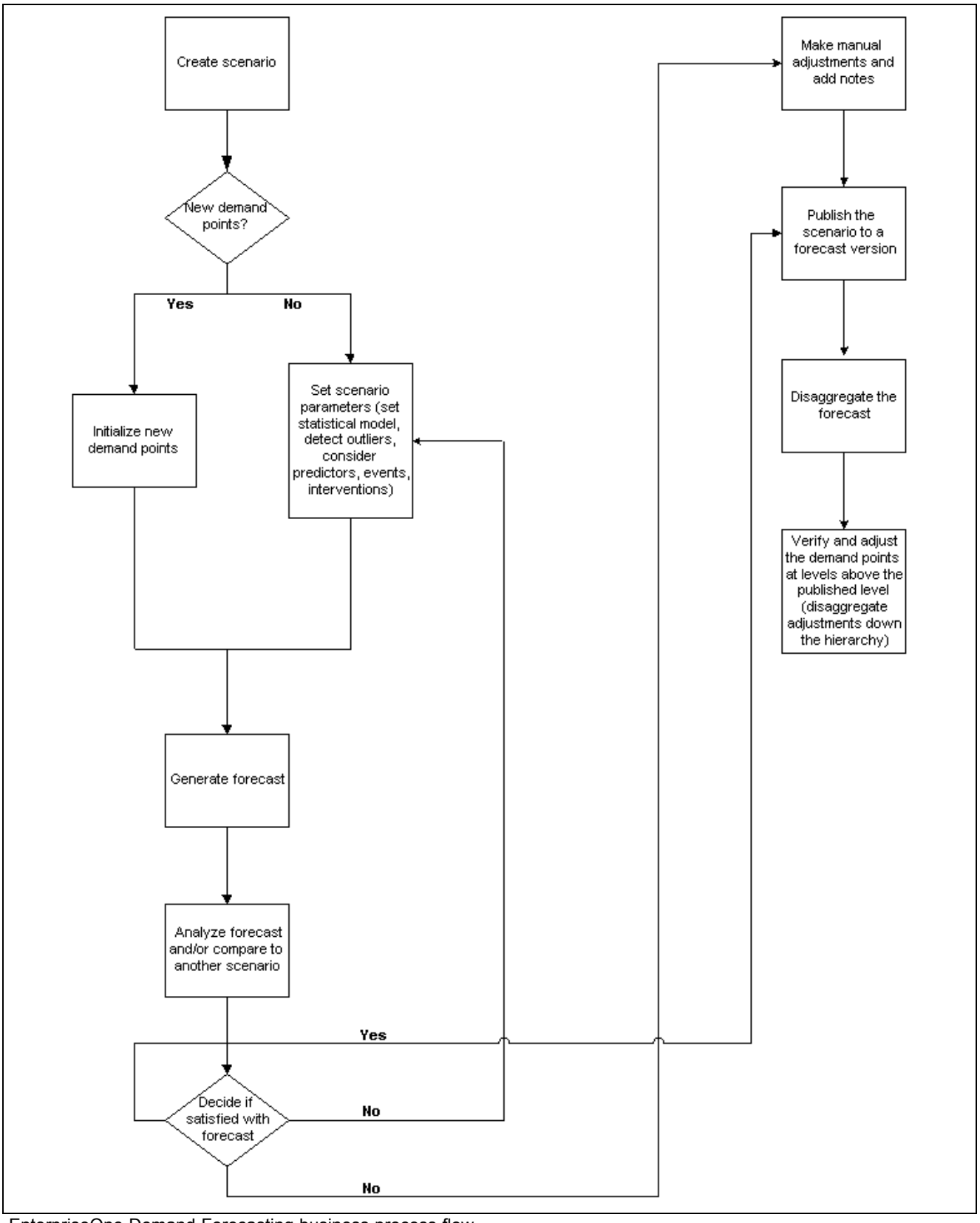
The Forecast Studio is the EnterpriseOne Demand Forecasting workspace. You can use it to:

- Create, customize, and maintain forecast data
- Generate forecasts that are based on various criteria.
- Refine your forecasts by taking into account the effects of predictors, events, and interventions on those forecasts.
- View the information in your forecasts either graphically or in tabular format.

You can apply different statistical techniques to different forecast models; choose the forecasting algorithm that best suits your needs; or use the expert selection algorithm, which picks the algorithm that best suits your needs. As well, you can apply different algorithms to different demand points to further refine your forecasts.

# EnterpriseOne Demand Forecasting Business Processes

The following process flow illustrates the Demand Forecasting process:




EnterpriseOne Demand Forecasting business process flow

# EnterpriseOne Demand Forecasting Integrations

EnterpriseOne Demand Forecasting can integrate with other EnterpriseOne Supply Chain Management and EnterpriseOne Supply Chain Planning systems through the EnterpriseOne Supply Chain Business Modeler application. The following graphic shows how EnterpriseOne Demand Forecasting integrates with other applications through EnterpriseOne Supply Chain Business Modeler:

Using EnterpriseOne Supply Chain Business Modeler, you can transfer supply chain data from EnterpriseOne Supply Chain Management systems into EnterpriseOne Demand Forecasting. You can then use Demand Forecasting to create enterprise demand forecasts and inventory safety targets based on the data.

After creating forecasts in EnterpriseOne Demand Forecasting, you can use EnterpriseOne Supply Chain Business Modeler to transfer the plans to another EnterpriseOne Supply Chain Planning system for further refinement or to a EnterpriseOne Supply Chain Management system for further refinement or implementation.

## EnterpriseOne Supply Chain Management Systems

EnterpriseOne Supply Chain Management systems, such as Enterprise Supply Chain Management, EnterpriseOne Supply Chain Management, and World Manufacturing Management, provide EnterpriseOne Supply Chain Business Modeler with the supply chain data that EnterpriseOne Demand Forecasting uses to generate accurate forecasts. The data includes information about items, branches, inventory policies, and manufacturing processes.

After EnterpriseOne Demand Forecasting creates optimal forecasts using the data, you can transfer the forecasts through EnterpriseOne Supply Chain Business Modeler to a EnterpriseOne Supply Chain Management system for further refinement or implementation.

## EnterpriseOne Sales and Operations Planning

Using EnterpriseOne Supply Chain Business Modeler, you can transfer supply chain data from EnterpriseOne Demand Forecasting to EnterpriseOne Sales and Operations Planning.

## EnterpriseOne Strategic Network Optimization

Using EnterpriseOne Supply Chain Business Modeler, you can transfer demand forecasts from EnterpriseOne Demand Forecasting into EnterpriseOne Strategic Network Optimization. You can then use Strategic Network Optimization to create inventory build targets and sourcing recommendations based on the data.

After creating supply chain plans in EnterpriseOne Strategic Network Optimization, you can use EnterpriseOne Supply Chain Business Modeler to transfer the plans to another EnterpriseOne Supply Chain Planning system for further refinement or to a EnterpriseOne Supply Chain Management system for further refinement or implementation.

## EnterpriseOne Production and Distribution Planning

Using EnterpriseOne Supply Chain Business Modeler, you can transfer supply chain plans from EnterpriseOne Demand Forecasting into EnterpriseOne Production and Distribution Planning. You can then use EnterpriseOne Production and Distribution Planning to create net deployment requirements and net production requirements based on the data.

After creating supply chain plans in EnterpriseOne Production and Distribution Planning, you can use EnterpriseOne Supply Chain Business Modeler to transfer the plans to another EnterpriseOne Supply Chain Planning system for further refinement or to a EnterpriseOne Supply Chain Management system for further refinement or implementation.

### EnterpriseOne Order Promising

Using EnterpriseOne Supply Chain Business Modeler, you can transfer supply chain data from a EnterpriseOne Supply Chain Management system to create a model in EnterpriseOne Order Promising.

### EnterpriseOne Production Scheduling - Discrete and EnterpriseOne Production Scheduling - Process

Using EnterpriseOne Supply Chain Business Modeler, you can transfer supply chain plans from EnterpriseOne Demand Forecasting into EnterpriseOne Production Scheduling - Discrete and EnterpriseOne Production Scheduling - Process. The EnterpriseOne Supply Chain Planning production scheduling applications can then produce optimal production schedules for meeting the production targets.

Supplemental information about third-party application integrations is located on the EnterpriseOne Customer Connection website.

## EnterpriseOne Demand Forecasting Implementation

The EnterpriseOne Demand Forecasting implementation process can be divided into the following steps:

- Installing EnterpriseOne Demand Forecasting.
- Creating forecast versions.
- Creating and managing scenarios.
- Identifying and repairing outliers.
- Creating and assigning predictors, events, and interventions.
- Generating forecasts.
- Disaggregating and balancing forecasts.

### Installing EnterpriseOne Demand Forecasting

| Step | Reference |
|---|---|
| Install EnterpriseOne Demand Forecasting. | *Demand Management Installation Guide for Windows*.<br>*Demand Management Installation Guide for UNIX*.<br>*Demand Management Installation Guide for LINUX*. |

### Creating Forecast Versions

| Step | Reference |
|---|---|
| Create a forecast version. | "Working with Forecast Versions", "Adding Forecast Versions to a Demand Model", *Forecast Studio Implementation Guide*. |

## Creating and Managing Scenarios

| Step | Reference |
|---|---|
| Create a scenario. | "Working with Scenarios", *Forecast Studio Implementation Guide*. |
| Managing a scenario. | "Working with Scenarios", "Managing Scenarios", *Forecast Studio Implementation Guide*. |
| Publish a scenario. | "Working with Scenarios", "Publishing Scenarios", *Forecast Studio Implementation Guide*. |

## Identifying and Repairing Outliers

| Step | Reference |
|---|---|
| Detect outliers. | "Working with Outliers", "Configuring Outliers for Detection", *Forecast Studio Implementation Guide*. |
| Repair outliers. | "Working with Outliers", "Repairing Outliers for Detection", *Forecast Studio Implementation Guide*. |

## Creating and Assigning Predictors, Events, and Interventions

| Step | Reference |
|---|---|
| Create predictors. | "Working with Predictors", "Creating Predictors", *Forecast Studio Implementation Guide*. |
| Assign predictors to demand points. | "Working with Predictors", "Assigning Predictors to Demand Points", *Forecast Studio Implementation Guide*. |
| Create events. | "Working with Events", "Creating Events", *Forecast Studio Implementation Guide*. |
| Assign events to demand points. | "Working with Events", "Assigning Events to Demand Points by Hierarchy", *Forecast Studio Implementation Guide*.<br>"Working with Events", "Assigning Events to Demand Points by Property", *Forecast Studio Implementation Guide*. |
| Create interventions. | "Working with Interventions", "Creating Interventions", *Forecast Studio Implementation Guide*. |
| Assign interventions to demand points. | "Working with Interventions", "Assigning Interventions to Demand Points by Hierarchy", *Forecast Studio Implementation Guide*.<br>"Working with Interventions", "Assigning Interventions to Demand Points by Property", *Forecast Studio Implementation Guide*. |

## Generating Forecasts

| Step | Reference |
| --- | --- |
| Install EnterpriseOne Demand Forecasting. | "Working with Scenarios", "Generating a Forecast", *Forecast Studio Implementation Guide*. |

## Disaggregating and Balancing Forecasts

| Step | Reference |
| --- | --- |
| Disaggregate a forecast. | "Disaggregating Forecasts", *Forecast Studio Implementation Guide*. |
| Balance a forecast. | "Balancing Forecasts", "Working with Scenarios", *Forecast Studio Implementation Guide*. |

# CHAPTER 2

# Understanding EnterpriseOne Demand Forecasting

This chapter discusses:

- Demand forecasting.
- Components of a forecast.
- Forecast Studio.
- Forecasting models.
- Exponential smoothing models.
- Goodness of fit statistics.
- Generated forecasts.

## Demand Forecasting

The ability of an enterprise to plan for and meet future demand depends on accurate business forecasts. Accurate forecasts ensure that you have sufficient stocks of products available when you need them

A forecast for the future demand for products is based on a demand model, which contains:

- Historical information on sales - for example, sales at specific locations and during specific periods.
- Historical demand for parts, components, or materials from suppliers.
- Information about promotions, sales campaigns, or other initiatives that can affect demand.

Without accurate forecasts, you leave yourself vulnerable to a variety of problems, including higher inventory, transportation, and production costs; increased levels of safety stock; and unexpected changes in the inventory balance across your enterprise. Your forecast enables you to create meaningful schedules, production plans, and financial plans to meet that demand. However, because forecasts can constantly change, you also need a way to easily modify and manipulate your forecasts.

## Components of a Forecast

A forecast consists of these components:

- Demand model

Contains both the forecast data and the business model data. The forecast data consists of the values for the demand while the business model contains such information as product, location, and channel data; horizon; unit of measure data; and aggregation hierarchy data.

- Sales history

  A file in Extensible Markup Language (XML) format that contains detailed information on the sales of products at locations in your enterprise. It also acts as a time series of sales data for a number of buckets for a particular product sold at a particular location. You import the sales history into the demand model when working with forecasts in the Forecast Studio.

- Forecast version

  A container that mimics the structure of the demand model currently loaded into the Forecast Studio. You can populate a forecast version with the data from one or more scenarios, and use the information as your forecast. You can add one or more forecast versions to a demand model. You can also import or export a forecast version to or from an XML file.

- Scenario

  Contains the information that is used to populate a forecast - product, location, and channel data; sales history; the unit of measure being used; and so on. Using scenarios, you can isolate a single demand point or multiple demand points, and use this information as the basis for a forecast. You can also import or export a scenario to or from an XML file.

## Factors Influencing Forecasting

While historical demand is the main influence on the accuracy of a forecast, other factors can also influence your forecasts. You must take into account a number of other unpredictable factors that can influence forecasts, including:

- New products with no historical data.
- Fluctuations in the economy.
- New or amended laws and regulations.
- Natural disasters.
- Innovations from your competitors.
- The influence of special promotions on sales.

# Forecast Studio

The Forecast Studio is a workspace that you can use to:

- Create, customize, and maintain forecast data
- Generate forecasts that are based on various criteria.
- Refine your forecasts by taking into account the effects of predictors, events, and interventions on those forecasts.
- View the information in your forecasts either graphically or in tabular format.

You can apply different statistical techniques to different forecast models; choose the forecasting algorithm that best suits your needs; or use the expert selection algorithm, which picks the algorithm that best suits your needs. As well, you can apply different algorithms to different demand points to further refine your forecasts.

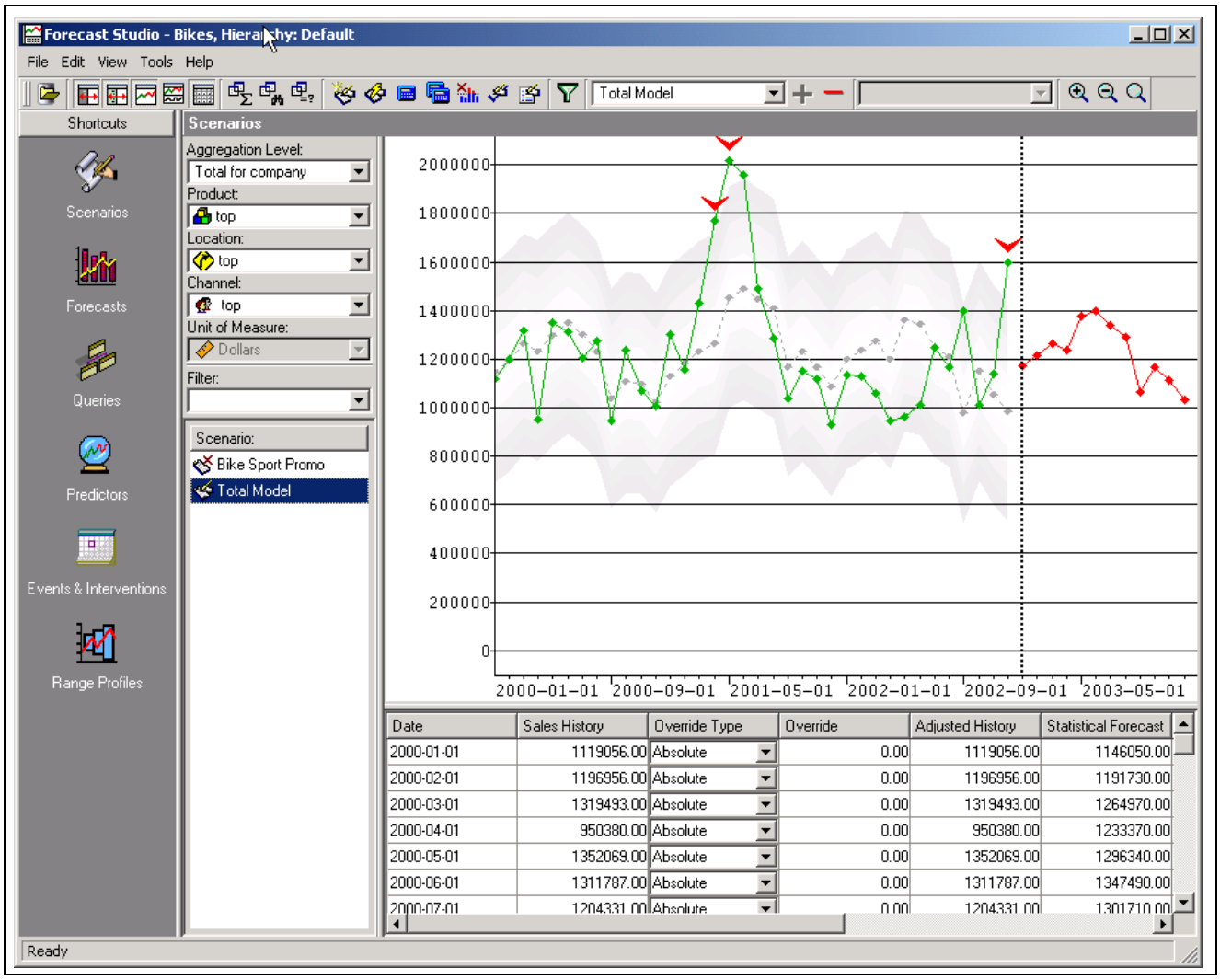
## Benefits of Using the Forecast Studio

By using the Forecast Studio, your enterprise can plan for and meet future demand using accurate business forecasts. The major benefits of using the Forecast Studio include:

- The ability to generate accurate forecasts.
- Decreased chances of underestimating or overestimating demand.
- The ability to better adapt to changes in demand.
- The ability to predict future demand based on historical sales data.
- The ability to include business intelligence in the forecasting process.

## Forecast Studio Interface

This screen shows the components of the Consensus Conference Room user interface:




Forecast Studio User Interface

The Forecast Studio interface consists of:

- Menu bar.
- Tool bar.
- Navigation bar.
- Shortcuts bar.
- Scenarios view.
- Forecast Versions view.
- Queries view.
- Graph view.
- Predictors Graph view.
- Model Statistics view.
- Time Series table.
- Scenario view.

- Scenario Comparison view.

### Menu Bar

The menu bar provides access to all of the Forecast Studio functions. You can access functions and commands by choosing items from the menu.

### Forecast Studio Toolbar

The icons on the toolbar give you quick access to common Forecast Studio commands

### Shortcuts bar

The Shortcuts bar enables you to quickly move between the Forecast Studio workspaces. Click an icon on the Shortcuts bar to display a workspace.

### Scenarios Workspace

The Scenarios workspace displays the scenarios that are defined for the demand model with which you are working. The names of scenarios are displayed alphabetically in list format.

---

**Note.** You can access a number of common menu and tool bar commands by right-clicking list of scenario names in the Scenarios workspace.

---

### Forecast Versions Workspace

The Forecasts workspace displays the forecast versions that are defined for the demand model with which you are working. The names of the forecast versions are displayed alphabetically in list format.

---

**Note.** You can access a number of common menu and tool bar commands by right-clicking list of forecast version names in the Forecast Versions workspace.

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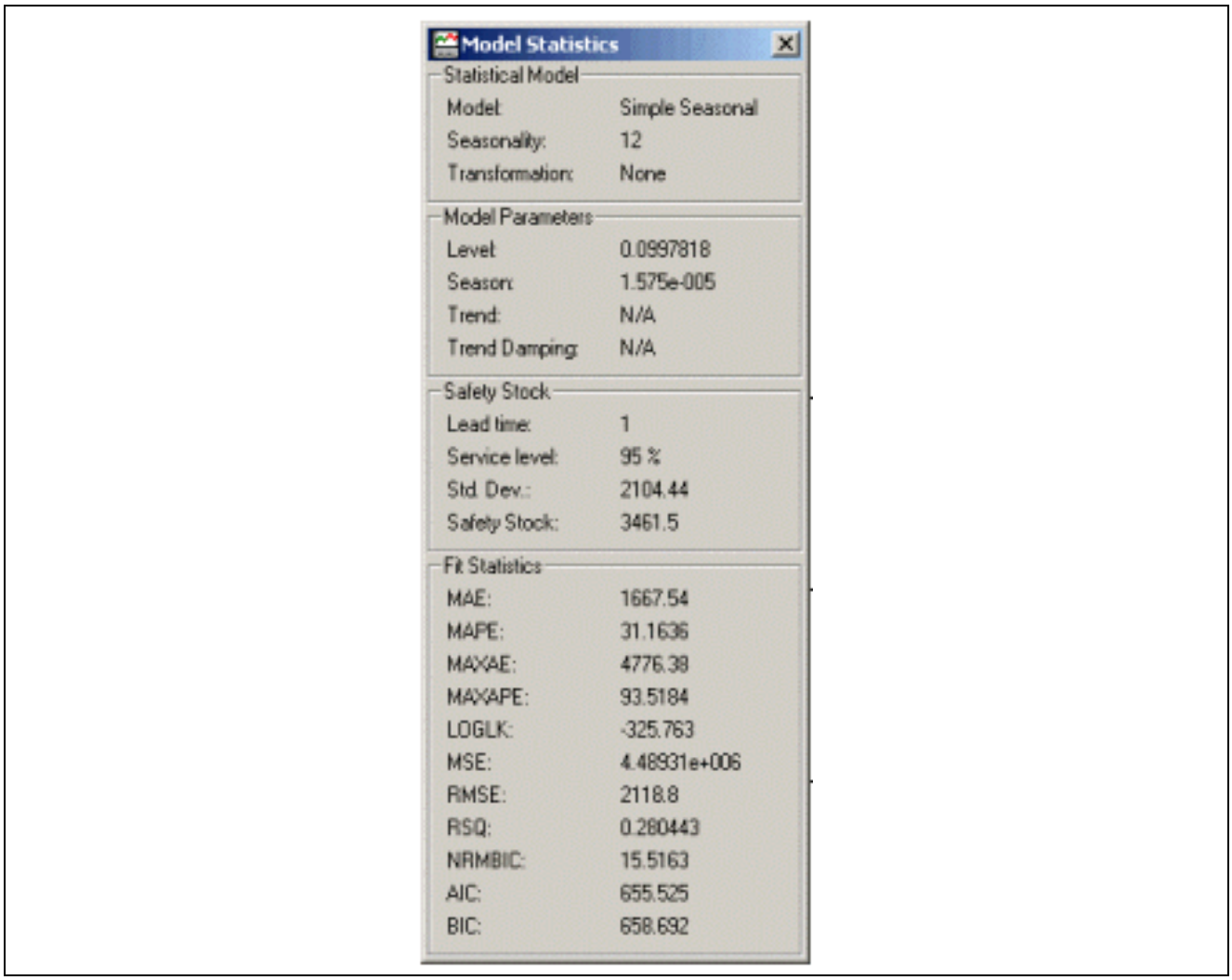
### Model Statistics View

The Model Statistics view is a floating panel that displays the statistical model that is being used to generate the forecast, the fit statistics for the forecast, and various key performance indicators for the scenario and its demand points

This image shows the Model Statistics view:




Model Statistics view

The upper portion of the Model Statistics view lists:

- The statistical model that is used to generate the forecast, as well as the number of seasonal periods used.
- The various parameters used by the statistical model when generating the forecast. These parameters are useful when comparing two scenarios.

The lower portion of the view lists:

- The safety stock parameters that are set for the forecast.
- The goodness of fit statistics for the forecast.

---

**Note.** When you use Croston's Model as the forecasting model, the Model Statistics view displays the results that are generated by Croston's model in place of the fit statistics.

---

## Queries View

The Queries view displays saved queries, and allows you to update query definitions.

### Graph View

The Graph view displays line graphs that illustrate the historical data and forecast information for the period covered by the demand model.

### Independent Series Graph View

The Independent Series Graph view displays line graphs that illustrate the predictor, event, or intervention information associated with a demand point. You choose the predictor, event, or intervention to view using the selector.

---

**Note.** The Independent Series Graph is only displayed in the Scenario workspace.

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### Time Series Table

The Time Series table displays the historical information for the demand model, as well as the corresponding information for the generated forecast. You can also edit the values in the Time Series table to adjust your forecast.

### Scenario View

The Scenario view is a dockable panel that displays the demand points in a scenario, the statistical model being used by the demand points in the scenario, and the fit statistics for each product or location.

### Scenario Comparison View

The Scenario Comparison view enables you to contrast the model statistics of each scenario that you defined for the demand model. This view displays data in a table and lists the statistical model that is used to generate the forecast, as well as the values returned by the exponential smoothing models. Selecting multiple scenarios also allows you to overlay the history and forecast graphs in the Graph view.

### Predictors Workspace

You work with predictors (time series that represent external, independent variables) in the Predictors workspace.

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**Note.** You can access a number of common menu and tool bar commands by right-clicking list of predictor names in the Predictors workspace.

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### Events/Interventions Workspace

You work with events and interventions (sudden occurrences or disturbances that negatively effect the accuracy of the forecast) in the Events/Interventions workspace.

---

**Note.** You can access a number of common menu and tool bar commands by right-clicking list of event or intervention names in the Events/Interventions workspace.

---

### Queries Workspace

You work with ad hoc queries (searches for information in the database that are based on user-specified criteria) in the Events/Interventions workspace. The Queries workspace also displays:

- The unit of measure used by the query that is currently selected in the Queries pane.
- The date and time when the query was last run.

### Range Profiles Workspace

You work with range forecasts (comparisons of multiple statements of demand across a forecasting horizon) in the Range Profiles workspace. The Ranges Profiles workspace displays a list of the profiles that make up a range forecast, as well as a table that defines the upper and lower levels of variation in a forecast.

### See Also

Creating What-If Scenarios

Working with Range Profiles

Working with Predictors

Understanding Events and Interventions

Working with Ad Hoc Queries

# Forecasting Models

Generating an accurate forecast depends not only on having the correct data, but also on using the correct forecasting model for your needs. Without the proper model, you cannot generate an accurate forecast.

A forecasting model provides a statistical framework for predicting demand based on historical patterns. The forecasting model that you choose determines any sales trends based on the sales history from recent years, and then extrapolates these trends into the next year or further, depending on your forecasting horizon.

## Forecasting and Time Series

Central to any forecast is a time series, which is a set of historical data that was collected over a specific period - for example, monthly sales information. By analyzing the time series, you can deduce patterns in demand, as well as see any variations in demand that are caused by seasonality or one-time incidents - for example, a natural disaster.

Each time series appears in the Time Series table. The Time Series table displays the historical information for the demand points in the forecast version, as well as the corresponding information for the generated forecast.

In the context of a forecasting model, a time series can also contain information about:

- General trends.
- Seasonal variations.
- Non-seasonal variations.

## General Trends

General trends represent an increase or decrease in the demand for an item over the period that is represented by the time series. Two types of general trends are:

- Global

  Overall trends that affect the time series as a whole - for example, a steady drop in the sales of an aging product.

- Local

Trends that only affect certain portions of the time series - for example, a sudden increase in sales due to an aggressive marketing campaign.

Trends can also be:

- Linear

  A simple increase or decrease in the level of the time series that is caused, for example, by upswings or downswings in demand.

- Nonlinear

  A trend that can randomly increase the level of the time series. Any changes in the level are based on the previous values in the time series.

## Seasonal Variations

Seasonal variations, also called seasonality, are changes in the demand for an item that occur regularly and predictably during the period that is represented by the time series. The demand for some products, for example, might be low in the first part of the year but significantly increase from September to December.

## Non-Seasonal Variations

Non-seasonal variations are unpredictable events that occur during the period that is represented by the time series and affect the demand for an item. These variations can be, for example, one-time aberrations, such as a natural disaster, or such recurring events as stock market downturns.

## Types of Models Used by Forecast Studio

By default, the Forecast Studio uses an Expert Modeler to determine the best model to apply to a particular forecast, as well as a number of goodness of fit statistics to determine how the results of the forecast fit the data from the sales history. The Forecast Studio also uses two specific types of forecasting models:

- ARIMA models.
- Exponential smoothing models.

### Expert Modeler

The Expert Modeler (labeled Expert Model Selection in the Forecast Studio) looks at the demand pattern for each demand point in your demand model and selects the forecasting model best suited for forecasting the demand at each demand point.

### ARIMA Models

ARIMA is the acronym for Autoregressive Integrated Moving Average. ARIMA is a method of selecting one of several forecasting models that is best suited to generating a forecast based on your data.

ARIMA models are quite complex and are well-suited for generating precise forecasting based on your data. An ARIMA model also enables you to include predictors that can help clarify the forecast.

An ARIMA model is generally expressed as:

ARIMA($p,d,q$)

where:

- $p$ is the order in which the model performs autoregression.

- *d* is the order in which the model performs integration.
- *q* is the order in which the model performs moving average.

ARIMA models carry out three basic processes:

- Autoregression
- Integration (also called differencing)
- Moving Average

Using these processes, an ARIMA model can explain various correlations in the data and deal with trends.

## Autoregression

The autoregression process treats each value in the time series as linear functions of the values that came before it. For example, suppose that a times series has three values:

- The third value is a function of the preceding two values.
- The second value is a function of the first value.

Autoregression models any changes or variations between intervals in a time series. Each value in the autoregression process is a weighted average of the most recent preceding values in the time series.

The autoregression process is mathematically expressed as:

$Value_t = Coefficient \times Value_{t-1} + Noise_t$

where:

- $Value_t$ is the value of the series at time period *t*.
- *Coefficient* is a value that specifies how a value depends on the preceding value. The coefficient can be a positive or negative value.
- $Value_{t-1}$ is the value of the series at time period *t-1*.
- $Noise_t$ is the amount of error associated with the series at time period *t*.

Autoregression is useful when you are generating forecasts over a long term.

## Integration

Integration (also called differencing) is a process that attempts to make a time series stationary. The time series is stationary when it has no trend or seasonality. However, most time series are not stationary because they contain some form of trend or seasonality. The ARIMA model uses the mathematical process of differencing to remove the seasonality and trend from the time series.

## Moving Average

Moving average is a method that an ARIMA model uses to generate forecasts that are based on deviations of previous values from the average in the time series. Moving average is useful when a time series has short-term variations.

This process models any changes or variations between intervals in a time series. Each value in the moving process is a weighted average of the most recent variations in the preceding values in the time series.

Mathematically, the moving average process is expressed as:

$Value_t = Coefficient \times Noise_{t-1} + Noise_t$

where:

- $Value_t$ is the value of the series at time period *t*.
- *Coefficient* is a value that specifies how a value depends on the preceding value. The coefficient can be a positive or negative value.
- $Noise_t$ is the amount of error associated with the series at time period *t*.

# Exponential Smoothing Models

Exponential smoothing is a mathematical technique that is used to predict future sales trends or demand based on sales history or past demand. The exponential smoothing models return a smoothed time series, which decreases the weightings of older results. This process ensures that the more recent the result, the greater the weight it has in the forecast. The exponential smoothing models require historical data from at least two previous periods.

The exponential smoothing models also consider any variances in demand. This process recognizes that these variances can depend on short-term or one-time trends, as well as seasonal demand. Unlike ARIMA models, exponential smoothing models do not understand the behavior of a forecast; they only describe the behavior of the time series in a forecast.

Exponential smoothing models are best suited for short-term forecasting. If you intend to forecast over longer periods, use the ARIMA model.

The Forecast Studio uses these smoothing models:

- Winter's Additive
- Winter's Multiplicative
- Brown's Exponential
- Holt's Linear
- Simple
- Simple Seasonal
- Damped

## Smoothing Parameters

The exponential smoothing models that are used by Forecast Studio rely on combinations of these parameters:

- Level

  Determines the speed at which the effect of the current value of a series on a future value of the series decreases. The larger the value, the more the model is weighted to recent values.

- Season

  Determines the speed at which the effect of the current value of a series on seasonality estimation of the series decreases. The larger the value, the faster the effects of the series on seasonality decrease.

- Trend

  Determines the speed at which the effect of the current value of a series on the overall trend of the series decreases. The larger the trend, the faster the effect of the series on the future trend decreases.

- Damping trend

  Determines the speed at which the magnitude of the trend of the series decreases. The larger the trend, the more gradually the trend of the series decreases.

Using these parameters, the forecasting model determines the weight of the results in the forecast. A larger value means that the results have a greater weight in the forecast.

### Winter's Additive

The Winter's Additive smoothing model is best used with a time series that has a linear trend and a constant seasonal variation. This model uses the level, trend, and season smoothing parameters.

### Winter's Multiplicative

The Winter's Multiplicative smoothing model is best used with a time series that has a linear trend and a seasonal variation that changes, based on the magnitude of the time series. This model uses the level, trend, and season smoothing parameters.

### Brown's Exponential

The Brown's Exponential smoothing model is best used with a time series that has a linear trend and no seasonal variation. This model uses the level and trend smoothing parameters. However, Brown's Exponential gives both parameters equal value. Brown's Exponential smoothing model is similar to Holt's Linear smoothing model, but deals with more specific scenarios and can generate forecasts faster than Holt's Linear smoothing model.

### Holt's Linear

The Holt's Linear smoothing model is best used with a time series that has a linear trend and no seasonal variation. This model uses the level and trend smoothing parameters. Unlike other models, each parameter used by Holt's Linear is not constrained by the value of another parameter. Holt's Linear smoothing model is similar to Brown's Exponential smoothing model, but it deals with more generalized scenarios.

### Simple

The Simple smoothing model is best used with a time series that has no trend or seasonal variation. This model uses the level smoothing parameter.

### Simple Seasonal

The Simple Seasonal smoothing model is best used with a time series that has no trend and a constant seasonal variation. This model uses the level and season smoothing parameters.

### Damped

The Damped smoothing model is best used with a time series that has a linear trend which is dying out and no seasonal variation. This model uses the level, trend, and damping trend smoothing parameters.

### Croston's Intermittent Demand

When demand for a product is sporadic, using exponential smoothing to model demand can return poor results. When demand is low, the model over-forecasts demand. When demand is higher, the model under-forecasts demand

Croston's Intermittent Demand model alleviates the problems that are caused by forecasting products with sporadic demand by adding an extra parameter to the model. This parameter corresponds to the likelihood that demand for the product will exist. The Model Statistics view displays the results that are generated by Croston's model in place of the fit statistics. In the Scenario Properties dialog box, you must select a separate confidence level (expressed as a percentage), which is required by the model. Croston's Intermittent Demand smoothing model plots the replenishment amount and the average interval in the Graph view.

# Goodness of Fit Statistics

The goodness of fit statistics determine how the results of a forecast fit the data from the sales history. Each goodness of fit statistic measures a different aspect of how the forecast fits the sales history. Generally, a smaller value means a better fit.

The goodness of fit statistics are specific to individual scenarios and appear in the Model Statistics view. They only appear when you generate a forecast for a demand point in the scenario.

This table explains the goodness of fit statistics used by the Forecast Studio:

| Fit Statistic | Description |
|---|---|
| MAE | Mean Absolute Error. A measure of the how much a forecast differs from the level that is predicted in the model. You can easily interpret MAE because it uses the same units of measure as the current time series. |
| MAPE | Mean Absolute Percent Error. Like MAE, MAPE measures how much a forecast differs from the level that the model predicts. However, you can use MAPE to compare time series that use different units of measure. |
| MAXAE | Maximum Absolute Error. MAXAE illustrates the worst-case scenario for a forecast, expressed in the original units of measure of the scenario. |
| MAXAPE | Maximum Absolute Percentage Error. MAXAPE illustrates the worst-case scenario for a forecast, expressed as a percentage. |
| LOGLK | Log Likelihood. LOGLK measures the accuracy of the values in the time series, based on the data in the model. With LOGLK, a larger value means a better fit. |
| MSE | Mean Square Error. MSE measures the amount by which the forecast deviates from the values predicted in the model. MSE then squares the amount of the difference. This action makes all of the values positive and gives more weight to larger deviations. |
| RMSE | Root Mean Square Error. RMSE measures the variation between any subgroups in the forecast - for example, this number can measure the variation between product subgroups like mountain bikes and racing bikes. In essence, RMSE returns the square root of MSE. |

| Fit Statistic | Description |
|---|---|
| RSQ | R-squared. RSQ measures the proportion of the variation between the demand model and the forecast. With RSQ, a larger value means a better fit.<br><br>RSQ can return negative values. You can ignore any negative values. |
| NRMBIC | Normalized Bayesian Information Criterion. NRMBIC measures how the forecast fits the model; at the same time, it takes the complexity of the model into account. NRBIC is based on MSE, and the value returned by this statistic is penalized for the number of parameters that the model contains. This penalty levels the data - models with more parameters no longer have any advantages over models with fewer parameters. The result produces a statistic that you can use to easily compare models in a time series. |
| AIC | Akaike Information Criterion. AIC tries to account for the complexity of autoregressive models. Like NRMBIC, AIC is penalized for the number of parameters that the model contains. |
| BIC | Bayesian Information Criterion. BIC is based on the negative value of the LOGLK statistic. Like NRMBIC and AIC, BIC is penalized for the number of parameters that the model contains. |

# Generated Forecasts

When you generate a forecast, the Forecast Studio displays the results in two ways:

- Using line graphs to illustrate the sales history and the statistical forecast in the Graph view.
- Numerically in the Time Series table.

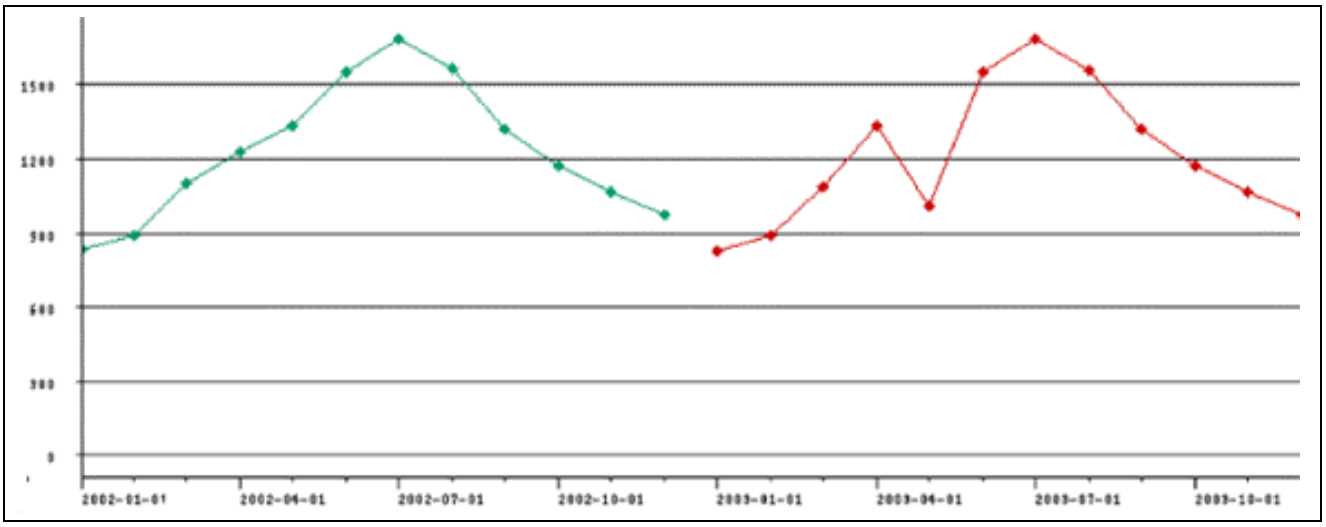
The Model Statistics view also displays information about options and goodness of fit of the statistical model that is used to generate a forecast.

**Note.** The Model Statistics view only displays information when you are in the Scenarios workspace.

## Graph View

The Graph view displays a line graph over the period that is covered by the demand model, as well as the values for the new forecast. In a generated forecast, the Graph view contains two or more curves as illustrated below:




Forecast Studio Graph view

The curve on the left represents historical data (Sales History), while the curve on the right represents the forecast data (Statistical Forecast). You can view graphs for individual demand points by selecting the appropriate demand point from the Scenario View pane, or by using the dropdown menus on the Navigation bar.

If you edit the forecast, an adjusted forecast curve appears. This curve lies over the original historical data curve.

You can also view information about individual points on the curve by holding the pointer over a specific point. The annotation for the point on the curve displays:

- The time series to which the point belongs.
- The period that the point covers in the time series.
- The value or amount of the item (expressed in the unit of measure of the scenario) at that point in the time series.

## Time Series Table

Time Series table displays the historical information for the demand points in the forecast version, as well as the corresponding information for the generated forecast. You can edit these fields in the Time Series table:

| Field | Explanation |
|---|---|
| Override Type | The override to apply to the sales history or statistical forecast. Valid options are:<br>• Absolute: Adds the specified value to the existing data. Use negative values to subtract from the existing data.<br>• Relative: Multiplies the existing data by the specified value. For example, to increase the forecast by ten percent, specify 1.1.<br>• Replace: replaces the existing data with the specified value. |
| Override | The amount of the override. |

You edit the information in the Time Series table by selecting a value from the Override Type field and entering the appropriate value in the corresponding Override field. Alternately, you can group-select values from the Adjusted History values and make the desired changes from the appropriate right-click menu. These actions affect both the adjusted forecast and the adjusted history, which is the series used by the forecasting engine when generating forecasts. The original history series is not changed. You can also edit the adjusted forecast or the adjusted history, and the Forecast Studio automatically calculates the override value.

## Safety Stock

The Model Statistics view displays the safety stock values for a selected scenario. Safety stock is the amount of supply below a minimum level that serves as a buffer against unexpected increases in demand.

When you select a demand point in the Scenario view, the Model Statistic view displays these values:

- Lead time.
- Service level.
- Standard deviation.

# CHAPTER 3

# Using the Forecast Studio

This chapter discusses how to:

- Start and log into the Forecast Studio.
- Open demand models and, optionally, select an aggregation hierarchy.

## Starting and Logging into the Forecast Studio

In Windows, you start the Forecast Studio from the Start menu. In UNIX, you start the Forecast Studio from the command line prompt. To obtain your Forecast Studio login information, contact the system administrator.

To start and log into the Forecast Studio:

1. Do one of the following:

   From the Windows Start menu, select Programs, EnterpriseOne Supply Chain Planning 8.12.1, Demand Management, Forecast Studio.

   At the UNIX command line prompt, type this command:

   *path*`/common/scp/run_dm_forecast_studio`

   Where *path* is the directory path (for example, */opt/scp/8.12.1*) where EnterpriseOne Demand Forecasting is installed.
2. Complete these fields:
   - User ID.
   - Password.
3. Click Login.

## Loading Demand Models

Demand models form the basis of your forecasts. Demand models contain such information as products, locations, and channels as well as aggregation and disaggregation information. You can create demand models by:

- Manually creating the demand model in the Design Studio.
- Saving data from an external application in Extensible Markup Language (XML) format, and importing that data into the database using the Demand Automation Shell.

The first step in creating a forecast is to load a demand model into Forecast Studio.

**Note.** You can only open one demand model at a time.

To load demand models:

1. Select Open Demand Model from the File menu.
2. Select the demand model with which you want to work.
3. If you are using a specific aggregation hierarchy when forecasting with this model, select the hierarchy from the Select Hierarchy drop down menu.

   **Note.** If at any point you want to use a different aggregation hierarchy, you must close and re-load the demand model.

4. Click OK to open the model.

# CHAPTER 4

# Working with Filters

This chapter provides an overview of filters and discusses how to:

- Work with filters
- Create custom filters.
- Use filter permissions.

## Understanding Filters

Filters can be created and applied to the product, location, and channel drop-down lists in the Scenarios workspace or the Forecast workspace. Filters can be very useful when a model contains many product, channel, and location elements because they allow you to define which values are displayed and which are hidden in these drop-down lists. Filters are user-based and can only be applied by those who have the appropriate access rights. A filter is applied regardless of the current aggregation hierarchy level at which you are browsing. For example, if you create a filter to view North American locations, you will only see North American countries at the country level and North American regions at the region level.

## Working with Filters

This section discusses how to:

- Create and save filters.
- Apply and unapply filters.
- Edit filters.
- Rename filters.
- Delete filters.

## Windows Used to Work with Filters

| Window Name | Navigation | Usage |
|---|---|---|
| Scenarios workspace | Shortcuts Bar, Scenarios | Displays the Scenarios workspace |
| Filters workspace | Shortcuts Bar, Filters | Displays the Filters workspace |
| Filters | Tools, Edit Filters | Select a filter to edit, rename or delete. |
| Search | In the Filter drop-down list, select (Custom...). You can also access the Search window by clicking the New button or the Edit button in the Filters window. | Create filters or edit the rules in existing filters. |

## Creating and Saving Filters

Access the Filters window.

To create and save a filter:

1. Click the New button.
2. To add a new product rule, click the + Add Product Rule button.

   A new product rule is created, and all of the Product properties defined in the model are populated in the drop-down list on the left.
3. In the drop-down list on the left, select a Product property.
4. In the drop-down list on the right, select one of the following:
   - is equal to
   - is not equal to
   - contains
   - does not contain
5. In the blank field, enter a property value. If you click the icon to the right of this field, a list of all available property values is displayed.
6. Click the + icon to add an OR statement to the product rule.
7. Click the + Add Product Rule button to add an AND statement to the product rule.
8. To add a new location rule, click the + Add Location Rule button.

   A new location rule is created, and all of the Location properties defined in the model are populated in the drop-down list on the left.
9. In the drop-down list on the left, select a Location property.
10. In the drop-down list on the right, select one of the following:
    - is equal to

- is not equal to
- contains
- does not contain

11. In the blank field, enter a location value. If you click the icon to the right of this field, a list of all available location values is displayed.
12. Click the + icon to add an OR statement to the location rule.
13. Click the + Add Location Rule button to add an AND statement to the location rule.
14. To add a new channel rule, click the + Add Channel Rule button.

    A new channel rule is created, and all of the Channel properties defined in the model are populated in the drop-down list on the left.
15. In the drop-down list on the left, select a Channel property.
16. In the drop-down list on the right, select one of the following:
    - is equal to
    - is not equal to
    - contains
    - does not contain
17. In the blank field, enter a channel value. If you click the icon to the right of this field, a list of all available channel values is displayed.
18. Click the + icon to add an OR statement to the channel rule.
19. Click the + Add Channel Rule button to add an AND statement to the channel rule.
20. In the Filter Name field, enter a name for the filter.
21. Click the Add Filter button.

## Applying and Unapplying Filters

Access either the Scenarios workspace or the Forecast workspace.

All the filters that you have the right to apply are listed in the Filters drop-down list. To apply a filter, select it from the Filter drop-down list.

---

**Note.** After you apply a filter, the data that is displayed in the main Forecast Studio workspace does not change. What changes are the lists of items displayed in the Product, Location, and Channel drop-down lists, which depends on the filter parameters that have been specified in the selected filter.

---

To apply a different filter, select a different filter in the Filter drop-down list.

To remove a filter:

1. Click the Filter drop-down list button.
2. Instead of selecting a filter, select the blank line above the (Custom...) filter.

   This removes all filters. The Product, Location, and Channel drop-down lists are repopulated with all items in those categories.

### See Also

Using Filter Permissions

Deleting Filters

## Editing Filters

Access the Filters window.

To edit filters:

1. In the Filter Names list, select the filter that you want to edit.
2. Click the Edit button.

   The Search window is displayed.
3. Make the appropriate changes to the filter in the Search window.
4. Close the Search window by clicking the OK button.
5. Select another filter to edit, or click the Close button.

## Renaming Filters

Access the Filters window.

To rename filters:

1. In the Filter Names list, select the filter that you want to rename.
2. Click the Rename button.
3. Rename the filter in the Filter Names list.
4. Click Enter on the keyboard.
5. Select another filter to rename, or click the Close button.

**Note.** Since filters can be made available globally, filter names must be unique in a demand model.

## Deleting Filters

Access the Filters window.

To delete a filter:

1. In the Filter Names list, select the filter that you want to delete.
2. Click the Delete button.
3. In the confirmation window, click Yes to confirm the deletion.

# Creating Custom Filters

Access either the Scenarios workspace or the Forecast workspace.

Custom filters are filters that are not permanent and are not saved when you close out of Forecast Studio. Custom filters can be useful when you want to quickly create and apply a filter.

To create a custom filter:

1. In the Filter drop-down list, select (Custom...)

   The Search window is displayed.

2. To add a new product rule, click the + Add Product Rule button.

   A new product rule is created, and all of the Product properties defined in the model are populated in the drop-down list on the left.

3. In the drop-down list on the left, select a Product property.
4. In the drop-down list on the right, select one of the following:
   - is equal to
   - is not equal to
   - contains
   - does not contain
5. In the blank field, enter a property value. If you click the ... icon to the right of this field, a list of all available property values is displayed.
6. Click the + icon to add an OR statement to the product rule.
7. Click the + Add Product Rule button to add an AND statement to the product rule.
8. To add a new location rule, click the + Add Location Rule button.

   A new location rule is created, and all of the Location properties defined in the model are populated in the drop-down list on the left.

9. In the drop-down list on the left, select a Location property.
10. In the drop-down list on the right, select one of the following:
    - is equal to
    - is not equal to
    - contains
    - does not contain
11. In the blank field, enter a location value. If you click the ... icon to the right of this field, a list of all available location values is displayed.
12. Click the + icon to add an OR statement to the location rule.
13. Click the + Add Location Rule button to add an AND statement to the location rule.
14. To add a new channel rule, click the + Add Channel Rule button.

    A new channel rule is created, and all of the Channel properties defined in the model are populated in the drop-down list on the left.

15. In the drop-down list on the left, select a Channel property.
16. In the drop-down list on the right, select one of the following:
    - is equal to
    - is not equal to

- contains
- does not contain

17. In the blank field, enter a channel value. If you click the ... icon to the right of this field, a list of all available channel values is displayed.
18. Click the + icon to add an OR statement to the channel rule.
19. Click the + Add Channel Rule button to add an AND statement to the channel rule.
20. Click the Apply Filter button.

    You can save a custom filter by entering a name in the Save as field before clicking the Apply Filter button.

# Using Filter Permissions

Before users can apply, edit, or create filters, they must be granted the appropriate rights. These rights apply to specific filters, not all existing filters. Contact your system administrator for more information about filter permissions.

### See Also

Granting Access to Filters

# CHAPTER 5

# Working with Scenarios

This chapter provides an overview of scenarios, lists prerequisites and discusses how to:

- Create scenarios.
- Compare scenarios.
- Create what-if scenarios.
- Import and export scenarios.
- Manage scenarios.
- Work with scenario notes.
- Generate forecasts.
- Edit generated forecasts.
- Publish scenarios.

## Understanding Scenarios

This section discusses:

- Scenarios.
- The Scenario Wizard.
- Scenario Comparison.
- What-if scenarios.
- Importing and exporting scenarios.
- Showing and hiding invalid demand points.
- Scenario management.
- Scenario notes.
- Forecast generation.
- Publishing scenarios.

### Scenarios

Scenarios contain the information that populates a forecast, including (but not limited to):

- Product, location, and channel data.
- Sales history information.

- The unit of measure being used.

Using scenarios, you can isolate a single demand point or multiple demand points, and then use this information as the basis for a forecast. You can create multiple scenarios to generate the optimal forecasts for your purposes.

You can create scenarios in the Forecast Studio using a wizard, and you can adjust the sales history information in the Time Series table. You can also import and export scenarios from within the Forecast Studio.

# The Scenario Wizard

The Scenario Wizard enables you to quickly create a scenario by walking you through the necessary steps. With the Scenario Wizard, you can isolate a single demand point or multiple demand points, select a set of coordinates, select sibling and children options, and then display a list of relevant demand points. Or, you can filter based on the properties of demand points.

You can create a scenario for the demand point that is currently selected in the Forecast Studio. Although creating a scenario for a single demand point is useful, it can limit the scope of your forecast. It is preferable to create scenarios for multiple demand points.

You can also create a scenario for a set of demand points. Doing so enables you to select the group of coordinates that you want to work with and then display a list of the relevant demand points. After you have selected the appropriate coordinates, your scenario focuses on only the demand points that you want to work with.

You can create a scenario for a set of demand points in the following ways:

- Use only the aggregation level that you specify by using the wizard.
- Use the siblings or children of the current aggregation level.
- Use a pre-defined demand point set.

Once you have a list of demand points, you can:

- Select specific demand points from the list to include in the scenario.
- Add all of the demand points in the list to the scenario.

As well, you can use a filter to return only a small subset of the demand points in a model. This enables you to focus in on the demand points that you want to work with.

## Using Filters

The demand points that the demand point set generator returns are based on the aggregation hierarchy of the demand model that you are working with. You must search from the list of demand points that is generated to find the demand points that you want to use in your scenario.

You can define a filter to quickly focus in on the demand points with which you or other users need to work. When you define a filter, you use the rule builder to create a rule that produces a list of demand points that are based on product, location, or channel attributes.

For example, you can define a filter that searches for a product or set of products that have these attributes:

- Available in a particular country or city.
- Have a certain word in the product name or description.
- Are sold by a specific customer.

The list of demand points that the filter returns is shorter than the one that is produced when you generate demand points based on an aggregation hierarchy.

### Generating Scenarios in Base Unit of Measure for Leaf Demand Points

When generating scenarios, a demand point can only be defined for a single unit of measure. However, in most cases your demand points have different units of measure. For example, a company has product families that use either weight or volume as a unit of measure.

Use the Generate in Base Unit of Measure for Leaf Demand Points to define a scenario where the unit of measure differs from the base unit of measure at aggregate levels. This is helpful since the primary purpose of scenarios is for generating a statistical forecast.

## Scenario Comparison

You can compare scenarios:

- Visually.
- In the Scenario Comparison window.

### Visually Comparing Scenarios

You can visually compare scenarios in the Graph view or the Scenario Comparison view of the Forecast Studio. Visually comparing scenarios enables you to quickly determine how the scenarios differ and which one is best suited for your forecasting purposes.

The Graph view offers "at a glance" information about the scenarios in the form of a line graph that illustrates both historical and forecast data. The Scenario Comparison view displays information about the statistical model used to generate the forecasts, as well as statistics regarding the goodness of fit.

If you need detailed information about the scenarios, you should compare them using the Scenario Comparison window.

### Compare Scenarios in the Scenario Comparison Window

The Scenario Comparison window enables you to view and compare information about a demand point that is used in multiple scenarios. You can compare only two scenarios at a time.

The upper portion of the window lists basic information about the demand model to which the scenarios belong, including the current aggregation hierarchy, the demand point being compared, and the scenario which is being used as the basis for the comparison. Each tab in the Scenario Comparison window contains information about the scenarios being compared, as described below:

| Tab | Description |
|---|---|
| Statistical Model | Displays this information for the scenarios being compared:<br>• Statistical model used to generate the forecast<br>• The number of periods that form one seasonal pattern<br>• The names of the events, interventions, and predictors that were used in the scenarios<br>Note that information appears on this tab only if the ARIMA model was used to generate the forecast. |

| Tab | Description |
|---|---|
| Statistics | Displays the fit statistics for each forecast, as well as various safety stock parameters for each scenario and its demand points. It also displays the differences between the statistics and key performance indicators for each scenario. |
| Adjusted Sales History | Displays the sales history for each date in the forecasting horizon, along with the differences between the sales histories of each scenario. |
| Generated Forecasts | Displays the values of the generated forecasts in the scenarios, along with the differences between the forecasts that were generated for each scenario. |
| Adjusted Forecasts | Displays the values of the adjusted forecasts in the scenarios, along with the differences between the forecasts that were generated for each scenario. |

**Note.** You cannot edit any of the values that appear in the Scenario Comparison window.

After comparing the scenarios, you can:

- Compare the baseline scenario to another scenario.
- Publish the scenario that best suits your forecasting needs.
- Add or remove events, interventions, or outliers, and then compare the scenarios again.

## What-If Scenarios

A what-if scenario enables you to perform a one-time comparison of two scenarios. By creating a what-if scenario, you can increase the level of accuracy of your comparisons. The improved accuracy level is a result of a comparison often only being valid if it is done from an exact duplicate of the scenario point being compared.

For example, you can use what-if scenarios to gauge the impact of a promotion on demand and inventory. The promotion in question doubles demand for various products. If the promotion is modeled as an event and that event is enabled in the baseline scenario (that is, the scenario containing the scenario point that you want to copy), you can create a what-if scenario that does not have the event enabled.

Or, you can use a what-if scenario to compare the impact of outliers on a forecast. If the outliers are true outliers - values in sales history that are much higher and lower than expected - then removing the outliers will generate a better fit in the forecast.

To create a what-if scenario, you first copy a scenario point from your baseline scenario to a second scenario. Once you have copied the scenario point, the results of the comparison are visible in the Scenario Comparison view.

You should carry out any what-if comparisons with a scenario that you use exclusively as a workspace. You can add or remove scenario points from this scenario without worrying that you will overwrite scenario points in a working scenario. However, you should only use the scenario points that you need when performing a comparison. Using too many scenario points increases the load on the Forecast Studio and can slow down processing.

### When To Use What-If Scenarios

You will most frequently work with what-if scenarios at the beginning of a forecasting cycle, and after you have published a forecast.

At the beginning of a forecasting cycle, you can use what-if scenarios to identify the outliers in a forecast. Once you have identified the outliers, you can use the what-if scenario to test ways to repair the outliers. Or, you can use a what-if scenario to model and test new promotions to gauge their effect on demand, inventory, and so on.

After you have published a forecast, you may receive updated information from another stakeholder - for example, that there are errors in the forecast due to a product no longer being sold, a promotion being held earlier in the cycle, and so on. Using this information and a what-if scenario, you can generate a forecast based on the what-if scenario, and then publish that forecast to override the baseline forecast.

### See Also

Working with Outliers

## Import and Export Scenarios

Importing and exporting scenarios enables you to back up and restore scenario data, as well as transfer the information to other instances of the Forecast Studio. By importing and exporting scenarios, you can persist the information outside of the Forecast Studio and the database. When exported, the data is written to an Extensible Markup Language (XML) file.

Importing scenarios is best done when you are at the beginning of a forecasting cycle and creating new forecasts. Generally, you should not import an XML file in the middle of a forecasting cycle because doing this overwrites data in an existing scenario, which can negatively affect your forecasts. However, there are times when you might want to import an XML file during the forecasting process. For example, if you made changes in a scenario that did not suit your needs, you can import an XML file to return the scenario to its original state.

Exporting scenarios is useful when you want to create a copy of a particular scenario for archiving. You can also export a scenario to maintain a pristine copy of a scenario that you are working on in the Forecast Studio. You can re-import the pristine copy if you make errors in your working copy.

## Show and Hide Invalid Demand Points

In the Forecast Studio, all demand points are displayed in the Navigation bar by default. However, you might not be able to access all of the demand points in the list. Any demand points that you cannot access are considered invalid. Searching through a list that contains invalid demand points to find the ones to which you have access can consume a lot of time. You can suppress the appearance of invalid demand points in the Forecast Studio so that you can only view valid combinations of demand points.

Regardless of whether you want to edit or view demand points, showing invalid demand points can be a useful navigation aid. After you show the invalid points, you can quickly navigate to other points in the demand model using the Navigation bar.

## Scenario Management

Scenario management is made up of five distinct tasks. These tasks enable you to work efficiently with scenarios.

You can add demand points to a scenario to further refine your forecasts. The demand points that you add are not specific to the scenario with which you are currently working; you can use them with other scenarios.

Using the Scenario Properties dialog box, you can refine your forecasts by editing these scenario properties:

- Forecast Generation

  The forecast generation parameters enable you to select a forecasting model on which to generate your forecasts. You can also adjust the number of seasonal periods that might affect your forecasts.

- Safety Stock

  Safety stock is the amount of supply above the forecasted level that serves as a buffer against unexpected increases in demand. Many enterprises base their levels of inventory on the amount of safety stock they have. However, you can also base your inventory on a specified level of service. This policy enables you to base your inventory on the amount of service that you can offer a customer at a particular cost.

- Predictors

  Time series that represent external, independent variables, such as the effect of a bad winter on orange crops, or the effect of interest rates on housing starts.

- Events

  Occurrences that take place at a regular interval - for example back-to-school sales, promotions or giveaways, and the like.

- Interventions

  One-time disturbances that cause a shift in demand.

You can specify a name for a scenario when you generate it using the Scenario Wizard. However, you can also rename the scenario in the Forecast Studio to make the name more meaningful or descriptive.

If you discover that a scenario is not a good fit for a particular forecast or you made errors while defining the scenario, you can delete it from the Forecast Studio. As well, you can delete specific demand points from the scenarios.

### See Also

Working with Predictors

Understanding with Events and Interventions

## Scenario Notes

Notes are annotations made at a particular time bucket for a demand point. You add notes in the Scenarios view in order to keep users informed about changes that have been made to a demand point during the forecasting process. A user can navigate to a specific demand point and add a note that contains information about any changes that were made to the demand point. Users with permissions to view the demand point can review notes. Only users with write permissions to the demand points in a scenario can edit or delete notes.

Comments apply to the entire demand point. You add and view comments in the Forecasts view. Comments can contain notes from a scenario if you specify that notes be added to comments when a scenario containing notes is published.

You add notes to demand points in the Scenario Notes column of the Time Series table in the Scenarios view. Each note can contain a brief description of any changes made to the demand point. After the scenario that contains the demand point is published to a forecast version, all scenario notes can appear in the Consensus Conference Room as annotations, or in forecast notes if specified during publish.

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**Note.** For better readability, your notes should be as concise as possible.

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You can choose to append notes to lower level forecasts when using the top-down method of disaggregating forecasts. When you select this option, notes from higher aggregation levels are added to notes in lower aggregation levels.

### See Also

Adding and Viewing Demand Point Annotations, *Consensus Conference Room Implementation Guide*

Exporting Scenarios

Forecast Notes

## Forecast Generation

Once you have loaded sales history data into the Forecast Studio, you can generate a forecast. If one or more demand points in the scenario are missing data, the Forecast Studio does not generate forecasts for those demand points. For each demand point that cannot be forecast, Failed and the name of the forecasting model being used when the failure occurred appears in the Model column of the Scenario Comparison view - for example, ARIMA-Failed. An error message also appears for the first demand point that cannot be forecast.

---

**Note.** If a negative forecast value is returned for any demand point in the scenario, the value will appear as zero in the Forecast Studio.

---

You should not generate a forecast for every demand point in a model because items in the model will not aggregate properly because the are in a fixed state when you run the forecast. As well, if you have a large model, it will take a quite a long time to generate a forecast.

You should generate a forecast at the lowest level of aggregation.

### Editing Generated Forecasts

After you have generated a forecast, you might want or need to restate your data. You can restate data in two ways:

- Changing the results graph.
- Specifying override values in the Time Series table.

By editing the values in the generated forecast, you can smooth out your data. If any one-off aberrations that are outside the normal behavior of a demand model - for example, a natural disaster - occur, you can edit the forecast to discount these events. You can also edit the data to account for shifts in behavior that cannot be explained by the sales history of a product.

You can also edit the forecast data to reflect changes that are caused by a product's life cycle. When a new product is in its initial stages, sales increase as the popularity of the product increases. However, this behavior does not continue. Eventually, demand for the product reaches a constant level and then tapers off. If you are dealing with a new product, you can model the last two stages its life cycle to reflect when demand inevitably levels off.

As well, you can edit the sales history before generating a forecast. This allows you to smooth your data so no anomalies are included in the forecast.

Each scenario in a forecast uses a common sales history. However, when you edit a scenario, the overrides only affect that scenario; they do not affect the common sales history.

### Publish Scenarios

Publishing a scenario adds the information in the scenario to a forecast version. This action makes the scenario visible to other users of the Forecast Studio who have the rights to access this forecast version into which you are publishing the scenario. You publish the scenario after you have generated a statistical forecast. Optionally, you can also publish any notes that are attached to a scenario.

You can only publish the demand points to which you have write permission in a particular forecast version. Any demand points to which you do not have write permissions are ignored. You will only see the forecast versions to which you have write permissions in the list of forecast versions.

**Note.** Published scenarios overwrite any forecasts that the target forecast version currently contains.

## Prerequisites

Before you can start working with scenarios, you must open a demand model and:

- If the demand model does not contain any sales history data, load the data.
- If the demand model does not have any scenarios, define at least two scenarios.

Before you can compare scenarios, you must:

- Ensure that the scenarios that you want to compare were created using the same aggregation hierarchy.
- Generate a forecast for each scenario that you want to compare before performing the comparison.

## Creating Scenarios

This section discusses how to:

- Create scenarios for one demand point.
- Create scenarios for a set of demand points.
- Create scenarios using a filter.
- Create scenarios for a pre-defined demand point set.

### Windows Used to Create Scenarios

| Window Name | Navigation | Usage |
|---|---|---|
| Forecast Studio | Change Level, Select a demand point. | Select a demand point on which to base a new scenario. |
| Scenario Wizard | Shortcuts bar, Scenarios, Edit, New Scenario. | Starts the Scenario Wizard, where you create a new scenario. |

### Creating Scenarios for One Demand Point

Access the Scenario Wizard window.

 

To create scenarios for one demand point:

1. Complete these fields:
   - Scenario Name
   - Unit of Measure
2. Select the Create the scenario for the current demand point option.

   This option bases the demand point on the aggregation level that you selected from the Change Level area of the Forecast Studio.
3. Select the Generate in base unit of measure for leaf demand points option.

   This option enables you to generate the forecast for the demand point using only the base unit of measure for that demand point.
4. Click Finish.

## Creating Scenarios for a Set of Demand Points

Access the Scenario Wizard window.

To create scenarios for a set of demand points:

1. Complete these fields:
   - Scenario Name
   - Unit of Measure
2. Select Create the scenario for a set of demand points option.

   This option enables you to generate a set of demand points for the scenario with which you are working.
3. Select the Generate in base unit of measure for leaf demand points option.

   This option enables you to generate the forecast for the demand points using only the base unit of measure for those demand points.
4. Click Next.
5. Complete the Aggregation Level field.
6. Complete these fields:
   - Product
   - Location
   - Channel
7. Select one of these options:
   - This Demand Point Only

     This option enables the user to access the demand point specified by the combination of product, location, and channel.
   - Include Siblings

     This option enables the user to access the specified demand point and any demand points that are on the same aggregation level.

- Include Children

  This option enables the user to access the specified demand point and any demand points that are under it. You can specify the number of levels to use below the current demand point by selecting a number from the Level(s) drop-down list.

8. Click Filter.
9. Do one of the following:
   - Click Add all.
   - Select the demand points that you want to use, and then click Add selected.
10. Repeat steps 3 to 9 for each demand point for which you want to grant user access.
11. Click Finish to save the changes and exit.
12. Click Yes to save the changes.

## Creating Scenarios Using a Filter

Access the Scenario Wizard window.

To create scenarios using a filter:

1. Click Demand Points by Property.
2. Complete the Property Name field with the property that you want to use for filtering.
3. Complete the Rule field.

   You can select from these options in the drop-down list:

   - is equal to

     Only demand points containing the exact criteria in the Property Value field are included in the list.

   - not equal to

     All demand points, other than the ones containing the exact criteria in the Property Value field, are included in the list.

   - contains

     Demand points are included in the list if they contain the criteria in the Property Value field.

   - does not contain

     All demand points except those containing the criteria in the Property Value field are included in the list.

4. Complete the Property Value field, and click OK.

   You can type the filtering criteria in the field or click the button next to the field and select a value from the dialog box that appears. Click the plus-sign button beside the Property Value field to add a property value to a rule. Entering additional property values enables you to specify multiple values for a particular property name and to filter on one value or the other.

1. Click Add Rule and repeat steps 2 to 4 for each new filter that you want to define.
2. Click Filter.
3. Do one of the following:
   - Click Add all.

 

- Select multiple demand points, and then click Add selected.

4. Click Finish.
5. Click Yes to save the changes.

## Creating Scenarios for a Pre-Defined Demand Point Set

Access the Scenario Wizard window.

To create scenarios for a pre-defined demand point set:

1. Complete these fields:
   - Scenario Name.
   - Unit of Measure.
2. Select Create the Scenario from a Pre-Defined Demand Point Set.
3. In the Demand Point Set drop-down list box, choose a demand point set.
4. Optionally, select the Generate in Base Unit of Measure for Leaf Demand Points option.

   This option sets leaf level demand points to the base unit of measure as demand points at an aggregate level might require a different unit of measure for forecasting.
5. Click Finish.

# Comparing Scenarios

This section discusses how to:

- Visually compare scenarios.
- Use the Scenario Comparison view.

## Windows Used to Compare Scenarios

| Window Name | Navigation | Usage |
|---|---|---|
| Forecast Studio | View, Graph | View a line graph that illustrates the historical demand and the forecast for a scenario. |
| Forecast Studio | View, Scenario Comparison | Compare multiple scenarios. |
| Forecast Studio | Tools, Compare Scenario | Displays the Compare Scenario dialog box. |

## Visually Comparing Scenarios

Access the Graph view.

To visually compare scenarios, select the scenarios that you want to compare.

## Using the Scenario Comparison View

Access the Compare To dialog box.

To compare scenarios in the Scenario Comparison view:

1. Select the scenario against which you want to make the comparison in Compare to Scenario, and then click OK.
2. When you have finished comparing the scenarios, click Close.

# Creating What-If Scenarios

This section lists a prerequisite and discusses how to create what-if scenarios.

## Prerequisite

Before you can work with what-if scenarios, you must create an empty scenario.

## Windows Used to Create What-If Scenarios

| Window Name | Navigation | Usage |
|---|---|---|
| Forecast Studio | Shortcuts bar, Scenarios | View the Scenarios workspace. |
| Forecast Studio | View, Scenario View | List the demand points in the currently selected scenario. |
| Forecast Studio | Edit, Copy Scenario Point | Copy the currently selected scenario point to another scenario. |
| Scenarios Pane | Select a scenario. | Select the scenario that you want to use as the basis for the comparison. |

## Creating What-If Scenarios

Access the Scenario view and the Copy to dialog box.

To create what-if scenarios:

1. Select the scenario to which you want to copy the scenario point from the drop-down list, and then click OK.

   If the scenario point that you are copying exists in the target scenario, the Forecast Studio displays an error message.
2. Click Yes to copy the scenario point; otherwise, click No.
3. Select Generate for Selected Demand Points only from the Tools menu to forecast the effects of the copied scenario point on the scenario.
4. Select Scenario Comparison from the View menu.

# Importing and Exporting Scenarios

This section discusses how to import and export scenarios.

## Windows Used to Import and Export Scenarios

| Window Name | Navigation | Usage |
|---|---|---|
| Forecast Studio | Shortcuts bar, Scenarios | Perform tasks in the Scenarios workspace. |
| Scenarios Pane | Select a scenario. | Select the scenario that you want to use as the basis for the comparison. |
| Forecast Studio | Edit, Import Scenario | Import scenario information from an XML file. |
| Forecast Studio | Edit, Export Scenario | Export scenario information to an XML file. |

## Importing Scenarios

Access the Import Scenario dialog box.

To import scenarios:

1. Navigate to the directory containing the scenario that you want to import.
2. Select the XML file that contains the scenario information that you want to import into the Forecast Studio.
3. Click Open.

## Exporting Scenarios

Access the Export Scenario dialog box.

To export scenarios:

1. Navigate to the directory where you want to save the scenario.
2. In the File Name field, type a name for the scenario.
3. Click Save.

## Showing and Hiding Invalid Demand Points

This section discusses how to show and hide invalid demand points in a scenario.

To show and hide invalid demand points:

1. Select Show Disabled Coordinates from the View menu.
2. Select Show Disabled Coordinates again to display invalid demand points.

# Managing Scenarios

This section discusses how to:

- Add demand points to scenarios.
- Edit scenario properties.
- Delete demand points from scenarios.
- Rename scenarios.
- Delete scenarios.

## Windows Used to Manage Scenarios

| Window Name | Navigation | Usage |
|---|---|---|
| Forecast Studio | Shortcuts bar, Scenarios | Perform tasks in the Scenarios workspace. |
| Scenario workspace | View, Scenario view | List the demand points in the currently selected scenario. |
| Scenario workspace | Tools, Scenario Properties | View details of the forecasting model, safety stock, outliers, predictors, and events used with the scenario. |
| Scenarios Pane | Select a scenario. | Select the scenario with which you want to work. |
| Scenarios Pane | Select a demand point. | Select the demand point with which you want to work. |

## Adding Demand Points to Scenarios

Access the Scenario workspace.

To add demand points to scenarios, click the Add to Scenario button on the toolbar.

## Deleting Demand Points from Scenarios

Access the Scenario workspace.

To delete demand points from scenarios, click the Remove from Scenario button on the toolbar.

## Editing Forecast Generation Parameters

Access the Scenario Properties dialog box.

To edit forecast generation parameters:

1. Select a forecasting model from the Forecasting Model drop-down list.
2. In the Seasonality field, select the number of periods for a seasonal cycle.

3. Click OK.

**Note.** The Model Parameters area of the dialog box displays the service level that you set on the Safety Stock tab of the Scenario Properties dialog box. You can adjust the properties of multiple demand points in a scenario by selecting the demand points in the Scenario view.

### See Also

Understanding Forecasting Models

## Editing Safety Stock Parameters

Access the Scenario view, and then the Scenario Properties dialog box.

To edit safety stock parameters:

1. Click Safety Stock.
2. In the Total Lead Time (periods) field, select the number of periods required to restock an item.

   You can set a maximum of 99 periods.
3. Enter a percentage of time during which you want customer orders to be fulfilled on time in the Desired Service Level field.

   The higher the service level, the more expensive it is to provide the specified level of service because you must carry more inventory to balance out any uncertainty. You can vary the service level depending on the customer.
4. Select one of these options:
   - Use system calculated standard deviation

     The Forecast Studio calculates the amount by which forecasts deviate from the actual demand.
   - User defined standard deviation

     The user specifies the amount by which forecasts deviate from the actual demand.
5. Click OK.

## Renaming Scenarios

Access the Scenario view.

To rename scenarios:

1. Select the scenario that you want to rename, and then choose Rename Scenario from the Edit menu.
2. Enter a new name for the scenario, and then press Enter.

## Deleting Scenarios

Access the Scenario view.

To delete scenarios:

1. Select Delete Scenario from the Edit menu.
2. Click Yes to delete the scenario.

# Working with Scenario Notes

This section discusses how to:

- Add notes to demand points.
- Delete notes from demand points.
- Show and hide notes.

## Windows Used to Work with Notes

| Window Name | Navigation | Usage |
|---|---|---|
| Forecast Studio | Shortcuts bar, Scenarios | Perform tasks in the Scenarios workspace. |
| Scenarios workspace | View, Time Series | List the sales history and forecast information for the scenario on a monthly basis. |
| Time Series Table | Select a demand point | Highlight to demand point that you want to work with. |

## Adding Notes to Demand Points

To add notes to demand points:

1. Double-click the Note field, and type the note.
2. Enter or click in another field.

### See Also

Publishing Scenarios

## Deleting Notes from Demand Points

To delete notes from demand points:

1. Double-click the Note field.
2. Drag the mouse pointer over the note text, and then press Delete.

## Showing and Hiding the Scenario Notes Column

Because the Time Series table in the Forecast Studio contains a considerable amount of information, occasionally you may need to view only some of the columns in the table. To simplify your tasks, you can show or hide the Scenario Notes column in the Time Series table.

To show and hide the Scenario Notes column, right-click any field in the Time Series table and select Notes from the shortcut menu that appears.

# Generating Forecasts

This section discusses how to:

- Generate a forecast for an entire scenario.
- Generate a forecast for one or more demand points in a scenario.

## Windows Used to Generate Forecasts

| Window Name | Navigation | Usage |
|---|---|---|
| Forecast Studio | Shortcuts bar, Scenarios | Perform tasks in the Scenarios workspace. |
| Scenarios workspace | Select a scenario. | Highlight the scenario on which you want to base the forecast. |

## Generating Forecasts for a Scenario

Access the Scenarios workspace.

To generate forecasts for a scenario, select Generate for Scenario from the Tools menu.

A graph appears in the Graph View area, and the forecast data appears in the Time Series Table. If the time series table is not visible, click the Show or Hide Time Series Table button on the toolbar.

## Generating Forecasts for a Selected Demand Point

Access the Scenarios workspace.

To generate forecasts for a selected demand point, select Generate for selected Demand Point(s) only from the Tools menu.

# Editing Generated Forecasts

This section discusses how to:

- Edit the Results graph.
- Edit the Time Series table.
- Edit sales history information.
- Edit forecast history information.

## Windows Used to Edit Generated Forecasts

| Window Name | Navigation | Usage |
|---|---|---|
| Forecast Studio | Shortcuts bar, Scenarios | Perform tasks in the Scenarios workspace. |
| Scenarios workspace | View, Graph | View a line graph that illustrates the historical demand and the forecast for a scenario. |
| Scenarios workspace | View, Time Series | List the sales history and forecast information for the scenario on a monthly basis. |

## Editing the Results Graph

Access the Graph view.

To edit the results graph:

1. Click and drag the highlighted demand point up or down, depending on how you want to edit that point.

   A dark line appears in the original path of the curve, denoting the locations of the points before the data was overridden.
2. From the Tools menu, select one of these options to apply the changes:
   - Generate for Selected Demand Point(s) Only.
   - Generate for Scenario.

## Editing the Time Series Table

Access the Time Series table.

To edit the Adjusted History or Adjusted Forecast columns in the Time Series table:

1. Find the value that you want to edit in the table.
2. Select one of these options from the Override Type drop-down menu:
   - Absolute

     This is a value that the Forecast Studio adds to the current value in the Sales History field of the Time Series table. For example, if the Sales History field contains the value 533.71 and you type 23.29 in the Override field, the value in the Adjusted History field becomes 557.
   - Relative

     The system uses the percentage difference. You specify this amount by using a decimal. To specify a 10 percent difference, for example, you type 1.1.
   - Replace

     The system uses the value that is specified in the Override field instead of the value in the Sales History field.
3. In the Override field, type a value for the option that you select from the Override drop-down menu.

   The value that you type in this field changes the contents of the Adjusted History field.

 

4. Repeat steps 2 and 3 for each value that you want to edit.

   To remove any changes made to the Override column, select the values that you want to change and from the right-click menu select Reset.

5. To make changes to multiple Adjusted History or Adjusted Forecast values, do the following:
   - Multi-select the values that you want to change.
   - Move the cursor out of the last selected cell and place the pointer on another selected cell.
   - From the right-click menu select the appropriate override type.
6. Select one of these options from the Tools menu to apply the changes:
   - Generate for Selected Demand Point(s) Only.
   - Generate for Scenario.

## Editing Sales History Information

Access the Scenarios workspace.

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**Note.** You must be at the lowest level of aggregation and have administrative privileges in order to edit sales history information.

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To edit sales history information:

1. Select the aggregation level containing the demand point whose sales history you want to edit.
2. In the Time Series table, find the value that you want to edit in the Sales History column.
3. Double-click on the field containing the value that you want to edit.
4. Enter a new value in the field, and then press Enter.

## Editing Forecast History Information

Access the Forecasts workspace.

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**Note.** You must be at the lowest level of aggregation and have administrative privileges in order to edit forecast history information.

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To edit forecast history information:

1. Select the aggregation level containing the demand point whose forecast history you want to edit.
2. In the Time Series table, find the value that you want to edit in the Sales History column.
3. Double-click the field containing the value that you want to edit.
4. Enter a new value in the field, and then press Enter.

# Publishing Scenarios

Access the Scenarios workspace.

To publish scenarios:

1. Select the forecast version to which you want to publish the scenario from the Publish forecasts to forecast version drop-down list.
2. Select one of these options:
   - Publish the forecast for the current demand point only.
   - Publish forecasts for all demand points in the Scenario.
3. If you also want to publish the notes in the scenario to the specified forecast version, select one of these options:
4. Publish scenario notes to comments

   Comments are similar to notes, but they apply to the entire demand point and can only be read in the Forecasts view. Use this option to add the notes in the scenario to the comments for the target forecast version.

   - Publish scenario notes to forecast notes

     Makes the notes visible in the Forecast Notes column of the Table view of the Forecasts view.

   - Append scenario notes to forecast notes

     If notes exist in the forecast version into which the scenario is published, selecting this option adds the notes in the scenario to the notes in the forecast version. If you do not select this option, the existing forecast notes are overwritten with the notes from the scenario.

     To publish the notes in the scenario, you must have write permissions to the demand points that contain notes.

     ---

     **Note.** If you do not have write permissions to some or all of the demand points that contain notes, an error message appears indicating the number of notes that cannot be written to the database.

     ---

     Users with read permissions to the forecast version to which are you publishing the scenario can view the scenario notes as annotations in the Consensus Conference Room.
5. Click OK.

# CHAPTER 6

# Working with Ad Hoc Queries

This chapter provides an overview of ad hoc queries, and discusses how to work with ad hoc queries.

## Understanding Ad Hoc Queries

This section discusses:

- Ad hoc queries.
- Creation of ad hoc queries.
- Execution of ad hoc queries.
- Disaggregation of ad hoc queries.
- Duplication of ad hoc queries.
- Export of query forecasts and query sales histories.
- Query properties.

### Ad Hoc Queries

Using ad hoc queries, you can use any criteria to search the database for items. They are called ad hoc queries because the search is based on individual properties that exist in the demand model but that might not exist together in any single aggregation hierarchy.

You can use ad hoc queries to view or edit a forecast for a product or a group of products based on the properties that you specify. For example, you can create a query to report on a single SKU for all independent channels in a particular region. When you run the query, the forecasts for the queries that you define appear in the Table and Graph views of the Forecast Studio.

When a property that is used by a query is renamed in the Design Studio, the change is automatically propagated to the query. However, you must reopen the demand model in the Forecast Studio to refresh the property names with the updated values.

Although you can generate ad hoc queries from within the Forecast Studio, there are also Demand Automation shell commands available for doing batch queries.

### Creation of Ad Hoc Queries

You create ad hoc queries with a wizard. Creating ad hoc queries involves selecting a list of demand points that you want to query. You select the demand points to use in a query from a list of demand points that are based on product, location, or channel attributes.

For example, you can define a filter that searches for a product or set of products that have the following attributes:

- Available in a particular country or city.
- Containing a particular word in the product name or description.
- Sold by a specified customer.

The list of demand points that the filter returns is shorter than the one that the system returns when you generate a list of demand points based on an aggregation hierarchy. Valid demand points have a check mark beside them. Invalid demand points have a cross beside them.

When you create an ad hoc query, you select one or more forecast versions to use with the query. Only forecast versions to which you have access appear in the query wizard. If you do not have access to a forecast version, it will not appear in the results in the Query pane.

When defining queries, you can group several together. When you group queries, you select the properties that are used to aggregate query results. For example, you can group queries by product name and location to aggregate query results using those properties.

# Execution of Ad Hoc Queries

After you define ad hoc queries, you run them periodically. If any information changes in the demand model with which you are working, running the queries updates the information in the query, and then query will be run.

You can run valid ad hoc queries only. To be valid, a query must contain all units of measure and all demand points specified in the query parameters. If any of the units of measure or demand points of a valid query are deleted, you can no longer run the query. However, you can export the last set of query results.

After you run the query, a graph can be displayed in the Graph view. The Table view is populated with data for each of the forecast versions in the query. The data in this view is based on Row and Column configurations. Column data is represented in the X-axis and Row data is represented in the Y-axis.

---

**Note.** Sales history can only be viewed when both Forecast Version and Time are selected in the Row and Column drop-down lists.

---

When you create a query, you can specify groupings for the query results. If you specify groupings, you can select the grouping properties in the drop-down lists in the Data Selection pane.

---

**Note.** Because ad hoc queries are specific to forecast versions, only forecast versions to which you have access appear in the results. If the query is invalid, a message appears to indicate that the query cannot be run.

---

When a property that is used in a query is deleted in the Design Studio, that query is no longer valid. The query property page in Forecast Studio will contain a message indicating the reason why the query is no longer valid.

### See Also

Exporting Query Forecasts

# Disaggregation of Ad Hoc Query Forecasts

After you generate forecasts based on an ad hoc query, you can disaggregate those forecasts. You can only edit and disaggregate queries that you have run.

**Note.** Queries can only be edited for specific query coordinates. If (All) is selected in any of the drop-down lists in the Data Selection pane, the query cannot be edited.

### See Also

Forecast Disaggregation

## Duplication of Ad Hoc Queries

You cannot edit queries. However, you can duplicate a query. Duplicating an ad hoc query makes a copy of a query and its parameters. Duplicating a query is useful if, for example, you want to use the same query criteria for a product at a different location in the supply chain.

**Note.** You can duplicate invalid queries.

### See Also

Creating Ad Hoc Queries

## Export of Query Forecasts and Query Sales Histories

The information in a demand model is rarely static. Data in the demand model changes, and will affects ad hoc queries. As data changes, you might need to maintain a record of the results from past queries. You can do this by exporting query results.

The sales histories in a query can be exported to a file that contains the following information:

- The query properties used to aggregate the query results.
- The date.
- The value of the forecast on a particular date.

You can save the query forecasts and query sales histories in these formats:

- A comma separated values (CSV) file with the extension .csv.

  The CSV file is a flat file containing information in tabular format. You can import the CSV file into any spreadsheet or database application, like Microsoft Excel.

- An XML file with the extension .xml.

  Using the Extensible Stylesheet Transformation Language (XSLT), you can transform the XML file to such formats as HTML (for viewing in a web browser) or Adobe PDF (for printing).

When exporting query results, you can select forecast versions whose sales histories are exported with the query.

**Note.** You cannot export query forecasts if:

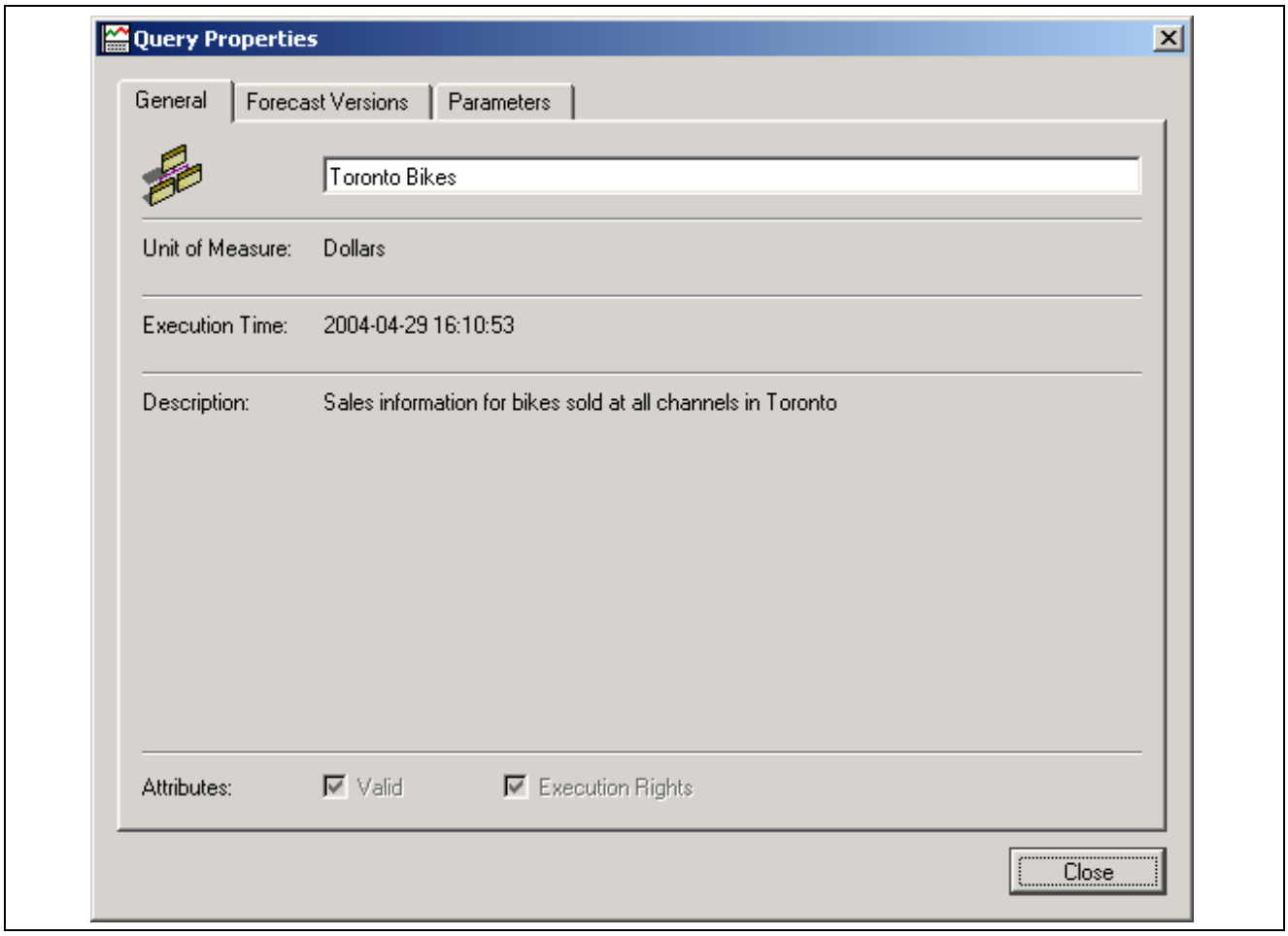
You do not have access to any of the forecast versions in the query.

The query has not been run.

# Query Properties

Unless you have created a particular query, it is difficult to determine the purpose of a particular query simply by looking at it in the Query workspace. By viewing the properties of a query, you can view the purpose of the query and its criteria.

You view query properties in the Query Properties window:




Query Properties window

The Query Properties window consists of the following three tabs:

- General

  This tab provides a basic description of the query, the base unit of measure, an indication of whether the query is valid, and information about permissions to run the query. If a query is invalid, the Valid check box on the General tab is cleared.

- Forecast Versions

  This tab lists the forecast versions used in the query.

- Parameters

  This tab lists the query criteria and describes how the elements of the query are grouped. A check mark appears beside all valid query criteria. A cross appears beside all invalid query criteria.

# Creating Ad Hoc Queries

This section discusses how to:

- Create ad hoc queries.
- Run ad hoc queries.
- Duplicate ad hoc queries.
- Disaggregate ad hoc query forecasts.
- Export ad hoc query forecasts.
- Export ad hoc query sales histories.
- View ad hoc query properties.
- Rename ad hoc queries.
- Delete ad hoc queries.

## Windows Used to Work with Ad Hoc Queries

| Window Name | Navigation | Usage |
|---|---|---|
| Query Workspace | Shortcuts Bar, Queries | Perform tasks in the Queries workspace. |
| Query Wizard | Edit, New Query | Starts the Query Wizard, where you define the criteria for ad hoc queries. |
| Disaggregate Query | Edit, Disaggregate Query | Disaggregates the forecasts generated by a query. |

## Creating Ad Hoc Queries

Access the Query Wizard window.

**Note.** You can also create ad hoc queries using the `import_queries` DASH command.

To create ad hoc queries:

1. Enter a descriptive name for the query.
2. (Optional) Enter a detailed description of the query.
3. Click Next.
4. Do one of the following:
   - Select the base unit of measure for the query from the Unit of Measure drop-down list.
   - Select one or more forecast versions. The query uses the forecast history from the selected forecast versions when you run the query.
5. Click Next.
6. Complete the Property Name field with the property that you want to use for filtering.

7. Complete the Rule field.

   You can select from the following options in the drop-down list box:

   - is equal to

     Only demand points containing the exact criteria in the Property Value field are included in the list.

   - not equal to

     All demand points, other than the ones containing the exact criteria in the Property Value field, are included in the list.

   - contains

     Demand points are included in the list if they contain the criteria in the Property Value field.

   - does not contain

     All demand points except those containing the criteria in the Property Value field are included in the list.

8. Complete the Property Value field and click OK.
9. Click Add Rule and repeat steps 9 and 10 for each new filter that you want to define.
10. (Optional) Click Preview.
11. Click Next.
12. Select the query properties that you want to use to group the results.
13. Click Next.
14. Review your selections.

If the query is satisfactory, then click Finish. Otherwise, click Back to modify the query.

## Running Ad Hoc Queries

Access the Query Workspace window.

To execute ad hoc queries, select Execute Query from the Tools menu.

## Duplicating Ad Hoc Queries

Access the Query Workspace window.

To duplicate ad hoc queries:

1. Select the query that you want to duplicate, and then select Duplicate Query from the Edit menu.
2. Enter a new name for the query in the Name field.
3. Enter a new description for the query in the Description field.
4. Click Next.
5. (Optional) Do the following:
   - Select a new base unit of measure for the query from the Unit of Measure drop-down list.
   - Select one or more new forecast versions. The query uses the forecast history from the forecast versions that you select.
6. Click Next.

7. Do the following:
   - Add or delete properties.
   - Add or delete rules.
8. (Optional) Click Preview.
9. Click Next.
10. Select the query properties that you want to use to group the results.
11. Click Next.
12. Review your selections.

If the query is satisfactory, then click Finish. Otherwise, click Back to modify the query.

## Disaggregating Query Forecasts

Access the Query Workspace window, select the query that you want to disaggregate, and then access the Disaggregate Query dialog box.

To disaggregate query forecasts:

1. Select the forecast version on which you want to base the disaggregation.
2. To disaggregate only the query demand points that have changed since you created the query, select the Only modified query points option.
3. Select one of the following disaggregation modes:
   - Disaggregate using system profile.
   - Disaggregate using own profile.
4. Click OK.

## Exporting Query Forecasts

Access the Query Workspace window, and select the query containing the results that you want to export.

To export query forecasts:

1. Select Export Query Forecasts from the Edit menu.
2. Select one or more forecast versions to use.
3. Select an output format for the query forecasts.

   Valid options are XML and CSV.
4. Enter a name and path for the file in the Please enter output name field.

   You do not have to include a file extension.
5. Click Export.

## Exporting Query Sales Histories

Access the Query Workspace window.

To export query sales histories:

1. Select the query containing the sales history that you want to export.
2. Select Export Sales History from the Edit menu.
3. Select an output format for the results.

   Valid options are XML and CSV.
4. Enter a name and path for the file in the Please enter output name field.

   You do not have to include a file extension.
5. Click Export.

## Viewing Query Properties

Access the Query Workspace window.

To view query properties:

1. Select the query whose properties you want to view.
2. Select Query Properties from the Tools menu.

   Review the Query Properties window to determine if the query suits your needs and, if you have the permissions, run it.
3. Click Close.

## Renaming Queries

Access the Queries workspace.

To rename queries:

1. Select the query that you want to rename.
2. Select Rename Query from the Edit menu.
3. Enter a new name for the query.
4. Press Enter to save the changes.

## Deleting Ad Hoc Queries

Access the Queries workspace.

To delete ad hoc queries:

1. Select the query that you want to delete.
2. Select Delete Query from the Edit menu.
3. Click OK.

CHAPTER 7

# Working with Forecast Versions

This chapter discusses how to:

- Work with forecast versions.
- Working with forecast notes and comments.
- Work with publishing profiles.

## Understanding Forecasts and Forecast Versions

This section discusses:

- Forecasts.
- Forecast versions.
- Forecast notes.
- Comments.
- Sales history.
- Product, location, and channel information.
- Demand point initialization.
- Approval of demand points.
- Cleared demand points.
- Fixed demand points.
- Import, export and clear fixed demand points.
- Import and export of forecast versions.
- Comparing forecasts.
- Forecast disaggregation.
- Forecast balancing.

### Forecasts

Forecasts are projections of future demand for a particular item. Using information in a demand model in conjunction with the sales history information for the same demand model, you can forecast the demand for a product at various points in the future.

Forecasts consist of:

- Forecast versions.
- A container for forecast data in a specific demand model.

  Each forecast version is associated with a demand model and is owned by the user who created it.
- Scenarios.
- The information that is used to populate a forecast.

  This information includes product, location, and channel data; sales history; the unit of measure; and so on. By defining scenarios, you can isolate a single demand point or multiple demand points and use this information as the basis for a forecast.

After you have entered all the required data, you can run the forecast based on a specific scenario. This action generates a graph that you can use to compare the forecast to the historical data. From this point, you can publish the scenario to a forecast version, which stores the scenario in the database.

Although you can add forecast versions to a demand model, you can only view, edit, or reconcile the forecast versions to which you have been granted access rights. Any forecast versions to which you do not have access rights are visible but unavailable for viewing or editing.

## Forecast Versions

Forecast versions act as containers for forecast data in a specific demand model. Each forecast version is associated with a demand model. The Forecast Studio user who created a particular forecast version also has permissions to read and write to the forecast version and to make it consistent.

When you create a forecast version, it uses the data structure of the demand model. However, any changes that you make to the data do not affect the demand model. If you are satisfied with the results that are produced by the forecast version, you can add this information to the database. Otherwise, you can delete it.

The user who creates a forecast version has read, write, and reconcile permissions for it. However, no other users have permissions to the forecast version. A user with administrative privileges can assign permissions to other users in the User Manager.

## Forecast Notes

Notes and comments enable you to keep track of the changes made to demand points. While they may seem similar, notes and comments are treated differently in a demand model.

Notes are annotations made at a particular time bucket for a demand point. You add notes in the Forecasts view in order to keep users informed about changes that have been made to a demand point during the forecasting process. A user can navigate to a specific demand point and add a note that contains information about any changes that were made to the demand point. Users with permissions to view the demand point can review notes. Only users with write permissions to the demand points in a forecast version can edit or delete notes.

Comments apply to the entire demand point. You add and view comments in the Forecasts view. Comments can contain notes from a scenario and a forecast version.

You add notes to demand points in the Forecast Notes column of the Time Series table in the Forecasts view. Each note can contain a brief description of any changes made to the demand point. You can copy forecast notes to comments.

---

**Note.** For better readability, your notes should be as concise as possible.

---

### See Also

Scenario Notes

## Comments

Like notes, comments enable you to keep track of the changes made to demand points. While they may seem similar, notes and comments are treated differently in a demand model.

Comments apply to the entire demand point. You add and view comments in the Forecasts workspace. Comments can contain notes from a scenario and a forecast version.

You add comments to demand points in the Forecasts view. Each comment consists of a subject, followed by the actual comment. After you save comments, they appear in the Consensus Conference Room as annotations.

You add comments using the Add Comment dialog box. In addition to containing fields for the subject and body of the comment, the Add Comment dialog box also displays:

- The forecast version to which the comment is being added.
- The demand point in the forecast version to which the comment will be added.

---

**Note.** The comments that you add in the Forecast Studio can be viewed in the Consensus Conference Room as annotations. Conversely, any annotations that are added in the Consensus Conference Room can be viewed in the Forecast Studio as comments.

---

Not all forecast versions have comments associated with them. Because comments are associated with demand points at a particular aggregation level, you may have to navigate to that aggregation level in order to view the comments.

You can copy forecast notes to comments in the Forecasts workspace.

### See Also

*Consensus Conference Room Implementation Guide*, "Adding and Viewing Demand Point Annotations"

Publishing Scenarios

## Sales History

Generating accurate forecasts is difficult when using only current forecast data because past factors have a direct impact on forecast data. Sales history data consists of trade promotion, out-of-stock history, seasonality, and market trend information.

Because sales history is also input into the forecasting engine and into the generated forecast, it can affect the validity of forecast data. Therefore, the sales history data must be accurate. If you use inaccurate sales information, your forecasts will also be inaccurate.

Sales history is also used to determine forecast accuracy by comparing historical data with forecast data that is projected for the future. Historical data can help to determine consistencies and inconsistencies in the forecast because spikes and valleys in the data indicate that some type of activity has occurred.

When comparing forecast data for a time series, sales history can reveal additional information that enables you to determine if the data is accurate. Forecast data is often based on patterns from previous years. If a sales history pattern shows an increase in product sales for a particular period, this pattern might not always fall in the same time period every year; therefore, it cannot be captured as seasonal data.

You can import existing sales history data into a demand model from within the Scenarios workspace in the Forecast Studio and use it to generate statistical forecasts and compare current forecast data. You can view the data in either graph mode or table mode.

Sales history data must be viewed in the same time bucket as the current forecast data that already exists in the database, such as daily, weekly, or monthly buckets. You might have to use the scrolling feature in graph mode if the start date of the sales history occurs before any forecast data and there are large gaps between the demand points.

## Product, Location, and Channel Information

The aggregation hierarchy defines the structure of a model. At the lowest level of the hierarchy are demand points for each location where you sell a product into a channel. Higher levels in the aggregation hierarchy are defined by choosing a product, a location, and a channel grouping.

Successively higher aggregation levels are built from successively higher product, location, and channel levels. At each aggregation level, you obtain aggregation points that are the intersection point for all of the values from the product, location, and channel levels (each level has successively fewer aggregation points than the one below it). The demand at any aggregation point is calculated by aggregating the demand from the next lower aggregation level.

An aggregation point is a demand point that appears in the aggregation hierarchy. All aggregation points are demand points, but all demand points are not aggregation points. An aggregated value can be calculated in many ways, depending on how you define the various hierarchies. The cross-product of all points in the product hierarchy, location hierarchy, and channel hierarchy define all of the possible demand points.

For example, suppose that a model contains this data:

- Product: Service Parts/Misc/Primer
- Location: Germany/Berlin/Alles Bikes/
- Channel: Independent

Using the product, location, and channel level, you can display specific data for particular demand points.

The combination of product, location, and channel level creates a demand point where potential for demand exists. Each demand point at the top of the aggregation hierarchy and follow the path down until you reach the point that has a unique place within the aggregation hierarchy-in this case, the bottom-most level. The data for this demand point is displayed in the Scenario View area.

---

**Note.** An ellipsis before a product, location, or channel field is a placeholder for any folders that are part of the navigation path but don’t appear in the field.

---

## Demand Point Initialization

New demand points that you introduce into a demand model do not have a sales history associated with them. Initializing demand points enables you to generate sales history data for any new demand points in a demand model. By initializing demand points, you are working with a subset of products, locations, or channels. The initialization process is useful when you have many new demand points, but you need to work with only a few of them.

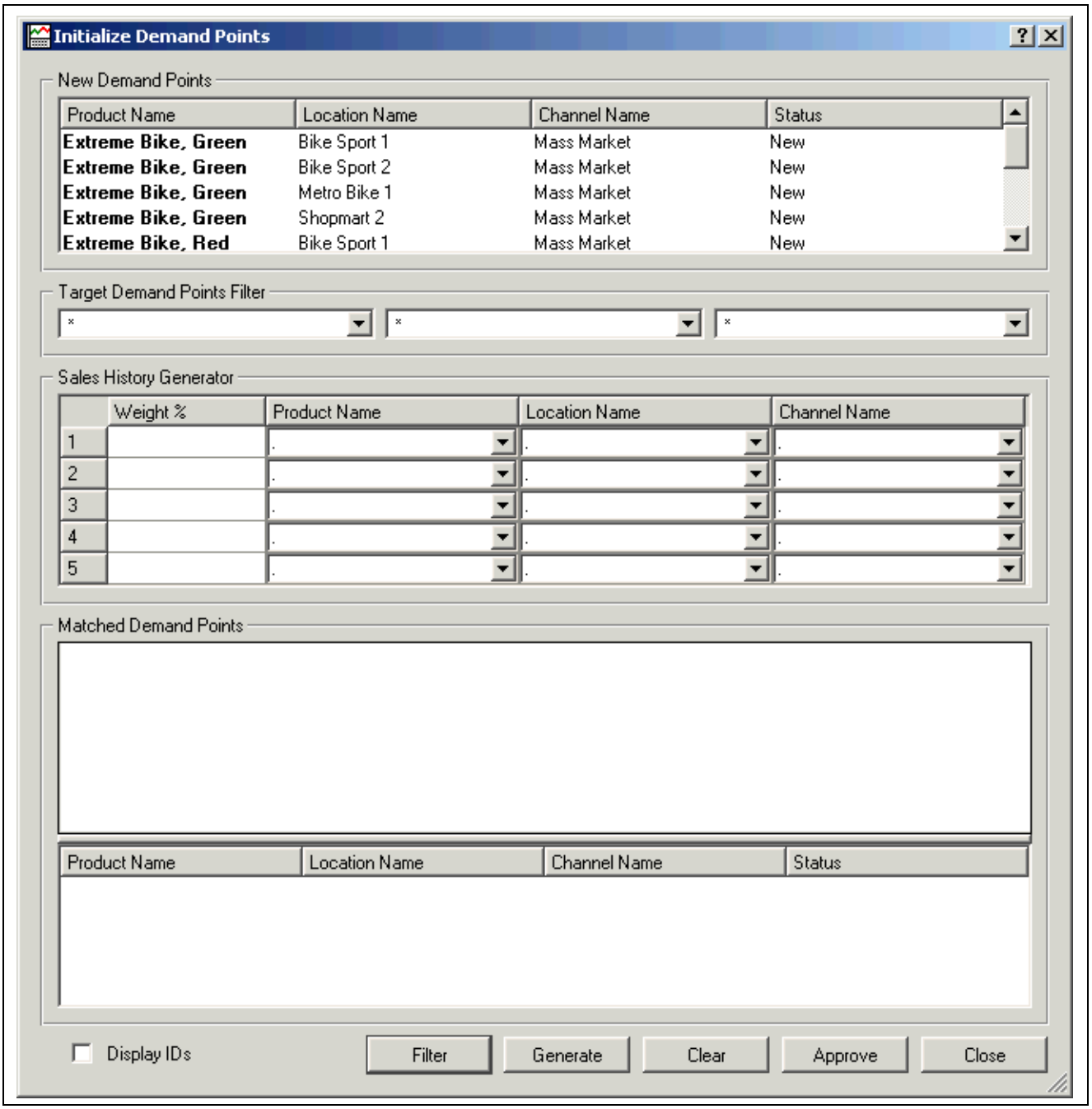
Initializing demand points also enables you to model the sales history for a product, location, or channel, based on the actual history of a similar product, location, or channel. When you generate a statistical forecast, the new demand points require historical data. For example, assume that you introduce into your line a new product that is based on an existing product. The new product does not have a sales history. However, you can use the sales history from the existing product to model the history of the new product.

You initialize demand points in the Initialize Demand Points window in the Forecast Studio. Initializing demand points enables you to:

- Select the demand point to filter.
- Specify sales history information for each product, location, or channel in the demand point.
- Generate a sales history for the demand point.

Here is the Initialize Demand Points window:




Initialize Demand Points window

The Initialize Demand Points window consists of these areas:

- New Demand Points

  This area lists all of the demand points in the demand model that are flagged as New. Product names that appear in bold represent demand points that are completely new.

- Target Demand Points Filter

  You use this area to define the demand points for which you want to model sales history information.

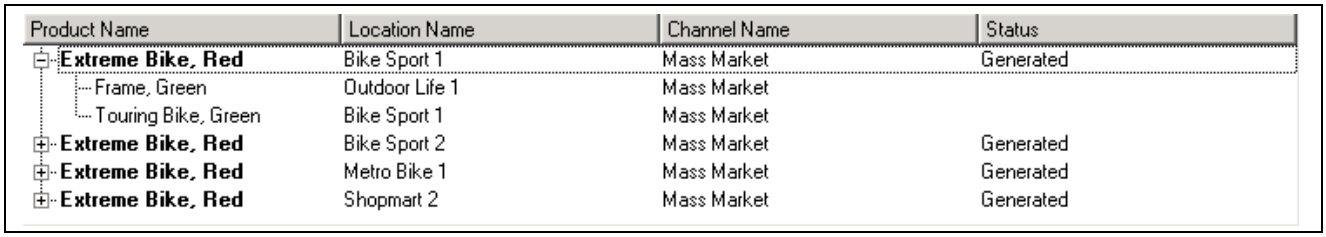
- Sales History Generator

  You use this area to specify the demand points that supply the sales history information for the new products.

- Matched Demand Points

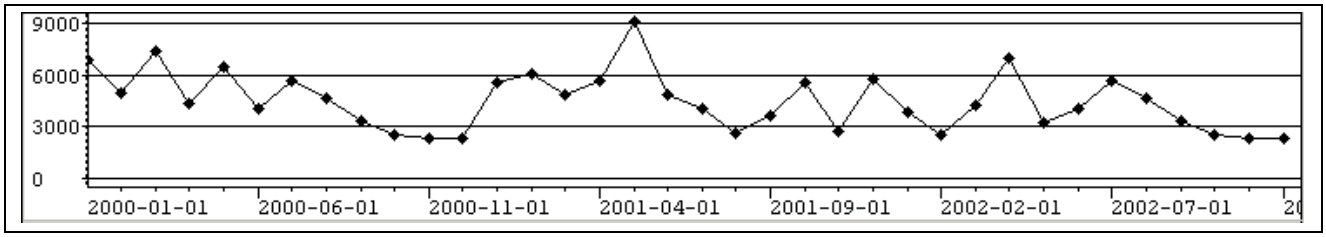
  This area lists all of the demand points that match the criteria that you specified in the Sales History Generator area.

After you generate sales histories for the demand points, the Initialize Demand Points window displays demand points in an expandable tree. The demand points that provide the history information are listed beneath the new demand points, as shown in this image:




Initialized demand points in the Forecast Studio

The Initialize Demand Points window also displays a graph that illustrates the modeled sales history for each demand point. This image shows a sample graph:




Initialized demand points graph

**Note.** You might have to filter and generate demand points multiple times before you achieve satisfactory results.

### See Also

Introducing New Products into Demand Models,*Design Studio Implementation Guide*

## Approval of Demand Points

After you have modeled the history for the demand points, you can approve them. When you approve a demand point, you clear the New flag for that demand point.

**Note.** You can exit the Initialize Demand Points window before you approve a demand point, and review the history in the Forecast Studio views. When you reopen the Initialize Demand Points window, the demand points that you generated are still available for revision.

# Cleared Demand Points

If you are dissatisfied with the sales history that you have modeled for any of the demand points, you can clear it. Any demand points for which you have cleared the sales history are removed from the list in the Matched Demand Points area of the Initialize Demand Points window.

# Fixed Demand Points

There are times that you may want to lock in or "fix" demand quantities for specific demand points to protect them during balance and disaggregation. For example, you may be providing a set number of promotional items to a customer, and that number will not be changing. Another example would be when you have more demand than you can fulfill due to supply constraints. In this case, you may commit to provide specific quantities to a demand point and need to lock it in.

---

**Note.** Fixing demand points should be used sparingly so that you can fully take advantage of the disaggregation and balance capabilities for generating demand forecasts.

---

To fix demand points, you must first specify that the aggregation hierarchy is "fixable". Only one aggregation hierarchy in your demand model is fixable at a time.

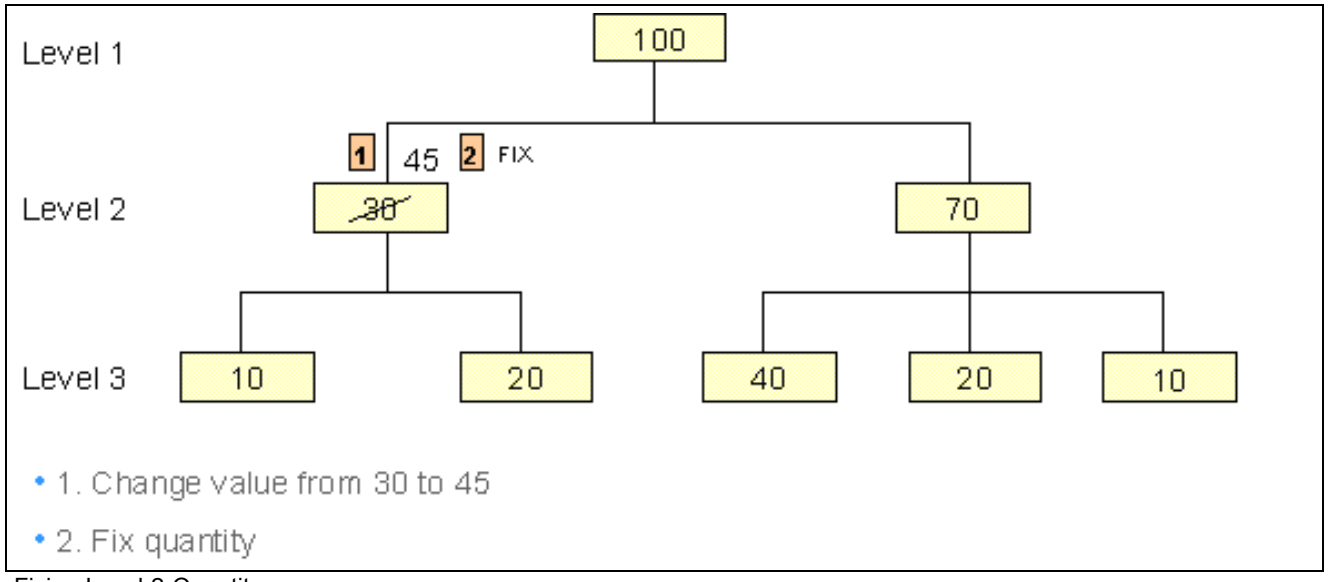
Within the Forecasts workspace, you can modify and fix future demand for a hierarchy level. At that time, you can specify how disaggregation and balance will proceed considering the fixed demand points, and whether forecast notes will be appended. Directly fixed demand points appear in green cells in the forecast workspace; indirectly fixed demand points appear in red cells. Directly fixed demand points can be unfixed, which has the effect of unfixing any dependent demand points.

Fixing a demand point has a number of implications depending on what hierarchical level is fixed. There are a couple of scenarios detailed below.

### Demand fixed at a middle level indirectly fixes the sub-pyramid below

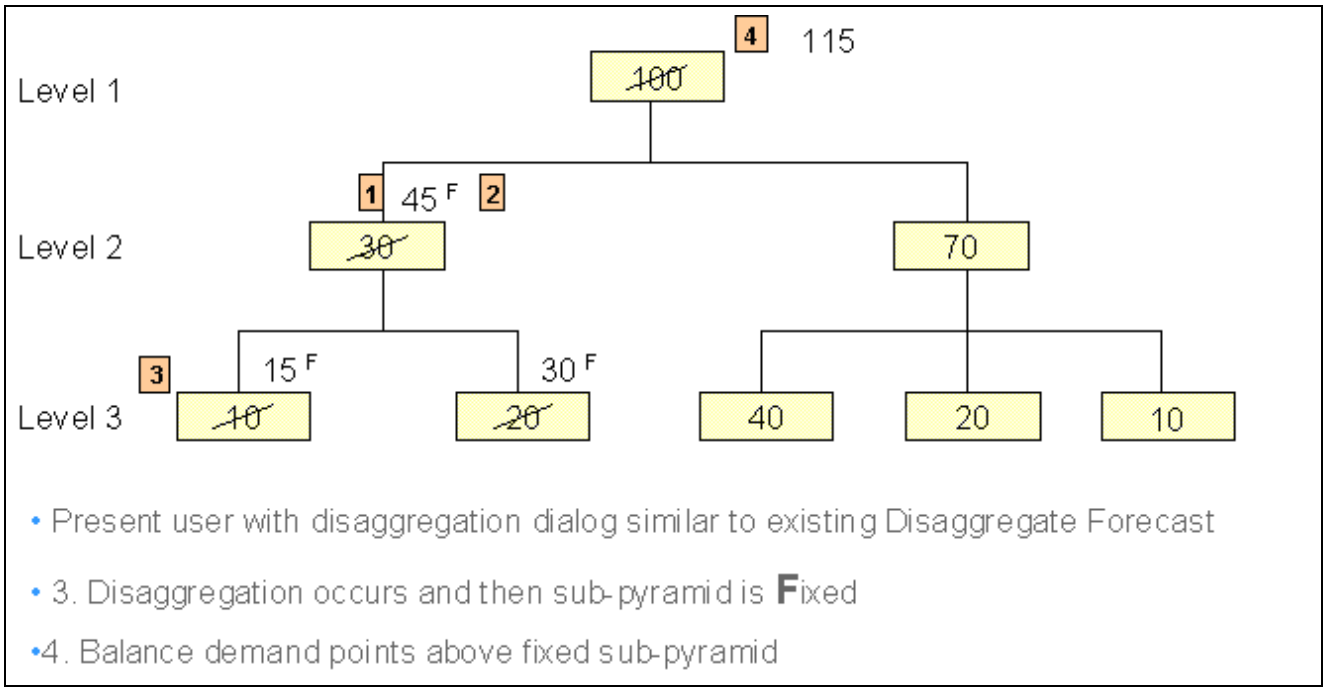
A balanced hierarchy is maintained by fixing demand points below the fixed demand point at the time of fixing. Demand points that are fixed directly are displayed on the screen in green. Demand points that are fixed indirectly are displayed on the screen in red.

For example, in the following example, a quantity above the leaf level is changed form 30 to 45 and fixed.




Fixing Level 2 Quantity

Upon top-down disaggregation, the quantities below the modified demand point change from 10 and 20 to 15 and 30 respectively and become fixed. The parent of the modified demand point is balanced and becomes 115.

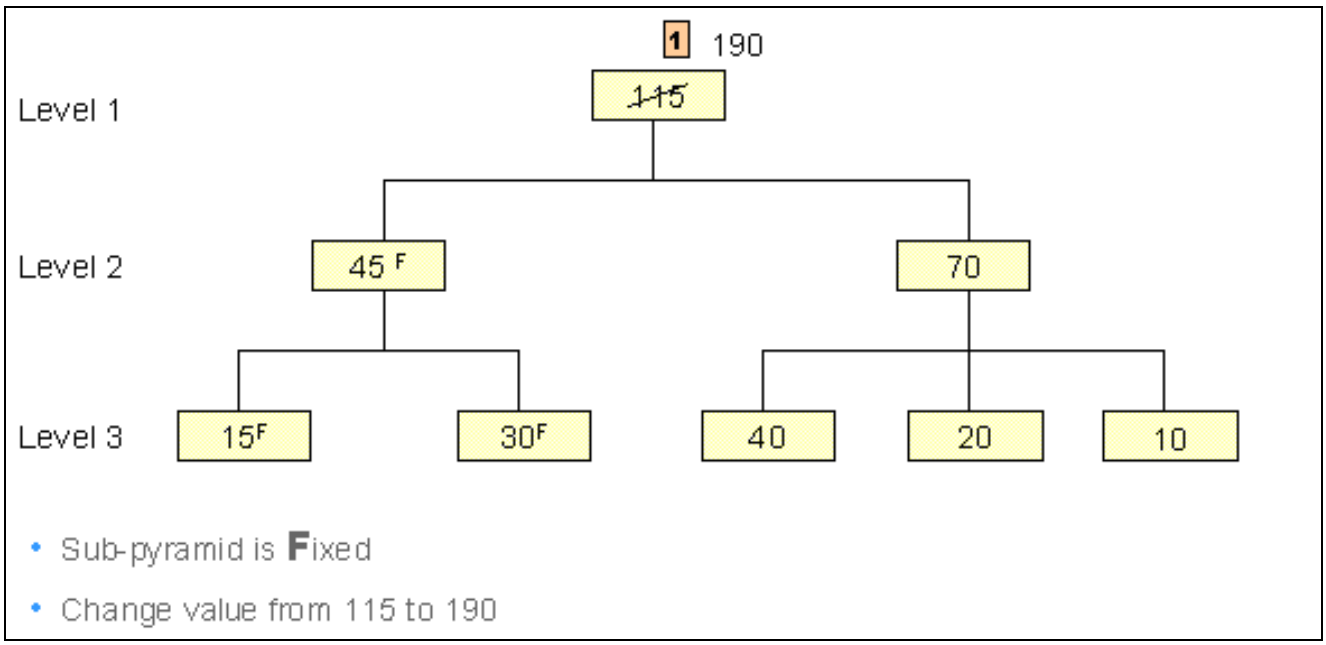



Level 1 Quantity changes to 115

## Disaggregating around a fixed demand point

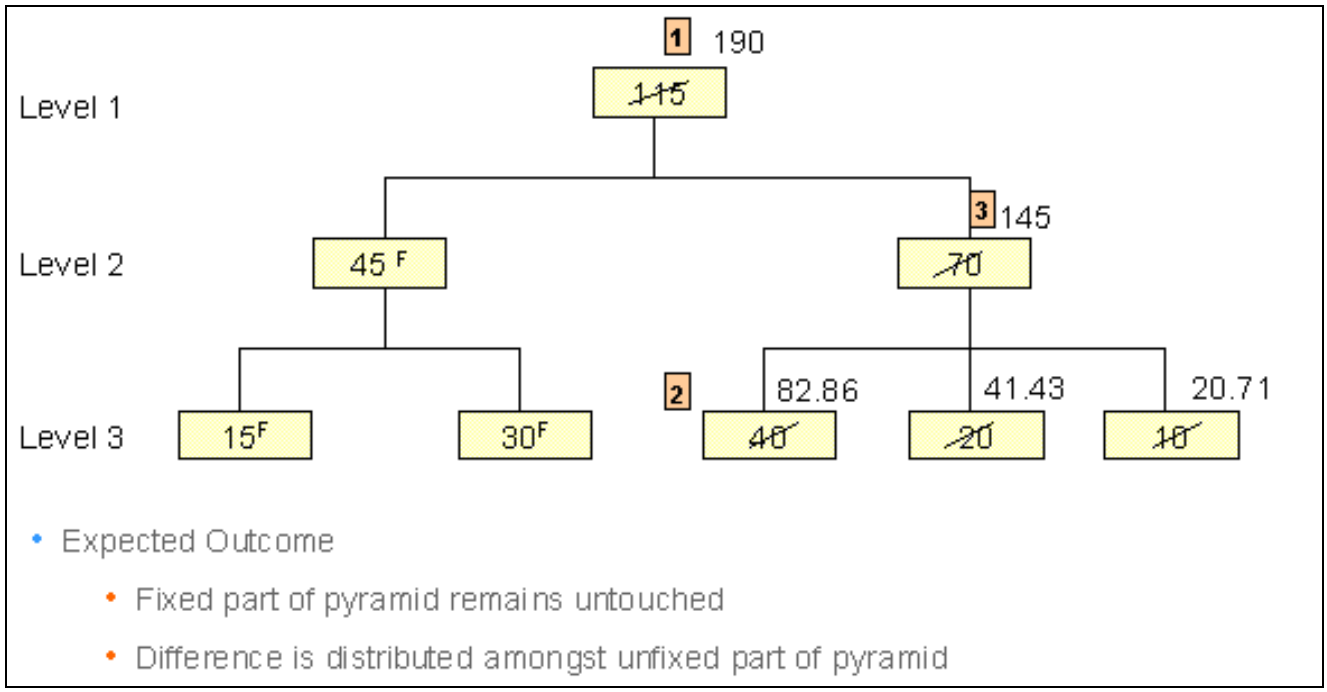
Disaggregation does not modify fixed demand point quantities. Instead, upon disaggregation, changes are made to the unfixed demand points within the same sub-pyramid.

In the following example, the quantity of a demand point was changed to 45 and fixed. The leaf demand points below it are also fixed. The demand point above this fixed point is changed from 115 to 190.




Level 2 and 3 demand points fixed

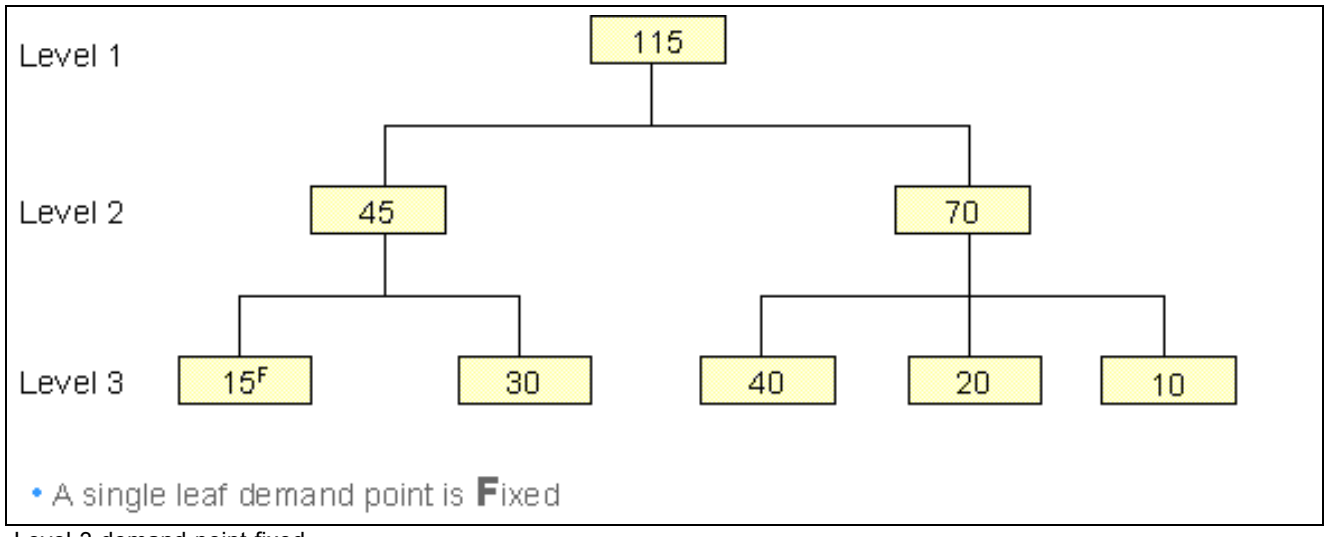
Upon top-down disaggregation, the fixed sub-pyramid remains unchanged and the change allocated to the unfixed demand points below:




Quantities distributed among unfixed demand points

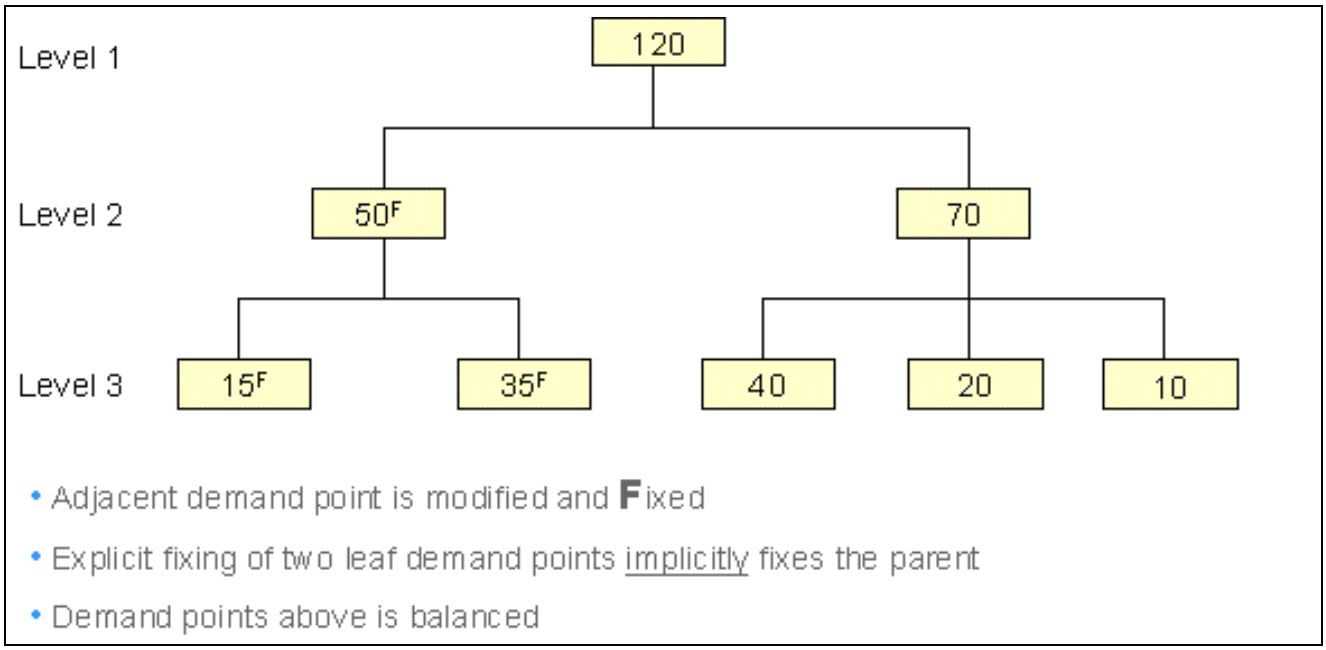
## Indirect demand point fixing

Fixing a demand point can potentially cause another demand point to be fixed. In the following example, a single leaf demand point with quantity of 15 is fixed.



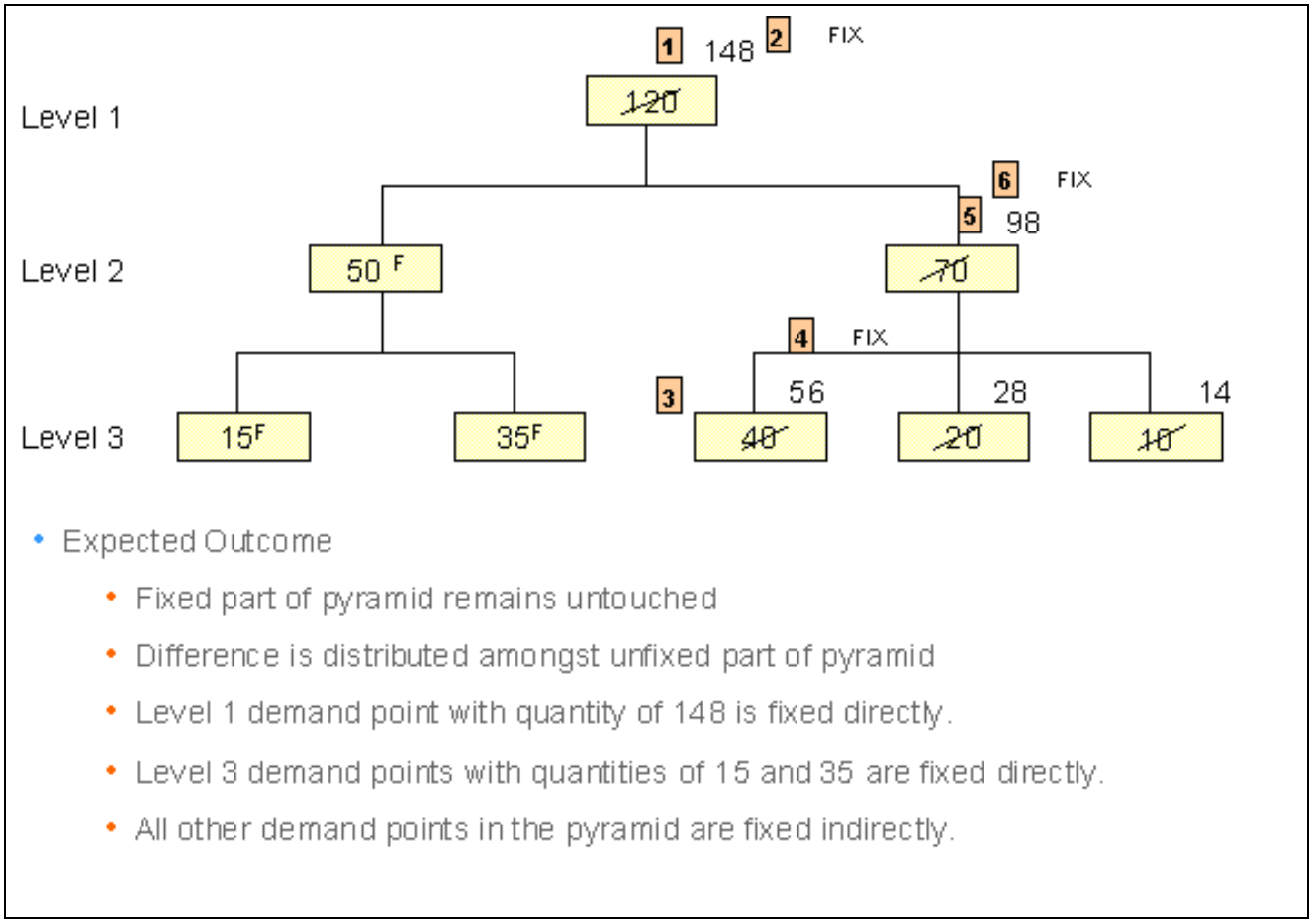

Level 3 demand point fixed

The adjacent demand point is changed from 30 to 35 and fixed. By directly fixing the adjacent demand point, the parent demand point with only these two children becomes fixed indirectly. Prior to fixing the parent indirectly, its quantity is balanced (from 45 to 50).




Second level 3 demand point is fixed, indirectly fixing the level 2 demand point

Using this pyramid, the quantity of 120 at Level 1 is modified from 120 to 148 and fixed. Disaggregation method is bottom-up.

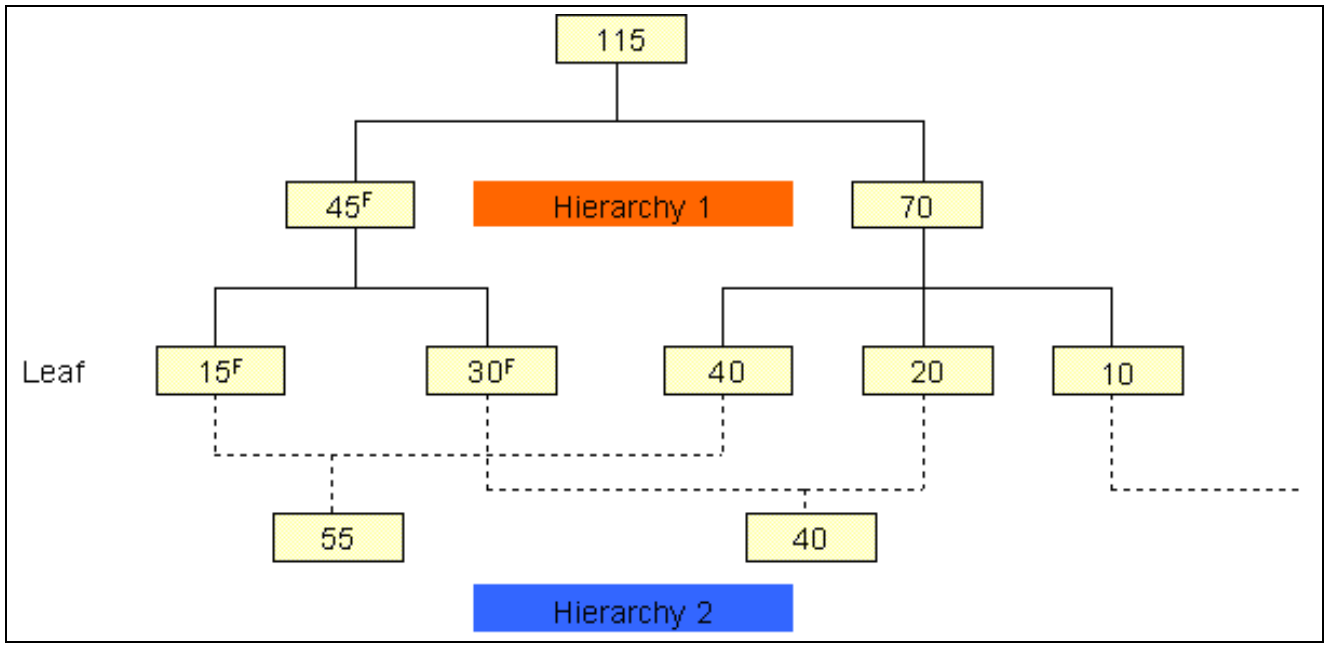



Level 1 fixed in addition to Level 3 and indirectly, Level 2

In the above example, the entire pyramid is fixed where three demand points are fixed directly and all others indirectly.

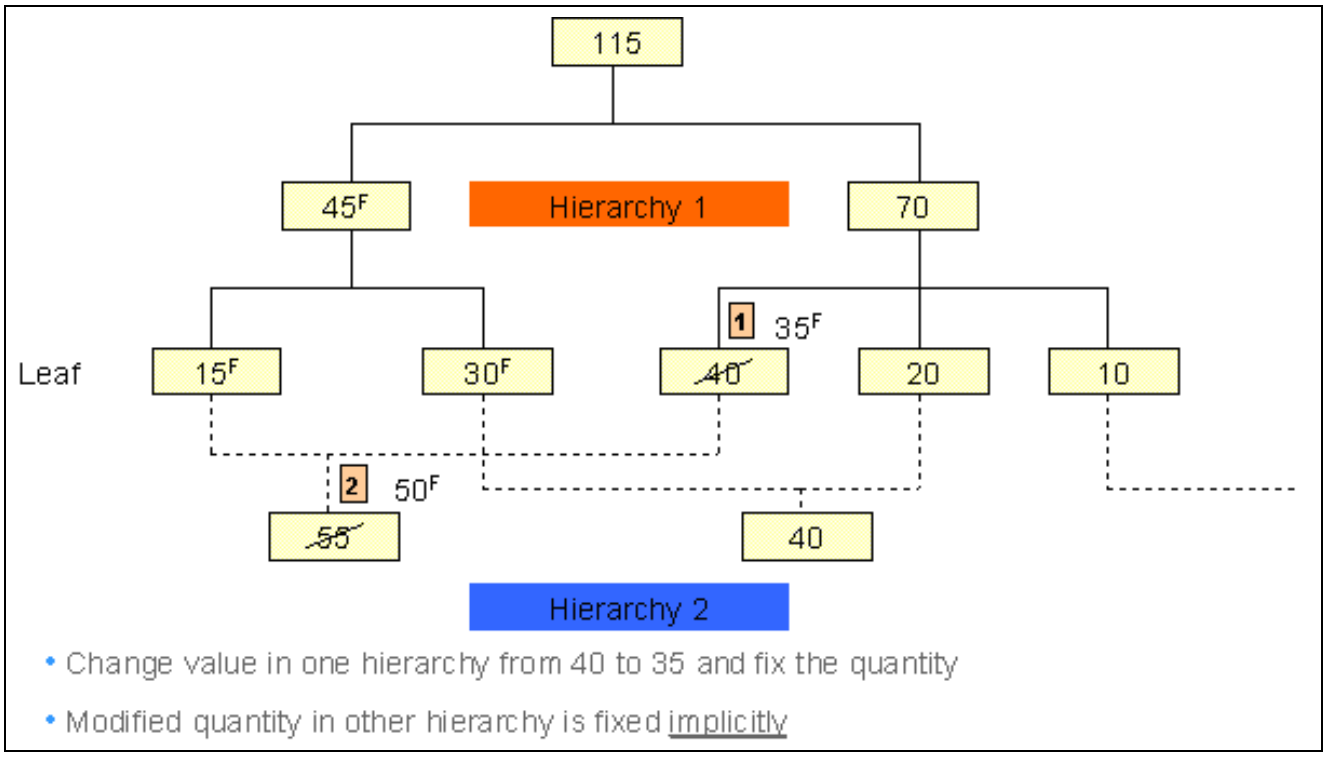
### Indirect demand point fixing in multiple hierarchies

Fixing a demand point can potentially cause another demand point to be fixed in another aggregation hierarchy. In the following example, there are two aggregation hierarchies that aggregate differently from the leaf level. There is a fixed sub-pyramid in one hierarchy. The dotted lines represent aggregation levels in the other aggregation hierarchy.




Two aggregation hierarchies

A demand point in the first hierarchy is changed from 40 to 35 and fixed. By directly fixing this demand point, a parent demand point in another aggregation hierarchy becomes fixed indirectly.

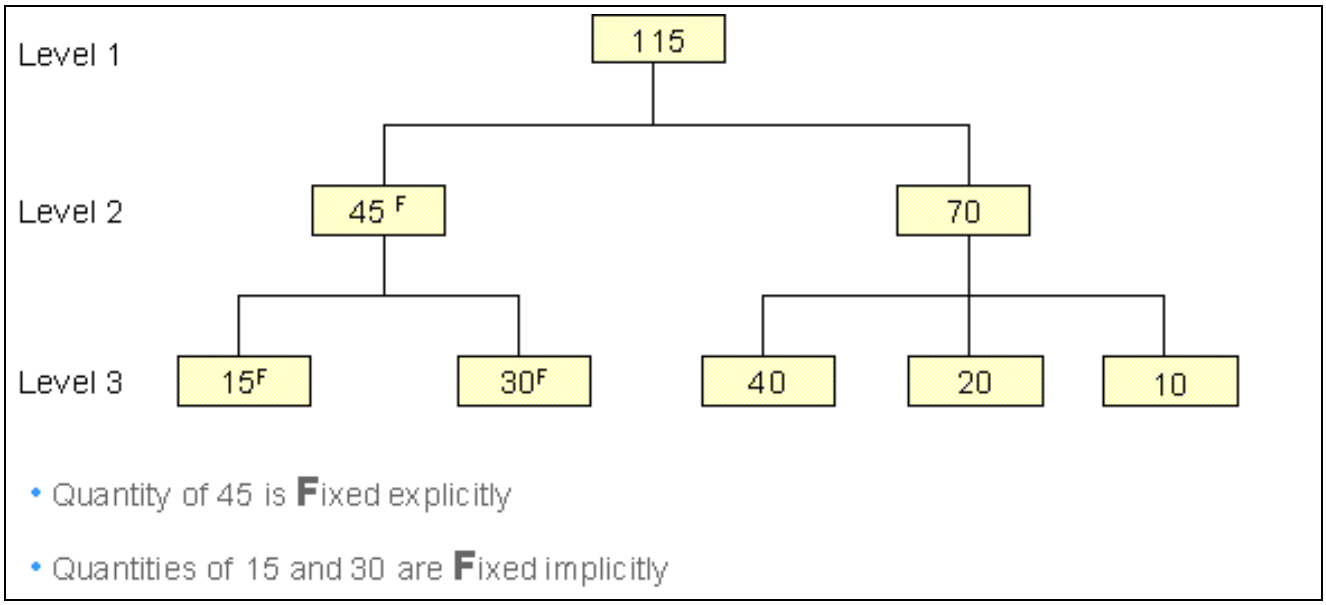



Fixing demand point in one hierarchy indirectly fixes demand points in other hierarchy

## Unfixing a fixed demand point

Demand points can be unfixed. Directly fixed demand points can be unfixed directly whereas implicitly fixed demand points cannot be unfixed.

In the following example, there is a fixed sub-pyramid where a demand point with quantity of 45 was fixed in a particular period and its children fixed indirectly. The user wants to increase the quantity from 45 to 60. In order to change the quantity, the user must first unfix the demand point in that period, make the edit and then refix the quantity. Since the demand point was fixed directly, it is possible to unfix the demand point directly, edit, and refix. There is no need for any special user notification.




Level 2 fixed directly, Level 3 fixed indirectly

In the same example, the user wants to adjust the leaf-level quantity from 15 to 30 units instead of revising at the next level up. In this case, the demand point was fixed indirectly as a consequence of the fixing of the demand point at a higher level. When the user tries to unfix the demand point with the quantity of 15, they are unable. If a user does not have access to a demand point that has caused one of their demand points to be fixed indirectly, they will need to notify the user with access to the fixed demand point in order to unfix. Once unfixed, the user can change the volume mix and notify the other user that the changes have been made.

## Import, Export and Clearing of Fixed Demand Points

Fixed demand points can be imported, exported and cleared from an XML file. By "fixing" specific demand points, demand quantities are protected for a hierarchy level during aggregation and disaggregation. Fixing demand points may indirectly affect the levels above or below the fixed level. Fixing can only be used in one aggregation hierarchy at a time.

## Import and Export of Forecast Versions

You can save and load files containing forecast version information to or from a local or network drive. The files containing forecast version information are in XML format and have the extension .xml. The XML files that you export encapsulate all of the information in a forecast version.

---

**Note.** Depending on the size of the data model, the forecast version files can be quite large and can take some time to import and export.

---

## Comparing Forecasts

From within the Forecasts workspace you can compare baseline forecast version data with other forecast versions. By comparing forecasts you can better understand the baseline forecast version data in relation to other stakeholder forecasts.

When comparing forecasts, actuals appear in the time series table as shaded, and forecast values appear unshaded. As you add forecasts that you want to compare, the appropriate columns are added to the time series table. Only the baseline forecast can be edited, and you must have the appropriate permissions.

## Forecast Disaggregation

Disaggregating forecasts enables you to compare forecast data that was forecasted at a higher level with another user's data that was forecasted at a lower level of abstraction.

You can disaggregate a forecast in three ways:

- Using the system profile.
- Using the current forecast version profile, in top-down mode.
- Using the current forecast version profile, in bottom-up mode.

### Disaggregation Using the System Profile

Disaggregating a forecast using the system profile causes the Forecast Studio to distribute forecast data upwards according to the underlying pattern in the current forecast version. To perform the disaggregation, the Forecast Studio copies leaf demand points from the system profile into the working profile. The values and forecasts in the system profile replace those in the working profile. Only leaf demand points from the system profile are used in disaggregation.

The value in each time bucket adds up to the value of the top-level forecast, and all existing proportions remain intact after disaggregation. These proportions are taken from the system forecast version.

You can disaggregate with the system profile if little or no data is at the lowest level of the current forecast version. In the Forecast Studio, the name of the system profile appears in parentheses beside this option.

In addition, any negative values are treated as 0 in the working profile. Negative values retain their original values in the system profile.

### Top-Down Disaggregation Using the Current Profile

Top-down disaggregation distributes the forecast data downwards from the highest aggregation level according to the underlying pattern in the current forecast version. The value in each time bucket adds up to the value of the parent forecast.

If there are no forecasts at the lower levels of aggregation, the Forecast Studio creates forecasts at those levels and then performs the disaggregation. If some of the demand points at the lower levels have forecasts and others do not, the values being pushed down from the top are split between the demand points that have forecasts. The demand points without forecasts are ignored.

All fixed points beneath the top level are overwritten, except for leaf demand points. If there are missing values, then the top value is evenly distributed at the lowest level. In addition, missing values at the lowest level of aggregation are ignored.

Depending on the quality of your data, however, disaggregation may not work exactly in this manner. Several special cases can affect results, including these:

- When the parent forecast has a missing value in a time bucket, this value is forced downwards to all children regardless of the values that they previously had.
- If all children in a particular bucket have a value of 0, the value of the parent forecast is distributed evenly among them.
- All missing values are considered missing as long as at least one value in the pyramid is greater than 0.
- If all values below the parent forecast are missing, then the Forecast Studio registers them as missing.
- Negative values are treated as 0.
- If some child demand points have missing values and others have data, the Forecast Studio only disaggregates the demand points that contain data.

### Bottom-Up Disaggregation Using the Current Profile

Bottom-up disaggregation distributes forecast data upwards from the lowest aggregation level according to the underlying pattern in the current forecast version. Leaf-level demand points are copied from the system profile into the working profile. The values that were originally in the working profile at the leaf level are ignored.

Depending on the quality of your data, however, disaggregation may not work exactly in this manner. Several special cases can affect results, including these:

- If all child demand points in a particular bucket have missing values, they are assigned equal values so that their sum is equal to the value of the parent forecast.
- A forecast is created for any demand points that do not have a forecast associated with them.
- All negative values are treated as 0.
- When some of the demand points in a time bucket have missing values, those demand points are ignored.

### More Information About Disaggregation

Regardless of the disaggregation option that you use, the changes that result from disaggregation are propagated to all units of measure that apply at the level of disaggregation. All fixed demand points demand points become unfixed, and the changes are displayed in the Table view.

You disaggregate forecasts by using the Disaggregate Forecast(s) dialog box. On the Disaggregate Forecast(s) dialog box, you select the options to use when disaggregating a forecast:

- Forecast version
- Unit of measure
- Aggregation level
- Forecast version profile

You can also specify whether to leave a forecast in the fixed state. By default, the Forecast Studio leaves forecasts that are fixed in the same state after disaggregation. Forecasts that are not fixed remain unfixed. Generally, you fix forecasts after disaggregation, because any forecast that is not fixed is not taken into account during the reconciliation process.

## Forecast Balancing

Sometimes, the values of the child data in a forecast do not add up to the value of the parent data. The Forecast Studio enables you to balance a forecast so that you can eliminate these inconsistencies and obtain the necessary data. Balancing a forecast essentially makes the forecast consistent.

By balancing a forecast, you minimize any errors in that forecast, and you create a well-formed forecast that is better suited to your needs. This process assigns new weights to the values in both the main forecast and its forecast versions, and this ensures that the values of the forecast version add up to the value of the forecast.

For example, assume that you have forecast that the demand for a particular product will be 1,000 units. The three child forecasts have values of 300, 370, and 280 units, respectively-totaling 950. Balancing the forecast assigns new weights to the value of the parent forecast and the values of the child forecasts so that the values add up correctly.

You can balance forecasts based on:

- The current demand point

  Balances the forecast based on the demand point that is currently active in the Forecast Studio. To balance all of the forecasts that are above the current demand point, select the Unfix forecast above option.

- The aggregation level

  Balances the forecast based on an aggregation level that you select from the drop-down menu.

After you balance the forecast, the Forecast Studio saves the results to the database. You cannot roll back the changes. Any negative values remain negative.

---

**Note.** You can only use the Balance Forecast function if you have reconciliation permissions for the forecast version that you are working with. Contact your system administrator to confirm that you have reconciliation permissions for the forecast version.

---

# Working with Forecast Versions

This section discusses how to:

- Add forecast versions to a demand model.
- Rename forecast versions.
- Delete forecast versions.
- Select the Baseline View Forecast Version.
- Compare forecast versions.
- Import sales histories.
- Change product, location, and channel.
- Initialize demand points.
- Approve demand points.
- Clear demand points.
- Fix demand points.
- Unfix demand points.
- Import fixed demand points.
- Export fixed demand points.
- Clear fixed demand points.
- Import and export forecast versions.
- Disaggregate forecasts.
- Balance forecasts.

## Windows Used to Work with Forecasts

| Window Name | Navigation | Usage |
|---|---|---|
| Forecast Studio | Shortcuts bar, Forecasts | Perform tasks in the Forecast Versions workspace. |
| Forecast Studio | Shortcuts Bar, Scenarios, Edit, Initialize Demand Points | Generate sales history data for any new demand points. |
| Forecast Studio | Edit, Import Forecast Version | Start the process for importing forecast version information from an XML file. |
| Forecast Studio | Tools, Balance | Make a forecast consistent. |
| Time Series Table | Select a demand point. | Highlight the demand oint with which you want to work. |

## Adding Forecast Versions to a Demand Model

Access the Forecasts workspace.

To add forecast versions to a demand model, select New Forecast Version from the Edit menu.

A new forecast version appears on the Forecasts tab. You can change the name of the forecast version to make it descriptive.

## Renaming Forecast Versions

Access the Forecasts workspace.

To rename forecast versions:

1. Select the forecast version that you want to rename.
2. Rename Forecast Version from the Edit menu.
3. Enter a new name for the forecast version, and then press Enter.

## Deleting Forecast Versions

Access the Forecasts workspace.

To delete forecast versions:

1. Select the forecast version that you want to delete.
2. Select Delete Forecast Version from the Edit menu.

## Selecting the Baseline Forecast Version

Depending upon the permissions that are granted to you by the system administrator, you can view your own forecast version and at least one other forecast version. When comparing forecasts, you can only edit the baseline forecast. Changing the baseline forecast version allows you to use different forecast versions as the benchmark for forecast data comparison. This ability provides you with different perspectives on the forecast data.

To select the baseline forecast version:

Select the name of the forecast version that you want as the baseline forecast version from the drop-down list in the Forecasts View.

## Comparing Forecast Versions

Access the Forecasts workspace.

To compare multiple forecasts:

1. Select a forecast version that you want to view from the Baseline View.
2. Select all of the forecast versions that you want to compare by choosing the option that is next to the forecast version.

## Importing Sales Histories

Access the Forecasts workspace.

To import sales histories:

1. Select Import Sales History from the Edit menu.
2. Navigate to the directory containing the sales history file that you want to import.

3. Select the sales history file, and then click Open.

## Changing Product, Location, and Channel Information

Access the Forecasts workspace.

To change the product, location, and channel levels that you want to view, select:

- Product.
- Location.
- Channel.

The data in the Graph view and Time Series table reflects the new aggregation level.

To change product, location, and channel information, select the demand point from the Aggregation Level drop-down list. The valid options depend on the demand model with which you are working.

The corresponding available product, location, and channel appear in the Product, Location and Channel drop-down list.

Depending on the item that you select, the information in the Graph view and in the Sales History column of the Time Series table reflects your selection.

## Initializing Demand Points

Access the Initialize Demand Points window.

To initialize demand points:

1. Select the product, location, and channel that you want to initialize from the respective drop-down lists in the Target Demand Points Filter area of the Initialize Demand Points window.

   Alternatively, you can use multiple products, locations, or channels for filtering by using the asterisk as a wildcard character.

2. For each unique combination of product, location, and channel, type the weighting in the Weight % field.

   By specifying a weighting, you can set the percentage of the sales history from the sources to use. For example, you can specify 30 percent from one combination of product, location, and channel, and 70 percent from another combination. The weightings do not have to equal 100 percent. For example, assume that a new location is in an area that is twice the size of the location on which you are modeling the new location. In that case, you can expect demand and sales to be twice as great in the new location. Therefore, you would type 200 in the Weight % field.

3. Click Filter.

   **Note.** Alternatively, you can perform this step after you have specified the target demand points that you want to filter. When you do this, any weightings that are generated apply to the source demand points only.

4. Select one or more demand points, and then click Generate.

   **Note.** You can select the Display IDs option to review information by product IDs instead of by product names.

## Approving Demand Points

Access the Initialize Demand Points window.

To approve demand points:

1. Select the product name.
2. Click Approve.

   If the demand point does not have sales history associated with it, a warning message appears. Click Yes to approve the demand point.

## Clearing Demand Points

Access the Forecasts workspace.

To clear demand points:

1. Select the demand points whose sales history you want to clear.
2. Click Clear.

## Fixing Demand Points

Access the Forecasts workspace.

To fix demand point(s):

1. Select the demand points you want to fix.
2. Select Fix Forecast from the Tools menu. The Fix Demand Point Period(s) dialog box appears.
3. Choose the disaggregation mode:

| | |
|---|---|
| **Disaggregate using system profile** | Disaggregates the forecast based on a system-defined pattern. Leaf-level demand points are copied from the system profile into the current profile and the existing demand points are ignored. You can use this information if little or no data is at the lowest level of the current forecast version. Another reason to use the system profile is for low-level data that cannot be forecast well. For example, the usage of a distribution pattern based upon average sales history rather than statistical forecasts of size and color combinations in the apparel sector. |
| **Disaggregate using current forecast version profile and top-down disaggregation mode** | Distributes the forecast data downwards from the highest aggregation level according to the underlying pattern in the current forecast version. The value in each time bucket adds up to the value of the parent forecast. |
| **Disaggregate using current forecast version profile and bottom-up disaggregation mode** | Distributes forecast data upwards from the lowest aggregation level according to the underlying pattern in the current forecast version. Use this method when low-level forecasts have proven to be reliable. |

4. Choose whether to balance demand points above the fixed demand point.
5. Choose whether to append notes to the forecast during the disaggregation process. This option is only available when using the top-down disaggregation mode.

6. Click OK. You are reminded that disaggregating the forecast values for the selected demand point(s) will overwrite all forecasts underneath it in the model hierarchy.
7. Click Yes to disaggregate the forecast.

The demand point cells are displayed as green when they are fixed.

## Unfixing Demand Points

Access the Forecasts workspace.

To unfix demand point(s):

1. Select the fixed demand points you want to unfix. These demand points must appear in a green cell to indicate that they are directly fixed.
2. Select Unfix Forecast from the Tools menu. You will be reminded that the action of unfixing the periods for the selected demand point will also unfix the demand points in lower levels in the model hierarchy.
3. Click Yes to unfix.

The demand point cells are unfixed.

## Importing Fixed Demand Points

Access the Forecasts workspace.

To import fixed demand points from an XML file:

1. Select Import Fixed Demand Points from the Edit menu.
2. Navigate to the directory containing the XML file with the fixed demand points to be imported.
3. Select the XML file containing the fixed demand points, and then click Open. The Fix Demand Point Period(s) dialog box appears.
4. Choose the disaggregation mode:

| | |
|---|---|
| **Disaggregate using system profile** | Disaggregates the forecast based on a system-defined pattern. Leaf-level demand points are copied from the system profile into the current profile and the existing demand points are ignored. You can use this information if little or no data is at the lowest level of the current forecast version. Another reason to use the system profile is for low-level data that cannot be forecast well. For example, the usage of a distribution pattern based upon average sales history rather than statistical forecasts of size and color combinations in the apparel sector. |
| **Disaggregate using current forecast version profile and top-down disaggregation mode** | Distributes the forecast data downwards from the highest aggregation level according to the underlying patter in the current forecast version. The value in each time bucket adds up to the value of the parent forecast. |
| **Disaggregate using current forecast version profile and bottom-up disaggregation mode** | Distributes forecast data upwards from the lowest aggregation level according to the underlying pattern in the current forecast version. Use this method when low-level forecasts have proven to be reliable. |

5. Choose whether to balance demand points above the fixed demand point.

6. Choose whether to append notes to the forecast during the disaggregation process. This option is only available when using the top-down disaggregation mode.
7. Click OK. The fixed demand points are imported.

## Exporting Fixed Demand Points

Access the Forecasts workspace.

To export fixed demand points:

1. Select the forecast version whose fixed demand points you want to export.
2. Export Fixed Demand Points from the Edit menu.
3. Select a folder in which to save the forecast version.
4. Enter a name for the exported fixed demand points in the File Name field, and then click Save.

## Clearing Fixed Demand Points

Fixed demand points can be cleared from a model for all demand points or only for specific points by referencing an external XML file.

Access the Forecasts workspace.

To clear fixed demand points:

1. Select the forecast version whose demand points you want to clear.
2. Clear Fixed Demand Points from the Edit menu. The Clear Fixed Points dialog box appears.
3. Choose one of the following options:
   - Clear all fixed demand points
   - Clear the fixed demand points specified in an XML file. Navigate to the XML file containing the fixed demand points you want to clear.
4. Click OK.

## Importing Forecast Versions

Access the Import Forecast Version window.

To import forecast versions:

1. Navigate to the directory containing the forecast version file that you want to export.
2. Select the file containing the forecast version, and then click Open.
3. Select a disaggregation mode:
   - Disaggregate using system profile.
   - Disaggregate using current forecast version profile and top-down disaggregation mode.
   - Disaggregate using current forecast version profile and bottom-up disaggregation mode.
4. Click OK.

# Exporting Forecast Versions

Access the Forecasts workspace.

To export forecast versions:

1. Select the forecast version that you want to export.
2. Export Forecast Version from the Edit menu.
3. Select a folder in which to save the forecast version.
4. Enter a name for the forecast version in the File Name field, and then click Save.

   **Note.** Specify the extension .xml with the file name.

5. Clear any of the following export options:
   - Include Aggregated Demand Points.
   - Include Missing Demand Points.
   - Include Annotations.
6. If you have a slices file-which lists the specific demand points that you want to export from a demand model so you do not export the entire forecast version-and you want to attach it to the export, click Slices File.
7. Navigate to the directory containing the slices file.
8. Select the slices file, and then click Open.
9. Click OK.

# Disaggregating Forecasts

Access the Forecasts workspace.

To disaggregate forecasts:

1. Select the forecast to disaggregate from the list.
2. Select Disaggregate Forecast from the Tools menu.
3. Select the forecast version that you want to disaggregate from the Forecast Version drop-down menu.
4. Select a unit of measure from the Unit of measure drop-down menu.

   The default is the unit of measure that is currently selected in the Forecasts workspace.
5. Select one of the following options:
   - Current Demand Point
   - Aggregation Level.
6. Select the aggregation level to use from the drop-down list.
7. Select a disaggregation mode:
   - Disaggregate using system profile.

- Disaggregate using current forecast version profile and top-down disaggregation mode.

  **Note.** To automatically append notes during top-down disaggregation, select the Append Forecast Notes option.

- Disaggregate using current forecast version profile and bottom-up disaggregation mode.

8. If the forecast is fixed and you want unfix it, select the Unfix all forecasts above demand points in scope option.
9. Click OK to disaggregate the forecast.

## Balancing Forecasts

Access the Balance Forecasts dialog box.

To balance levels:

1. Select the forecast that you want to balance from the Forecast Version drop-down list.
2. Select one of the following options:
   - Current Demand Point

     You can also select the Unfix forecasts above option.
   - Aggregation Level

     Select an aggregation level from the drop-down list.
3. Click OK.
4. In the warning dialog box that appears, click Yes.

# Working with Forecast Notes and Comments

This section discusses how to:

- Add notes to demand points.
- Delete notes from demand points.
- Show and hide notes.
- Add comments to demand points.
- View comments.
- Copy notes into comments.

## Windows Used to Work with Forecast Notes

| Window Name | Navigation | Usage |
|---|---|---|
| Forecast Studio | Shortcuts bar, Forecasts | Perform tasks in the Forecasts workspace. |
| Forecasts workspace | Select a forecast | Highlight the forecast with which you want to work. |
| Forecasts workspace | Edit, Copy Notes into Comment | Copy the notes in a forecast into the comments for that forecast. |
| Forecasts workspace | Edit, Add Comment | Add a new comment to a forecast. |

## Adding Forecast Notes to Demand Points

To add forecast notes to demand points:

1. Click the Forecast Notes field, and type the note.
2. Enter or click in another field.

## Deleting Forecast Notes from Demand Points

To delete forecast notes from demand points:

1. Click the Note field.
2. Drag the mouse pointer over the note text, and then press Delete.

## Showing and Hiding the Forecast Notes Column

Because the Time Series table in the Forecast Studio contains a considerable amount of information, occasionally you may need to view only some of the columns in the table. To simplify your tasks, you can show or hide the Forecast Notes column in the Time Series table.

To show and hide the Forecast Notes column, right-click any field in the Time Series table and select Forecast Notes from the shortcut menu that appears.

## Adding Comments to Demand Points

Access the Add Comment dialog box.

To add comments to demand points:

1. Complete these fields:
   - Subject
   - Comment
2. Click OK to save the comment

## Viewing Comments

When a forecast version contains demand points with comments associated with them, a paper clip icon appears beside the name of the forecast version.

To view comments, select Show Comment from the Edit menu.

A dialog box appears listing all of the comments associated with the demand point.

## Copying Forecast Notes into Comments

Access the Copy Notes into Comment dialog box.

To copy forecast notes into comments:

1. Select one of the following options:
   - Copy Forecast Notes to Comments for All Demand Points.
   - Copy Forecast Notes to Comment for Current Demand Point only.
2. Click OK.

# Working with Publishing Profiles

This section provides an overview of publishing profiles and describes how to:

- Create a publishing profile
- Publish a publishing profile
- Edit a publishing profile
- Delete a publishing profile

EnterpriseOne Demand Forecasting is a decision support tool which enables you to plan for and meet future demand by creating on accurate business forecasts. You can create meaningful schedules, production plans, and financial plans to meet that demand. You can also create and run publishing profiles that allow you to publish a configurable set of plans to an external location.

These publishing profiles contain standardized publish actions that can be used to commit a plan during any session. Profiles determine which plans to publish and they also allow you to initiate an integration process with an external system. You can refine your publishing preferences by editing an existing profile, or by creating a new profile for a specific business need.

**Note.** The publish process is not intended to generate reports.

## Windows Used to Work With Publishing Profiles

Create a publishing profile from the Forecasts workspace:

- File, Publish.
- Click New.

Publish a profile from the Forecasts workspace:

- File, Publish.
- Click Publish.

Edit a publishing profile from the Forecasts workspace:

- File, Publish.
- Click Edit.

Delete a publishing profile from the Forecasts workspace:

- File, Publish.
- Click Delete.

## Creating a Publishing Profile

Access the Create a Publish Profile window.

To create a publishing profile:

1. Complete the following fields:

| | |
|---|---|
| **Profile Name** | Specify a unique name for the publishing profile. |
| **Description** | Optionally, specify a description for the publishing profile. |
| **Format** | Select the format that will be used for publishing the data. |
| **Output File** | Specify the directory where the system will save the published data. You can explicitly specify the location of the directory or click Browse to browse for a directory. |

2. Optionally, specify a script that will be initiated after the data is published. You can explicitly specify the location of the script or click Browse to browse for a script.
3. Select the Data Selection Tab.
4. Select a forecast version.
5. Click OK.

## Publishing Data Using Profiles

Access the Publish window.

To publish data using a profile:

1. In the *Profiles* list, select the profile that you want to publish.
2. Click Publish.

## Editing Publishing Profiles

Access the Edit Profile window.

To edit a publishing profile:

1. Edit the fields in the *General* and *Data Selection* tabs as applicable.
2. Click OK to save your changes to the profile.

## Deleting Publishing Profiles

Access the Publish window.

To delete a publishing profile:

1. In the *Profiles* list, select the profile that you want to delete.
2. Click Delete.
3. Click Yes to confirm that you want to delete the profile.

# CHAPTER 8

# Working with Range Profiles

This chapter provides an overview of range profiles, and discusses how to:

- Work with range profiles
- Manage range profiles.

## Understanding Range Profiles

This section discusses:

- Range forecasting.
- Range alerts.
- Forecasts outside the flex fence.
- Export and import of range forecasts.
- Export of range profile alert reports.
- Range profile management.

### Range Forecasting

Range forecasts enable you to compare multiple statements of demand across a forecasting horizon. You can generate optimistic, pessimistic, and most likely forecasts and visually compare and contrast them.

You do this by creating a profile that defines a flex fence. The flex fence specifies the lower-most and upper-most levels of variation within a forecast for a particular period. The range profile is applied to the last period's sales history. If there is no sales history, no flex fences are generated. Using a flex fence, you can better manage large variations in demand.

You work with range forecasts in the Range Profiles workspace. The range forecasting process consists of these tasks:

- Creating range forecasting profiles.
- Applying range forecasting profiles.
- Viewing range forecasts.
- Identifying forecasts outside of range.
- Importing and exporting range forecast information.

### Create Range Profiles

When you create a range profile, you are creating an empty shell into which you add the demand points that will make up the range profile. The empty range profile consists of a name for the profile, a unit of measure to use, and an optional description. Once you have created a range profile, you must assign demand points to it.

The flex fence is defined in the Table view of the Ranges workspace. In Table view, you can define the lower-most and upper-most levels of variation within the forecast.

### Assign Demand Points to Range Profiles

You assign demand points to a range profile with a wizard. Demand point assignment involves selecting the specific demand points that you want to assign to a range forecast. For example, you can define a filter that searches for a product or set of products that have the following attributes:

- Available in a particular country or city
- Have a certain word in the product name or description
- Are sold by a specific customer

The list of demand points that the filter returns is shorter than the one that is produced when you generate a list of demand points based on an aggregation hierarchy. Valid demand points have a check mark beside them. Invalid demand points have a cross beside them.

## Range Alerts

After you have defined a range profile and assigned demand points to it, you can generate range alerts. A range alert indicates that there is demand for a product that lies outside of the flex fence.

You view the range alerts information in the Range Alerts view of the Forecasts workspace. The Range Alerts view displays the following information:

- The demand points that contain demand that is outside of the flex fence.
- The name of the range profile being used.
- The number of alerts that were generated for each demand point.

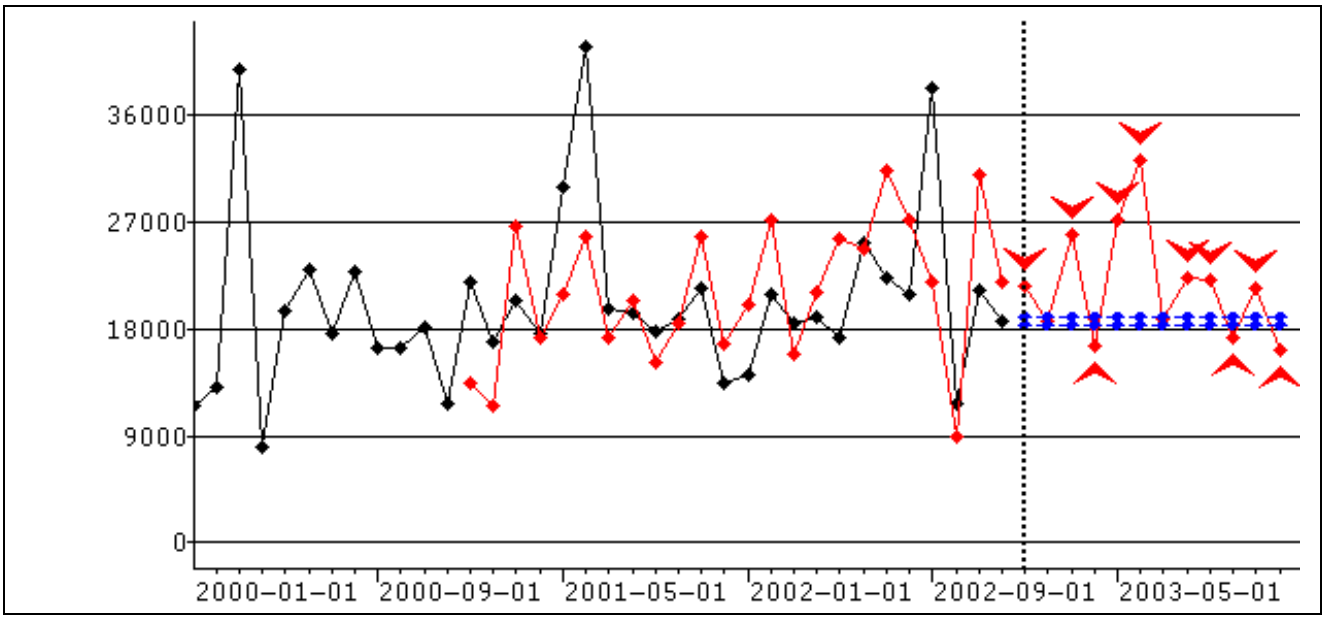
The following screen shows the Range Alerts view:

| Product | Location | Channel | Range Profile | Total Alerts |
|---|---|---|---|---|
| /Recreational/Bicycles | /Canada/Vancouver/Outdoor Life 3 | /Mass Market | Optimistic | 10 |
| /Recreational/Bicycles/Mountain Bike, Green | /Canada/Vancouver/Outdoor Life 3 | /Mass Market | Optimistic | 11 |
| /Recreational/Bicycles/Mountain Bike, Red | /Canada/Vancouver/Outdoor Life 3 | /Mass Market | Optimistic | 11 |
| /Recreational/Bicycles/Touring Bike, Green | /Canada/Vancouver/Outdoor Life 3 | /Mass Market | Optimistic | 12 |
| /Recreational/Bicycles/Touring Bike, Red | /Canada/Vancouver/Outdoor Life 3 | /Mass Market | Optimistic | 10 |

The Range Alerts view

## Forecasts Outside the Flex Fence

Forecasts outside of the flex fence appear in the Graph view, and are indicated by chevrons. This image shows range forecasts outside of the flex fence as they appear in the Graph view.




The Graph view displaying range forecasts outside of the flex fence

You can view the alerts in the Graph view by clicking on the demand point in the Range Alerts view. The upper and lower ranges of the flex fence are represented by blue dotted lines in the Graph view. You can choose to display either the upper or lower ranges.

## Export and Import of Range Profile Data

You can save both the structure of a range profile and the range profile demand point set assignments to an XML file. You can do this to back up this information, or to share it with another EnterpriseOne Demand Forecasting user in your enterprise. You can also restore backed up range profile information, or import information from another forecaster, from an XML file.

## Export of Range Profile Alert Reports

You can save the information about alerts in a range profile to an XML file. You can do this to save range profile alert information for later comparison. The report contains the following information:

- The demand points outside of the flex fence.
- The amount by which those demand points are outside of the flex fence.
- The forecast versions that contain the demand points.
- The name of the range profiles being used.

## Range Profiles Management

Range forecast management consists of the following tasks:

- Duplicating range profiles.
- Renaming range profiles.
- Deleting range profiles.

You cannot edit range profiles. However, you can duplicate profiles. Duplicating a range profile makes a copy of the profile and its parameters. A duplicate is given the name "Copy of<profile name>", where<profile name>is the base profile. For example, "Copy of Pessimistic." Duplicating a range profile is useful if, for example, you want to use the same range profile criteria for a product at a different location in your supply chain.

Renaming a range profile is useful when you want to give that profile a more descriptive name, or if you need to change the name of a range profile that you have duplicated.

# Working with Range Profiles

This section discusses how to:

- Create range profiles.
- Assign demand points to range profiles.
- Import and export range profiles.
- Import and export range profile demand point assignments.
- Generate range alerts.
- View demand points outside of the flex fence.
- Export range profile alert reports.

## Windows Used to Work with Range Profiles

| Window Name | Navigation | Usage |
|---|---|---|
| Range Profiles workspace | Shortcuts Bar, Range Profiles | Displays the Range Profiles workspace. |
| New Range Profile | Edit, New Range Profile | Displays the New Range Profile window, where you can enter the basic information for a range profile. |
| Assign Range Profile | Edit, Assign Range Profile Demand Points | Displays the Assign Demand Points window, where you select the demand points that you want to use with the profile. |
| Import Range Profile Definitions | Edit, Import Range Profiles | Displays the Import Range Profile Definitions dialog box, which enables you to import range profiles from an XML file. |
| Export Range Profile Definitions | Edit, Export Range Profiles | Displays the Export Range Profile Definitions dialog box, which enables you to export range profiles to an XML file. |
| Import Range Profile Demand Point Assignment | Edit, Import Range Profile Demand Point Assignment | Displays the Import Range Profile Demand Point Assignment dialog box, which enables you to import range profiles demand point set assignment information from an XML file. |
| Export Range Profile Demand Point Assignment | Edit, Export Range Profile Demand Point Assignment | Displays the Export Range Profile Demand Point Assignment dialog box, which enables you to Export range profiles demand point set assignment information to an XML file. |
| Range Alert View | Forecasts, View, Range Alert View | Displays the Range Alert view, which lists the number of alerts in each demand point. |

## Creating Range Profiles

Access the New Range Profile dialog box.

To create a new range profile:

1. Enter a name for this profile in the Name field.

2. Select a unit of measure to associate with the profile from the Unit of Measure drop-down list.
3. Optionally, type a short description of the profile in the Description field.
4. Click OK.
5. In the Table view of the Ranges workspace, define the flex fence by typing values in the Upper Range and Lower Range columns of the table. The values must be entered as factors. For example, a 10% increase must be entered as 1.1 and a 10% decrease as 0.9.

## Assigning Demand Points to Range Profiles by Hierarchy

Access the Assign Range Profiles dialog box.

To assign demand points to range profiles by hierarchy:

1. Complete these fields:
   - Aggregation Level
   - Product
   - Location
   - Channel
2. Click one of these options:
   - This Demand Point Only

     This option enables the user to access the demand point specified by the combination of product, location, and channel.
   - Include Siblings

     This option enables you to access the specified demand point and any demand points that are on the same aggregation level. This option is disabled if you have chosen the top/top/top aggregation level.
   - Include Children

     This option enables you to access the specified demand point and any demand points that are under it. You use the Level(s) drop-down list to specify the number of levels below the current demand point.
3. Click Filter.
4. To add specific demand points to the set, select the demand points and then click Add.
5. To add all of the demand points to the set, click Add all.
6. If the demand points have units of measure assigned to them, you can click the Allow to overwrite the existing assignment option to replace the unit of measure assignment with the unit of measure used by the range profile.
7. Click OK.

## Assigning Demand Points to Range Profiles by Property

Access the Assign Range Profiles dialog box.

To assign demand points to range profiles by property:

1. Click the Demand Points by Property tab.
2. Click Add Rule to create a new rule.

3. Select the appropriate items from the drop-down lists:
   - Name

     Select Aggregation Level. You use the aggregation level to base your query on.
   - Function. You can select from these options in the drop-down list:

     is equal to

     Only demand points containing the exact criteria in the Property Value field will be included in the list.

     not equal to

     All demand points, other than the ones containing the exact criteria in the Property Value field, will be included in the list.

     Contains

     Demand points will be included in the list if they contain the criteria in the Property Value field.

     does not contain

     All demand points except those containing the criteria in the Property Value field will be included in the list.
4. Complete the Property Value field either by typing the filtering criteria in the field, or clicking the button that is beside the field and choosing a value from the dialog box that appears.

   **Note.** Click the plus button beside the Property Value field to add an additional property value to a rule. Adding more property values enables you to specify multiple values for a particular property name, and filter on one value or the other.
5. Repeat steps 2 to 4 for each rule that you want to add.
6. Click Filter to generate a list of demand points.
7. Select the demand points that you want to associate with the event, and then click Add.
8. If the demand points have units of measure assigned to them, you can click the Allow to overwrite the existing assignment option to replace the unit of measure assignment with the unit of measure used by the range profile.
9. Click OK to save the changes.

## Generating Range Alerts

Access the Forecasts workspace and display the Range Alerts view.

To generate range alerts, select Generate Range Alerts from the Tools menu.

The range alert information appears in the Range Alerts view.

## Viewing Demand Points Outside of the Flex Fence

Access the Forecast workspace.

To view demand points outside of the flex fence, right-click in the Graph view and select the following options from the pop-up menu:

- Upper Range.
- Lower Range.

- Range Exceptions.

## Exporting Range Profile Alert Reports

Access the Forecasts workspace.

To export range profile alert reports:

1. Select Export Range Profile Alert Reports from the Edit menu.
2. In the Export Range Profile Alert Report dialog box, navigate to the directory where you want to save the report.
3. Enter a name for the report in the File name field. You do not have to include an extension for the file.
4. Click Save.

## Viewing Range Alerts in the Graph View

Access the Range Alerts view.

To view range alerts in the Graph view, select a demand point in the Range Alerts view.

Any forecasts outside of the flex fence are indicated by chevrons.

# Managing Range Profiles

This section discusses how to:

- Rename range profiles.
- Duplicate range profiles.
- Delete range profiles.

## Renaming Range Profiles

Access the Range workspace.

To rename range profiles:

1. Select the range profile that you want to rename.
2. Select Edit, Rename Range Profile.
3. Enter a new name for the range profile, and then press Enter.

## Duplicating Range Profiles

Access the Ranges workspace.

To duplicate range profiles:

1. Select the range profile that you want to duplicate.
2. Select Edit, Duplicate Range Profile.

3. Enter a name for this profile in the Name field.
4. Select a unit of measure to associate with the profile from the Unit of Measure drop-down list.
5. Optionally, type a short description of the profile in the Description field.
6. Click OK.

## Deleting Range Profiles

Access the Ranges workspace.

To delete range profiles:

1. Select the range profile that you want to delete.
2. Select Edit, Delete Range Profile.

# CHAPTER 9

# Working with Exception Reports

This chapter provides an overview of exception reports and discusses working with exception reports.

## Understanding Exception Report Management

This section discusses:

- Exception report management.
- The exception report wizard.
- Viewing exception reports.
- Editing exception reports.
- Running exception reports.
- Open exception reports.

When you compare forecast data from multiple sources, discrepancies in the data are likely. Sometimes, the discrepancies are large enough to provide incorrect perceptions about demand patterns. Exception handling warns you about discrepancies that occur in forecast data.

One of the main causes of exceptions is inaccurate forecast data. To create an enterprise forecast that contains meaningful data, you must consider all of the exceptions. If the origin of these exceptions is not understood, changes to the data can result in even more discrepancies. Demand Forecasting compares multiple forecast data, using threshold values at different levels of aggregation, and generates a report that lists exceptions. For each level of aggregation, you can specify the threshold percentage and quantity at which you want the system to report the forecast versions exceptions.

The report shows the baseline forecast version and the total number of exceptions. The report also provides a sum of the exceptions in addition to other information about the exceptions.

### Exceptions Workflow

You can control all aspects of the exception report from the Exception Report dialog box, accessible from the Forecast Studio. You can perform these tasks to create and manage an exceptions report:

- Create the exceptions report.
- Edit the exceptions report parameters.
- Run the exceptions report.

After you run an exceptions report, you can view the exceptions report in the Forecast Studio. After you review the differences, you can access the appropriate demand point in the Forecasts workspace and edit values.. To make the forecast data as accurate as possible, you must minimize the number of exceptions that are returned. Generally, the top level does not return many exceptions, but any exceptions that occur at this level are typically more serious than those at lower levels.

For example, you select the forecast versions with forecast data that you want to compare for a specific level of aggregation. You also select the threshold level for each aggregation level. Assume that the first level is Top/Top/Top. This level refers to all products, locations, and channels for the Demand Model. The last level might be Product-Top-Bikes-Mountain Bikes/Location-Top-Europe/Channel-Top. In this example, for each level of aggregation, you can attach a percentage threshold value and a threshold quantity. For the first level, you might specify five percent with a quantity of 1000, and for the last level, you might specify 10 percent with a quantity of 100.

## Exception Report Wizard

When you add an exception report, you can define the parameters that the system uses to generate the exceptions. You can use the Exception Report wizard to add the exception report. The Exception Report wizard guides you through these ordered steps that are required to create a report:

- Specifying the report name, baseline forecast, and unit of measure.
- Specifying comparison forecast versions and demand point set.
- Specifying threshold values and levels.
- Choosing the period range.

---

**Note.** The exception reports you create will be based on the forecast versions and demand point sets that you have permission to view or edit.

---

## Run an Exception Report

After you have defined an exception report, the system tracks it in the Exception Report dialog box until you delete it. Running the report generates exceptions based on the report criteria created in the Exception Report Wizard.

When you run the exception report, the job status is shown in the Exception Report dialog box. When the report job completes, the Exception Report dialog box displays this information:

- The name of the report.
- The status of the report.
- The date and time that the report was last run.
- The number of exceptions generated for the report.

## Open an Exception Report

You can view the exceptions in an exception report by opening it from the Exception Report dialog. This populates the results of an exception report in the Exception View.

## Edit an Exception Report

You can select an existing report from the Exception Report dialog box and edit its parameters. When you edit the parameters of an existing report, you affect how forecast information is processed, which, in turn, affects the results of the report.

# Creating and Managing Exception Reports

This section discusses how to:

- Add an exception report using the Exception Report wizard.
- Edit exception report parameters.
- Delete an exception report.
- Rename an exception report.
- Run an exception report.
- Open an exception report.
- Review or edit demand point data from exceptions.

## Window Used to Manage Exception Reports

| Page Name | Navigation | Usage |
|---|---|---|
| Exception Report dialog box | Shortcut Bar, Forecasts, Tools, Exception Report | Create and manage exception reports. |

## Adding Exception Reports using the Exception Report Wizard

Access the Exception Report dialog box.

To add an exceptions report:

1. Click the Add button
2. On the Introduction screen, complete these fields:
   - Report Name. The report name must be unique.

     **Note.** These characters are not supported in the exception report name:

     " (quotation mark)

     | (vertical bar)

     / (forward slash)

     + (plus sign)

   - Baseline Forecast
   - Unit of Measure

- Click Next.

3. On the Report Parameters screen, complete these fields:
   - Comparison Forecast. Choose the forecast versions to compare with the baseline forecast. Only the forecast versions that you have permission to view or edit are visible.
   - Demand Point Set, if you want to limit the number of demand points being compared. Only the demand point sets that you have permission to view or edit are visible.
4. Click Next.
5. On the Enter Threshold Values screen, select the aggregation level(s) to include in the report. You may also specify the threshold percentage and threshold quantity by level for the selected unit of measure.
6. Click Next.
7. On the Options screen, complete these fields:
   - First period to include
   - Last period to include
8. To hide multiple exceptions, click the Hide multiple exceptions option. When selected, only those exceptions with the largest absolute percentage difference from one demand point are displayed.
9. Click Finish.

## Editing Exception Report Parameters

Access the Exception Report dialog box.

To edit the exception report parameters:

1. Select the report that you want to edit.
2. Click Edit.
3. Change any of the parameters in any of the steps in the Wizard.

   You can click Next to skip any step of the Wizard.
4. Click Finish to update the exception report.

## Deleting Exception Reports

Access the Exception Report dialog box.

To delete an exception report:

1. Select the report that you want to delete.
2. Click Delete.
3. Click Yes to delete the report.

## Renaming Exception Reports

Access the Exception Report dialog box.

To rename an exception report:

1. Select the report that you want to rename.

2. Click Rename. The current report name is highlighted.
3. Type the new name and press Enter.

## Running Exception Reports

Access the Exception Report dialog box.

To run an exception report:

1. Select the report that you want to run.
2. Click Run.

## Opening Exception Reports

Access the Exception Report dialog box.

To view the parameters and results of an exception report:

1. Select the report that you want to view.
2. Click Open. This populates the results of an exception report in the Exception View and closes the Exception Report dialog box. The name of the current exception report in the Exception View is shown in the status bar at the bottom.

## Reviewing or Editing Demand Point Data from Exceptions

Access the Exception Report dialog box.

To review or edit demand point data from an exception:

1. Open the report you want to view by selecting the report name and clicking Open. This populates the exception results in the Exception View.
2. In the Exception View, select the row for the exception that you want to review. This updates the Forecast workspace automatically by displaying the baseline forecast version and comparison forecast version for the selected demand point.
3. Edit the value for the baseline forecast, if desired.
4. Select other demand points from the exception report, for the same aggregation, in the Exception View.
5. Make additional forecast value edits, if desired.
6. Disaggregate all edited values for that aggregation level.

# CHAPTER 10

# Working with Outliers

This chapter provides an overview and discusses how to work with outliers.

## Understanding Outliers

This section discusses:

Outliers.

Outlier configuration.

Outlier review.

Outlier repair.

### Outliers

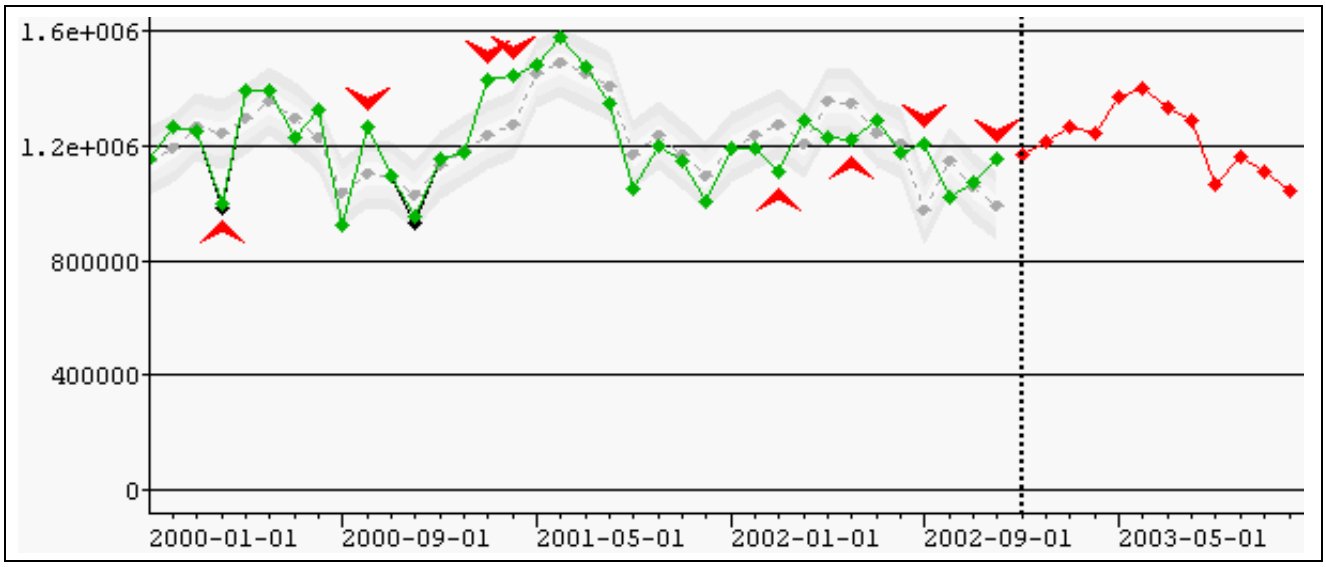
Outliers are values in a sales history that are much larger or much smaller than normally expected. Outliers can be caused by issues such as a one-time large sales order, the actions of competitors, or natural or economic disasters like a large-scale blackout or a stock market crash.

Due to their unpredictability, outliers can negatively affect a forecast. Because the sales history for a forecast is often used to approximate demand, removing outliers from sales history helps to ensure that your forecasts are more accurate by providing greater certainty in demand, reduced levels of inventory, and better customer service.

In the Forecast Studio, working with outliers involves:

- Setting parameters for outliers.
- Detecting the outliers.
- Reviewing the outliers.
- Repairing the outliers.

Outliers appear in the Graph view, and are indicated by chevrons. This image shows outliers as they appear in the Graph view.




Outliers in the Graph view

The gray band behind the forecast history is a visualization of the confidence level. The confidence level is a threshold that determines which of the unusually high or low points in the sales history are outliers.

**Note.** You can right-click within the Graph view to show and hide the outliers and the confidence level band.

### See Also

Configuring Outliers for Detection

## Outlier Configuration

The Forecast Studio is configured to automatically detect outliers. However, the default outlier detection parameters might not be suitable for your purposes. You can change these parameters.

Before you change the outlier detection parameters, you must consider other statistical properties in the sales history. For example, if you have seasonal demand that peaks in the summer but tapers off in the winter, this demand can affect your sales history. However, you cannot base the detection of outliers on this demand because, due to its seasonality, its effect is exaggerated.

The key to configuring outlier detection is to set a confidence level. If points in the sales history are within the confidence level, then they are normal values; anything outside of the confidence level is an outlier. For example, if you set a confidence level of 95%, any values that are outside of the 95% threshold are considered outliers. As you lower the confidence level for a scenario, the Forecast Studio detects and displays more outliers.

## Outlier Review

Outliers appear randomly throughout a demand model. They are specific both to demand points and to periods within a demand point. As discussed in the section Working with Outliers, outliers are marked in the Graph view with a chevron. However, you can access a more detailed and convenient view of the outliers that exist in a demand model by using the Scenario view.

The Scenario view contains a column labeled Outliers. This column lists the number of outliers that exist at particular demand points. The image below shows the Scenario view with the Outliers column displayed:

| Product | Location | Channel | Outliers |
|---|---|---|---|
| / | / | / | 4 |
| /Service Parts/Powertrain/Crank | /Canada/Vancouver/Outdoor Life 3 | /Mass Market | 3 |
| /Service Parts/Powertrain/Chain Stay | /Canada/Vancouver/Bike Sport 3 | /Independent | 3 |
| /Service Parts/Frames/Seat Post | /Canada/Vancouver/Bike Sport 3 | /Independent | 3 |
| /Recreational/Inline Skates/Powerline, Red | /United States/San Diego/Shopmart 2 | /Mass Market | 3 |
| /Service Parts/Powertrain/Chain Rings | /Canada/Montreal/Outdoor Life 1 | /Mass Market | 2 |
| /Service Parts/Misc/Seat | /Germany/Munich/Metro Bike 2 | /Independent | 2 |
| /Service Parts/Misc/Pedal, clip | /Germany/Frankfurt/Metro Bike 1 | /Independent | 2 |
| /Service Parts/Misc | /United States/Denver | / | 2 |
| /Recreational/Bicycles/Touring Bike, Red | /United States/Denver/Bikemart 4 | /Mass Market | 2 |
| /Service Parts/Powertrain/Chain Rings | /Canada/Vancouver/Bike Sport 3 | /Independent | 1 |
| /Service Parts/Misc/Seat | /Germany/Munich/Radsport 1 | /Independent | 1 |
| /Service Parts/Frames/Frame, Red | /Germany/Frankfurt/Radsport 2 | /Independent | 1 |
| /Service Parts/Frames/Frame, Red | /Canada/Montreal/Outdoor Life 1 | /Mass Market | 1 |
| /Service Parts/Frames/Frame, Green | /Germany/Frankfurt/Radsport 2 | /Independent | 1 |
| /Service Parts/Frames/Frame, Green | /Germany/Frankfurt/Metro Bike 1 | /Independent | 1 |

Scenario view showing the Outlier column

By using the Outliers column of the Scenario view, you can quickly identify concentrations of outliers and decide how to resolve them.

## Outlier Repair

After you have identified the outliers in a scenario, you can determine whether the outliers can be explained by known causes. If the cause of the outliers is known (for example, due to a sales promotion or the actions of a competitor), you can model the cause in the forecast by using an event, intervention, or a predictor. Or, you can manually adjust the outlier if the known cause is unlikely to recur in the future. Otherwise, you must decide whether the exceptional history should be changed.

By repairing an outlier, you are mitigating its effect on a forecast. Repairing outliers involves specifying whether you want to apply the fixes to the entire scenario, or to only the demand points that are currently selected in the Forecast Studio. In addition, you can specify the number of standard deviations to which the outliers are moved. Doing so controls the amount by which the effects of the outliers are mitigated.

### See Also

Working with Predictors

Working with Events

Working with Interventions

# Working with Outliers

This section discusses how to:

- Configure outliers for detection.
- Review outliers.

- Repair outliers.

## Window Used to Work With Outliers

| Window Name | Navigation | Usage |
|---|---|---|
| Forecast Studio | Shortcuts Bar, Scenarios | Displays the Scenarios workspace. |

## Configuring Outliers for Detection

Access the Outliers tab on the Scenario Properties window.

To configure outliers for detection:

1. Select the Check for Outliers checkbox.
2. Complete these fields:
   - Number of standard deviations

     The amount by which forecasts deviate from the actual demand. The value in this field must be greater than zero.
   - Confidence Level.

     This is the threshold that determines which unusually high or low points in the sales history are outliers. The confidence level is expressed as a percentage. Specifying a lower percentage causes more outliers to be displayed. The value in this field can be between zero and one hundred.

     **Note.** The value that appears in one field is dependent on the value that you enter in the other field. For example, if you type 65 in the Confidence Level field, the value in the Number of standard deviations field changes accordingly.
3. Click OK.

## Reviewing Outliers

Access the Scenario view.

To review outliers, click the header of the Outliers column to sort the demand points in ascending or descending order.

When you click the header of the Outliers column, the system groups the demand points that contain outliers.

## Repairing Outliers

Access the Repair Outliers dialog box.

To repair outliers:

1. Select one of these options:
   - Repair Outliers for the current Scenario.
   - Repair Outliers for the selected Demand Points only.
2. Complete the Number of standard deviations that Outliers are moved to field:

The value that you enter determines the number standard deviations from the historical fit that the outlier will be moved. If you type zero in this field, the outliers will be aligned with the historical fit.

3. If you do not want a new forecast to be generated after the outliers are repaired, clear the Reforecast after Outlier repair check box:

---

**Note.** If you do not clear the Reforecast after Outlier repair check box, more outliers might appear in the Graph view. This occurs because the outlier repair operation is not recursive until all outliers are removed from a forecast.

---

4. Click OK.

---

**Note.** When you repair outliers, the Note field in the Table view for the demand point that contained the outlier displays Outlier adjusted by system.

---

# CHAPTER 11

# Working with Predictors

This chapter provides an overview of predictors, and explains how to:

- Create predictors.
- Manage predictors.
- Use predictors with scenarios.

## Understanding Predictors

This section discusses:

- Predictors.
- Predictor creation.
- Demand point predictor assignment.
- How to use predictors with scenarios.

### Predictors

You can generate statistical forecasts by projecting future demand based on established relationships. You do this by modeling the relationship between historical demand and one or more predictors. Predictors are time series that represent external, independent variables, such as the effect of a bad winter on orange crops, or the effect of interest rates on housing starts. The information in the predictors can come from a variety of sources, including government agencies, banks, research firms, and so on.

You can use any time series with the following characteristics as a predictor:

- It must run the entire length of your forecasting horizon.
- It cannot have any missing values.

Predictors are used only with ARIMA statistical models when generating forecasts. All other statistical models ignore predictors. ARIMA models can use predictors to generate forecasts and can help explain the cause-and-effect relationships that exist between demand and external variables.

When you change the forecast horizon, the system deletes the predictor series; however, the actual predictors still exist. When the horizon is rolled forward, the predictor series is not deleted, but is rolled forward as well. The roll forward action results in missing values at the end of the predictor series. The existence of the missing values invalidates the predictor series. When you generate a forecast for a demand point that uses the predictor series, the Forecast Studio indicates that the predictor series has missing values.

You work with predictors in the Predictors workspace. You can only access the Predictors workspace if you have an Advanced Forecast Modeling license. Contact your system administrator for more information about this license.

The Predictors workspace is divided into three areas:

| Area | Description |
|---|---|
| Predictors Pane | A list of all of the predictors that are available in the active demand model. |
| Graph View | A line graph that represents the predictor series. |
| Table View | An editable table in which you can add, delete, or modify predictor values for dates in the time series. |

**Note.** To import predictor data into the Forecast Studio, you must ensure that the source data is in a format that is compatible with the Forecast Studio.

# Predictor Creation

Predictors must have data in every bucket in the history and in the forecasting horizon. This data cannot have missing values. The forecasting engine ignores any predictors that are missing data.

**Note.** You should limit the number of predictors that you have associated with a forecast. A large quantity of predictors slows down the forecasting engine and does not increase the accuracy of your forecasts.

### See Also

Assigning Demand Points to Predictors

Importing Predictors

Exporting Predictors

# Demand Point Predictor Assignment

After you have created a predictor, you can assign one or more demand points to it. If you are using an ARIMA forecasting model to generate a forecast, the forecasting engine will try to use any assigned predictors. If the forecasting engine finds a useful correlation, it applies the data in the predictors to the generated forecast. Otherwise, the predictors are ignored.

Predictors can be assigned to demand points within a demand model and within a specific aggregation hierarchy. You can import and export predictors that are assigned to demand points, which enables you to exchange predictor data with other users, or to backup your predictor assignment data. The predictor assignment data is imported from and exported to an XML file.

When you import predictors, any predictors that are assigned to specific demand points will be assigned to the corresponding scenario points in the demand model. If a predictor for a particular demand point does not exist, the import process fails.

**Note.** The system appends to the demand model any new demand points that are in the XML file that you are importing.

## Use Predictors with Scenarios

There will be times when you have a demand point in a scenario that has several predictors associated with it. However, when generating forecasts you might want to use only a few of the available predictors. You can set scenario properties to indicate that one or more demand points should be considered when the forecast is generated. By default, all predictors are used.

### See Also

Assigning Demand Points to Predictors

# Working with Predictors

This section discusses how to:

- Create predictors.
- Assign demand points to predictors.
- Import predictors.
- Export predictors.
- Import demand point predictor assignments.
- Export demand point predictor assignments.

## Windows Used to Work with Predictors

| Window Name | Navigation | Usage |
|---|---|---|
| Forecast Studio | Shortcuts Bar, Predictors | Displays the Predictors workspace. |
| Forecast Studio | Edit, Import Predictors | Displays the Import Predictors dialog box, which enables you to import predictor information from an XML file. |
| Forecast Studio | Edit, Export Predictors | Displays the Export Predictors dialog box, which enables you to export predictor information to an XML file. |

## Creating Predictors

Access the Predictors workspace.

To create predictors:

1. Right-click anywhere in the Predictors workspace and select New Predictor from the shortcut menu.

   A new predictor, with the name New Predictor.

**Note.** You should rename the predictor to make the name more meaningful or descriptive.

2. In the workspace, enter data for all of the buckets in the time series by clicking each field in the table, and then entering the value of the predictor.
3. Press Enter or click another field to save the changes.
4. Repeat steps 2 and 3 for each value that you want to add.

**Note.** You must enter values for every bucket in the history and in the forecasting horizon. The predictor must contain no missing values.

### See Also

Renaming Predictors

## Assigning Demand Points to Predictors

Access the Predictors workspace, and then select the predictor to which you want to add a demand point.

To assign demand points to predictors by hierarchy:

1. Select Assign Predictor Demand Points from the Edit menu.
2. Complete these fields:
   - Aggregation Level
   - Product
   - Location
   - Channel
3. Click one of these options:
   - This Demand Point Only

     This option enables the user to access the demand point specified by the combination of product, location, and channel.
   - Include Siblings

     This option enables you to access the specified demand point and any demand points that are on the same aggregation level. This option is disabled if you have chosen the top/top/top aggregation level.
   - Include Children

     This option enables you to access the specified demand point and any demand points that are under it. You use the Level(s) drop-down list to specify the number of levels below the current demand point.
4. Click Filter.
5. To add specific demand points to the set, select the demand points and then click Add.
6. To add all of the demand points to the set, click Add all.
7. Click OK.

To assign demand points to predictors by property:

1. Select the predictor to which you want to add a demand point, and then select Assign Predictor Demand Points from the Edit menu.

2. Click Demand Points by Property.
3. Click Add Rule.
4. Select the appropriate items from these drop-down lists:
   - Property Value

     Select Aggregation Level. You base your query on the aggregation level.
   - Function. Select one of these values from the dropdown list:

     is equal to

     Only demand points containing the exact criteria in the Property Value field will be included in the list.

     not equal to

     All demand points, other than the ones containing the exact criteria in the Property Value field, will be included in the list.

     Contains

     Demand points will be included in the list if they contain the criteria in the Property Value field.

     does not contain

     All demand points except those containing the criteria in the Property Value field will be included in the list.
5. Complete the Property Value field either by typing the filtering criteria in the field or by clicking the button immediately to the right of the field and choosing a value from the dialog box that appears.

   **Note.** Click the plus button beside the Property Value field to add an additional property value to a rule. Adding more property values enables you to specify multiple values for a particular property name, and filter over one value or the other.
6. Repeat steps 3 to 5 for each rule that you want to add.
7. Click Filter to generate a list of demand points.
8. Select the demand points that you want to associate with the predictor, and then click Add.
9. Click OK.

# Importing Predictors

Access the Predictors workspace and the Import Predictors dialog box.

To import predictors:

1. Navigate to the directory in which the XML file with the predictor data that you want to import is located.
2. Select the file, and then click Open.

### See Also

Creating Predictors

# Exporting Predictors

Access the Predictors workspace and the Export Predictors dialog box.

To export predictors:

1. Navigate to the directory in which you want to save the XML file that contain the predictor data.
2. Enter a name for the XML file in the File name field, and then click Save.

## Importing Demand Point Predictor Assignments

Access the Predictors workspace.

To import demand point predictor assignments:

1. Select Import Demand Point Predictor Assignment from the Edit menu.
2. Navigate to the directory in which the XML file with the predictor assignment data that you want to import is located.
3. Select the file, and then click Open.

## Exporting Demand Point Predictor Assignments

Access the Predictors workspace.

To export demand point predictor assignments:

1. Select Export Demand Point Predictor Assignment from the Edit menu.
2. Navigate to the directory in which you want to save the XML file that will contain the predictor assignment data.
3. Enter a name for the XML file in the File name field and click Save.

# Managing Predictors

This section explains how to:

- Rename predictors.
- Edit predictors.
- Delete predictors.
- Remove demand points from predictors.

## Renaming Predictors

Access the Predictors workspace.

To rename predictors:

1. Select the predictor that you want to rename.
2. Select Rename Predictor from the Edit menu.
3. Enter a new name for the predictor and press Enter.

**Note.** If you include blank spaces at the beginning or the end of the predictor name, an error message appears, and the Forecast Studio does not change the name of the predictor:

## Editing Predictors

Access the Predictors workspace.

To edit predictors:

1. Click the name of the predictor that you want to edit.
2. Locate the date in the time series table that you want to edit, and then:
   - If the field in Time Series table is empty, click the field and type a value.
   - If the field contains a value, click the field and type a new value to replace the old one.
3. Click Enter or click in another field to save the changes.
4. Repeat steps 2 and 3 for each value that you want to edit.

## Deleting Predictors

Access the Predictors workspace.

To delete predictors:

1. Select the predictor that you want to delete.
2. Select Delete Predictor from the Edit menu.
3. When prompted, click Yes.
4. Repeat steps 2 and 3 for each predictor that you want to delete.

## Removing Demand Points from Predictors

Access the Predictors workspace.

To remove demand points from predictors:

1. Select the predictor from which you want to remove a demand point.
2. Select Assign Predictor Demand Points from the Edit menu.
3. Select the demand point that you want to remove.
4. Click Remove.
5. Click OK.

# Using Predictors with Scenarios

Access the Scenarios workspace.

To use predictors with scenarios:

1. Select a scenario from the list in the Scenario workspace.

2. Select a demand point in the Scenario view.
3. Select Scenario Properties from the Tools menu.
4. Click Predictors.
5. Select the predictors that you want to include with the demand point by clicking the appropriate check box.
6. Click OK to save the changes.

# CHAPTER 12

# Working with Events

This chapter discusses how to:

- Work with events.
- Manage events.
- Import and export events.
- Work with events and scenarios.

## Understanding Events and Interventions

This section discusses:

- Events and interventions.
- Demand point event assignment.
- Creation of interventions.
- Import and export of demand point intervention assignments.
- Use of interventions with scenarios.

### Events and Interventions

In the historical time series that you are using, sudden occurrences or disturbances can negatively affect the accuracy of the forecast. This is because the time series model that the Forecast Studio uses is intended to chart gradual changes in demand. Any sudden changes can reduce the quality of the fit of the model, and therefore the quality of your forecast.

However, you can improve the quality of your forecasts by modeling the occurrences or disturbances either as events or as interventions:

| Events | Interventions |
|---|---|
| An occurrence that takes place at a regular interval - for example back-to-school sales, promotions or giveaways, and the like.<br><br>You generally do not model seasonal occurrences as events. However, the way that you model seasonal occurrences depends on the time bucket you use. For example, if you are using a monthly bucket, then Boxing Day does not have to be modeled as an event. The forecasting engine treats Boxing Day as seasonal. If, on the other hand, you are using weekly buckets, you will have to model Boxing Day as an event because it does not fall on the same week each year. | A one-time disturbances that cause a shift in demand. There are two types of interventions:<br><br>• Pulse, which cause a sudden, temporary shift in the level of sales or demand. Examples of pulse interventions include a blackout or damage caused by a severe storm.<br><br>• Step, which cause a sudden, permanent shift in the level of sales or demand. Examples of step interventions include a competitor opening a store near one of your locations. |

You can use events and interventions to improve the quality of a forecast by determining the effect of the event or intervention on a forecast.

You create and manage events and interventions in the Events/Interventions workspace in the Forecast Studio. You can only access the Events/Interventions workspace if you have an Advanced Forecast Modeling license. Contact your system administrator for more information about this license.

The Events/Interventions workspace is divided into two areas:

| Area | Description |
|---|---|
| Events/Interventions Pane | This area contains a list of the events and interventions that are available in the active demand model. The events and interventions are arranged in expandable lists. |
| Graph View | This view is a Gantt chart that represents that events and interventions in the demand model. |

Events apply to an entire time bucket, regardless of whether the events last for the duration of that bucket. For example, if you are working with weekly buckets and an event lasts two days, the event is valid for the entire week.

## Demand Point Event Assignment

After you have created an event, you can assign demand points to it. By doing this, you ensure that the event is available to those demand points. Events that have demand points assigned to them can be grouped into three categories:

- Available for inclusion in a forecast.
- Chosen for use by the forecasting engine.
- Used by the forecasting engine.

You can use these methods to assign demand points to events:

- Assign demand points by hierarchy

  You select the demand points by using one of the available hierarchies.
- Assign demand points by property

You select the demand points by specifying properties for the demand points, such as product description, geographical location, name of a distribution channel, and so on.

### See Also

Rule Based Demand Point Sets, *Design Studio Implementation Guide*

## Creation of Interventions

Interventions are a class of events that occur only once in the past, but can have an effect on your forecasts. There are two types of interventions:

- Pulse interventions

  Pulse interventions are unexpected events such as natural disasters or the results of a wide-scale civil disturbance that have a one-time effect on a forecast. Pulse interventions have a start date and an end date.

- Step interventions

  Step interventions are events that cause a sudden, permanent change in demand. Step interventions affect a time series into the indefinite future and have no end date.

When the Forecast Studio encounters an intervention, it ignores the sales data from the date or dates to which the intervention applies.

## Import and Export of Demand Point Intervention Assignments

You can assign interventions to demand points within a demand model and within a specific aggregation hierarchy. You can import and export interventions that are assigned to demand points, which enables you to back up your predictor assignment data as well as exchange intervention data with other users. The intervention assignment data is imported from and exported to an XML file.

When you import intervention assignment data, the system assigns any interventions that are assigned to specific demand points to the corresponding scenario points in the demand model. If an intervention for a particular demand point does not exist, the import process fails.

---

**Note.** The system appends to the demand model any new demand points that are in the XML file that you are importing.

---

## Use of Interventions with Scenarios

There will be times when you have a demand point in a scenario with several interventions associated with it. However, when generating forecasts you might want to use only a few of the available interventions. On the Interventions tab of the Scenario Properties dialog box, you can set scenario properties to indicate that one or more demand points should be considered when the forecast is generated.

The selections available on the Interventions tab are the interventions that have been assigned to demand points in the scenario. By default, all interventions are used.

### See Also

Assigning Demand Points to Interventions by Hierarchy

# Working with Events

This section discusses how to:

- Create events.
- Assign demand points to events by hierarchy.
- Assign demand points to events by property.

## Windows Used to Work with Events

| Window Name | Navigation | Usage |
|---|---|---|
| Forecast Studio | Shortcuts Bar, Events/Interventions | Displays the Events/Interventions workspace. |
| Forecast Studio | Shortcuts Bar, Scenarios, View, Scenario View | Displays the Scenario View. |

## Creating Events

Access the Events/Interventions workspace.

When creating events, the start and end dates cannot overlap the start and end dates of other event instances. For example, if another event instance ends on June 14, 2001, neither the start nor the end date for the new event instance can be set to June 14, 2001.

To create events:

1. Select New Event from the Edit menu.
2. Select the new event, and then select Set Event Date from the Edit menu.
3. Complete these fields:
   - Start Date
   - End Date
4. Click Add.
5. Repeat steps 1 to 4 for each date combination that you want to add.
6. Click OK.

## Assigning Demand Points to Events by Hierarchy

Access the Events/Interventions workspace.

To assign demand points to events by hierarchy

1. Select the event to which you want to add a demand point.
2. Select Assign Event Demand Points from the Edit menu.
3. Complete these fields:
   - Aggregation Level

- Product
- Location
- Channel

4. Click one of these options:
   - This Demand Point Only

     This option enables the user to access the demand point specified by the combination of product, location, and channel.
   - Include Siblings

     This option enables you to access the specified demand point and any demand points that are on the same aggregation level. This option is disabled if you have chosen the top/top/top aggregation level.
   - Include Children

     This option enables you to access the specified demand point and any demand points that are under it. You use the Level(s) drop-down list to specify the number of levels below the current demand point.
5. Click Filter.
6. To add specific demand points to the set, select the demand points and then click Add.
7. To add all of the demand points to the set, click Add all.
8. Click OK.

## Assigning Demand Points to Events by Property

Access the Events/Interventions workspace.

To assign demand points to events by property:

1. Select the event to which you want to add a demand point.
2. Select Assign Event Demand Points from the Edit menu.
3. Click Demand Points by Property.
4. Click Add Rule to create a new rule.
5. Select the appropriate items from the drop-down lists:
   - Name

     Select Aggregation Level. You use the aggregation level to base your query on.

- Function. You can select from these options in the drop-down list:

  is equal to

  Only demand points containing the exact criteria in the Property Value field will be included in the list.

  not equal to

  All demand points, other than the ones containing the exact criteria in the Property Value field, will be included in the list.

  Contains

  Demand points will be included in the list if they contain the criteria in the Property Value field.

  does not contain

  All demand points except those containing the criteria in the Property Value field will be included in the list.

6. Complete the Property Value field either by typing the filtering criteria in the field, or clicking the button that is beside the field and choosing a value from the dialog box that appears.

   **Note.** Click the plus button beside the Property Value field to add an additional property value to a rule. Adding more property values enables you to specify multiple values for a particular property name, and filter on one value or the other.

7. Repeat steps 4 to 6 for each rule that you want to add.
8. Click Filter to generate a list of demand points.
9. Select the demand points that you want to associate with the event, and then click Add.
10. Click OK to save the changes.

# Managing Events

This section explains how to:

- Rename events.
- Edit event dates.
- Delete event dates.
- Delete events.
- Remove demand points from events.

## Renaming Events

Access the Events/Interventions workspace.

To rename events:

1. Select the event that you want to rename.
2. Select Rename Event from the Edit menu.
3. Enter a new name for the event and press Enter.

## Adding New Event Dates

Access the Events/Interventions workspace.

To add new event dates

1. Select the event that you want to edit.
2. Select Set Event Dates from the Edit menu.
3. Complete these fields:
   - Start Date
   - End Date
4. Click Add.
5. Repeat steps 3 and 4 for each date combination that you want to add.
6. Click OK.

## Changing Event Dates

Access the Events/Interventions workspace.

To change event dates:

1. Select the event that you want to edit.
2. Select Set Event Dates from the shortcut menu.
3. Click a date and then edit these fields as necessary:
   - Start Date
   - End Date

   **Note.** The start and end dates cannot overlap with the start and end dates of other events. For example, if another event ends on June 14, 2001, the start and end dates for this event cannot be set to June 14, 2001.
4. Click OK.

## Changing the Dates of a Single Event

Access the Events/Interventions workspace and open the Graph view.

To change the dates of a single event:

1. Double-click the event that you want to edit.
2. Click a date and then edit these fields as necessary:
   - Start Date
   - End Date
3. Click OK to save the changes.

## Deleting Event Dates

Access the Events/Interventions workspace.

To delete event dates:

1. Select the event that you want to edit.
2. Select Set Event Dates from the Edit menu.
3. Click the event dates pair that you want to delete, and then click Delete.
4. Click OK.

## Deleting Events

Access the Events/Interventions workspace.

To delete events:

1. Select the event that you want to delete.
2. Select Delete Event from the Edit menu.
3. Click Yes.

## Removing Demand Points from Events

Access the Events/Interventions workspace.

To remove demand points from events:

1. Select the event from which you want to remove a demand point.
2. Select Assign Event Demand Points from the Edit menu.
3. Click the demand points that you want to remove.
4. Click Remove.
5. Click OK.

# Importing and Exporting Events

This section explains how to:

- Import and export events.
- Import and export demand point event assignments.

## Importing Events

Access the Events/Interventions workspace.

To import events:

1. Select Import Events from the Edit menu.
2. Navigate to the directory in which the XML file with the event data that you want to import is located.

3. Select the file, and then click Open.

## Exporting Events

Access the Events/Interventions workspace.

To export events:

1. Select Export Events from the Edit menu.
2. Navigate to the directory in which you want to save the XML file that will contain the event data.
3. Enter a name for the XML file in the File name field and click Save.

## Importing Demand Point Event Assignments

Access the Events/Interventions workspace.

To import demand point event assignments:

1. Select Import Demand Point Event Assignment from the Edit menu.
2. Navigate to the directory in which the XML file that contains the event assignment data that you want to import is located.
3. Click the name of the file, and then click Open.

## Exporting Demand Point Event Assignments

Access the Events/Interventions workspace.

To export demand point event assignments:

1. Select Export Demand Point Event Assignment from the Edit menu.
2. Navigate to the directory in which you want to save the XML file that will contain the event assignment data.
3. Enter a name for the XML file in the File name field and click Save.

# Working with Events and Scenarios

There will be times when you have a demand point in a scenario with several events associated with it. However, when generating forecasts you might want to use only a few of the available events. On the Events tab of the Scenario Properties dialog box, you can set scenario properties to indicate that one or more demand points should be considered when the forecast is generated.

The selections available on the Events tab are the events that have been assigned to demand points in the scenario. By default, all events are used.

### See Also

Assigning Demand Points to Events by Hierarchy

Assigning Demand Points to Events by Property

## Using Events with Scenarios

Access the Events/Interventions workspace.

To use events with scenarios:

1. Select a scenario from the list.
2. Select a demand point in the Scenario view
3. Select Scenario Properties from the Tools menu.
4. Click Events.

   **Note.** The Events tab is disabled if you select multiple demand points in the Scenario view.

5. Select the events that you want to include by clicking the appropriate check boxes.

# CHAPTER 13

# Working with Interventions

This chapter discusses how to:

- Work with interventions.
- Manage interventions.
- Use interventions with scenarios.

## Working with Interventions

This section discusses how to:

- Create interventions.
- Assign demand points to interventions by hierarchy.
- Assign demand points to interventions by property.

### Windows Used to Work with Interventions

| Window Name | Navigation | Usage |
|---|---|---|
| Forecast Studio | Shortcuts Bar, Events/Interventions | Displays the Events/Interventions workspace. |
| Forecast Studio | View, Scenario View | Displays the Scenario View. |

### Creating Interventions

Access the Events/Interventions workspace.

To create interventions:

1. Select New Intervention from the Edit menu.
2. Select the new intervention, and then select Set Intervention Dates from the shortcut menu.

   **Note.** For new interventions, the system assigns a default start date based on the beginning date of the horizon.

3. Click one of these options:
   - Pulse

- Step

4. Complete these fields:
   - Start Date.
   - End Date

   **Note.** If you are creating a step intervention, you cannot enter an end date.

5. Click OK to save the new intervention.

   **Note.** In the Graph view, a pulse intervention is denoted by a red inverted triangle icon. A step intervention is denoted by a yellow diamond icon.

## Assigning Demand Points to Interventions by Hierarchy

Access the Events/Interventions workspace.

To assign demand points to interventions by hierarchy:

1. Select the intervention to which you want to add a demand point.
2. Select Assign Intervention Demand Points from the Edit menu.
3. In the Assign Demand Points window, Complete these fields:
   - Aggregation Level
   - Product
   - Location
   - Channel
4. Click one of these options:
   - This Demand Point Only
   - Include Siblings
   - Include Children
5. Click Filter.

   A list of the demand points for the criteria that you defined in the previous steps appears in the Filtered Demand Points portion.
6. Click one of these options:
   - Add Selected.
   - Add all.
7. Click OK.

## Assigning Demand Points to Interventions by Property

Access the Events/Interventions workspace.

To assign demand points to interventions by properties:

1. Right-click the intervention to which you want to add a demand point.

2. Select Assign Intervention Demand Points from the Edit menu.
3. Click Demand Points by Property.
4. Click Add Rule.
5. Select the appropriate items from the drop-down lists:
   - Name

     Select Aggregation Level. You use the aggregation level to base your query on.
   - Function. You can select from these options in the drop-down list:

     is equal to

     Only demand points containing the exact criteria in the Property Value field will be included in the list.

     not equal to

     All demand points, other than the ones containing the exact criteria in the Property Value field, will be included in the list.

     Contains

     Demand points will be included in the list if they contain the criteria in the Property Value field.

     does not contain

     All demand points except those containing the criteria in the Property Value field will be included in the list.
6. Complete the Property Value field either by typing the filtering criteria in the field, or clicking the button that is beside the field and choosing a value from the dialog box that appears

   **Note.** Click the plus button beside the Property Value field to add another property value to a rule. Adding more property values enables you to specify multiple values for a particular property name, and filter on one value or the other.
7. Repeat steps 4 to 6 for each rule that you want to add.
8. Click Filter to generate a list of demand points.
9. Select the demand points that you want to associate with the event, and then click Add.
10. Click OK.

# Managing Interventions

This section discusses how to:

- Edit interventions.
- Rename interventions.
- Delete interventions.
- Remove demand points from interventions.
- Import interventions.
- Export interventions.

- Import demand point intervention assignments.
- Export demand point intervention assignments.

## Editing Interventions

Access the Events/Interventions workspace.

To edit interventions:

1. Do one of the following:
   - In the Events/Interventions workspace, select the intervention that you want to edit, and then select Set Intervention Dates from the Edit menu.
   - In the Graph view, double-click the icon representing the intervention.
2. Click one of these options to change the type of intervention:
   - Pulse
   - Step
3. Complete these fields:
   - Start Date.
   - End Date.

   **Note.** If you clicked the Step option, you cannot edit the End Date field.
4. Click OK.

## Renaming Interventions

Access the Events/Interventions workspace.

To rename interventions:

1. Select the intervention that you want to rename.
2. Select Rename Intervention from the Edit menu.
3. Enter a new name for the intervention and press Enter.

## Deleting Interventions

Access the Events/Interventions workspace.

To delete interventions:

1. Select the intervention that you want to delete.
2. Select Delete Intervention from the Edit menu.
3. Click Yes.
4. Repeat steps 1 to 3 for each intervention that you want to delete.

## Removing Demand Points from Interventions

Access the Events/Interventions workspace.

To remove demand points from interventions:

1. Select the intervention from which you want to remove a demand point.
2. Select Assign Intervention Demand Points from the Edit menu.
3. Click the demand point that you want to remove.
4. Click Remove.
5. Click OK.

## Importing Interventions

Access the Events/Interventions workspace.

To import interventions:

1. Select Import Interventions from the Edit menu.
2. Navigate to the directory in which the XML file with the intervention data that you want to import is located.
3. Click the name of the file, and then click Open.

## Exporting Interventions

Access the Events/Interventions workspace.

To export interventions:

1. Select Export Interventions from the Edit menu.
2. Navigate to the directory in which you want to save the XML file that will contain the intervention data.
3. Enter a name for the XML file in the File name field and click Save.

## Importing Demand Point Intervention Assignments

Access the Events/Interventions workspace.

To import demand point intervention assignments:

1. Select Import Demand Point Intervention Assignment from the Edit menu.
2. Navigate to the directory in which the XML file that contains the intervention assignment data that you want to import is located.
3. Click the name of the file, and then click Open.

## Exporting Demand Point Intervention Assignments

Access the Events/Interventions workspace.

To export demand point intervention assignments:

1. Select Export Demand Point Intervention Assignment from the Edit menu.

2. Navigate to the directory in which you want to save the XML file that will contain the intervention assignment data.
3. Enter a name for the XML file in the File name field and click Save.

# Using Interventions with Scenarios

Access the Events/Interventions workspace.

To use interventions with scenarios:

1. Select a scenario from the list in the Scenario workspace.
2. Select a demand point in the Scenario view.
3. Select Scenario Properties from the Tools menu.
4. Click Interventions.

**Note.** The Interventions tab is disabled if you select multiple demand points in the Scenario view.

5. Select the interventions that you want to include by clicking a check box.
6. Click OK to save the changes.

# CHAPTER 14

# Working with Forecast Accuracy Reports

This chapter discusses how to work with forecast accuracy reports.

## Understanding Forecast Accuracy Reports

This section provides an overview of forecast accuracy reports, and discusses:

- Forecast accuracy reports.
- Forecast accuracy report definition.

### Forecast Accuracy Reports

Defining a forecast accuracy report allows you to compare the deviation between your forecast and actual demand. You can also use the report to compare the results generated with the various goodness of fit statistics. The report enables you to isolate where strengths and weaknesses in the forecasting process of your enterprise exist, and the demand points or products on which you need to focus more attention.

You should run a report when you have a clear idea of what your actual sales are, which can be over the space of several months or even over several forecasting periods. You can also run the report at regular intervals during a forecasting horizon. You might discover, for example, that forecasts generated at the beginning of a forecasting horizon are less accurate than those generated towards the middle in the horizon. With a forecast accuracy report, you can isolate the best level to forecast. Then you can use this knowledge to improve your forecasting processes.

You can save the report in one of two formats:

- A Comma Separated Values (CSV) file.

  The CSV file is a flat file containing information in tabular format. You can import the CSV file into any spreadsheet or database application, like Microsoft Excel.

- An XML file.

  Using the Extensible Stylesheet Transformation Language (XSLT), you can transform the XML file to such formats as HTML (for viewing in a Web browser) or Adobe PDF (for printing).

The report displays this information about the forecast:

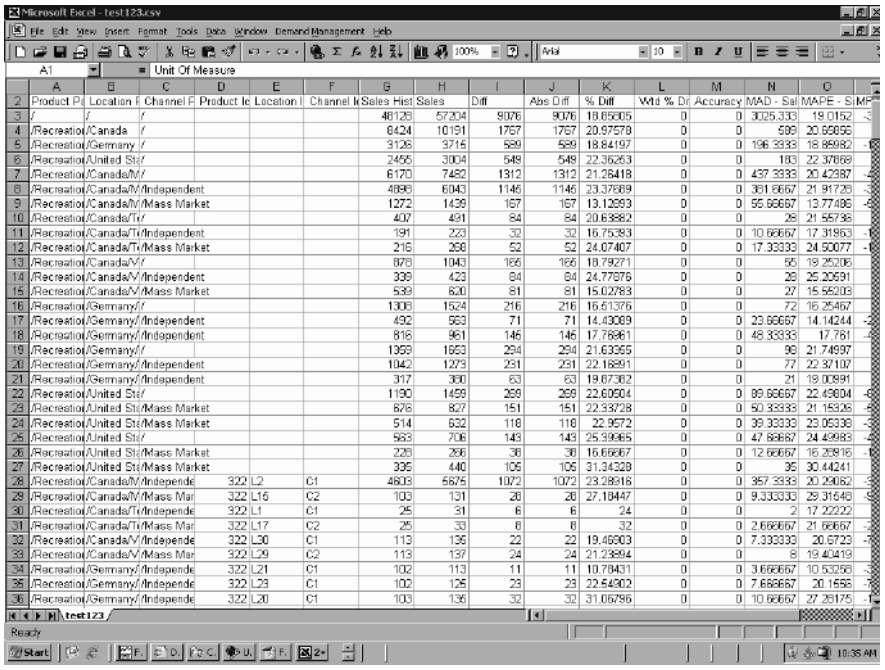
- Demand point data, which consists of product, location, and channel information

  You can specify the demand points to include in the report.

- The goodness of fit statistics for the forecast
- Compares sales history to forecast history information

**Note.** If specific units of measure have been assigned to demand points, the demand points that do not use those units of measure do not appear in the accuracy report. Instead, those demand points are listed as "undefined" in the report.

This sample shows a forecast accuracy report in CSV format that has been imported into Microsoft Excel:



A forecast accuracy report in Microsoft Excel

| Column Headings | Description |
|---|---|
| Sales History | Actual sales quantity. |
| Sales | Forecast version quantity (forecast history). |
| Diff | Sales History quantity—Forecast Version quantity. |
| Abs Diff | \| Difference \| |
| % Diff | (Sales History-Forecast History)/Sales History |
| Accuracy % | 100—(% Difference); if \| % Difference \| > 100, then Accuracy % = 0 |
| MAD | Mean Absolute Deviation<br>[ Σ \| (Sales History- Forecast History \| ] / N<br>where N is the number of periods in the period range |
| MAPE | Mean Absolute Percent Error<br>[ Σ ( \| (Sales History-Forecast History) \| / Sales History ] ) / N ) * 100 |

| Column Headings | Description |
|---|---|
| MFE | Mean Forecast Error<br>[ Σ (Sales History-Forecast History) ] / N |
| MSE | Mean Squared Error<br>[ Σ (Sales History-Forecast History)$^2$ ] / N |
| WMAPE-Sales | Weighted Mean Absolute Percent Error<br>[ Σ ( [ \| (Sales History-Forecast History) \| /Sales History ] * 100 * Sales History) / Σ Sales History<br>Weighted MAPE is essentially the same as MAPE except the ratio of (Sales History/Σ Sales History) is included in the calculation. |

Once the report is in your spreadsheet application, you can use the filtering and sorting function in the application to focus on problem areas. The filtering and sorting functions enable you to display specific values in a row or column of the report. For example, you can use a filter to isolate a location or a specific error in the forecast.

### See Also

Assigning Units of Measure to Demand Points, *EnterpriseOne Design Studio Implementation Guide*

## Forecast Accuracy Report Definition

When you define a forecast accuracy report, you are setting the parameters for the report. This process involves specifying demand points to include in the report, statistical measures to use, the location to save the report file, and so on. After defining the report, you can later edit its parameters.

You can define forecast accuracy reports in two ways:

- For a user-defined set of demand points. Options are:
  - Demand Points by Hierarchy — Returns a list of demand points that are based on the aggregation hierarchy of the demand model you are working with. Once the list of demand points is generated, you must search through the list to find the demand points you want to use in your scenario.
  - Demand Points by Property — Returns a list of demand points that chosen using a filter. By defining a filter, you are creating a rule that produces a list of demand point based on product, location, or channel attributes
- For a pre-defined demand point set . Demand point sets are defined in the Design Studio. User access to demand point sets is defined in the User Manager. You can select from a list of demand point sets to which you have access.

# Working with Forecast Accuracy Reports

This section discusses how to:

- Define forecast accuracy reports for a set of demand points.

- Define forecast accuracy reports from a predefined demand point set.
- Run forecast accuracy reports.
- Edit forecast accuracy reports.
- Rename forecast accuracy reports.
- Delete forecast accuracy reports.
- Edit forecast accuracy reports based on demand point properties.

## Window Used to Work with Forecast Accuracy Reports

| Window Name | Navigation | Usage |
|---|---|---|
| Forecast Studio | Shortcuts Bar, Forecasts, Tools, Accuracy Report | Displays the Forecast Accuracy Report dialog box. |

## Defining Forecast Accuracy Reports for a Set of Demand Points

Access the Forecast Accuracy Report dialog box.

To define forecast accuracy reports for a set of demand points:

1. If this is the first time you have run a Forecast Accuracy report, click Add to create a new report.
2. Enter a descriptive name for the report.
3. Enter the unit of measure to be used for the report.
4. Select Create the report for a set of demand points.
5. Select one of these formatting options for the report:
   - csv
   - xml
6. Enter the directory path and name for the output report.

   By default, reports are saved to the Samples subfolder of the folder where the application is installed.
7. Click Next.
8. Select one or more forecast histories that you want to compare to the sales history.
9. Select one or more statistical measures that you want to include in the report. Valid options are:
   - MAD
   - MAPE
   - MFE
   - MSE
   - WMAPE
10. Select the first period included in the report, where 1 represents the most recent period of sales history.
11. Select the last period included in the report.
12. Click Next.

13. Click the Demand Points by Hierarchy, or Demand Points by Property tab to choose your set of demand points. With the Demand Points by Hierarchy option, you can choose the top/top/top aggregation level, or specify the demand points by product, location and channel. With the demand property option, you can specify multiple rules to search for specific demand points.
14. To specify demand points from the Demand Points by Hierarchy tab, provide details about the set of demand points you want to include in the report:
    - Aggregation Level
    - Product
    - Location
    - Channel
15. Select one of these options:
    - This Demand Point Only
    - Include Siblings
    - Include Children, and the number of levels
16. Click Filter.
17. Do one of the following:
    - Click Add all.
    - Select the demand points that you want to use individually, or use the Ctrl key to select multiple demand points. Click Add.

    The demand points selected are displayed in the bottom pane. To remove demand points, simply highlight the demand point from the displayed list and click Remove or Remove All.
18. To specify demand points from the Demand Points by Property tab, set rules about the set of demand points you want to include in the report:
    - In the first criteria field, choose the type of property you want to search by. Your choices are Aggregation, Channel, Location, or Product.
    - In the second criteria field, choose a field within the property selected.
    - In the third criteria field, select the logic for the search. Your choices are is equal to, is not equal to, contains, or does not contain.
    - In the fourth criteria field, specify the search criteria. Click the ... button to view the field options.
    - To create another rule, click either the + button to create an OR rule, or the + Add Rules button to create an AND rule.

    Click the x button to delete rules.
19. Click the Filter button. All the demand points that match the criteria specified are displayed.
20. When you have added the demand points that you want to include in the report, click Finish to save the report.
21. Do one of the following:
    - Click Add all.

- Select the demand points that you want to use individually, or use the Ctrl key to select multiple demand points. Click Add.

  The demand points selected are displayed in the bottom pane. To remove demand points, simply highlight the demand point from the displayed list and click Remove or Remove All.

22. Click Finish. The report appears in the Forecast Accuracy Report dialog box.

## Defining Forecast Accuracy Reports from a Pre-Defined Demand Point Set

Access the Forecast Accuracy Report dialog box.

To define forecast accuracy reports from a pre-defined demand point set:

1. Click Add to create a new report.
2. Enter a descriptive name for the report.
3. Enter the unit of measure to be used for the report.
4. Select Create the report from a pre-defined demand point set..
5. Choose the pre-defined demand point set.
6. Select one of these formatting options for the report:
   - csv
   - xml
7. Enter the directory path and name for the output report.

   By default, reports are saved to the Samples subfolder of the folder where the application is installed.
8. Click Next.
9. Select one or more forecast histories that you want to compare to the sales history.
10. Select one or more statistical measures that you want to include in the report. Valid options are:
    - MAD
    - MAPE
    - MFE
    - MSE
    - WMAPE
11. Select the first period included in the report, where 1 represents the most recent period of sales history.
12. Select the last period included in the report.
13. Click Finish. The report appears in the Forecast Accuracy Report dialog box.

## Running Forecast Accuracy Reports

Access the Forecast Accuracy Report dialog box.

To run forecast accuracy reports:

1. Select the report that you want to run.
2. Click Run.

3. Click Close.

## Editing Forecast Accuracy Reports

Access the Forecast Accuracy Report dialog box.

To edit forecast accuracy reports based on demand point aggregations:

1. Select the report you want to edit and then click Edit.
2. Change any of the parameters in any of the steps in the Wizard.
3. When done, click Finish.

## Renaming Forecast Accuracy Reports

Access the Forecast Accuracy Report dialog box.

To rename forecast accuracy reports:

1. Select the report that you want to rename.
2. Click Rename.
3. Enter a new name for the report, and then press Enter.

## Deleting Forecast Accuracy Reports

Access the Forecast Accuracy Report dialog box.

To delete forecast accuracy reports:

1. Select the report that you want to delete.
2. Click Delete.
3. When prompted, click Yes to delete the report.

# CHAPTER 15

# Working With Forecast History Data

This chapter provides an overview of forecast history data and discusses how to:

- Import forecast history data.
- Export forecast history data.
- Clear forecast history data.
- View forecast history data.

## Understanding Forecast History Data

As the forecast horizon rolls forward, forecast data that resides outside of the forecast horizon is considered forecast history. Forecast history data is valuable when compared with sales history data (actuals).

Comparing forecast history data to sales history data reveals:

- Forecast accuracy.
- Changes in forecasting patterns.
- Possible problems in the forecasting process.

### Understanding Importing Forecast History Data

You can import forecast history data into a forecast version in a demand model from either a local directory or a network directory. The forecast history data that you import is in XML format.

Only the default unit of measure is imported with forecast history data. In addition, when you import forecast history data, the demand points are displayed as fixed values. If you import forecast history data that has missing values, the fields for the missing values are blank when you view the imported data.

**Note.** You must have administrative permissions to import forecast history data.

### Understanding Exporting Forecast History Data

You can export forecast history data for a forecast version in a demand model to a directory or network drive. The forecast history data that you import is in .xml format. If you revise the data in the XML file and later import this file into the same demand model, all of the demand points are fixed.

**Note.** Only the default unit of measure is exported with forecast history data.

### Windows Used When Working with Forecast History Data

| Window Name | Navigation | Usage |
|---|---|---|
| Forecast Studio | Shortcuts Bar, Forecasts | Displays the Forecasts workspace. |
| Forecast Studio | View, Graph | Displays the Graph view, which shows a line graph that illustrates the historical demand and the forecast data. |

## Importing Forecast History Data

Access the Forecasts workspace.

To import forecast history data:

1. Click the forecast version for which you want to import forecast history
2. Select Import Forecast History from the Edit menu.
3. Navigate to the directory that contains the data that you want to import.
4. Select the file that contains the forecast history information.
5. Click Open.

## Exporting Forecast History Data

Access the Forecasts workspace.

To export forecast history data:

1. Select the forecast version for which you want to export forecast history.
2. Select Export Forecast History from the Edit menu.
3. Navigate to the directory in which you want to save the forecast history.
4. In the File Name field, type a name for the forecast history data.
5. Click Save.

## Clearing Forecast History Data

Access the Forecasts workspace.

To clear forecast history data:

1. Select the forecast version for which you want to clear forecast history.

2. Select Clear Forecast History from the Edit menu.

# Viewing Forecast History Data in the Time Series Table

Access the Forecasts workspace.

To view forecast history data in the Time Series table, select the forecast version for which you want to view data. Forecast history data appears in the Time Series table as shaded.

If the Time Series table is not visible, you must first open it by selecting Time Series from the View menu.

# Viewing Forecast History in Graph View

Access the Forecasts workspace and the Graph view.

To view forecast history data in Graph view, select the forecast version for which you want to view data.

Forecast history data appears to the left of the forecast horizon in the graph.

# CHAPTER 16

# Working With Effective Dates

This chapter provides an overview of effective dates and discusses how to:

- View demand points with effective dates.
- Edit demand points with effective dates.

## Understanding Effective Dates

Effective dates indicate when demand points are available or unavailable in the forecasting process. Effective dates are set and changed in the demand model using the Design Studio application. You can set the effective start date and effective end date for a single demand point or for multiple demand points.

You can view demand points with effective dates in the Time Series table. If you are in the Forecasts workspace, all effective dates appear under the Forecast column. If you are in the Scenarios workspace, all effective dates appear in the column of the forecast version for which you are viewing data. Demand point values that fall outside of the start and end effective dates are highlighted.

You can also view demand points with effective dates in the Graph view. The effective start and end dates for demand points appear in the Graph view as broken lines and have a black triangle at the base and top of the lines.

## Viewing Demand Points with Effective Dates in the Time Series Table

This section discusses how to view demand points with effective dates in a time series table.

### Windows Used to View Demand Points with Effective Dates in the Time Series Table

| Window Name | Navigation | Usage |
|---|---|---|
| Forecast Studio | Shortcuts Bar, Scenarios | Displays the Scenarios workspace. |
| Forecast Studio | View, Time Series | Displays the Time Series table, which lists the sales history and forecast information for the scenario on a monthly basis. |
| Forecast Studio | View, Graph | Displays the Graph view, which shows a line graph that illustrates the historical demand and the forecast for a scenario. |

## Viewing Demand Points with Effective Dates in the Time Series Table

Access the Scenarios workspace and the Time Series table.

To view demand points with effective dates in the Time Series table:

1. Select the forecast version for which you want to view data.
2. Select these options from the Navigation bar:
   - Aggregation Level
   - Product
   - Location
   - Channel

   The demand points that you selected appear in the Table view with either scenario or forecast versions displaying effective dates within the start and end effective date lines.

## Viewing Demand Points with Effective Dates in Graph View

Access the Scenarios workspace and the Graph view.

To view demand points with effective dates in the Graph view:

1. Select the forecast version for which you want to view data.
2. Select these options from the Navigation bar:
   - Aggregation Level

- Product
- Location
- Channel

3. Select Graph from the View menu.

# Editing Demand Points With Effective Dates in the Time Series Table

Access the Scenarios workspace and the Time Series table.

You can edit demand points with effective dates in the Time Series table. You edit the information in the Time Series table by choosing a value from the Forecast field and specifying your change. When you edit effective dates in the Time Series table, the changes are reflected in the Graph view. After you edit demand point values, you generate the scenario.

To edit demand points with effective dates in the Time Series table:

1. Select the forecast version for which you want to view data.
2. From the Navigation bar, select these options:
   - Aggregation Level
   - Product
   - Location
   - Channel
3. In the Time Series table, double-click the forecast field that contains the value for the effective date that you want to edit.
4. Enter a new value in the field, and then press Enter.

# Editing Demand Points With Effective Dates in the Graph View

Access the Scenarios workspace and the Graph view.

You can edit demand points with effective dates in the Graph view. You can view graphs for individual demand points by choosing the appropriate demand point from the Scenario View pane. When you edit effective dates in the Time Series table, the changes are reflected in the Graph view. After you edit demand point values, you generate the scenario

To edit demand points with effective dates in Graph view:

1. Select the forecast version for which you want to view data.
2. From the Navigation bar, select these options:
   - Aggregation Level
   - Product

- Location
- Channel

# Glossary of JD Edwards EnterpriseOne Terms

**activity** A scheduling entity in JD Edwards EnterpriseOne tools that represents a designated amount of time on a calendar.

**activity rule** The criteria by which an object progresses from one given point to the next in a flow.

**add mode** A condition of a form that enables users to input data.

**Advanced Planning Agent (APAg)** A JD Edwards EnterpriseOne tool that can be used to extract, transform, and load enterprise data. APAg supports access to data sources in the form of rational databases, flat file format, and other data or message encoding, such as XML.

**application server** A server in a local area network that contains applications shared by network clients.

**as if processing** A process that enables you to view currency amounts as if they were entered in a currency different from the domestic and foreign currency of the transaction.

**alternate currency** A currency that is different from the domestic currency (when dealing with a domestic-only transaction) or the domestic and foreign currency of a transaction.

In JD Edwards EnterpriseOne Financial Management, alternate currency processing enables you to enter receipts and payments in a currency other than the one in which they were issued.

**as of processing** A process that is run as of a specific point in time to summarize transactions up to that date. For example, you can run various JD Edwards EnterpriseOne reports as of a specific date to determine balances and amounts of accounts, units, and so on as of that date.

**back-to-back process** A process in JD Edwards EnterpriseOne Supply Management that contains the same keys that are used in another process.

**batch processing** A process of transferring records from a third-party system to JD Edwards EnterpriseOne.

In JD Edwards EnterpriseOne Financial Management, batch processing enables you to transfer invoices and vouchers that are entered in a system other than JD Edwards EnterpriseOne to JD Edwards EnterpriseOne Accounts Receivable and JD Edwards EnterpriseOne Accounts Payable, respectively. In addition, you can transfer address book information, including customer and supplier records, to JD Edwards EnterpriseOne.

**batch server** A server that is designated for running batch processing requests. A batch server typically does not contain a database nor does it run interactive applications.

**batch-of-one immediate** A transaction method that enables a client application to perform work on a client workstation, then submit the work all at once to a server application for further processing. As a batch process is running on the server, the client application can continue performing other tasks.

See also direct connect and store-and-forward.

**business function** A named set of user-created, reusable business rules and logs that can be called through event rules. Business functions can run a transaction or a subset of a transaction (check inventory, issue work orders, and so on). Business functions also contain the application programming interfaces (APIs) that enable them to be called from a form, a database trigger, or a non-JD Edwards EnterpriseOne application. Business functions can be combined with other business functions, forms, event rules,

| | |
|---|---|
| | and other components to make up an application. Business functions can be created through event rules or third-generation languages, such as C. Examples of business functions include Credit Check and Item Availability. |
| **business function event rule** | See named event rule (NER). |
| **business view** | A means for selecting specific columns from one or more JD Edwards EnterpriseOne application tables whose data is used in an application or report. A business view does not select specific rows, nor does it contain any actual data. It is strictly a view through which you can manipulate data. |
| **central objects merge** | A process that blends a customer's modifications to the objects in a current release with objects in a new release. |
| **central server** | A server that has been designated to contain the originally installed version of the software (central objects) for deployment to client computers. In a typical JD Edwards EnterpriseOne installation, the software is loaded on to one machine—the central server. Then, copies of the software are pushed out or downloaded to various workstations attached to it. That way, if the software is altered or corrupted through its use on workstations, an original set of objects (central objects) is always available on the central server. |
| **charts** | Tables of information in JD Edwards EnterpriseOne that appear on forms in the software. |
| **connector** | Component-based interoperability model that enables third-party applications and JD Edwards EnterpriseOne to share logic and data. The JD Edwards EnterpriseOne connector architecture includes Java and COM connectors. |
| **contra/clearing account** | A general ledger account in JD Edwards EnterpriseOne Financial Management that is used by the system to offset (balance) journal entries. For example, you can use a contra/clearing account to balance the entries created by allocations in JD Edwards EnterpriseOne Financial Management. |
| **Control Table Workbench** | An application that, during the Installation Workbench processing, runs the batch applications for the planned merges that update the data dictionary, user-defined codes, menus, and user override tables. |
| **control tables merge** | A process that blends a customer's modifications to the control tables with the data that accompanies a new release. |
| **cost assignment** | The process in JD Edwards EnterpriseOne Advanced Cost Accounting of tracing or allocating resources to activities or cost objects. |
| **cost component** | In JD Edwards EnterpriseOne Manufacturing, an element of an item's cost (for example, material, labor, or overhead). |
| **cross segment edit** | A logic statement that establishes the relationship between configured item segments. Cross segment edits are used to prevent ordering of configurations that cannot be produced. |
| **currency restatement** | The process of converting amounts from one currency into another currency, generally for reporting purposes. You can use the currency restatement process, for example, when many currencies must be restated into a single currency for consolidated reporting. |
| **database server** | A server in a local area network that maintains a database and performs searches for client computers. |
| **Data Source Workbench** | An application that, during the Installation Workbench process, copies all data sources that are defined in the installation plan from the Data Source Master and Table and Data Source Sizing tables in the Planner data source to the system-release number data source. It also updates the Data Source Plan detail record to reflect completion. |

**date pattern** A calendar that represents the beginning date for the fiscal year and the ending date for each period in that year in standard and 52-period accounting.

**denominated-in currency** The company currency in which financial reports are based.

**deployment server** A server that is used to install, maintain, and distribute software to one or more enterprise servers and client workstations.

**detail information** Information that relates to individual lines in JD Edwards EnterpriseOne transactions (for example, voucher pay items and sales order detail lines).

**direct connect** A transaction method in which a client application communicates interactively and directly with a server application.

See also batch-of-one immediate and store-and-forward.

**Do Not Translate (DNT)** A type of data source that must exist on the iSeries because of BLOB restrictions.

**dual pricing** The process of providing prices for goods and services in two currencies.

**edit code** A code that indicates how a specific value for a report or a form should appear or be formatted. The default edit codes that pertain to reporting require particular attention because they account for a substantial amount of information.

**edit mode** A condition of a form that enables users to change data.

**edit rule** A method used for formatting and validating user entries against a predefined rule or set of rules.

**Electronic Data Interchange (EDI)** An interoperability model that enables paperless computer-to-computer exchange of business transactions between JD Edwards EnterpriseOne and third-party systems. Companies that use EDI must have translator software to convert data from the EDI standard format to the formats of their computer systems.

**embedded event rule** An event rule that is specific to a particular table or application. Examples include form-to-form calls, hiding a field based on a processing option value, and calling a business function. Contrast with the business function event rule.

**Employee Work Center** A central location for sending and receiving all JD Edwards EnterpriseOne messages (system and user generated), regardless of the originating application or user. Each user has a mailbox that contains workflow and other messages, including Active Messages.

**enterprise server** A server that contains the database and the logic for JD Edwards EnterpriseOne.

**EnterpriseOne object** A reusable piece of code that is used to build applications. Object types include tables, forms, business functions, data dictionary items, batch processes, business views, event rules, versions, data structures, and media objects.

**EnterpriseOne process** A software process that enables JD Edwards EnterpriseOne clients and servers to handle processing requests and run transactions. A client runs one process, and servers can have multiple instances of a process. JD Edwards EnterpriseOne processes can also be dedicated to specific tasks (for example, workflow messages and data replication) to ensure that critical processes don't have to wait if the server is particularly busy.

**Environment Workbench** An application that, during the Installation Workbench process, copies the environment information and Object Configuration Manager tables for each environment from the Planner data source to the system-release number data source. It also updates the Environment Plan detail record to reflect completion.

**escalation monitor** A batch process that monitors pending requests or activities and restarts or forwards them to the next step or user after they have been inactive for a specified amount of time.

**event rule** A logic statement that instructs the system to perform one or more operations based on an activity that can occur in a specific application, such as entering a form or exiting a field.

**facility** An entity within a business for which you want to track costs. For example, a facility might be a warehouse location, job, project, work center, or branch/plant. A facility is sometimes referred to as a "business unit."

**fast path** A command prompt that enables the user to move quickly among menus and applications by using specific commands.

**file server** A server that stores files to be accessed by other computers on the network. Unlike a disk server, which appears to the user as a remote disk drive, a file server is a sophisticated device that not only stores files, but also manages them and maintains order as network users request files and make changes to these files.

**final mode** The report processing mode of a processing mode of a program that updates or creates data records.

**FTP server** A server that responds to requests for files via file transfer protocol.

**header information** Information at the beginning of a table or form. Header information is used to identify or provide control information for the group of records that follows.

**interface table** See Z table.

**integration server** A server that facilitates interaction between diverse operating systems and applications across internal and external networked computer systems.

**integrity test** A process used to supplement a company's internal balancing procedures by locating and reporting balancing problems and data inconsistencies.

**interoperability model** A method for third-party systems to connect to or access JD Edwards EnterpriseOne.

**in-your-face-error** In JD Edwards EnterpriseOne, a form-level property which, when enabled, causes the text of application errors to appear on the form.

**IServer service** This internet server service resides on the web server and is used to speed up delivery of the Java class files from the database to the client.

**jargon** An alternative data dictionary item description that JD Edwards EnterpriseOne appears based on the product code of the current object.

**Java application server** A component-based server that resides in the middle-tier of a server-centric architecture. This server provides middleware services for security and state maintenance, along with data access and persistence.

**JDBNET** A database driver that enables heterogeneous servers to access each other's data.

**JDEBASE Database Middleware** A JD Edwards EnterpriseOne proprietary database middleware package that provides platform-independent APIs, along with client-to-server access.

**JDECallObject** An API used by business functions to invoke other business functions.

**jde.ini** A JD Edwards EnterpriseOne file (or member for iSeries) that provides the runtime settings required for JD Edwards EnterpriseOne initialization. Specific versions of the file or member must reside on every machine running JD Edwards EnterpriseOne. This includes workstations and servers.

**JDEIPC** Communications programming tools used by server code to regulate access to the same data in multiprocess environments, communicate and coordinate between processes, and create new processes.

**jde.log** The main diagnostic log file of JD Edwards EnterpriseOne. This file is always located in the root directory on the primary drive and contains status and error messages from the startup and operation of JD Edwards EnterpriseOne.

**JDENET** A JD Edwards EnterpriseOne proprietary communications middleware package. This package is a peer-to-peer, message-based, socket-based, multiprocess communications middleware solution. It handles client-to-server and server-to-server communications for all JD Edwards EnterpriseOne supported platforms.

**Location Workbench** An application that, during the Installation Workbench process, copies all locations that are defined in the installation plan from the Location Master table in the Planner data source to the system data source.

**logic server** A server in a distributed network that provides the business logic for an application program. In a typical configuration, pristine objects are replicated on to the logic server from the central server. The logic server, in conjunction with workstations, actually performs the processing required when JD Edwards EnterpriseOne software runs.

**MailMerge Workbench** An application that merges Microsoft Word 6.0 (or higher) word-processing documents with JD Edwards EnterpriseOne records to automatically print business documents. You can use MailMerge Workbench to print documents, such as form letters about verification of employment.

**master business function (MBF)** An interactive master file that serves as a central location for adding, changing, and updating information in a database. Master business functions pass information between data entry forms and the appropriate tables. These master functions provide a common set of functions that contain all of the necessary default and editing rules for related programs. MBFs contain logic that ensures the integrity of adding, updating, and deleting information from databases.

**master table** See published table.

**matching document** A document associated with an original document to complete or change a transaction. For example, in JD Edwards EnterpriseOne Financial Management, a receipt is the matching document of an invoice, and a payment is the matching document of a voucher.

**media storage object** Files that use one of the following naming conventions that are not organized into table format: Gxxx, xxxGT, or GTxxx.

**message center** A central location for sending and receiving all JD Edwards EnterpriseOne messages (system and user generated), regardless of the originating application or user.

**messaging adapter** An interoperability model that enables third-party systems to connect to JD Edwards EnterpriseOne to exchange information through the use of messaging queues.

**messaging server** A server that handles messages that are sent for use by other programs using a messaging API. Messaging servers typically employ a middleware program to perform their functions.

**named event rule (NER)** Encapsulated, reusable business logic created using event rules, rather that C programming. NERs are also called business function event rules. NERs can be reused in multiple places by multiple programs. This modularity lends itself to streamlining, reusability of code, and less work.

***nota fiscal*** In Brazil, a legal document that must accompany all commercial transactions for tax purposes and that must contain information required by tax regulations.

***nota fiscal factura*** In Brazil, a nota fiscal with invoice information.

See also *nota fiscal.*

**Object Configuration Manager (OCM)** In JD Edwards EnterpriseOne, the object request broker and control center for the runtime environment. OCM keeps track of the runtime locations for business functions, data, and batch applications. When one of these objects is called, OCM directs access to it using defaults and overrides for a given environment and user.

**Object Librarian** A repository of all versions, applications, and business functions reusable in building applications. Object Librarian provides check-out and check-in capabilities for developers, and it controls the creation, modification, and use of JD Edwards EnterpriseOne objects. Object Librarian supports multiple environments (such as production and development) and enables objects to be easily moved from one environment to another.

**Object Librarian merge** A process that blends any modifications to the Object Librarian in a previous release into the Object Librarian in a new release.

**Open Data Access (ODA)** An interoperability model that enables you to use SQL statements to extract JD Edwards EnterpriseOne data for summarization and report generation.

**Output Stream Access (OSA)** An interoperability model that enables you to set up an interface for JD Edwards EnterpriseOne to pass data to another software package, such as Microsoft Excel, for processing.

**package** JD Edwards EnterpriseOne objects are installed to workstations in packages from the deployment server. A package can be compared to a bill of material or kit that indicates the necessary objects for that workstation and where on the deployment server the installation program can find them. It is point-in-time snapshot of the central objects on the deployment server.

**package build** A software application that facilitates the deployment of software changes and new applications to existing users. Additionally, in JD Edwards EnterpriseOne, a package build can be a compiled version of the software. When you upgrade your version of the ERP software, for example, you are said to take a package build.

Consider the following context: "Also, do not transfer business functions into the production path code until you are ready to deploy, because a global build of business functions done during a package build will automatically include the new functions." The process of creating a package build is often referred to, as it is in this example, simply as "a package build."

**package location** The directory structure location for the package and its set of replicated objects. This is usually \\deployment server\release\path_code\package\package name. The subdirectories under this path are where the replicated objects for the package are placed. This is also referred to as where the package is built or stored.

**Package Workbench** An application that, during the Installation Workbench process, transfers the package information tables from the Planner data source to the system-release number data source. It also updates the Package Plan detail record to reflect completion.

**planning family** A means of grouping end items whose similarity of design and manufacture facilitates being planned in aggregate.

**preference profile** The ability to define default values for specified fields for a user-defined hierarchy of items, item groups, customers, and customer groups.

**print server** The interface between a printer and a network that enables network clients to connect to the printer and send their print jobs to it. A print server can be a computer, separate hardware device, or even hardware that resides inside of the printer itself.

**pristine environment** A JD Edwards EnterpriseOne environment used to test unaltered objects with JD Edwards EnterpriseOne demonstration data or for training classes. You must have this environment so that you can compare pristine objects that you modify.

**processing option** A data structure that enables users to supply parameters that regulate the running of a batch program or report. For example, you can use processing options to specify default values for certain fields, to determine how information appears or is printed, to specify date ranges, to supply runtime values that regulate program execution, and so on.

**production environment** A JD Edwards EnterpriseOne environment in which users operate EnterpriseOne software.

**production-grade file server** A file server that has been quality assurance tested and commercialized and that is usually provided in conjunction with user support services.

**program temporary fix (PTF)** A representation of changes to JD Edwards EnterpriseOne software that your organization receives on magnetic tapes or disks.

**project** In JD Edwards EnterpriseOne, a virtual container for objects being developed in Object Management Workbench.

**promotion path** The designated path for advancing objects or projects in a workflow. The following is the normal promotion cycle (path):

11>21>26>28>38>01

In this path, *11* equals new project pending review, *21* equals programming, *26* equals QA test/review, *28* equals QA test/review complete, *38* equals in production, *01* equals complete. During the normal project promotion cycle, developers check objects out of and into the development path code and then promote them to the prototype path code. The objects are then moved to the productions path code before declaring them complete.

**proxy server** A server that acts as a barrier between a workstation and the internet so that the enterprise can ensure security, administrative control, and caching service.

**published table** Also called a master table, this is the central copy to be replicated to other machines. Residing on the publisher machine, the F98DRPUB table identifies all of the published tables and their associated publishers in the enterprise.

**publisher** The server that is responsible for the published table. The F98DRPUB table identifies all of the published tables and their associated publishers in the enterprise.

**pull replication** One of the JD Edwards EnterpriseOne methods for replicating data to individual workstations. Such machines are set up as pull subscribers using JD Edwards EnterpriseOne data replication tools. The only time that pull subscribers are notified of changes, updates, and deletions is when they request such information. The request is in the form of a message that is sent, usually at startup, from the pull subscriber to the server machine that stores the F98DRPCN table.

**QBE** An abbreviation for query by example. In JD Edwards EnterpriseOne, the QBE line is the top line on a detail area that is used for filtering data.

**real-time event** A service that uses system calls to capture JD Edwards EnterpriseOne transactions as they occur and to provide notification to third-party software, end users, and other JD Edwards EnterpriseOne systems that have requested notification when certain transactions occur.

**refresh** A function used to modify JD Edwards EnterpriseOne software, or subset of it, such as a table or business data, so that it functions at a new release or cumulative update level, such as B73.2 or B73.2.1.

**replication server** A server that is responsible for replicating central objects to client machines.

**quote order** In JD Edwards Procurement and Subcontract Management, a request from a supplier for item and price information from which you can create a purchase order.

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|---|---|
| | In JD Edwards Sales Order Management, item and price information for a customer who has not yet committed to a sales order. |
| **selection** | Found on JD Edwards EnterpriseOne menus, a selection represents functions that you can access from a menu. To make a selection, type the associated number in the Selection field and press Enter. |
| **Server Workbench** | An application that, during the Installation Workbench process, copies the server configuration files from the Planner data source to the system-release number data source. It also updates the Server Plan detail record to reflect completion. |
| **spot rate** | An exchange rate entered at the transaction level. This rate overrides the exchange rate that is set up between two currencies. |
| **Specification merge** | A merge that comprises three merges: Object Librarian merge, Versions List merge, and Central Objects merge. The merges blend customer modifications with data that accompanies a new release. |
| **specification** | A complete description of a JD Edwards EnterpriseOne object. Each object has its own specification, or name, which is used to build applications. |
| **Specification Table Merge Workbench** | An application that, during the Installation Workbench process, runs the batch applications that update the specification tables. |
| **store-and-forward** | The mode of processing that enables users who are disconnected from a server to enter transactions and then later connect to the server to upload those transactions. |
| **subscriber table** | Table F98DRSUB, which is stored on the publisher server with the F98DRPUB table and identifies all of the subscriber machines for each published table. |
| **supplemental data** | Any type of information that is not maintained in a master file. Supplemental data is usually additional information about employees, applicants, requisitions, and jobs (such as an employee's job skills, degrees, or foreign languages spoken). You can track virtually any type of information that your organization needs.<br><br>For example, in addition to the data in the standard master tables (the Address Book Master, Customer Master, and Supplier Master tables), you can maintain other kinds of data in separate, generic databases. These generic databases enable a standard approach to entering and maintaining supplemental data across JD Edwards EnterpriseOne systems. |
| **table access management (TAM)** | The JD Edwards EnterpriseOne component that handles the storage and retrieval of use-defined data. TAM stores information, such as data dictionary definitions; application and report specifications; event rules; table definitions; business function input parameters and library information; and data structure definitions for running applications, reports, and business functions. |
| **Table Conversion Workbench** | An interoperability model that enables the exchange of information between JD Edwards EnterpriseOne and third-party systems using non-JD Edwards EnterpriseOne tables. |
| **table conversion** | An interoperability model that enables the exchange of information between JD Edwards EnterpriseOne and third-party systems using non-JD Edwards EnterpriseOne tables. |
| **table event rules** | Logic that is attached to database triggers that runs whenever the action specified by the trigger occurs against the table. Although JD Edwards EnterpriseOne enables event rules to be attached to application events, this functionality is application specific. Table event rules provide embedded logic at the table level. |
| **terminal server** | A server that enables terminals, microcomputers, and other devices to connect to a network or host computer or to devices attached to that particular computer. |

**three-tier processing** The task of entering, reviewing and approving, and posting batches of transactions in JD Edwards EnterpriseOne.

**three-way voucher match** In JD Edwards Procurement and Subcontract Management, the process of comparing receipt information to supplier's invoices to create vouchers. In a three-way match, you use the receipt records to create vouchers.

**transaction processing (TP) monitor** A monitor that controls data transfer between local and remote terminals and the applications that originated them. TP monitors also protect data integrity in the distributed environment and may include programs that validate data and format terminal screens.

**transaction set** An electronic business transaction (electronic data interchange standard document) made up of segments.

**trigger** One of several events specific to data dictionary items. You can attach logic to a data dictionary item that the system processes automatically when the event occurs.

**triggering event** A specific workflow event that requires special action or has defined consequences or resulting actions.

**two-way voucher match** In JD Edwards Procurement and Subcontract Management, the process of comparing purchase order detail lines to the suppliers' invoices to create vouchers. You do not record receipt information.

**User Overrides merge** Adds new user override records into a customer's user override table.

**variance** In JD Edwards Capital Asset Management, the difference between revenue generated by a piece of equipment and costs incurred by the equipment.

In JD Edwards EnterpriseOne Project Costing and JD Edwards EnterpriseOne Manufacturing, the difference between two methods of costing the same item (for example, the difference between the frozen standard cost and the current cost is an engineering variance). Frozen standard costs come from the Cost Components table, and the current costs are calculated using the current bill of material, routing, and overhead rates.

**Version List merge** The Versions List merge preserves any non-XJDE and non-ZJDE version specifications for objects that are valid in the new release, as well as their processing options data.

**visual assist** Forms that can be invoked from a control via a trigger to assist the user in determining what data belongs in the control.

**vocabulary override** An alternate description for a data dictionary item that appears on a specific JD Edwards EnterpriseOne form or report.

**wchar_t** An internal type of a wide character. It is used for writing portable programs for international markets.

**web application server** A web server that enables web applications to exchange data with the back-end systems and databases used in eBusiness transactions.

**web server** A server that sends information as requested by a browser, using the TCP/IP set of protocols. A web server can do more than just coordination of requests from browsers; it can do anything a normal server can do, such as house applications or data. Any computer can be turned into a web server by installing server software and connecting the machine to the internet.

**Windows terminal server** A multiuser server that enables terminals and minimally configured computers to display Windows applications even if they are not capable of running Windows software themselves. All client processing is performed centrally at the Windows

terminal server and only display, keystroke, and mouse commands are transmitted over the network to the client terminal device.

**workbench** A program that enables users to access a group of related programs from a single entry point. Typically, the programs that you access from a workbench are used to complete a large business process. For example, you use the JD Edwards EnterpriseOne Payroll Cycle Workbench (P07210) to access all of the programs that the system uses to process payroll, print payments, create payroll reports, create journal entries, and update payroll history. Examples of JD Edwards EnterpriseOne workbenches include Service Management Workbench (P90CD020), Line Scheduling Workbench (P3153), Planning Workbench (P13700), Auditor's Workbench (P09E115), and Payroll Cycle Workbench.

**work day calendar** In JD Edwards EnterpriseOne Manufacturing, a calendar that is used in planning functions that consecutively lists only working days so that component and work order scheduling can be done based on the actual number of work days available. A work day calendar is sometimes referred to as planning calendar, manufacturing calendar, or shop floor calendar.

**workflow** The automation of a business process, in whole or in part, during which documents, information, or tasks are passed from one participant to another for action, according to a set of procedural rules.

**workgroup server** A server that usually contains subsets of data replicated from a master network server. A workgroup server does not perform application or batch processing.

**XAPI events** A service that uses system calls to capture JD Edwards EnterpriseOne transactions as they occur and then calls third-party software, end users, and other JD Edwards EnterpriseOne systems that have requested notification when the specified transactions occur to return a response.

**XML CallObject** An interoperability capability that enables you to call business functions.

**XML Dispatch** An interoperability capability that provides a single point of entry for all XML documents coming into JD Edwards EnterpriseOne for responses.

**XML List** An interoperability capability that enables you to request and receive JD Edwards EnterpriseOne database information in chunks.

**XML Service** An interoperability capability that enables you to request events from one JD Edwards EnterpriseOne system and receive a response from another JD Edwards EnterpriseOne system.

**XML Transaction** An interoperability capability that enables you to use a predefined transaction type to send information to or request information from JD Edwards EnterpriseOne. XML transaction uses interface table functionality.

**XML Transaction Service (XTS)** Transforms an XML document that is not in the JD Edwards EnterpriseOne format into an XML document that can be processed by JD Edwards EnterpriseOne. XTS then transforms the response back to the request originator XML format.

**Z event** A service that uses interface table functionality to capture JD Edwards EnterpriseOne transactions and provide notification to third-party software, end users, and other JD Edwards EnterpriseOne systems that have requested to be notified when certain transactions occur.

**Z table** A working table where non-JD Edwards EnterpriseOne information can be stored and then processed into JD Edwards EnterpriseOne. Z tables also can be used to retrieve JD Edwards EnterpriseOne data. Z tables are also known as interface tables.

**Z transaction** Third-party data that is properly formatted in interface tables for updating to the JD Edwards EnterpriseOne database.

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