



SAS[®] Demand Forecasting for Retail 4.2-SP3

Release Notes

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Document Introduction

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1.1 Overview

This document provides information about the new and enhanced features that are supported by SAS Demand Forecasting for Retail.

1.2 Audience

This document should be read by business domain consultants, instructors, analytical modelers, and solution specialists in the service provider's project team, as well as business users, in the customer project team.

1.3 Purpose of This Document

This document lists the specific and general enhancements made to SAS Demand Forecasting for Retail. Use this document as a quick guide for new and enhanced features of SAS Demand Forecasting for Retail.

Note: Text in a gray box indicates a point of particular interest or that special notice should be given to the text that follows.



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2.1 Introduction to the SAS Demand Forecasting for Retail

SAS Demand Forecasting for Retail provides accurate forecasts for the planning needs of any retail organization.

This release of SAS Demand Forecasting for Retail incorporates all the features that were previously released in service packs and base pack of the solution. This release does not require installation of the previous service packs. The supporting documents for this release of the solution do not contain any reference to the prior service packs and the base pack.

2.2 What's New?

2.2.1 Custom Model Support

The forecasting process uses HPF diagnose to evaluate and suggest the best forecast models. This feature enables the user to suggest the forecast models rather than going with the standard recommendations. The solution offers the following two methods to select the forecast models:

- Suggest Custom Model:** In this method, the user can suggest a custom model. The system compares the user-suggested custom model with other models and selects the best model for the case.
- Force Fit Custom Model:** In this method, the system considers the user-suggested custom model as the best model for the case and does not generate other models for the case.

2.2.2 Negative Forecast Resolution

Forecasted figures can be negative. For such values (negative values), the solution provides a mechanism to resolve them to zero. This can be done by setting value of the parameter `DFR_NON_NEGATIVE_FORECAST` to 1.

2.2.3 Internationalization

The default language for the solution is English-US. However, this release of SAS Demand Forecasting for Retail is compliant with I18N in terms of:

- ❑ **Code:** All code is I18N ready with respect to the K-functions.
- ❑ **Message:** All messages can be localized to any language.
- ❑ **Report Label:** All report labels can be localized to any language.

2.3 Enhancements

This release of SAS Demand Forecasting for Retail offers the following enhanced features.

2.3.1 Improved Forecast Performance

Performance of forecasting process has been significantly improved by using:

- ❑ **Multi-threaded Architecture**

The solution design has been re-architected to maximize multi-processing wherever possible.
- ❑ **Grid Computing**

With grid architecture in place, this release of SAS Demand Forecasting for Retail is enabled for distributed processing. The solution can leverage the power of multiple server resources and improve the forecasting performance to a much higher degree.
- ❑ **Resolving Performance Bottlenecks**

The code has been fine-tuned to resolve all performance bottlenecks that were experienced in the previous releases of this solution.
- ❑ **Database Partitioning and Indexing**

In addition to the code, database table partitioning and indexing have been implemented to improve overall forecasting process performance.

2.3.2 Leverage HPF2.3 Options

This release of SAS Demand Forecasting for Retail is compatible with High-Performance Forecast 2.3 and higher thereby leveraging all possible options of High-Performance Forecast procedures. See *Demand Forecasting for Retail 4.2: User's Guide* for details on various options and their corresponding usage.

2.3.3 Interface for Independent Variables

The known independent variables such as Events, Promotions, and Weather for which data is commonly available, the solution provides standard published interfaces in the form of CSV files. This feature eliminates the need of performing additional data preparation tasks on the forecast input data. Similarly, the new independent variables must be provided in a specified format. These new independent variables can then be factored in the forecasting processes with the help of several options available in forecast procedures.

2.4 Known Issues

1. The system might give the following error message when HPF_CALL macro is executed:

“ERROR: User [USER NAME] (server connection [number]) is using observation [number]”

Note: The user should ignore this error message. The program takes care of this error.

2. The system might give the following error message while executing PROC HPFENGINE:
 - In Windows environment: “ERROR: Read Access Violation in Task [HPFENGINE]”
 - In UNIX environment: “Segmentation Violation In Task [HPFENGINE]”

This error occurs due to large number of independent variables in the INPUT statement and can be resolved by removing a few independent variables.
3. The system might give the following error while executing PROC HPFRECONCILE:

“ERROR: Floating Point Overflow”

“ERROR: Termination due to Floating Point Exception”

This error occurs due to the WEIGHTED option in HPFRECONCILE. This option is controlled by the parameter RECON_WEIGHT_REQUIRED. The default value of this parameter is “0” (parameter WEIGHTED is set to Off).
4. For a job, usage of the circular reference for acts-like items is only applicable to the merchandise members at lowest level. With parent acts-like reference, only one parent is used. The solution does not support linked or circular references to other acts-like members.
5. For quarterly level worksheets, the last record is missed in each time series of all external independent variables.
6. In Standalone mode, the run fails if KPI names are provided in small case. To avoid this, the user must provide all KPI names in uppercase only.
7. Performance split (dataset split – DFR_NO_DS and DFR_WF_SPLIT_TYPE=2) fails if user provides group keys for the entire extract results or as input to the forecasting. In such case, user can use time series split (DFR_NO_TS and DFR_WF_SPLIT_TYPE=1).
8. In New Product Forecast, if **Merge History with Forecast** option is used at month level, the month forecast values for new product might repeat in the forecast. However, this issue is not seen when **Merge Forecast with History** is used at week or quarter level.