



SAS® High-Performance Forecasting

Accurate, automatic, large-scale forecasting

Forecasting forms the foundation for planning processes across organizations. Funding allocations, inventory planning and scheduling, resource allotments, budgets, sales quotas, marketing campaigns and procurement activities. Each day these decisions and many others are based on predictions for the future. The more accurate the forecasts, the better the decisions.

Successful organizations know the importance of accurate forecasting — it's what keeps them on track and enables the most effective operations. Organizations today want to use the large quantities of data that are collected to help make better predictions for the future. But producing large numbers of frequent, up-to-date forecasts can be a tremendous challenge, especially when you are dealing with huge volumes of data.

Who in your organization has the time and experience to create these forecasts? Frequently, the number of forecasts needed is so great that human interaction is impractical. Also, scalability can be an issue if you are producing forecasts for thousands, even millions, of items. How can you be sure the most appropriate statistical models are being used so that the forecasts produced are accurate?

SAS® High-Performance Forecasting gives you the ability to quickly, accurately and automatically produce large quantities of forecasts so you can understand trends, plan for fluctuations and confidently execute your business processes for improved operational efficiencies.

Powered by SAS award-winning analytics, High-Performance Forecasting transforms transactional data into time series formats, automatically selects the time series models that best explain your historical data, optimizes all model parameters and generates large volumes of high-quality forecasts, giving you confidence that your analysis provides the accurate information you need.

This new solution from SAS is the fastest and most analytically advanced large-scale forecasting program on the market.

It performs automatic forecasting in a batch environment to produce millions of forecasts with unprecedented speed and accuracy. With each forecast individually calculated using statistically optimized parameters, the information you receive is accurate, up-to-date and can adapt quickly to underlying business changes.

In addition, seasonality and sporadic patterns, often problematic analytically, are handled easily, enabling you to better understand how these factors affect business operations. The time series models provided with High-Performance Forecasting are designed to produce forecasts that account for seasonal or cyclical variation. Forecasting packages that cannot model intermittent data may produce forecasts that drift toward zero and cannot predict when the next spike in the data will occur. This makes planning nearly impossible.

SAS High-Performance Forecasting is also the only product that directly processes transactional data as well as data in traditional time series formats.



SAS High-Performance Forecasting provides:

- **Conversion of transactional data.**

Time-stamped data collected from transactional systems, such as the Web, Point-of-Sale systems, ATMs, etc., is transformed into the time series formats necessary for forecasting. Transactional data can be accumulated into any time interval (hourly, daily, weekly, quarterly, annually, etc.) with statistics produced on each interval for added business insight.

- **Trend analysis.** Trend and seasonal analysis is performed on transactional data by computing a variety of statistics for each time period and season created in the data conversion process.

- **By-group processing.** You can produce forecasts in different groupings such as by region, department, product family, customer, etc., allowing the forecasting process to map to the hierarchical nature of many planning processes.

- **Automatic forecasting models.** High-Performance Forecasting automatically selects the forecasting model that best fits the historical data you supply, then generates your forecasts with no human intervention. To fine-tune the automatic forecasting process, you have the option of specifying the criteria used to determine the best model. You can specify which statistic of fit is used in the model selection process

or request that a holdout sample be used when the system determines the best fitting model.

- **Variability measures.** Confidence limits, available with every forecast, indicate the variability of the forecast. These variability measures can add insight to the planning process as they illustrate the range of potential best-case and worst-case scenarios.

- **Exception reporting.** Automatically generated forecasts that fall outside of a desired performance standard can be flagged for additional attention and analyzed further with SAS.

- **Customizable output.** For your forecasted results to help your organization, you have to get them in the right hands quickly. With High-Performance Forecasting, you can share output from the forecasting process across the enterprise or with select business units via a Web browser. Or, simply have the forecasts feed directly into other business systems that require the information.

- **Flexibility and extensibility.** SAS provides a full range of in-depth analytic and forecasting capabilities that work in concert with SAS High-Performance Forecasting to address more specific forecasting, analysis and optimization needs. In addition, you can create automated processes that quickly deliver pertinent information to the relevant people on a regular basis.

SAS High-Performance Forecasting helps you understand, prepare for changes and predict trends that are a normal part of your business — all without requiring you to re-train or increase your staff to process, analyze and update your huge volumes of corporate data. You get the confidence that the forecasts produced are accurate and that you're finally getting the information you can act on.

When you have too many forecasts for your staff to optimally address, let SAS High-Performance Forecasting do it for you — automatically and accurately. By improving the accuracy of the vast number of forecasts you rely on, your entire organization will operate more efficiently. Your bottom-line will reflect it.

The SAS Intelligence Advantage

SAS is the market leader in providing a new generation of business intelligence software and services that create true enterprise intelligence. SAS solutions are used at more than 38,000 sites — including 98 of the top 100 businesses on the Fortune 500 — to develop more profitable relationships with customers and suppliers; to enable better, more accurate and informed decisions; and to drive organizations forward. SAS is the only vendor that completely integrates leading data warehousing, analytics and traditional BI applications to create intelligence from massive amounts of data. For more than 25 years, SAS has been giving customers around the world *The Power to Know*®. Visit us at www.sas.com.



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