



## SAS® Analytics Pro

A powerful and comprehensive analytical toolset  
for analysts, researchers, statisticians, engineers and scientists

### What does SAS® Analytics Pro software do?

SAS Analytics Pro is a powerful, proven toolset that gives users the ability to access data from virtually any source, analyze it and transform it into meaningful, usable information presented in high-impact visuals that allow decision makers to gain a quick understanding of critical issues.

### Why is SAS® Analytics Pro software important?

SAS Analytics Pro combines SAS' three most popular software products: Base SAS, SAS/STAT® and SAS/GRAPH®. It provides all of the functionality needed to access, manipulate, analyze and present information in visual formats. Because it works on the desktop, IT does not have to provide resource-intensive support.

### For whom is SAS® Analytics Pro designed?

SAS Analytics Pro is designed for use by analysts, researchers, statisticians, engineers and scientists who need to explore, examine and present data in an easily understandable way, and distribute their findings in a variety of formats.

Today's organizations, whether in business, government or academics, are overwhelmed with data. The challenge is to access that data, make sense of it and deliver the resulting information quickly and effectively to decision makers so appropriate actions can be taken.

Data sources have gotten so large and varied that the majority of statistical software products just can't handle them. On top of that, increasingly advanced statistical methods are called for, along with analyses that can be verified and documented to meet government compliance standards.

SAS Analytics Pro offers you the best alternative to mixing and matching software packages that can tax your IT resources as well as your patience. SAS Analytics Pro combines SAS' three top-selling products (Base SAS, SAS/STAT and SAS/GRAPH) into one easy-to-install and easy-to-use desktop package.

With SAS Analytics Pro, users have an integrated and scalable software environment for reading and transforming data, information storage and retrieval, statistical analysis, report writing and visualization. In addition, a powerful macro facility reduces application development and maintenance time.

SAS Analytics Pro lets IT organizations streamline and speed up programming, reduce costs and produce the analyses and reports that decision makers need.

### Key benefits

- **Integrate data across environments.** SAS software integrates into any computing environment, enabling you to unify your computing efforts and get a single view of your data. Analysts are freed to focus on analysis rather than data issues.
- **Meet enterprise visualization and reporting needs.** SAS software can handle all of an organization's graphic/data visualization needs, including analytical-style graphs, maps and charts with any style of output that is required. Users can easily create reports in standard office formats such as Rich Text Format (RTF) and Portable Document Format (PDF), and produce output in a variety of markup languages – making them more productive and reducing the load on IT.
- **Satisfy corporate and governmental compliance.** Users can produce repeatable code that can easily be documented and verified for compliance.
- **Benefit from a full range of enterprise analysis, reporting and visualization needs from one vendor.** A consolidated vendor portfolio reduces the costs of licensing, maintenance, training and support, and ensures that consistent information is available across the enterprise.
- **Employ the latest statistical techniques.** SAS statistical procedures are constantly being updated to reflect the latest advances in statistical methodology. Technical support is provided by experienced master's and doctorate level statisticians who deliver a level of service not often found with other software vendors.



## Solution overview

SAS Analytics Pro combines three of SAS' top-selling products (Base SAS, SAS/STAT and SAS/GRAPH). It delivers a complete set of tools in a comprehensive and integrated package. SAS Analytics Pro gives users everything they need to manipulate, manage, store, analyze, visualize and report on data.

### Intuitive fourth-generation programming language

SAS Analytics Pro provides a highly flexible and extensible 4GL with an easy-to-learn syntax. It includes hundreds of language elements and functions that support programming, from data extraction, formatting and cleansing to data analysis, reporting and information storage.

### A rich library of prewritten, ready-to-use integrated procedures

Prewritten SAS procedures handle many common tasks, including data manipulation and management, information storage and retrieval, statistical analysis and report writing. They encapsulate and deliver significant functionality that can be executed with just a few simple commands, enabling programmers to be more efficient and productive.

### The SAS® Macro Facility

Included as part of the SAS language, the SAS Macro Facility lets users extend and customize SAS programs by reducing the amount of coding required for common tasks. With the Macro Facility, users encapsulate small or large amounts of text into units with names and then work with the names rather than the longer text. Development staff can modularize their work for easy reuse and maintenance.

### Cross-platform and multiple platform support

With SAS MultiVendor Architecture™ (MVA), SAS Analytics Pro runs on all major computing platforms, can access virtually any data source and easily integrates into any organization's computing environment. SAS code developed on one platform runs easily on others.

### SAS® Output Delivery System (ODS)

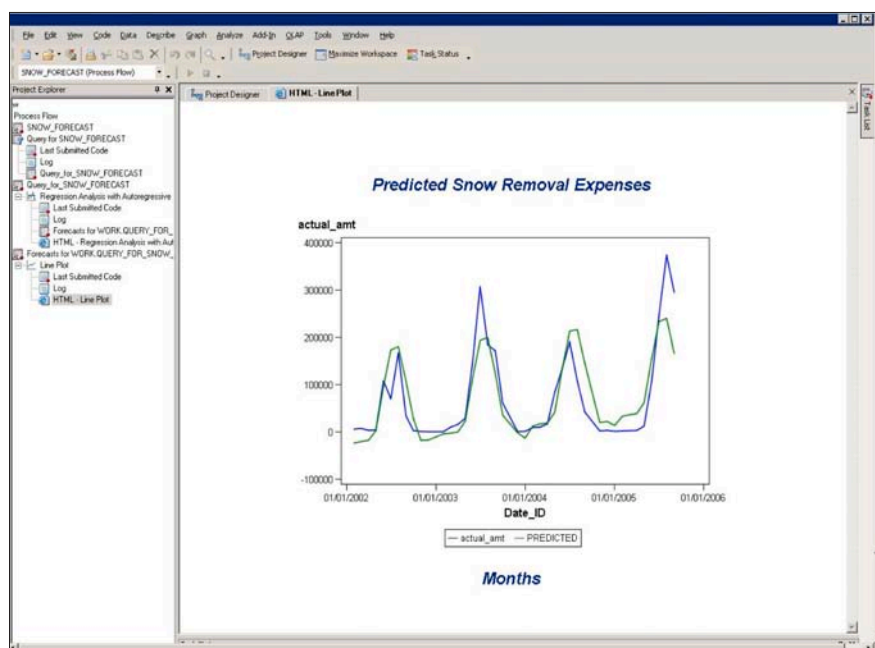
SAS ODS for data capture, report formatting and information delivery provides an almost limitless number of choices for reporting and displaying analytical results with a wide variety of output formats and destinations. While providing an array of options for customizing the output, ODS takes care of arranging the output in the form most appropriate for the chosen format. Programmers can create and deliver accurate and visually appealing reports in less time with reduced programming effort.

### Analysis of variance

Analysis of variance is a technique for analyzing experimental data. With SAS Analytics Pro, users can perform analysis of variance for balanced or unbalanced designs, multivariate analysis of variance and repeated measurements analysis of variance. Users can also fit general linear models and mixed models for a variety of data situations.

### Regression

Regression analysis examines the relationship between a response variable and a set of explanatory variables. SAS Analytics Pro's general regression procedure uses least squares to estimate parameters, includes nine different model selection methods and produces a variety of diagnostic measures. More specialized procedures fit generalized linear models, mixed linear models, nonlinear models and quadratic response surface models.



Visual display in SAS® Analytics Pro

## Categorical data analysis

In categorical data, the outcome of interest reflects categories with data often presented in tabular form, known as contingency tables. With SAS Analytics Pro, users can investigate the association in a contingency table as well as produce measures that indicate the strength of that relationship. Users can also use parametric models to investigate the variation of a function of the outcome variable across the various levels.

## Multivariate analysis

Multivariate analyses encompass a variety of methods for modeling data with two or more response variables or for identifying relationships among several variables without designating particular variables as response or explanatory variables. Common factor analysis can be used to explain the correlations among a set of variables in terms of a limited number of unobservable, or latent, variables. Principal component analysis summarizes a large number of variables with a small number of linear combinations.

## Cluster analysis

Cluster analysis places observations into groups based on similarity. SAS Analytics Pro performs hierarchical clustering of multivariate data or distance data with graphical tree diagrams, disjoint clustering of large data sets, and nonparametric clustering with hypothesis tests for the number of clusters.

## Survey data analysis

Researchers often use sample survey methodology to obtain information about a large population by selecting and measuring a sample from that population. SAS Analytics Pro provides tools for selecting probability-based random samples from a study population and analyzing the sample survey data. Procedures for computing summary

## Key Features

### General

- Powerful 4GL with easy-to-learn syntax.
- Ability to read data in virtually any format, from virtually any kind of file.
- Support for SQL.
- Robust macro language reduces coding for common tasks.
- Runs interactively or in batch mode.

### Data analysis

- Examine data for relationships using a broad range of statistical methods, including:
  - Analysis of variance.
  - Regression.
  - Categorical data analysis.
  - Multivariate analysis.
  - Survival analysis.
  - Psychometric analysis.
  - Cluster analysis.
  - Nonparametric analysis.
  - Survey data analysis.
  - Compare data against common distributions.
  - Imputation for missing values.
  - Study planning.
- Add drill-down capabilities, even to GIF images, so users can visually explore analyses.

### Data visualization, presentation and delivery

- Built-in map data sets (down to level of US states and counties).
- Broad range of charts and plots:
  - Scatter, line, area, bubble, multiple axis and overlay.
  - Bar, pie, donut, star and block.
  - Customized colors, line styles and symbols.
  - 2-D and 3-D plots with tilting and rotation.
- Generate static or dynamic interactive (Java or ActiveX) charts and graphs with drill-down capabilities.
- Link graphs to Web pages.
- Embed interactive graphics in Web pages or Microsoft Office documents.
- Support for virtually all common printers and plotters.

statistics, analyzing contingency tables and building linear and logistic regression models enable users to incorporate the sample design into analysis.

## Creating high-impact visuals

SAS Analytics Pro enables users across the enterprise to visually present their ideas and findings using a huge variety of business maps, charts, plots and 3-D relationship graphs. Prism, choropleth, block and surface maps can be created in many colors and patterns, and extensive map data sets are included.

## Presenting data visualizations

Visual components can be created, customized, easily stored in catalogs, retrieved as needed and combined with other graphics and information. Create both static and interactive visuals, even freeform designs, and output them on hundreds of different devices. The software also supports the batch processing of high-volume graphics. Results can be delivered across the enterprise via printed reports, e-mail or the Web, or embedded in other applications.

## SAS® Analytics Pro Technical Requirements

**Included software:** Base SAS®  
SAS/STAT® and SAS/GRAPH®

**Note:** For PC/desktop users there is a built-in, easy-to-use guided interface (SAS® Enterprise Guide®) so there is no need to learn the 4GL. If implemented in a server environment, this interface can easily be added to the offering.

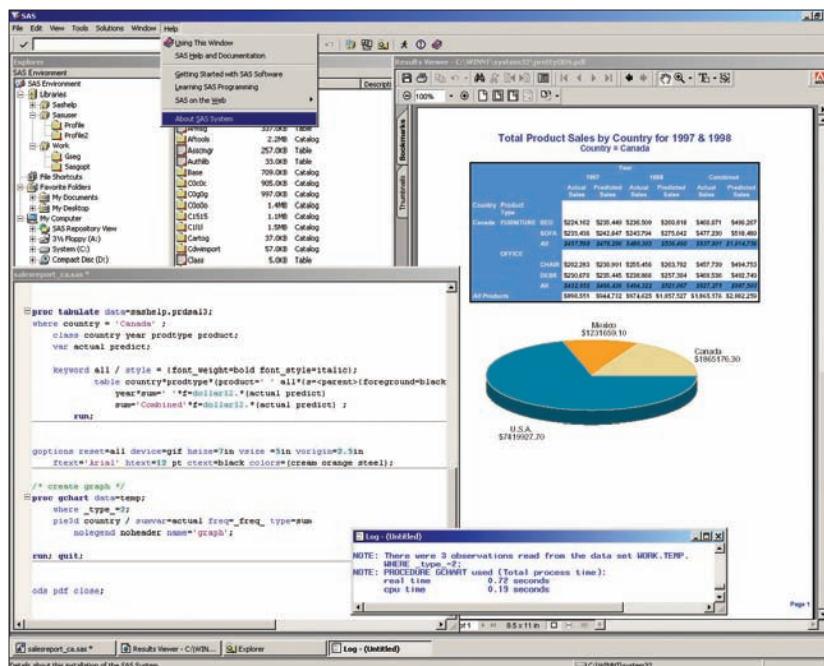
### Client environment

- Microsoft Windows (x86-32):  
Windows 2000 Professional,  
Windows Vista\*

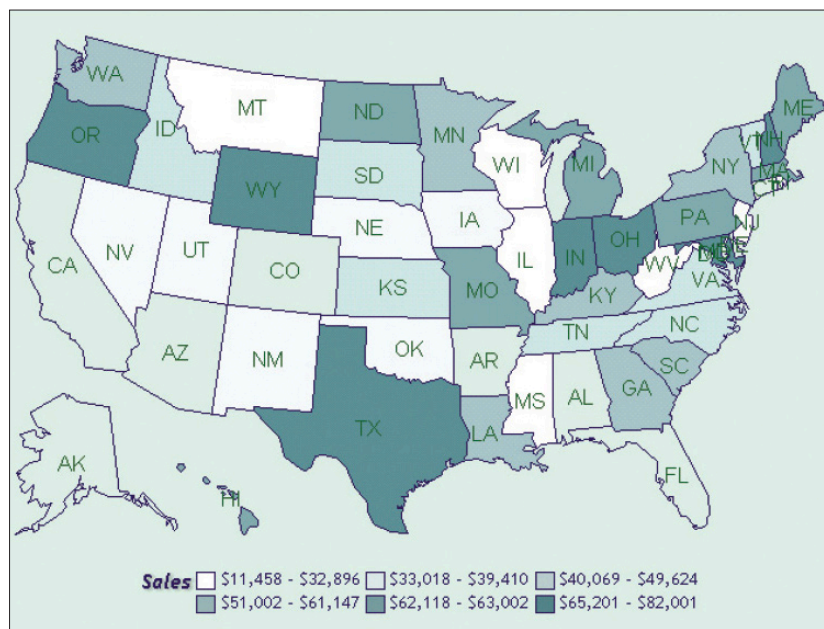
### Server environment

- AIX: Release 5.3 and 6.1 on POWER architectures
- HP-UX PA-RISC: HP-UX 11iv2 (11.23), 11iv3 (11.31)
- HP-UX Itanium: HP-UX 11iv2 (11.23), 11iv3 (11.31)
- Linux for x86 (x86-32): RHEL 4 and 5, SuSE SLES 9 and 10
- Linux for x64 (EM64T/AMD64): RHEL 4 and 5, SuSE SLES 9 and 10
- Microsoft Windows (x86-32): Windows XP Professional, Windows Server 2003, Windows Vista\*
- Microsoft Windows on x64 (EM64T/AMD64): Windows XP Professional for x64, Windows Vista\* for x64, Windows Server 2003 for x64
- Solaris on SPARC: Version 9 and 10
- Solaris on x64: Version 10
- OpenVMS for HP Integrity Servers (Itanium): 8.3
- z/OS: V1R7, V1R8, V1R9 and higher

**NOTE:** Windows Vista editions that are supported include Enterprise, Business and Ultimate.



SAS® Analytics Pro provides advanced data analysis, graphics and reporting all in one bundle.



SAS® Analytics Pro includes built-in mapping capabilities.



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POWER  
TO  
KNOW.

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