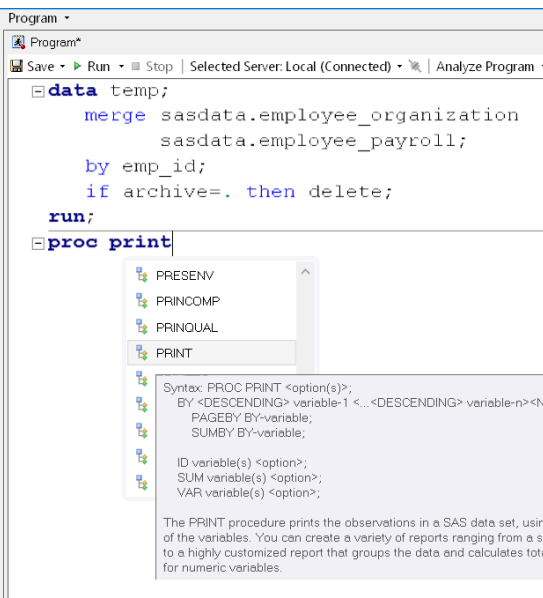# SAS® Enterprise Guide®

Delivering the power of SAS® Analytics and reporting from an easy-to-use, point-and-click Windows interface

What does SAS® Enterprise Guide® do?

SAS Enterprise Guide is a point-and-click, menu- and wizard-driven tool that empowers users to analyze data and publish their results. It provides fast-track learning for quick data investigations, generating the code for greater productivity, accelerating deployment of analyses and forecasts.

Why is SAS® Enterprise Guide® important?

It saves time and money, building upon pre-existing SAS investments. With SAS Enterprise Guide, coders can use programs they already have to quickly create stored processes that can be run on demand by management and ported to Microsoft Excel.

For whom is SAS® Enterprise Guide® designed?

With the efficiencies gained from a workflow environment, SAS Enterprise Guide is suited for statisticians, programmers and analysts – even those with little expertise using SAS.

With the demand for timely analytics insights, IT is under constant pressure to support advanced user needs and meet organizational expectations with a comprehensive application.

Analysts need a simple mechanism for presenting and sharing everything from standardized reports to advanced analytics results that enable their management to make better decisions. Providing this functionality can prove difficult if the majority of analysts are not experienced programmers, and yet they still need self-sufficient software for quick access to data and analytical capabilities.

SAS Enterprise Guide, a powerful Windows client application, meets all of these needs. It provides a point-and-click interface to the power of SAS. Interactive dialog boxes guide users through analytical and reporting tasks that range from simple to complex.

SAS Enterprise Guide also provides transparent access to SAS and external data, with the ability to export results to other Windows and server-based applications – making it easy for management to consume SAS in a familiar environment.

Reports created with SAS Enterprise Guide can be distributed on a periodic basis to targeted groups of users within the organization, enabling the latest data-driven insights to reach those who need it to make the right decisions.

Benefits

- **Liberates IT by providing analysts and statisticians with a self-service environment for workflow-based projects**. SAS Enterprise Guide integrates an extensive array of analytics with the power of SAS in an efficient, friendly user interface. Business analysts can produce analyses and distribute reports, freeing IT from ad hoc requests from all parts of the organization.

- **Provides centralized, IT-managed role-based security**. A centralized system for managing access to enterprise data ensures that users have the appropriate access privileges – governing data distribution and empowering individuals to react quickly to changing business conditions.

- **Enables self-sufficient and easy access to enterprise data sources for business analysts, programmers and statisticians**. Our solution guides users so they can quickly access data for analysis, schedule projects, share results and embed output easily for repeated use – including access to SAS advanced analytics and data management capabilities.

- **Makes reporting and analytics available to the masses with flexible distribution mechanisms that adapt to changing needs**. The ability to develop and deploy customized tasks lets users extend the product's core functionality to create easily distributed custom wizards. Results can be delivered through an established publishing framework with the ability to publish dynamic, interactive content to Microsoft Office and web users.

Product Overview

SAS Enterprise Guide is a powerful Windows .NET client application with an easy-to-use graphical user interface designed to enable self-sufficient and guided access to the analytical power of SAS software.

Business analysts, programmers and statisticians can leverage the power of SAS across a diversity of platforms. Accessing 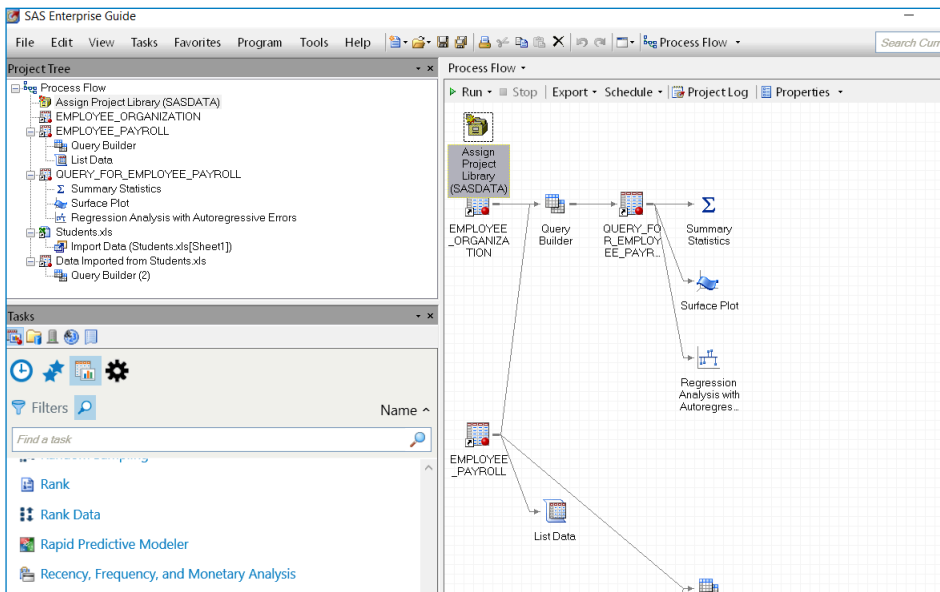data quickly, manipulating it, performing basic reporting and building basic and complex analyses, they can easily distribute their results to targeted groups.

Guided analysis and reporting

SAS Enterprise Guide provides a graphical user interface that allows access to SAS data integration, preparation, analytics and reporting. A process flow diagram facility lets users visually organize and maintain their projects.

The software delivers many out-of-the-box analytical tasks, including forecasting, correlations and predictive models. Results from analyses can then be shared seamlessly with decision makers. More than 100 prebuilt tasks are provided, making specific capabilities easily accessible. For both beginners and those unfamiliar with SAS programming, SAS code is generated automatically, as the user interacts with the workflow interface.
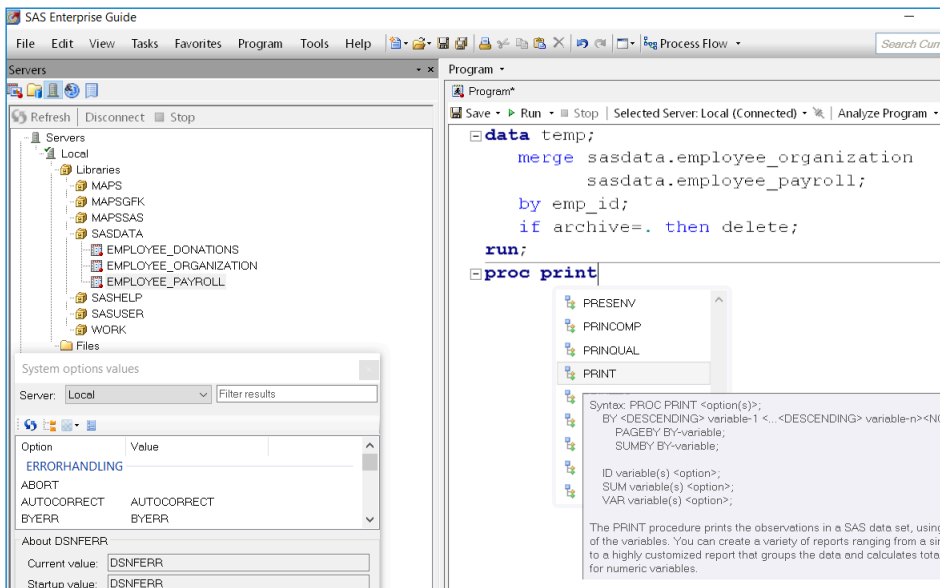
To improve collaboration, more advanced users can build new tasks from those included within SAS Enterprise Guide and share those with less sophisticated users - providing step-by-step instructions for more complex business investigations. These customized tasks extend the product's core functionality, and can be shared from the web or Microsoft Office products.

Data access and management

With SAS Enterprise Guide, users can visually access any data type supported by SAS, as well as native Windows data types. A powerful, graphical query builder lets users create, update, subset and join tables without involving IT specialists. SAS Enterprise Guide users can easily manipulate data visually – without writing one line of SQL code. Query code, generated automatically behind the scenes, can be viewed and validated for query syntax validity. Guided tasks also are provided for organizing information and transposing, ranking, normalizing and subsetting almost any enterprise data source.

Process flows help users visually organize and maintain their projects.

Pop-up tips and an autocomplete feature make programming faster and easier.

Result distribution and sharing

Result distribution and sharing is managed centrally by the IT department. SAS Enterprise Guide is integrated with the Microsoft Windows Scheduler, enabling those who need reports refreshed regularly to schedule the automated execution of the code required to generate the report at regular intervals. Planning task execution and publishing results to multiple channels, including shared report folders and portals, reduces the time it takes to deliver information across an organization.

Key Features

Graphical user interface

- Intuitive, flexible wizards provide access to SAS capabilities from reporting to complex analyses.
- A log is generated with information about processing, including notes, warnings and errors.
- Results can be delivered in HTML, RTF, PDF, SAS reports and text formats. Most results also can be output as SAS data sets for further analysis with other tasks. SAS report formats can be shared with SAS Add-In for Microsoft Office.
- Graphs can be created as ActiveX (dynamic or image), Java Applets (dynamic or image), GIFs or JPEGs. ActiveX and Java Applets permit direct interaction with the graph objects without resubmitting requests to the server.
- An intuitive process flow diagram facility lets you visually organize and maintain your projects.
- Custom tasks enable you to easily extend the range of business problems that can be solved.
- The Data Explorer tool lets you create custom views of data, quickly calculate basic charts and statistics for each column in a SAS data set, and add a data exploration view to your project.

Reporting, graphical and analytical tasks

- Descriptive reports and analyses include basic listings, summary statistics tables, one-way frequencies tables, correlations tables and graphs, and tabular or graphical distribution analysis.
- Graphs include area charts, bar charts, box plots, bubble plots, donut charts, line plots, maps, pie charts, radar charts, scatter plots, surface plots and contour plots.
- Analysis of Variance (ANOVA) predictive models: t test, one-way ANOVA, nonparametric one-way ANOVA, linear models and mixed linear models.
- Regression models: linear, logistic, nonlinear and generalized linear models.
- Multivariate relationship models: cluster analysis, factor analysis, principal components, canonical correlation and discriminant function analysis.
- Survival analysis: life table and proportional hazards.
- Capability analysis: CDF plots, histograms, P-P plots, probability plots and Q-Q plots.
- Control charts: mean and range, mean and standard deviation, individual measurements, box, p, np, u and c charts.
- Pareto charts.
- Forecasting: data transformation, basic forecasting, ARIMA modeling and forecasting, regression analysis with autoregressive errors and regression analysis of panel data.
- Table analysis.
- Operations research: numerical optimization, algebraic modeling language, project and resource scheduling, genetic algorithms and constraint programming.
- Integration with SAS Rapid Predictive Modeler lets business analysts and subject-matter experts quickly create predictive models and step through a workflow of data preparation tasks.

Data access and management

- Visually access any data type supported by SAS. Accessible local file types include: Microsoft Word documents (embeddable in project files to help document your project work), Excel, HTML, Access, TXT files (fixed width), TAB delimited files and CSV files (comma delimited).
- Allows easy access of data (local and remote) for use in other SAS products or JMP®.

Key Features (continued)

- Powerful, graphical query builder allows users to visually access and manipulate their data without SQL expertise:
  - Save settings for reuse with query templates.
  - Use subqueries to include results from one query as input to another query.
  - Graphically or programmatically subset data to reduce the results to manageable sizes and identify the data you need.
  - Parameterize data to interactively filter information.
  - Organize information for easy viewing with a Select and Sort interface. Format existing variables and create new calculated variables.
  - Visually build calculated variables from a comprehensive list of SAS functions.
  - Preview generated query code, check the query syntax validity or copy the code for reuse in other applications.
- Use the program editor with autocomplete and integrated syntax for faster programming.
- Transpose data from long, narrow data to wide, short data, etc.
- Rank data in multiple ways: absolute, percentile, decile, quartiles, fractional, normal and Savage.
- Perform data subsets using a variety of basic and statistical methods.

Result distribution and sharing
- Distribute results by publishing to multiple channels, including the SAS BI report/content repository, the SAS Stored Process Server, printers, Microsoft Office documents and email.
- Share results in the form of SAS Stored Processes for use in other applications.
- Export results to other applications such as Adobe Acrobat and Microsoft Excel, Access, Outlook, Word and SharePoint.
- Update analyses and results on a periodic basis using the native Windows scheduler.

Administration and security
- Can be deployed with SAS Grid Manager to provide automated management of the computing grid with dynamic load balancing, resource assignment and job prioritization.
- Can be deployed via MSI-based installer or application streaming.

High-performance computing, grid enablement
- Automatically detects if a grid environment is available for more efficient processing.
- Lets you configure process flow branches to run in parallel on different grid nodes.
- Analyzes SAS programs to optimize performance of code in the grid environment.
- Enables parallel execution of tasks on the same server.
- Enables you to run tasks at the project level or individual task level in a SAS grid environment.

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