

SAS® Enterprise Guide® for SAS Programmers

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NOTE: This is a summary of the presentation given at SUGI 31. This is not a SUGI Paper but a summary of a "SAS Presents" presentation.

SAS Enterprise Guide for SAS Programmers

About SAS Enterprise Guide

- The “Swiss Army Knife” of SAS
 - Harnesses many of the traditional strengths of SAS in a friendly yet powerful interface that add some new tricks to the SAS experts capabilities
- Target audiences
 - Statisticians
 - SAS Programmers
 - Business Analysts
 - Report Developers

Enterprise Guide Flexibility

- SAS programming environment to work seamlessly across many servers
- Organize your data, code, output, and notes around subject areas
- Guided wizards for data access, reporting, and analytics
- Advanced OLAP analysis
- Drag and drop reporting
- Intelligence creation and authoring to the SAS Business Intelligence Server

The Benefits of Enterprise Guide

- Effectively create and maintain your analyses and reports
- Greater visibility for your work
- Less repetitive work and more strategic work
- The new up to date preferred interface to SAS
- Greater return on your SAS investment and expertise.

Enterprise Guide Status

- 4,000+ sites worldwide
 - This count does not include sites using via PC SAS license
- Current Production Release is 4.1
 - Successor to Enterprise Guide 3.0.2
 - Delivery in 2006MAR
 - Dependent on SAS Service Pack 4 for certain new features, such as:
 - Reporting
 - Information Map access via IMLE

Enterprise Guide Status

- Works transparently with PC SAS or SAS Servers on any platform
- Bundled with PC SAS starting with SAS 9.1

Enterprise Guide Requirements

- Client
 - Internet Explorer 5.5 or higher
 - Embedded and used for HTML output viewing
 - Operating System
 - Windows 2000 or later
- Server (minimum requirements)
 - If the “server” is the local PC, BASE SAS
 - Otherwise (remote)
 - BASE SAS (8.2 or later)
 - SAS Integration Technologies -OR-
Local PC SAS with CONNECT and CONNECT on the remote SAS server

Enterprise Guide 4.1

Key Enhancements for SAS Programmers

- Many enhancements for SAS Programmers in this release!
- Improve export code interface- include hierarchies of PF's and individual data flows
- Show consolidated SAS log for all user written and EG generated SAS code in a project
- Enhanced local scheduling- especially save/e-mail/export/publish
- Parameterize stored process variable role assignments
- Represent Save As/Send To as tasks in process flow
- Define libname wizard
- Allow user-defined associations and dependencies within process flow
- Integration of SAS Reporting capabilities for SAS programs
 - Ability to place output objects side by side
 - Format text, delete sections, other formatting operations
 - Preserve interactive graph changes after rerunning
 - Preserve formatting and allow refresh of results
 - Publish results to Report Repository for use by Web Report Studio users
- Project Parameters
 - Centralized management of user macro variables (integrated for use with tasks and SAS programs)
 - Your project parameters flow through automatically to your stored process authoring
- Addition of enhanced editor during stored process authoring wizard
- For longer running code, you can watch the log scroll by before the submitted code is complete, just like DMS

Usage

- Projects
 - The place to organize your programs, logs, output, datasets used/created, notes, and Word documents for your project
 - User defined dependencies to manually control program submission/order
- Local SAS
 - Automatically available if installed on same PC as Enterprise Guide
- Server Based SAS
 - Requires Integration Technologies -OR-
 - Local PC SAS with CONNECT and CONNECT on the remote SAS server

■ Administration

- The Enterprise Guide Repository- last release to support this is 4.1
- SAS Metadata Repository Integration- since 3.0!
- Security- Centrally controlled and respected
- Data Access- metadata based, autoexec.sas or config.sas, and your session assigned libnames
- Binders- only available with EG Repository
- Server Based File Access- transparent via EG
- SAS Workspace Servers
- SAS Stored Process Servers

Enterprise Guide Interaction with SAS Application Servers

- **SAS Metadata Server**
 - Read and write metadata for repository objects such as stored processes.
 - Read metadata for objects such as libraries, tables, IT channels, and SAS Workspace and SAS Stored Process servers defined via SAS Management Console.

- **SAS Workspace Server**
 - Access resources such as tables, views, databases via SAS ACCESS®.
 - Execute SAS code, EG tasks, and queries.
 - Move and copy library members and files between different SAS Workspace Servers.
 - Perform a variety of maintenance tasks
 - Renaming and deleting files and folders
 - Copying server and PC SAS files, SAS datasets, even database tables to files, libraries, or databases

- **SAS Stored Process Server**
 - Author stored processes via an intuitive and powerful wizard interface
 - Update stored processes
 - Execute stored processes and present results.

- **SAS OLAP Server**
 - Access cube data and process MDX queries.
 - Primarily used via EG's OLAP Analyzer interface

- **Other Servers**
 - Microsoft Analysis Services (OLAP)
 - SAP BW (OLAP)

Enterprise Guide Data Access

■ Data Access

- PC File import facility (BASE SAS only required)
- Locally Accessible Data Sources- ODBC, OLE DB, Exchange Server
- SAS Data
- Server Based SAS ACCESS engines
- SAS Scalable Performance Data Server (SPDS)
- SAS OLAP Server
- Data Migration and Transparency
- Data Location and Code Execution Location

Tasks and Code from Enterprise Guide

- SAS Tasks and Wizards
 - Overview of Tasks and Wizards
 - How They Work
 - Preview Code and Inserting Custom SAS Code In a Task
 - A Review of Major Task Areas
 - Exporting Code
 - Tasks Limitations
 - Tasks make their selections and options available during stored process authoring
 - Use project parameters to control variable role assignment at run time
- The Code Editor
 - SAS Enhanced Editor
 - Same editor as used in traditional DMS
 - Usage
 - SAS programs can be saved embedded in the project or as separate files anywhere on your file system
 - Options and Settings
 - Many options to control appearance and behavior of the editor
 - Limitations Relative to DMS
 - EG does not support SAS AF®, FSP, Insight, or SCL
 - EG replaces this functionality with custom tasks written in VB.NET or C#
 - Consolidated SAS log across all sessions/nodes

Output and Intelligence Distribution With Enterprise Guide

- **Output Management**
 - Output Types- quickly and easily switch between/among text, HTML, PDF, RTF, and SAS Report Object Model (ROM)
 - Easily switch among styles used
 - Styles & Style Editor
 - Quickly and easily create custom CSS styles for HTML and SAS ROM controlling almost every table and title/footnote element
 - Report control capabilities
 - Static snapshots
 - Dynamic reports combining many outputs
 - Refresh results while preserving interactive formatting
- **Distribution of your Work and Results**
 - Stored Process Authoring
 - Publish from a node or a flow
 - The Document Builder
 - Portal/LDAP Publishing
 - Scheduling
 - E-mail
 - SAS/IntrNet®
 - Report Repository for Web Viewing and Refresh
 - Easily export code individually or as a flow

Future Improvements for SAS Programmers

- Some of the new features planned for the next release of Enterprise Guide (post 9.2)
 - Conditional logic node for EG Process Flow
 - New version of the enhanced editor with top two SASWare Ballot® items addressed, also Unicode support
 - Automatic color coding of parentheses to easily find missing parenthesis
 - Automatic highlighting of MACRO usage in editor
 - New PROC REPORT based wizard