Paper BB-111

Taking Advantage of SAS® Stored Processes to Share SAS® Results in a SAS® Office Analytics Environment

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ABSTRACT

Once a SAS Office Analytics deployment is complete, traditional SAS coders often have the following questions about the benefits of changing the way they work. They wonder what the value is in moving from traditional SAS coding to leveraging SAS Enterprise Guide. This paper intends to demonstrate the value in using SAS Enterprise Guide to create SAS Stored Processes with prompts and how to make them available to information consumers via SAS Add-in for Microsoft Office and the SAS Stored Process Web Application.

INTRODUCTION

This paper intends to address the methods for taking advantage of a SAS Office Analytics Environment to automate the execution and results distribution of SAS programs. This paper is appropriate regardless of your SAS experience and is written for users that are just getting started in leveraging a SAS Office Analytics Environment.

SAS OFFICE ANALYTICS

To set the stage, let's discuss what a typical SAS Office Analytics environment looks like. Although every SAS environment is unique in some way, a typical SAS Office Analytics Environment is comprised of SAS server software and SAS client desktop software.

SAS Server Software (where the SAS processing happens)

- SAS/Base
- SAS/Graph
- SAS/Stat
- SAS/Access Interface to <your choice>
- SAS Integration Technologies
- SAS Web Application Server & SAS Web Server
- More SAS products can be added upon customer request.

SAS Client Desktop Software (where the SAS development and/or processing requests happen)

- SAS Enterprise Guide
- SAS Add-In for Microsoft Office
- SAS Management Console
- Thin Client Web Applications from Web Browser
    - SAS Stored Process Web Application
    - SAS Studio
    - SAS Environment Manager

SAS STORED PROCESSES

SAS programmers that are first exposed to SAS Stored Processes are unsure of exactly what they are dealing with. In reality, a SAS stored process is just a SAS program that has been registered in the SAS Metadata. Since they are registered in the SAS Metadata, they can be leveraged from other SAS applications such as the SAS Add-in for Microsoft Office or from a web browser using the SAS Stored Process Web Application.

Once you have defined a SAS Stored Process, it will show up in the SAS Metadata folders with the  icon next to the SAS Stored Process name.

There are two distinct methods for creating a SAS Stored Process which we will discuss in this paper. These are the SAS Enterprise Guide Method and the SAS Management Console method.

SAS ENTERPRISE GUIDE METHOD

This is the preferred method as SAS Enterprise Guide has additional features and functionality around creating stored processes such as:

- SAS Prompt Manager
- including SAS Enterprise Guide Tasks in your process

Steps for Creating a Stored Process

Right click in your SAS EG Project and choose “Create a Stored Process” and navigate through the following 7 screens.

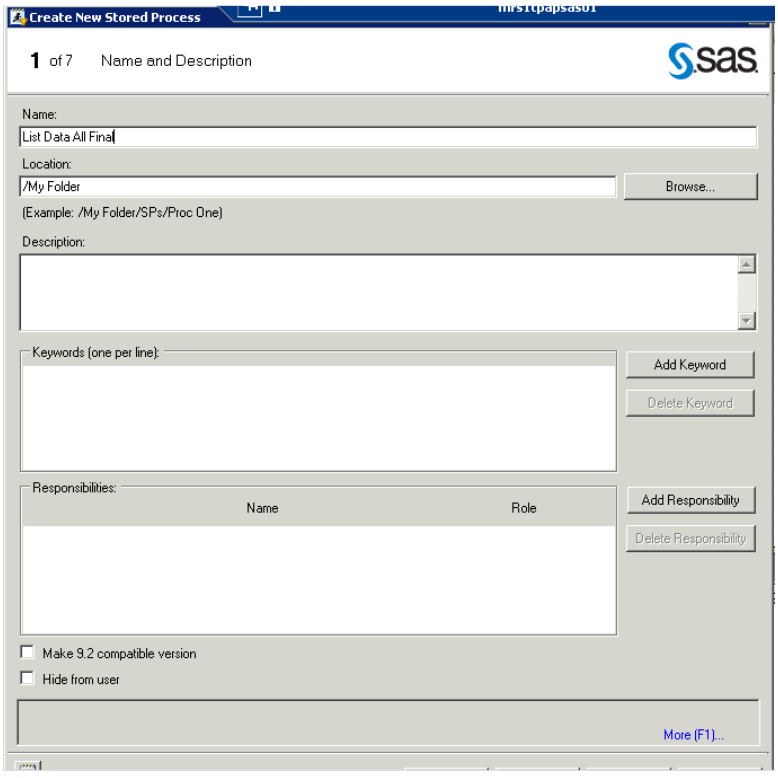
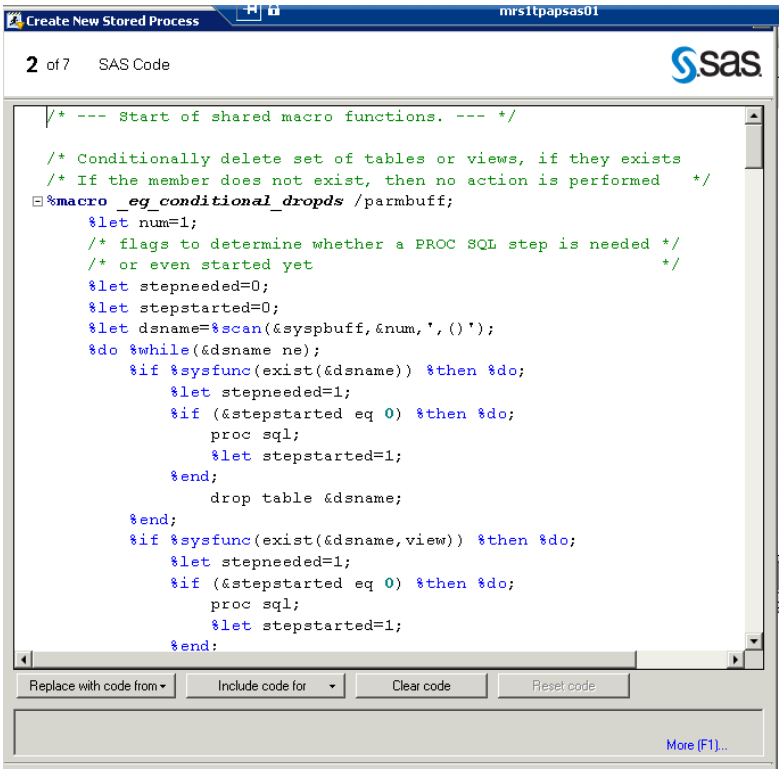
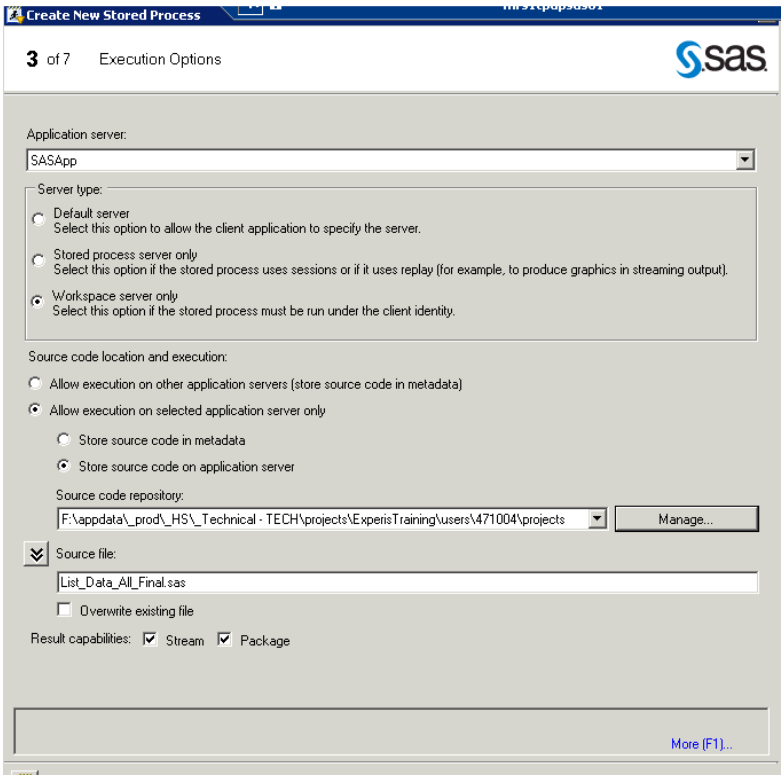


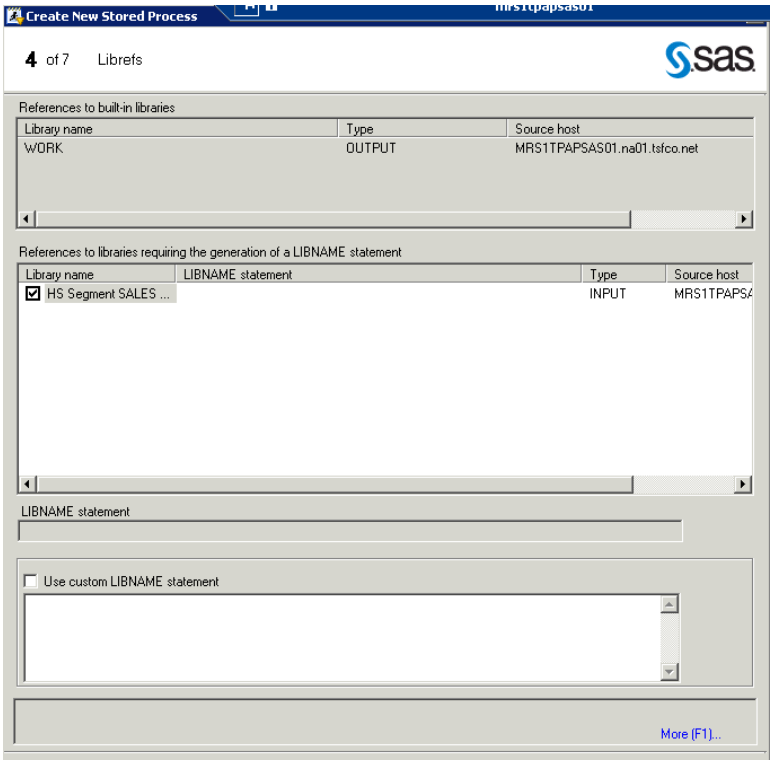
Figure 1: Creating a SAS Stored Process: Screen 1 of 7, Name and Description



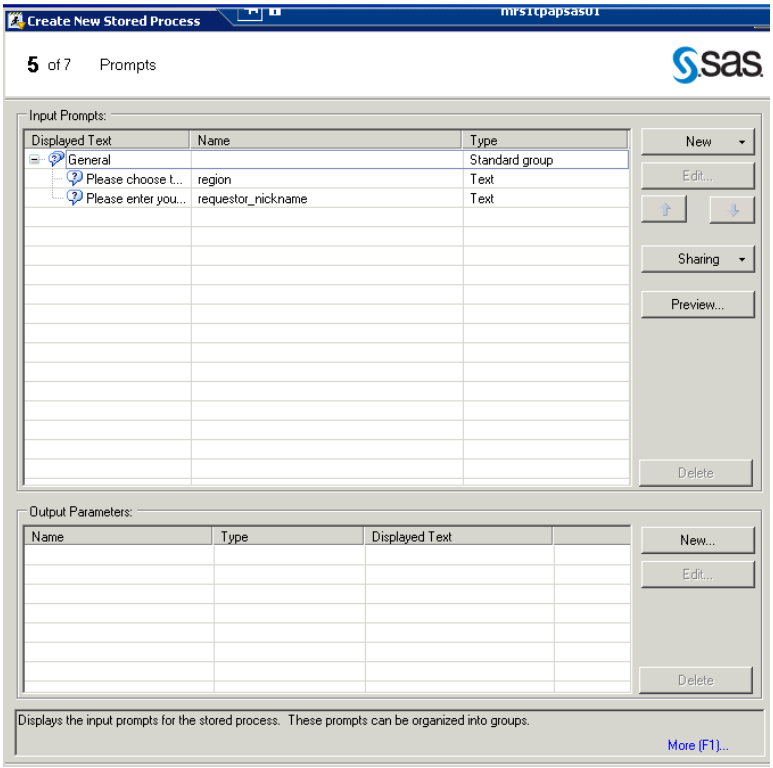
Creating a SAS Stored Process: Screen 2 of 7, SAS Code



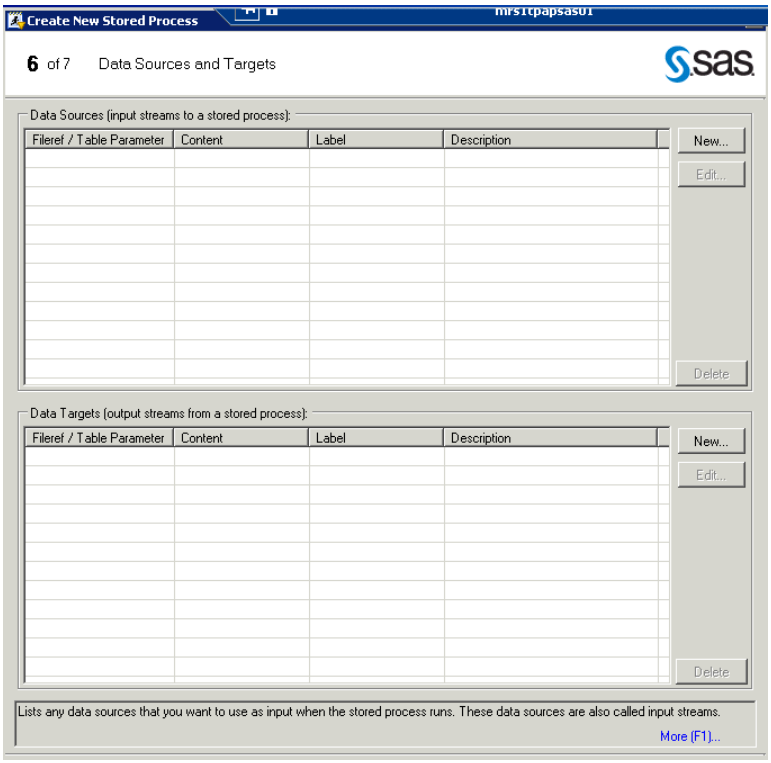
Creating a SAS Stored Process: Screen 3 of 7, Execution Options



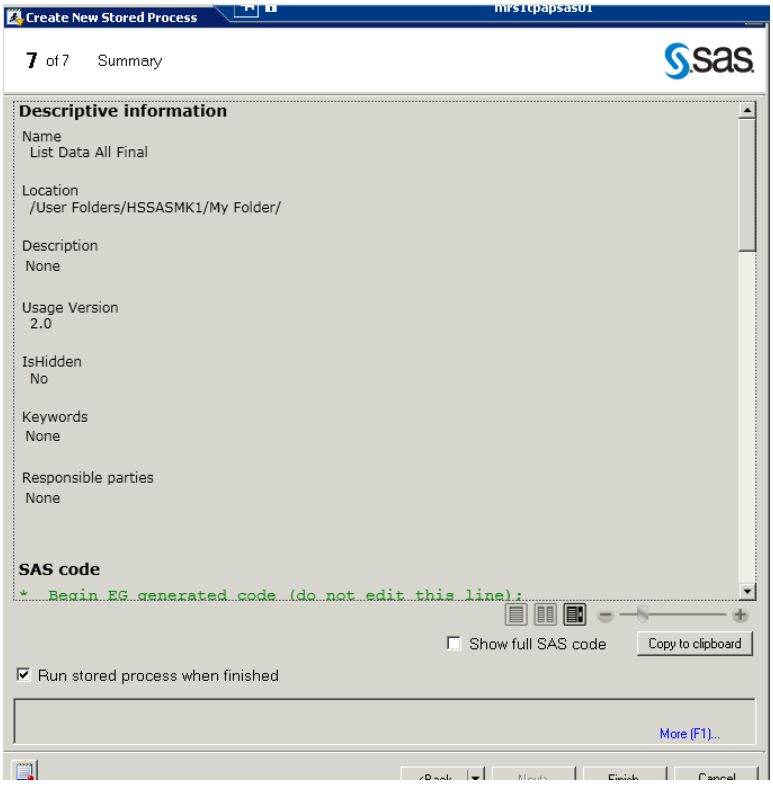
Creating a SAS Stored Process: Screen 4 of 7, Librefs



Creating a SAS Stored Process: Screen 5 of 7, Prompts



Creating a SAS Stored Process: Screen 6 of 7, Data Sources and Targets



Creating a SAS Stored Process: Screen 7 of 7, Summary

SAS MANAGEMENT CONSOLE METHOD

This is a method for registering a SAS program as a SAS Stored Process directly in the SAS Management Console. All you have to do is right click on a metadata folder and choose “New” > “Stored Process”. Then follow the screens as outlined in the previous section pertaining to the “SAS Enterprise Guide Method”.

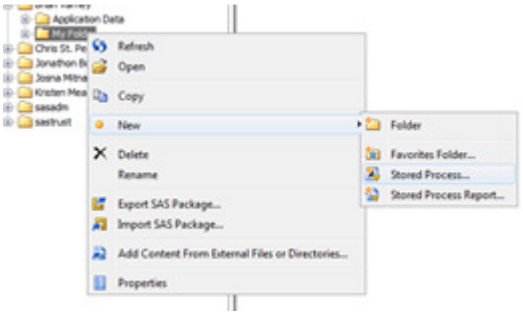


Figure 8: Creating a Stored Process from the SAS Management Console

PROMPTS

Prompts are very handy and will most likely be involved when automating a process using a SAS Stored Process. As you saw in “Screen 5 of 7” above, you can define your prompts during the creation of the stored process. Or if your SAS Enterprise Guide project already takes advantage of prompts, they will be included when you use SAS Enterprise Guide to create your SAS Stored Process.

There are many different types of prompts that you can create when defining a SAS Stored Process.

- Text & Text Range
- Numeric & Numeric Range
- Date & Date Range
- Time & Time Range
- Time Stamp & Time Stamp Range
- Color
- Data Source
- Data Source Item
- File or Directory
- OLAP Member
- Data Library

Prompts are displayed in a graphical user interface window and the values chosen or entered are turned into SAS Macro variables that can be taken advantage of within the SAS code portion of a SAS Stored Process. Prompts can also be leveraged from SAS Enterprise Guide Tasks.

Prompts are defined with attributes that minimize the risk of a user entering or choosing invalid values.

CONCLUSION

If your users are just using your SAS Office Analytics environment submit code to the SAS server, you are missing out on some valuable functionality. The ability to give the ability to your users to run SAS processes on demand with graphical prompts is something you will not want to deprive your developers and consumers of.

REFERENCES

SAS Office Analytics Products Page
http://support.sas.com/software/products/oa/index.html

CONTACT INFORMATION

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