Message Prompt Task

A custom task for SAS Enterprise Guide

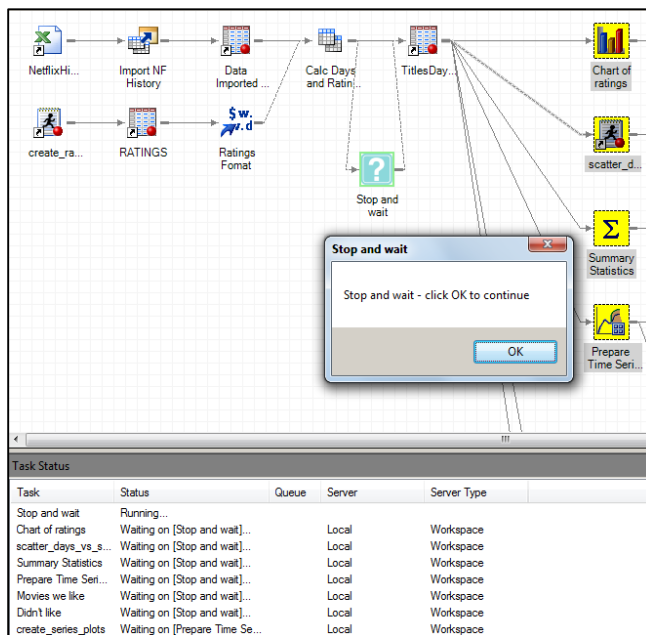**Support:** Chris Hemedinger, Global Services Factory, SAS Professional Services
Revised: 19-August-2013

About this Task

In SAS Enterprise Guide, the project prompts that you define in the built-in Prompt Manager are displayed and answered *before* the process flow begins to run.

This custom task allows you to add an interactive message or prompt step to a SAS Enterprise Guide process flow. Unlike a traditional project prompt, this task does not run or display a prompt message until the process flow "run time" reaches the point of the Message Prompt task.

Here is an example of the Message Prompt task in action. SAS Enterprise Guide displays a message as defined in the task, and the process flow stops running until the message is dismissed.

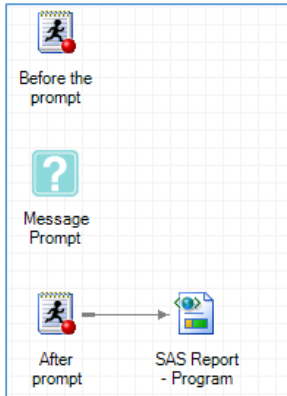The Message Prompt task supports 4 styles of prompts:

- Information message prompt. Displays the text you define, and then continues when the user clicks OK.
- Yes/No question prompt. Displays the text of a question you define and provides Yes/No answer buttons. The response value (YES or NO) is stored in a macro variable named **&_MESSAGE_RESULT**.
- Text question prompt. Displays the text of a question you define and provides a text field for the user to enter a response. The response is stored in a macro variable named **&_PROMPT_VALUE**.
- Password question prompt. Displays the text of a question you define and provides a password-style text field for the user to enter a response. The response is stored in a macro variable named **&_PASSWORD_VALUE**.

How to Use this Task Effectively
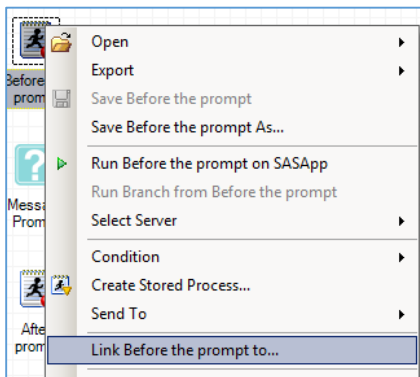
Defining Dependencies (or "Run Order")

In order for the task to run and "interrupt" your process flow at precisely the right moment, you must create user-defined links in the flow. These links will establish proper dependencies that ensure that the task runs (and the prompt is displayed) **after** any prerequisite tasks but **before** any tasks that need to wait until after the prompt is addressed.

For example, suppose you defined this simple process flow with two programs, plus the Message Prompt task:
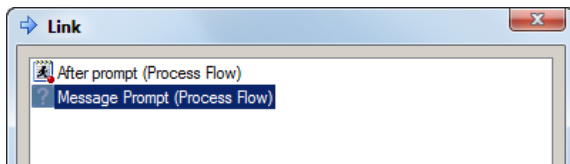

To ensure the prompt displays after the first program runs but before the second program runs, you must add two links: one link from the first program to the prompt task, and then another link from the prompt task to the second program.
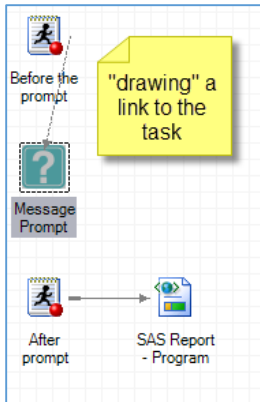
To add a link, right-click on the first program node and select **Link to…** from the popup menu:

In the Link window, select the Message Prompt task as the "end point" of the link:
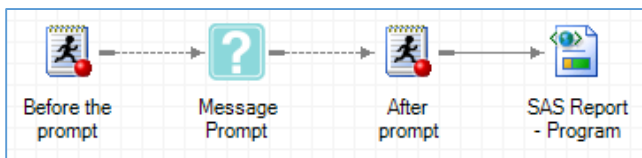

Alternatively, you can "draw" a link from one node to another by hovering the mouse cursor near the edge of the starting node until the cursor shows as a crosshairs, then click-and-drag the pointer to the ending node:

You must then repeat the process for the second link, making the "Message Prompt" task the starting point.

After you have defined both of the links, the process flow should look like this:

Working with the Task Results

Except for the "Information message" prompt, all prompting styles of the Message Prompt task will yield one or more results that are stored within SAS macro values. The user response (YES/NO/OK/CANCEL) is stored in _MESSAGE_RESULT. The text prompt value is stored in _PROMPT_VALUE or _PASSWORD_VALUE, depending on the style of text prompt that you selected.

You can use these macro variables in subsequent programs or tasks to react accordingly to the user response. You can reference the macro variables in custom programs, and you can also use the macro variables as input to Conditions that you define on tasks within a process flow. (See the SAS Enterprise Guide help documentation for more information about Conditions.)

The Message Prompt task also creates a simple log output that summarizes the task action and the user-supplied values. In the case of the password-style prompt, the user-supplied text value is obscured so that potentially sensitive information isn't echoed to the SAS Enterprise Guide log:

```
NOTE: "DBMS challenge" began at 8/19/2013, 3:23:41 PM
NOTE: Message displayed - What's the database password?
1

1          ;*';*";*/;quit;run;
2          OPTIONS PAGENO=MIN;
3          %let _MESSAGE_RESULT=OK;
4          %let _PASSWORD_VALUE=*******;
5          QUIT; RUN;
6
NOTE: "DBMS challenge" finished at 8/19/2013, 3:23:46 PM
     Elapsed time: 5 seconds
```

NOTE: any values supplied for these prompts may still appear in server-side Workspace log files, typically accessible by administrators.

If the user answers a prompt by clicking **Cancel**, the task is also flagged as an error in the process flow.

Using this Task in Scheduled Projects

You should avoid using this task within projects or process flows that you intend to schedule to run unattended. Scheduled projects are run by using the SAS Enterprise Guide automation API, and use of the Message Prompt task in automation *will* stop the project from running until the prompt is answered.

This *might* be desired if you write your own automation scripts and you want to create a simple prompting experience while a project is run "in the background". However, displaying an interactive prompt during an automated process is usually not the intended effect of automation.

Creating Task Templates with this Task

This task supports Task Templates, which means that you can create and store common prompt messages and have them accessible from your Tasks menu. See the SAS Enterprise Guide help documentation for more information about Task Templates.

Software Requirements

- SAS Enterprise Guide 4.3, 5.1, 6.1 (Windows 32-bit or 64-bit) or later
- SAS 9.2 or later (local install or remote SAS Workspace)

Installing the Custom Task

The custom task is in this .NET assembly (DLL):

SAS.Tasks.MessagePrompt.dll

To install the custom task for use with SAS Enterprise Guide, you simply need to copy the DLL to a designated directory. The directory location is version specific, but always follows the format:

        %appdata%\SAS\EnterpriseGuide*<version>*\Custom

For example, for use by **just the current user in version 5.1**, copy the DLL to:

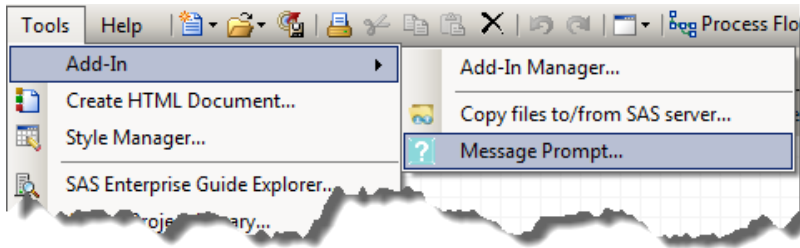   %appdata%\SAS\EnterpriseGuide\5.1\Custom

where *%appdata%* is a Windows environment variable that resolves to your profile area. You might need to create the "Custom" subfolder in this area.

For use by **all users** on a machine, copy the DLL to:

        %programfiles%\SASHome\SASEnterpriseGuide\5.1\Custom

The exact folder name will depend on the installed location and version of SAS Enterprise Guide. You might need to create the "Custom" subfolder in this area. You might also need elevated privileges on your machine to copy content into the Program Files area.

After the file is copied into place, restart SAS Enterprise Guide. The task should appear in the **Tools->Add-Ins** menu:

See also: Special steps for installing custom tasks that you download