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What’s New in SAS Task Manager 2.4

Overview

The user interface has been rewritten in HTML5. Previously, many SAS applications and SAS solutions used the Adobe Flash Player to provide interactive user interfaces. Adobe announced that it intends to end support for Flash technology and will cease to update and distribute the Flash Player at the end of 2020. Browser vendors will disable Flash by default in 2019. For more information about Adobe Flash end-of-life, see SAS Software and Its Use of the Adobe Flash Player.

- The Search and Filter options are now located on the left side of the window.
- The Task Details and Task Data tabs are now located on the right side of the window.

Search and Filter Options

The Search and Filter options have moved from the right side of the window to the left side in SAS Task Manager 2.4.

Task Details and Task Data Tabs

The Task Details and Task Data tabs have moved from the left side of the window to the right side in SAS Task Manager 2.4.
Chapter 1
SAS Task Manager

Overview

Many organizations need to coordinate people, processes, and technology through defined business workflows. SAS Workflow Studio is a suite of applications and services that work together to meet these needs. It helps organizations model, automate, integrate, and streamline business processes. Several SAS solutions use SAS Workflow Studio to orchestrate user or system activity. SAS Task Manager is one of these applications. SAS Task Manager gives users direct access to a workflow that is initiated from one of the other SAS applications. With SAS Task Manager, users can start, stop, and transition workflows that have been uploaded to the SAS Workflow Studio server environment. SAS Task Manager also enables users to interact with certain elements of active workflows called data objects. These data objects can be used to trigger additional activity that goes beyond standard workflow interaction.

SAS Task Manager was designed for the following users:

<table>
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<tr>
<th>User</th>
<th>Privileges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrators</td>
<td>Administrators can terminate active workflows or transition them to other users in case of errors or deadlocks.</td>
</tr>
<tr>
<td>Workflow template designers</td>
<td>Designers can test workflow behavior outside of the parent application that consumes the workflow definition.</td>
</tr>
</tbody>
</table>
Designated users can perform the following tasks:

- Start a workflow that acts as a scheduling process to initiate programs or web services in a defined way.
- Provide data input to workflow-backed processes through editable data objects in the workflow itself.
- Initiate or terminate project-based actions. Users can start and stop workflows. They can control activities that tie into policies supported by the workflow design, including notifications, web service calls, scheduling a task, or invoking a SAS program.
- Interact with the workflow process through a custom form.

### Working with Data Objects

#### Overview
The ability to add special attributes to workflow data objects makes SAS Task Manager more than just a window to the SAS Workflow Studio environment.

#### Adding Special Attributes to Workflow Data Objects
By default, data objects and their values are always shown to users in the Task Data tab, but they cannot be edited. By adding specific attributes to the data objects, users can hide data objects from view and make the values of certain data objects editable. Only the data objects short text, long text, number, and date are supported for editing. You can use the following attributes:

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIDE</td>
<td>Adding a HIDE attribute to a data object controls its visibility in SAS Task Manager. Setting it to 0 allows users to see the data object and value. Setting it to 1 hides the data object and value. By default, the data object and its value are displayed.</td>
</tr>
<tr>
<td>WRITE</td>
<td>Adding a WRITE attribute to a data object lets users edit the data object value in SAS Task Manager. Setting it to 0 sets the data object value to read-only. Setting it to 1 enables users to edit the value. By default, the data object value is read-only.</td>
</tr>
</tbody>
</table>

With a few exceptions, all data object data type values are set to read-only by default, even if you set the WRITE attribute to 1. Exceptions are the short text, long text, number, and date data objects. If you need to edit values other than the supported types, use one of the supported types to capture the information. Then use data object substitution in the workflow design to transform the value to another type.

*Note:*
• Not all data types can be transformed into other data types without loss of information.
• Use all uppercase text for the HIDE and WRITE attributes.
Chapter 2
SAS Task Manager Interface

Log On to SAS Task Manager

You can access SAS Task Manager from the following URL: http://hostname/SASTaskManager.

If your site is not using the default port for SAS Task Manager, you must specify the port in the URL. For example, if the port is 7980, you can access SAS Task Manager from the following URL: http://hostname:7980/SASTaskManager.

Note: If you log on to SAS Task Manager in one browser tab, and then log on to SAS Task Manager or a different SAS web application in another browser tab, the same credentials are used automatically for subsequent authentication attempts.

To log off from SAS Task Manager, click User name then Sign Out in the upper right corner of the user interface.

Note: When you select Sign Out, you are logged off from all tabs opened by SAS Task Manager as well as other SAS web applications.

View the SAS Task Manager Application

The SAS Task Manager application enables you to view tasks in a central location.
• The **Search** option enables you to search for a specific task by name, workflow definition, activity, and assignee.

• The **Notifications** option enables you to view email notifications related to tasks.

• The **User name** drop-down list displays options including Help Center, Settings, About, and Sign Off.

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**Overview of the SAS Task Manager Interface**

**Menu Options**

The SAS Task Manager interface has several common features including **Search**, **Notifications**, and **User**. Below the common banner, the SAS Task Manager displays tasks available to the user. Depending on your user permissions, you can do any of the following to update or edit items in a workflow:

• Click **New** from the toolbar to create a new task.

• Click **Open** from the toolbar to open and view information about a task in the table.

• Click **Terminate** from the toolbar to terminate a task in the table.

• Click **Refresh** from the toolbar to refresh the tasks listed in the table.

• Click the **Actions** menu to Show all tasks.

**Tables**

SAS Task Manager presents lists of workflow tasks. This table shows a subset of the information associated with the workflows. To open a task in an editor, double-click or right-click the row, and select **Open** from the pop-up menu.
To sort a table column in either ascending or descending order, click the column heading. Sorted columns display up or down arrows to indicate the sort direction.

**Task Details**

To view details related to a task, select the task in the table. On the right, you can toggle between Task Details and Task Data.

Task Details provides information about the task, including name, task definition, activity, assignee, and start date.

**Task Data**

To view data related to a task, select the task in the table. On the right, you can toggle between Task Details and Task Data.

Task Data displays information about the data objects in the selected task, including application URL, user name, term ID, error code, error message, process invoker, and process title.

**Filters**

On the left of the SAS Task Manager interface, you can filter the tasks or select from the Advanced Filter. Enter your criteria in the Filter dialog box or click Advanced Filter for additional options.
The Advanced Filter feature provides additional built-in filter options.
Chapter 3
Understanding SAS Task Manager

Working with SAS Task Manager

Overview

SAS Task Manager provides a location to manage workflow instances that have been initiated in SAS Data Remediation or other external applications. For additional information, see the SAS Data Remediation User's Guide.

SAS Task Manager displays a summary of information from external processes. Users can monitor and manage assignments for workflow tasks that are displayed in SAS Task Manager, correct the problems in an external system, and then close the issue within SAS Task Manager.

SAS Task Manager does not use a separate administration environment. SAS Task Manager relies on SAS Workflow Studio for workflow template design and management on the SAS Workflow server. For information about SAS Workflow Studio, see the SAS Workflow Manager: User's Guide.

SAS Task Manager Tab

The toolbar at the top of the task list contains an Actions menu with the following options:

New
creates a new task. You must have a role assignment that enables you to perform this action.

Open
opens the task selected in the task list and displays details about it in a new tab.
**Terminate**
removes the selected task from all applications. You must have a role assignment that enables you to perform this action.

**Refresh**
updates the task list.

**Show All Tasks**
appears if you are assigned the Task Manager: Task Administration role or are a member of the Data Management Administrators group. Selecting this shows all workflow tasks active in the system regardless of whether you are part of the workflow definition itself. You do not gain any extra privileges beyond those normally defined for a participant in the workflow. If you have permission to terminate tasks, you can terminate any workflow task visible.

If you are not defined as a user or group participant in an active workflow when this option is selected, some features are not available. The **Data** tab in the details pane does not appear nor does the toolbar containing action buttons that were derived from the workflow definition.

**Settings**
ensures you to change settings such as theme, language, accessibility, and maximum number of tasks to display.

**SAS Task Manager Settings**

*About SAS Task Manager* displays application version information.

*Show workflow and activity IDs* controls whether the Activity ID and Workflow ID fields appear in the **Task Details** tab. This is not selected by default.

*Show hidden data objects* controls whether hidden data objects appear in the **Task Data** tab. This is not selected by default.

*Maximum number of tasks to display* controls the maximum number of tasks that appear. The default value is 500. The minimum is 1 and the maximum is 5,000.

The details pane at the right of the tab contains two sub-tabs: **Task Details** and **Task Data**. The **Task Details** tab is displayed by default. For detailed information about the fields on these tabs, see the **Task** tab description.

Action buttons might appear below the **Task Details** and **Task Data** sub-tabs. These are determined by the workflow definition and might not be a part of your template.

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**Task Tab**

When you select a task from the task list and click **Open**, the task opens in a new tab.

The toolbar contains an **Actions** menu with the following options:

**Terminate**
terminates the task on the server and removes the selected task from SAS Task Manager as well as other applications. You must have a role assignment that enables you to perform this action.

**Refresh**
refreshes the task list.

Action buttons might appear in the toolbar. These are determined by the workflow definition and might not be a part of your template.

The **Task Details** and **Task Data** panes are comparable to the **Task Details** and **Task Data** sub-tabs on the SAS Task Manager tab.
The **Task Details** pane provides an overview of information related to the selected task:

- **Name**
  - the name of the selected task.

- **Workflow definition**
  - the name of the workflow template used for the selected task.

- **Activity**
  - a value that comes from the workflow definition. It is the current step in the workflow. When you change a status, the **Activity** state changes depending on the design of the workflow.

- **Assignee**
  - the user or groups assigned to the selected task.

- **Start date**
  - the date on which the workflow was started.

The values that are displayed on the Data pane depend on the design of your workflow template. The information under **Task Data** comes from the data objects in the workflow definition. You can control the visibility and editability of the data object values by setting certain attributes on the data objects through SAS Workflow Studio. For more information, see “About SAS Task Manager” on page 1.

If you add or edit values in data object fields that are editable, they are passed into the next step of the workflow. The values are passed when you use one of the action buttons available on the task.

The following data object values are always provided by the workflow engine:

- **Process Invoker**
  - the user that initiated the task.

- **Process Title**
  - the name used for the selected task.

After you have reached a terminal step in the workflow, the task no longer appears in SAS Task Manager.

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**SAS Task Manager Roles**

SAS Task Manager creates three new roles in SAS Management Console. These roles are tied to distinct capabilities in the task management application. Depending on the assigned role of the user, the experience in SAS Task Manager changes. Certain features are available to those assigned one role, but the same features are not available to users in another role.

Here are the roles for SAS Task Manager:
Table 3.1 SAS Task Manager Roles

<table>
<thead>
<tr>
<th>Role</th>
<th>Default Groups</th>
<th>Capability</th>
</tr>
</thead>
</table>
| Task Manager: Task Administration | Data Management Administrators     | • View Application: The user can view a workflow in SAS Task Manager.  
• Manage Tasks: The user can edit set workflow statuses and edit data object values (if they are set to be editable).  
• Initiate Tasks: The user can start a workflow.  
• Terminate Tasks: The user can cancel active a workflow.  
• View all Tasks: the user can see workflows in which they are not defined as participants. This enables the Actions menu option View All Tasks.  
• View All Data Objects: the user can override the HIDE option specified on data objects in a given workflow and thereby view the data values for all data objects in an active workflow. |
| Task Manager: Task Management | Data Management Stewards Data Management Business Approvers | • View Application: The user can view a workflow in SAS Task Manager.  
• Manage Tasks: The user can edit set workflow statuses and edit data object values (if they are set to be editable).  
• Initiate Tasks: The user can start a workflow. |
| Task Manager: Task View       | Data Management Business Users      | • View Application: The user can view a workflow in SAS Task Manager. |

Logs

Logs for SAS Task Manager can be found on the application server that hosts it. They are typically found in a location similar to the following:

SAS Task Manager  
**..\Config\Lev1\Web\Logs\SASServer13_1\SASTaskManager.log**

Other logs that might be useful for troubleshooting might not be on the same system as SAS Task Manager. Examples are as follows:

SAS Workflow  
**..\Config\Lev1\Web\Logs \SASServer1_1\SASWorkflowServicesx.x.log**

SAS Metadata Server  
**..\Config\Lev1\SASMeta\MetadataServer\Logs**
Chapter 4
Example

Starting a Workflow

Overview

The primary purpose of SAS Task Manager is to view workflow instances that have been initiated by another SAS application such as SAS Data Remediation or SAS Business Data Network. However, it is also possible to initiate a workflow instance directly from SAS Task Manager and interact with it. The following example shows how this can be done.

Creating a Workflow Template in SAS Workflow Studio

Using SAS Workflow Studio, you can create a workflow template that can be started from SAS Task Manager. You can accept data values from the user and can be transitioned to a Done state to complete the workflow.

To create the workflow template in SAS Workflow Studio:
1. Create a new workflow template named Example.
2. Create two tasks and define these tasks as Start and End.
3. For each task, create a data object. For the Start task, name the data object MessageIn and for the End task, name the data object MessageOut. Use the short text data type for both data objects and add the following attributes:
   - HIDE = 0
   - WRITE = 1
This enables these data objects to be visible and editable in SAS Task Manager.

4. To pass data values from one object to another, add a new policy on the Start task. The policy copies the data object value from MessageIn to MessageOut with the event type of Task Finished. This enables you to edit the data value first and pass over another data object once the status has been modified.

5. Add Data Management Stewards as a group participant on both the Start and End tasks.

6. Add a Confirm status and set it for the transition between the Start and End tasks.

7. Add a Done status and set it as the transition between the End task and the terminating task represented by ❌.

8. Upload this workflow template to the SAS server. Log on to the SAS server from the main menu and save this new workflow to the online repository, activating it before you complete the transaction.

You now have a workflow template that enables any user in the Data Management Stewards group to invoke, start a workflow, add a message, and mark complete. In a more elaborate scenario, this same design might include a new Invoke Web Service policy. The policy takes the input from the data steward, passes into the web service, and sends an email confirmation to the data steward when the web service successfully completes.

**Starting a Workflow in SAS Task Manager**

If you are a member of the Data Management Stewards group, you can log on to SAS Task Manager and start the workflow.

To start the workflow in SAS Task Manager:

1. From the Actions menu, select New ▼ to open the New Task dialog box.

2. In the New Task dialog box, select the template that you created earlier and enter a name. Click OK.

3. The workflow begins and a new workflow instance appears in the table of tasks. Confirm appears beneath the Task Details and Task Data tabs.

4. Click the Task Data tab and enter text in to the MessageIn data field. Click Confirm.

   The workflow moves from the Start task to the End task shown in the main workflow queue. Done appears in the issue toolbar as well as the data that you entered into the MessageIn data object appearing in a new MessageOut data object.

5. Click Done. This terminates the workflow because the next step in the workflow definition is the standard termination task.
Recommended Reading

Here is the recommended reading list for this title:

- *DataFlux Data Management Server: Administrator's Guide*
- *DataFlux Data Management Server: User's Guide*
- *DataFlux Data Management Studio: Installation and Configuration Guide*
- *DataFlux Data Management Studio: User's Guide*
- *SAS Data Remediation: User's Guide*
- *SAS Intelligence Platform Middle-Tier Administration Guide*

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