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Double-Clicking a SAS® File: What Happens Next?

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ABSTRACT

When you double-click a SAS® file on your desktop or in Windows Explorer, which program launches—SAS or SAS® Enterprise Guide®? Does the SAS program open in a preferred application?

Both Microsoft and SAS have introduced changes in how you change the default SAS file type associations, starting with Microsoft Windows Vista and with SAS 9.2. If you have installed SAS 9.2 or SAS 9.3 and are using earlier approaches to change the default file associations (for example, through Windows Explorer), you might encounter problems. This topic has generated a lively discussion among the SAS Deployment Support Community!

The recommended method for changing file type associations is described in this paper. Also discussed are ways to troubleshoot problems that might surface during this process.

INTRODUCTION

Beginning with Microsoft Windows Vista and SAS 9.2, the way in which you change the default action in a Windows operating environment has changed. The term *default action* means the action that takes place when you double-click a SAS file type (.sas, .sas7bdat, and so on). If you install SAS 9.2 and later releases with another application, such as SAS® Foundation 9.x, SAS Enterprise Guide, or the SAS® Universal Viewer, the installation procedures automatically register the SAS file types in the Windows registry and set the default action for those file types. These default actions can be changed later.

Before Vista and SAS 9.2, you probably used Windows tools to change the default actions for your SAS files. For example, you would probably right-click a .sas file in Windows Explorer and select **Open with**, or maybe you used other tools that are available in the Windows operating environment. These methods, while still commonly used, are not the best approaches for changing the default actions for SAS file types in SAS 9.2 and later. The recommended approach is to use the SAS File Type Management Tool that is included with SAS 9.2 and later releases. However, the tool might not work as expected if you used Windows tools to change the default action for your SAS file types before you use the SAS File Type Management Tool. The unexpected behaviors are related to the changes introduced with Windows Vista.

Windows Vista introduced the ability to set a per-user default action for opening a file type. As the term implies, a per-user setting is specific to a user's individual account on the system. It is created when the user right-clicks a file type and selects **Open With** or goes to the Control Panel and selects **Default Programs** and chooses to set a default application for a file type. Windows creates a key in the Windows registry called **UserChoice**, which specifies the user-selected default action to be used when a user double-clicks a SAS file type. Once a per-user default setting is created, it takes precedence over the SAS default action that is defined for a SAS file type in the Windows registry.

Therefore, SAS does not recommend setting a per-user default for SAS file types because doing so can lead to unexpected behaviors similar to the following scenarios:

- When you double-click a SAS program, it submits in batch mode in SAS instead of opening in the SAS Enhanced Editor as desired.
- You run the SAS File Type Management Tool and the file type association that you selected is not accepted. As a result, the file opens in the application that was previously the default for the file type.

This paper explains how the default action for SAS file types is set in SAS 9.2 and later releases in the Windows operating environment. You learn how to identify the SAS file type associations on your system. In addition, you learn about the SAS File Type Management Tool and how to use it to change the default actions for your SAS file types. To ensure that this tool works correctly, you are shown how to remove the **UserChoice** registry key that is created if you used the Windows tools to change the default actions for SAS file types before running the SAS File Type Management Tool. Finally, various troubleshooting solutions are presented for problems that could occur when you try to change the default action for a SAS file type.

UNDERSTANDING THE DEFAULT ACTION FOR SAS® FILE TYPES

When you double-click a SAS file type, by default, the file opens in a SAS editor. However, the default action for any SAS file type is determined by the SAS application that was installed last. As a result, the file might not open in the expected application. For example, you install both SAS Foundation and SAS Enterprise Guide together; SAS Enterprise Guide is installed last. When you double-click a .sas file type, the file opens in SAS Enterprise Guide. If you install several products at the same time, such as SAS Foundation 9.x, SAS Enterprise Guide, and SAS Universal Viewer, by default the SAS Universal Viewer is installed last. Therefore, the default action opens the file in the SAS Universal Viewer.

The default action for a file type will change when you add a product to an existing installation. For example, SAS 9.3 is installed on your system and you later install the SAS Universal Viewer. When you double-click the .sas file type, the default action opens the file in the SAS Universal Viewer instead of in SAS 9.3.

IDENTIFYING THE SAS FILE TYPE ASSOCIATIONS IN THE WINDOWS REGISTRY

Each SAS file type has its own registry keys, which are located in the Windows registry hive HKEY_CLASSES_ROOT. A *hive* is a logical group of keys, subkeys, and values in the registry. The HKEY_CLASSES_ROOT hive stores information related to which programs are used to open specific file types. The "Appendix" contains a complete list of the locations for the default action for SAS file types in the registry. To find the registry keys for any SAS file type, open the Windows Registry Editor.

To open the Registry Editor in Windows Vista, Windows 7, and Windows 2008:

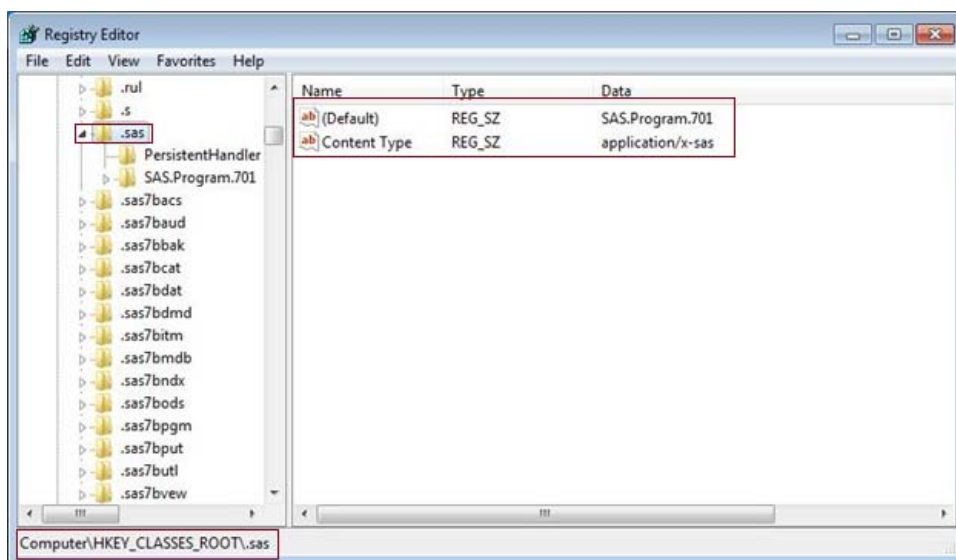
1. Click the **Start** icon on your desktop.
2. Type **regedit** in the **Search programs and files** field.
3. Press Enter.

To open the Registry Editor in Windows XP and Windows 2003:

1. Click the **Start** icon on your desktop.
2. Select **Run** and type **regedit** in the field.
3. Click **OK**.

When the Registry Editor window opens, right-click the **HKEY_CLASSES_ROOT** hive, select **Find**, and search for the .sas file type extension. Expand the .sas entry. This example shows the search for the .sas file extension, but you can follow these same steps to find any registered SAS file type in the Windows registry.

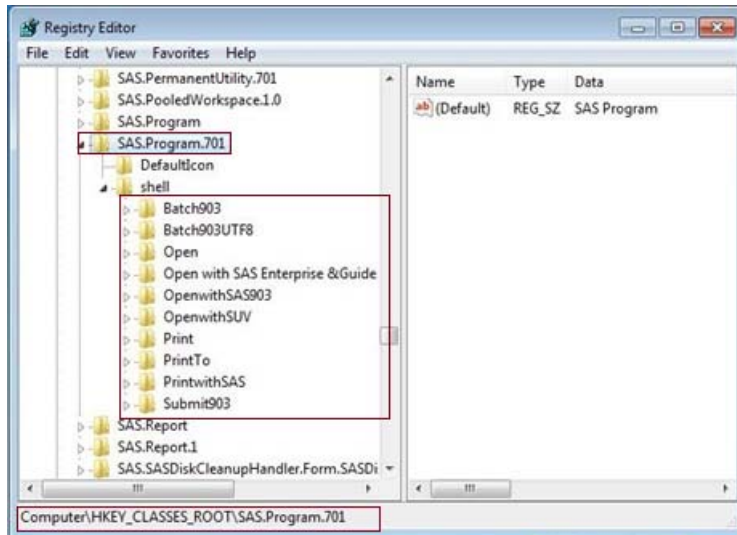
Display 1 shows the results of your search.



Display 1. The Registry HKEY_CLASSES_ROOT\.sas Key

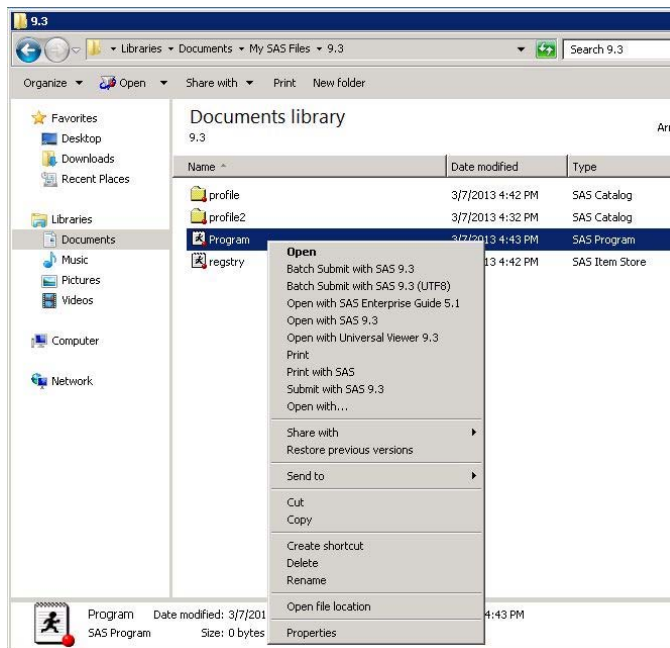
In Display 1, notice that the value in the Data column for the (Default) registry key is **SAS . Program . 701** and the value for the Content Type (or MIME Type) registry key is **application/x-sas**. These values show that the .sas file extension runs in a SAS program.

Next, under the **HKEY_CLASSES_ROOT** hive, locate the **SAS . Program . 701** key and expand it. The registered actions for the .sas file type are listed under **HKEY_CLASSES_ROOT\SAS . Program . 701\shell**. The example in Display 2 shows each of the registered actions for the .sas file type. It also shows that SAS 9.3, SAS Enterprise Guide 5.1, and the SAS Universal Viewer are installed on the system.



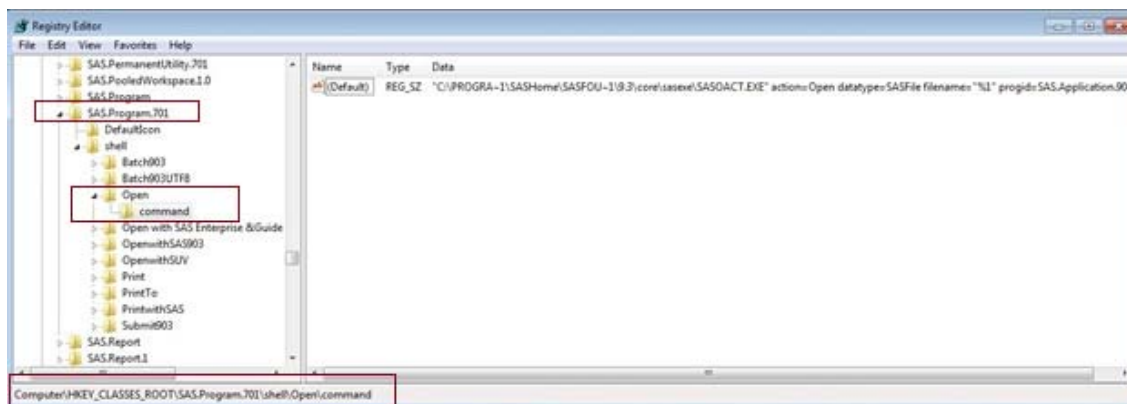
Display 2. The Registry **HKEY_CLASSES_ROOT\SAS . Program . 701** Key

You can find the same information under the **SAS . Program . 701** key, if you right click a .sas file in the Windows Explorer window as shown in Display 3.



Display 3. The Context Menu When You Right-Click the **SAS . Program . 701** Key

The default action for the .sas file type is defined under the **HKEY_CLASSES_ROOT\SAS.Program.701\shell\Open\command** key, as shown in Display 4.



Display 4. The Registry **HKEY_CLASSES_ROOT\SAS.Program.701\shell\Open\command** Key

WHAT HAPPENS WHEN YOU DOUBLE-CLICK THE .SAS FILE TYPE?

To help you understand what happens when you double-click a .sas file type, first look at the command that is defined for the default action **Open** in the Windows registry.

In Display 4, if you look at the value in the Data column for the (Default) key under **HKEY_CLASSES_ROOT\SAS.Program.701\shell\Open\command**, you see the following string:

```
"C:\PROGRA~1\SASHome\SASFOU~1\9.3\core\sasexe\SASOACT.EXE" action=Open
datatype=SASFile filename=\"%1\" progid=SAS.Application.903
```

You might have expected to see `sas.exe` instead of `sasoact.exe`. First, understand that `sas.exe` is used to batch submit a file when you double-click it. If you mistakenly set the default action for a .sas file type to `sas.exe`, when you double-click a .sas file, the file will batch submit instead of opening in your editor window. This is the expected behavior. If programs are batch submitting when you double-click them, see the "[Troubleshooting Problems That Occur Despite Using the SAS File Type Management Tool](#)" section of this paper, which goes into detail about how to fix this issue.

The `sasoact.exe` program is used to launch an OLE automation session of SAS. *Automation* is a mechanism through which one Windows application can control another application programmatically. When you double-click a SAS file type, `sasoact.exe` checks to see if an existing OLE automation session of SAS is running. If not, it then invokes an OLE automation session of SAS. Once there is an active SAS automation server session, any further calls from `sasoact.exe` are handled by the existing SAS session instead of in a new SAS session. Therefore, if you have a SAS session open and you double-click a SAS file type, the file will open in the existing SAS session instead of in a second SAS session.

The default location for the `sasoact.exe` application is `C:\Program Files\SASHome\SASFoundation\9.3\core\sasexe\sasoact.exe` and the default location for the `sas.exe` application is `C:\Program Files\SASHome\SASFoundation\9.3\sas.exe`.

Look again at the following string, which is the command that is executed when you double-click a .sas file:

```
"C:\PROGRA~1\SASHome\SASFOU~1\9.3\core\sasexe\SASOACT.EXE" action=Open
datatype=SASFile filename=\"%1\" progid=SAS.Application.903
```

Notice the additional arguments in the command: **ACTION**, **DATATYPE**, **FILENAME** and **PROGID**. These arguments might be required by `sasoact.exe`. Below is a description of each argument:

- **ACTION** – used by SAS file types and actions for valid actions for the registered data types
- **DATATYPE** – used by sas file types and actions for valid data types

- FILENAME – describes the fully qualified filename, with which the action is to be performed. In the Windows Explorer environment, the operating system provides the fully qualified filename.
- PROGID – created from the Windows registry under the registry structure

If these arguments are omitted and you double-click a SAS file, SAS opens but the file does not open in the SAS editor. Because SAS Foundation requires these additional arguments that the Windows operating system does not use by default, SAS does not recommend using the tools that are available in Windows to change the default action for your SAS file types. Instead, using the SAS File Type Management Tool to change default actions is recommended and is discussed in the next section.

Behind the scenes, the following command is sent to SAS, which contains a SAS Component Language (SCL) program. *SCL* is a programming language that is designed to facilitate the development of interactive applications using the SAS System.

```
"afa c=sashelp.dispatch.actions.frame"
```

The Dispatch window becomes the active window. Sasoact.exe then passes the following command to the Dispatch window:

```
Action="Open" Datatype="SASFile"
Filename=""
```

Finally, the Dispatch SCL program invokes the appropriate method to perform the end result.

CHANGING THE DEFAULT SAS® FILE TYPE ASSOCIATION WITH THE SAS FILE TYPE MANAGEMENT TOOL

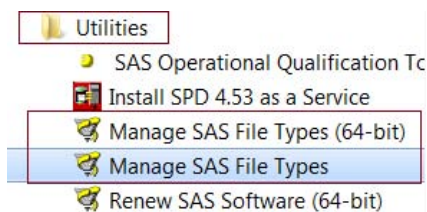
The SAS File Type Management Tool, introduced in SAS 9.2, enables you to change the default action for your SAS file types in a Windows operating environment. Whether you have installed SAS 9.2 or SAS 9.3 software, you use the SAS File Type Management Tool the same way. However, where you find the tool does depend on your version of SAS software. A version of the SAS File Type Management Tool is available for both SAS 32-bit and 64 bit applications.

LOCATING THE SAS FILE TYPE MANAGEMENT TOOL

For SAS® 9.3

To locate the SAS File Type Management Tool for SAS 9.3:

1. Select **Start ► Programs ► SAS ► Utilities** (Display 5).



Display 5. Locating the SAS 9.3 SAS File Type Management Tool

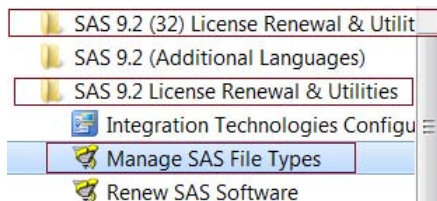
2. Select the version of the tool for your system::
 - For SAS 9.3 32-bit on a 64-bit operating system and SAS 9.3 32-bit on a 32-bit operating system, select **Manage SAS File Types** (Display 5).
 - For SAS 9.3 64-bit on a 64-bit operating system, select **Manage SAS File Types (64-bit)** (Display 5).

Note: Under Windows Vista, Windows 7, or Windows Server 2008, right-click **Manage SAS File Types** and select **Run as Administrator**.

For SAS® 9.2

To locate the SAS File Type Management Tool for SAS 9.2:

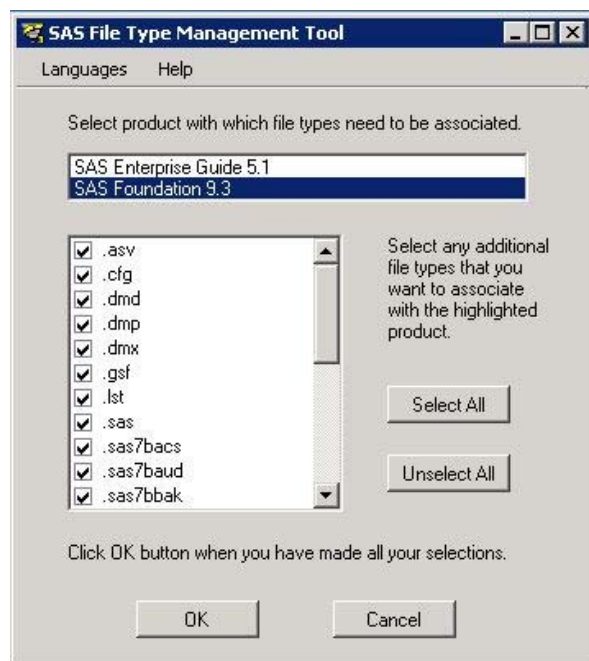
1. Select **Start ► Programs ► SAS**.
2. Select the version of the tool for your system:
 - For SAS 9.2 64-bit on a 64-bit operating system and SAS 9.2 32-bit on a 32-bit operating system, select **SAS 9.2 License Renewal & Utilities ► Manage SAS File Types** (Display 6).
 - For SAS 9.2 32-bit on a 64-bit operating system, select **SAS 9.2 (32) License Renewal & Utilities ► Manage SAS File Types** (Display 6).



Display 6. Locating the SAS 9.2 SAS File Type Management Tool

RUNNING THE SAS FILE TYPE MANAGEMENT TOOL IN SAS® 9.3 AND SAS® 9.2

When you first click **Manage SAS File Types** to open the SAS File Type Management Tool, you see one or more products with which file types can be associated (as shown in Display 7). This list of products will vary depending on what is installed on your system. You also see that all file types are selected.

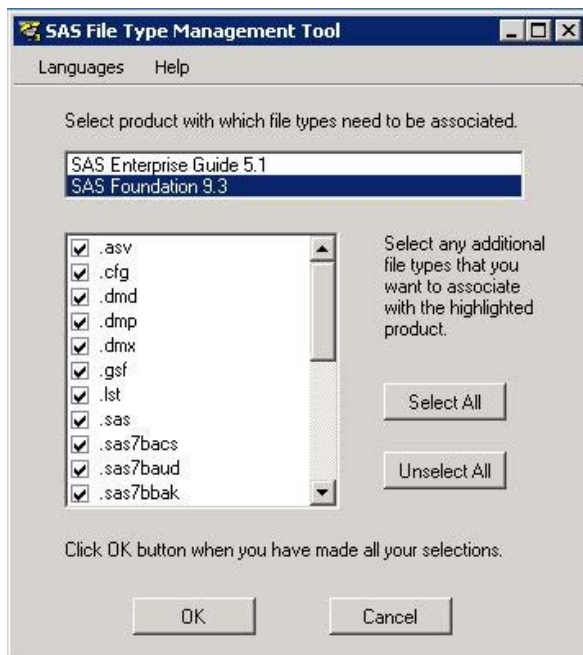


Display 7. The SAS File Type Management Tool When It Initially Opens

A common misconception is to assume that the files types that you see selected already have a default association with the product that is highlighted. This is not true! The tool will look this way each time you open it.

In order to set the default actions, you are required to perform the following steps to associate the file types properly and then finalize your choices:

1. Select the product with which a file type needs to be associated (**SAS Foundation 9.3** or **SAS Enterprise Guide**). Click **Select All**, and then click **OK** (Display 8).



Display 8. Selecting Products with Which the File Types Need to Be Associated in the SAS 9.3 SAS File Type Management Tool

Note: For SAS 9.3, if you do not see SAS Foundation in the list, run the SAS File Type Management Tool from this location:

```
C:\Program Files\SASHome\SASFileTypeManagementTool\9.3\
SASFileExtensionManager.exe
```

2. Verify that when you double-click a SAS file type that it opens in the application that you chose to associate your file type.

Alternatively, you can run the SAS File Type Management Tool manually from the following directories:

SAS® 9.3

- For SAS 9.3 32-bit on a 64-bit operating system, run the tool from the following directory:

```
C:\Program Files\SASHome\x86\SASFileTypeManagementTool\9.3\
SASFileExtensionManager.exe
```

- For SAS 9.3 32-bit on a 32-bit operating system and SAS 9.3 64-bit on a 64-bit operating system, run the tool from the following directory:

```
C:\Program Files\SASHome\SASFileTypeManagementTool\9.3\
SASFileExtensionManager.exe
```

SAS® 9.2

- For SAS 9.2 32-bit on a 64-bit operating system, run the tool from either of the following directories depending on how you installed your SAS software:

```
C:\Program Files\SAS\SASFoundation\9.2(32-bit)\core\sasinst\
filetypeutil\sasfileextensionmanager.exe
```

```
C:\Program Files(x86)\SAS\SASFoundation\9.2\core\sasinst\
filetypeutil\sasfileextensionmanager.exe
```

- For SAS 9.2 64-bit on a 64-bit operating system and SAS 9.2 32-bit on a 32-bit operating system, run the tool from the following directory:

```
C:\Program Files\SAS\SASFoundation\9.2\core\sasinst\filetypeutil\
sasfileextensionmanager.exe
```

USING MICROSOFT TOOLS TO ASSOCIATE SAS FILE TYPES: WHEN YOU SHOULD AVOID THIS METHOD

In the past, you might have found it easy to change your SAS file type association on the Microsoft Windows XP operating system. You could right-click a .sas file in Windows Explorer and select **Open with**. This would enable you to modify the actual command that executes when you open a file, without ever manually modifying the Windows registry. However, if you are now using a more recent operating system, such as Windows Vista or Windows 7, this is not so. You can no longer modify the actual command that is executed, unless you manually edit the Windows registry.

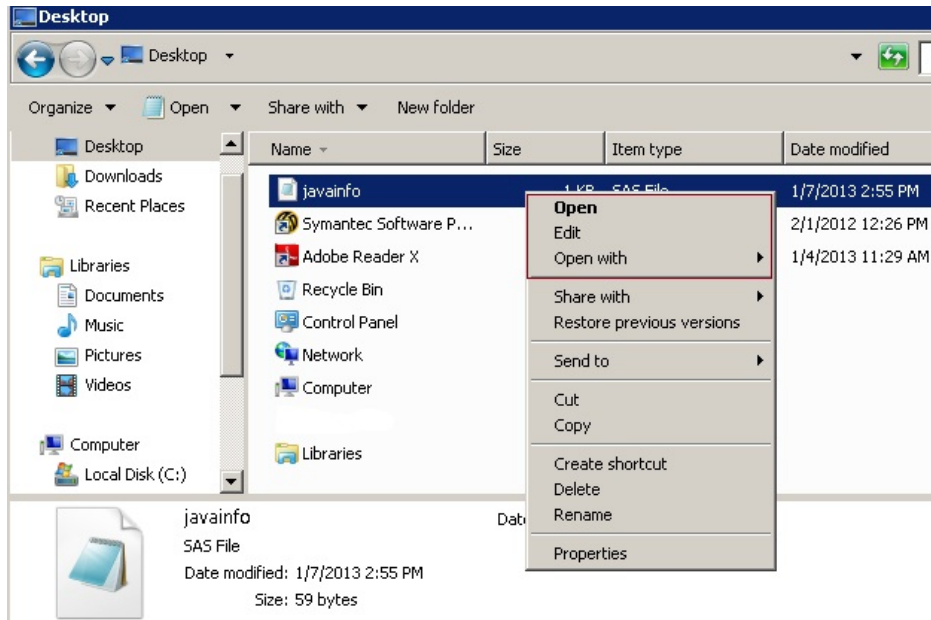
As explained in the "[Introduction](#)," Windows Vista introduced the ability to set the default action for a file type on a per-user basis. This is accomplished by using the Windows tools. For example, you would right-click a file type and select **Open With** or go to the Control Panel and select **Default Programs**.

If you use the Windows tools to set the per-user default action for a file type, Windows adds a UserChoice key under the registry hive HKEY_CURRENT_USER. This key is associated with the user's individual account (also known as your Windows profile). Here is an example:

```
HKCU\Software\Microsoft\Windows\CurrentVersion\Explorer\FileExts\
.sas\UserChoice
```

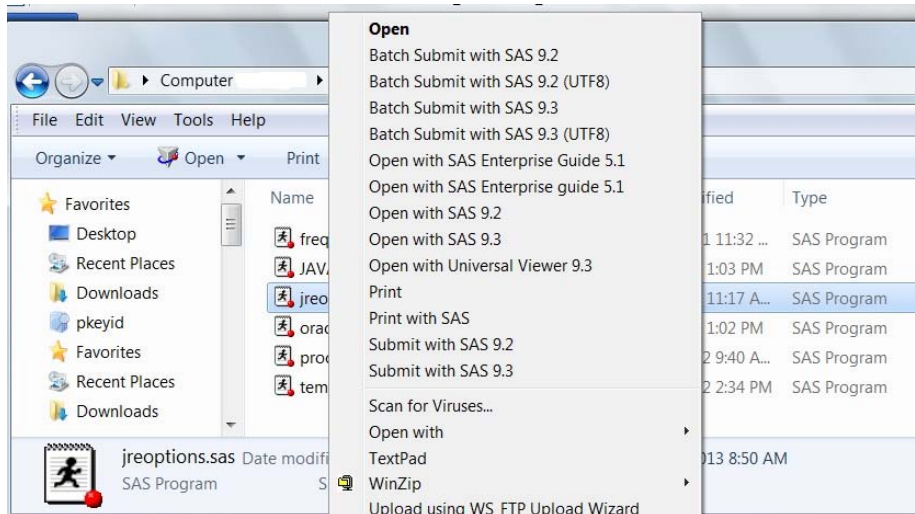
When you double-click a .sas file, the system first checks to see whether a UserChoice key exists. If it does, this registry key takes precedence over the default action that is defined by the SAS installation under the **HKCR\SAS.Program.701** key. This behavior causes undesirable results, such as those discussed in the "[Introduction](#)" of this paper.

If a UserChoice key is set in the registry, you no longer see options for your SAS file types on your context menu when you right-click the file. Additionally, the SAS icons might not be displayed (as shown in Display 9).



Display 9. The UserChoice Key Has Been Set In the Registry, Preventing the Typical SAS Selections (for Example, Batch Submit with SAS 9.3)

Display 10 shows the typical SAS selection screen.



Display 10. The Typical SAS Selection Screen

To resolve the issue, you should remove the UserChoice key. A SAS File Type Registry fix is available that will remove the UserChoice registry key for you. See the "[Troubleshooting Problems That Occur Despite Using the SAS File Type Management Tool](#)" section of this paper, which goes into detail about how to fix this issue. You can also see SAS Note 45779: "Troubleshooting issues related to SAS file type association in a Windows operating environment" (support.sas.com/kb/45/779.html).

TROUBLESHOOTING PROBLEMS THAT OCCUR DESPITE USING THE SAS FILE TYPE MANAGEMENT TOOL

Running the SAS File Type Management Tool will resolve most common file type association problems. Sometimes though, running the tool alone is not sufficient. If you run the tool and your files do not open in the SAS application of your choice when you double-click them, the cause is most commonly an existing issue on the system. For example, a user-selected default application is set on the system (UserChoice) or the method that your organization uses to install SAS software is not the recommended method. This section discusses how to resolve common issues that are not resolved by running the SAS File Type Management Tool alone.

PROBLEM: FILES UNINTENTIONALLY SUBMIT IN BATCH MODE.

This problem occurs when a user selects a per-user default application for a file type using the Microsoft tools. Even after running the SAS File Type Management Tool the problem persists. This problem might manifest in any of the following ways:

- A file continues to submit in batch mode after you run the SAS File Type Management tool.
- You double-click a file and it submits in batch mode in SAS instead of opening in the SAS Enhanced Editor as desired.
- When you right-click a SAS file type, the options to **Batch Submit with SAS 9.3** or **Open with SAS 9.3** are missing.

Resolution: Run the SAS File Type Registry fix

Important: Do not attempt the SAS File Type Registry fix on any operating system other than the Microsoft Vista, Windows 7, or Windows 2008 operating systems.

This registry file is changed under the HKEY_CURRENT_USER registry hive, which is associated with the user Windows profile. *Therefore, the UserChoice key must be removed by the user who set the default action using the Windows tools. This also requires that this same user have permission to update the Windows registry.*

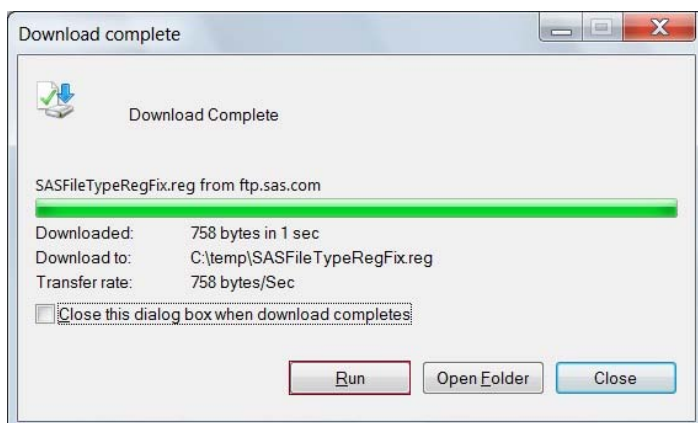
Warning: SAS is not responsible for problems that might occur with your system when you edit the Windows registry. Changes in the Windows registry can render your system unusable and will require that you reinstall the operating system. Therefore, before you run the SAS File Type Registry fix, you should back up your registry. For assistance, refer to the Windows Help, Microsoft documentation, or the Microsoft Windows web site (windows.microsoft.com/en-US/windows/support).

The following instructions show how to run the tool in Internet Explorer. These steps might differ if you use another Internet browser. To run the SAS File Type Registry fix:

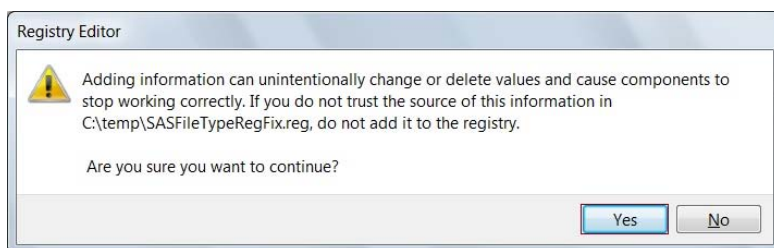
1. Download SASFileTypeRegFix.reg from <ftp://ftp.sas.com/techsup/download/blind/SASFileTypeRegFix.reg>.
2. When the File Download - Security Warning dialog box appears, click **Save** and choose a location to save the file on your local machine.



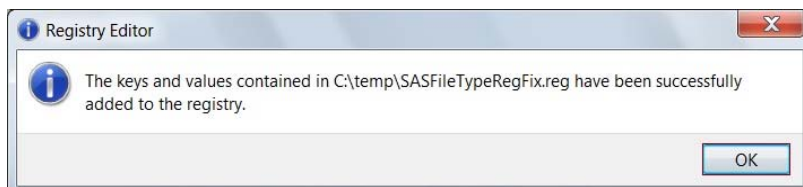
- When the Download Complete dialog box appears, click **Run**.



- When the Registry Editor dialog box appears, click **Yes** to continue.



- Click **OK** when the Registry Editor dialog box displays the message indicating that the registry keys have been added successfully.



- Now, double-click your .sas file to retest it. The file should now open in the application in which you chose to associate SAS file types in Step 1 in the section "[Running the SAS File Type Management Tool in SAS 9.3 and SAS 9.2.](#)"

PROBLEM: A SAS APPLICATION OPENS WHEN YOU DOUBLE-CLICK THE .SAS FILE, BUT THE FILE DOES NOT OPEN IN THE SAS ENHANCED EDITOR AS EXPECTED.

This problem can happen for two reasons: either the user selected a per-user default application for a file type; or the Windows registry has a corrupt entry. The latter cause typically occurs when you are installing SAS software outside of the recommended methods (for example, a custom installer).

Resolution: Run the SAS File Type Registry fix.

To resolve this problem:

- Run the SAS File Type Registry Fix (follow the steps in the preceding section "[Problem: Files Unintentionally Submit in Batch Mode.](#)")

2. Next, either run the SAS File Type Management Tool or fix your corrupted Windows registry:
 - a. To run the SAS File Type Management Tool, follow the relevant steps that are documented in the section "[Running the SAS File Type Management Tool in SAS 9.3 and SAS 9.2.](#)"
 - b. To fix your Windows registry, which has become corrupted, refer to SAS Note 45821: "Double-clicking a .sas file type does not open the SAS windowing environment" (support.sas.com/kb/45/821.html).

PROBLEM: IT IS NOT POSSIBLE TO EXECUTE THE SAS FILE TYPE MANAGEMENT TOOL USING THE RECORD AND PLAYBACK RESPONSE FILE (IN OTHER WORDS, *SILENTLY*).

Managing changes to the default file type action in a large deployment can be challenging when you are installing SAS, SAS Enterprise Guide, and the SAS Universal Viewer.

Resolution: Two common approaches are currently available to manage changes to file type association in a large deployment.

Although neither of the following approaches is ideal, you should choose the option that will best suit your environment.

1. Install the SAS application of your choice last.
2. Run the SAS File Type Management Tool on one machine. Then export the registry keys for the default action and create a registry file. The "[Appendix](#)" contains a complete list of the locations for the default action for SAS file types in the registry. The registry file can be imported to the remaining machines in your deployment.

This method has been a successful for customers, but requires careful consideration and testing. Additionally, you should back up the Windows registry before you make any changes. *Again, SAS is not responsible for any changes that are made to the registry using this approach.*

Plans for better managing file type associations in a large deployment are discussed in the next section.

FUTURE PLANS FOR MANAGING SAS® FILE TYPES

The SAS File Type Management Tool currently enables you to manage file type information after the initial deployment has completed. There are plans to write a new SAS File Type Management Tool into the SAS Deployment Manager. This is planned for SAS 9.4. A benefit to moving the tool into the SAS Deployment Manager is that you can run the SAS Deployment Manager silently, which will help to manage file type association in a large deployment. Additionally, the SAS Universal Viewer will be available in the Graphical User Interface (GUI) for the SAS File Type Management Tool. This plan, however, is still under development.

CONCLUSION

The best approach for associating SAS file types is with the SAS File Type Management Tool. Some of the older methods that were used for associating file types using Windows tools worked in the past, but are no longer the recommended approach. So if your SAS file types do not open the way you would like or expect, remember to use the SAS File Type Management Tool.

RESOURCES

SAS Institute Inc. 2012. SAS Note 45821: "Double-clicking a .sas file type does not open the file in the SAS windowing environment." Available at support.sas.com/kb/45/821.html.

SAS Institute Inc. 2012. SAS Note 45779: "Troubleshooting issues related to SAS file-type association in a Windows operating system." Available at support.sas.com/kb/45/779.html.

SAS Institute Inc. 2011. SAS Deployment Support Community: "Opening a SAS file." Available at: communities.sas.com/message/108826#108826.

SAS Institute Inc. 2011. SAS Note 44031: "The SAS 9.3 default file type associations for SAS data set and SAS data view files might be incorrect." Available at support.sas.com/kb/44/031.html.

SAS Institute Inc. 2009. SAS Note 34879: "If 32- and 64-bit versions of SAS 9.2 are installed then only ONE "Open with SAS 9.2" option appears when you select a .sas file in Windows Explorer." Available at support.sas.com/kb/34/879.html.

SAS Institute Inc. 2008. SAS Note 32558: "Installing SAS 9.2 after SAS 9.1 removes SAS 9.1 file type registrations such as 'Open with SAS 9.1.'" Available at support.sas.com/kb/32/558.html.

SAS Institute Inc. 2008. SAS Note 32464: "Registering file types via the SAS File Type Management Tool for SAS 9.2, SAS 9.3, and SAS Enterprise Guide." Available at support.sas.com/kb/32/464.html.

SAS Institute Inc. 2005. Hints & Tips on Using SAS. Available at: www.sas.com/offices/europe/uk/newsletter/feature/18dec_jan05/hints2005.pdf.

APPENDIX

The following table shows the locations for the default action for SAS file types in the registry. The file extensions that are shown in boldface are the most commonly used extensions.

SAS® File Extensions and the Windows Registry Location for the Default Action		
SAS® File Extension	File Description	Location for the Default Action in the Windows Registry
.asv	SAS Autosave	HKEY_CLASSES_ROOT\SAS.Autosave.8\shell\Open\command
.cfg	SAS Configuration	HKEY_CLASSES_ROOT\SAS.Config.701\shell\Open\command
.dmd	SAS® Enterprise Miner™ Diagram	HKEY_CLASSES_ROOT\SAS.EnterpriseMinerDiagram.4\shell\Open\command
.dmp	SAS® Enterprise Miner™ Project	HKEY_CLASSES_ROOT\SAS.EnterpriseMinerProject.4\shell\Open\command
.dmx	SAS® Enterprise Miner™ Database	HKEY_CLASSES_ROOT\SAS.EnterpriseMinerDatabase.4\shell\Open\command
.egp	SAS® Enterprise Guide® Project	HKEY_CLASSES_ROOT\SASEGuide.Project.2\shell\Open\command
.lst	SAS Output Listing	HKEY_CLASSES_ROOT\SAS.OutputLst.701\shell\Open\command
.sas	SAS Program	HKEY_CLASSES_ROOT\SAS.Program.701\shell\Open\command
.sas7bacs	SAS Access Descriptor File	HKEY_CLASSES_ROOT\SAS.AccessDescriptor.701\shell\Open\command
.sas7bcats	SAS Catalog	HKEY_CLASSES_ROOT\SAS.Catalog.701\shell\Open\command
.sas7bdat	SAS Data Set	HKEY_CLASSES_ROOT\SAS.DataSet.701\shell\Browse\command
.sas7bmdb	SAS Multi-Dimensional Database File	HKEY_CLASSES_ROOT\SAS.MultiDimensionalDatabase.701\shell\Open\command
.sas7bpgrm	SAS Stored Program	HKEY_CLASSES_ROOT\SAS.StoredProgram.701\shell\Open\command
.sas7bview	SAS Data Set View	HKEY_CLASSES_ROOT\SAS.DataSetView.701\shell\Open\command
.sd2	SAS Data Set 6.12	HKEY_CLASSES_ROOT\SAS.DataSet.612\shell\Open\command
.stc	Cport Transport File	HKEY_CLASSES_ROOT\SAS.CportTransportFile.701\shell\Open\command
.stx	Xport Transport File	HKEY_CLASSES_ROOT\SAS.XportTransportFile.701\shell\Open\command

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