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How to Continue Using SAS System Viewer in SAS 9.4

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ABSTRACT

SAS System Viewer 9.1 is an application that SAS programmers use to check the contents of SAS related documents. Compared with later versions of similar applications, such as System Universal Viewer or SAS Enterprise Guide (EG), SAS System Viewer can open a dataset in a much faster speed due to its lightweight design. However, SAS has stopped official support for SAS System Viewer since SAS 9.2 was released. SAS programmers can still use SAS System Viewer to open SAS datasets in SAS 9.2 and 9.3, but not any more in SAS 9.4.

Many SAS programmers asked in different internet forums how to continue to use SAS System Viewer in latest version of SAS. So far no satisfactory answers have been provided. This paper presents a work around solution for SAS programmers to continue using the lightweight SAS System Viewer even in SAS 9.4. It provides a much more efficient tool to help SAS programmers in their daily life at work.

1. INTRODUCTION

SAS System viewer (version 9.1) is a standalone application that runs in MS Windows environment. It can be distributed with royalty free to users without installing SAS System in their machines. Since its release, SAS System Viewer has become one of the most favorite applications for SAS programmers, data managers and clinical scientists to check the contents of SAS data files. Due to its lightweight design, it can open a relatively large dataset in a much faster speed compared with its later versions, such as SAS Universal Viewer or SAS Enterprise Guide. However, SAS has stopped the official support to this application since SAS 9.2. Users can still use this application in SAS 9.2 and 9.3, but not any more in SAS 9.4.

Many SAS programmers asked the same question in internet forums and meetings on how to continue using this valuable application in later SAS versions. So far no satisfactory answers have been given. This paper aims to provide a work around solution that enables users to continue taking advantage of this lightweight application to improve our programming efficiency.

2. DISCUSSION

The first question to ask is why SAS System Viewers cannot open datasets generated in SAS 9.4. Since SAS 9.3, SAS introduced a dataset option “EXTENDOBSCOUNTER”. In SAS 9.4 the default value of this option has been set to “Yes”. This option allows an enhanced file format in newly created SAS dataset that counts observations beyond the 32-bit limitation. Although this SAS data file is created for an operating environment that stores the number of observations with a 32-bit integer, the data file behaves

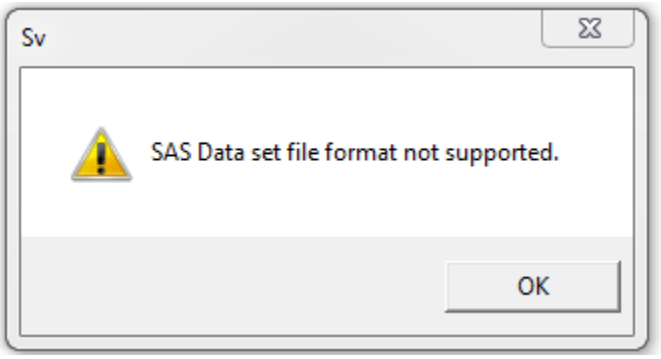


Figure 1. Screen print of SAS System Viewer 91 when opening a SAS 94 dataset

like a 64-bit file with respect to counters. As a result, this new dataset will have back-compatibility issue when being opened in an earlier version of SAS. That is why SAS System Viewer is not able to open SAS datasets created using SAS 94.

As a work around solution, we can set the value of the option EXTENDOBSCOUNTER to “No”, and then duplicate the dataset and save it in a temporary folder. As a result, the duplicate dataset can be opened by SAS System Viewer without any capability issue. However, it is troublesome to run SAS code in a SAS session to read in the dataset in a library, and then write it out to a temporary location. In order to eliminate these trivial steps, this paper presents a way to add an option in the pop up menu in SAS advanced editor. All steps will be done by choosing that menu option in the pop up menu. See below for how to configure it in SAS advanced editor.

- Create a folder in C drive, i.e., C:\temp”. This folder will be used to store the temporary datasets generated.
- Save the following macro in the global macro library in SAS installation: usually it is in “C:\Program Files\SAS94\x86\SASFoundation\9.4\core\sasmacro”. Depends on your installation of SAS system, the location might vary in your machine. Please note that the value of the option EXTENDOBSCOUNTER has been set to “no” when defining the temp library in following macro. Running this macro does not affect any global settings in the SAS session.

```
%macro SASfileViewer(library=, table=);
   gsubmit 'libname temp  "C:\temp " extendobscounter=no;';
   gsubmit  "data a.&table; set &library..&table; run;";
   gsubmit "libname temp clear;";
%mend SASfileViewer;
```

- Open SAS Advanced Editor, Select a dataset in the Explorer window. Then select Tools→Options→Explorer, A window appears, see below

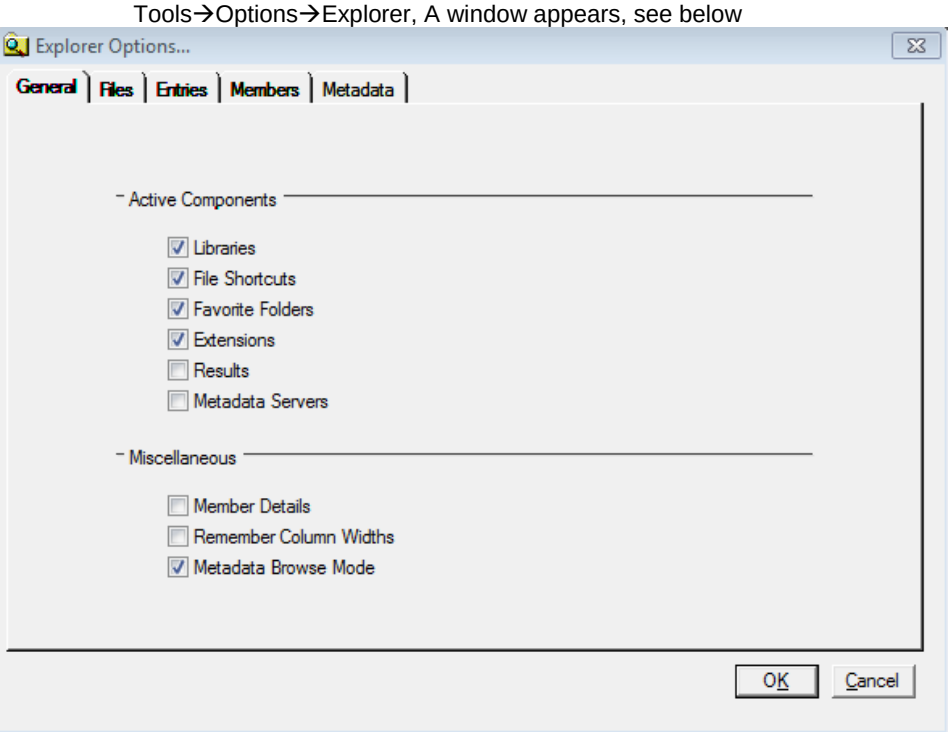


Figure 2. Screen print of SAS Advanced Editor: Explorer Options

- Select “Members”, and then select “TABLE” (second to the last item in the Window below)

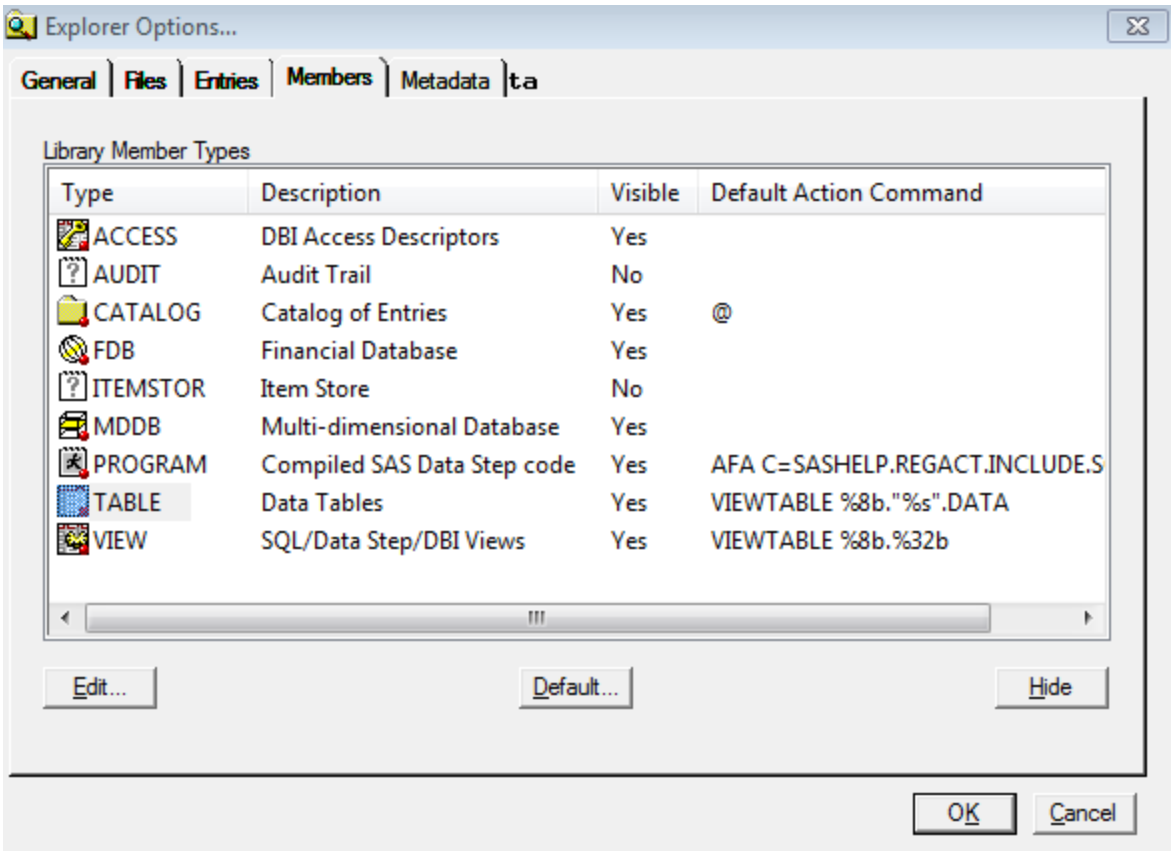


Figure 3. Screen print of SAS Advanced Editor: Members

- Then select “Edit” button in the above screen print and then select “Add” button

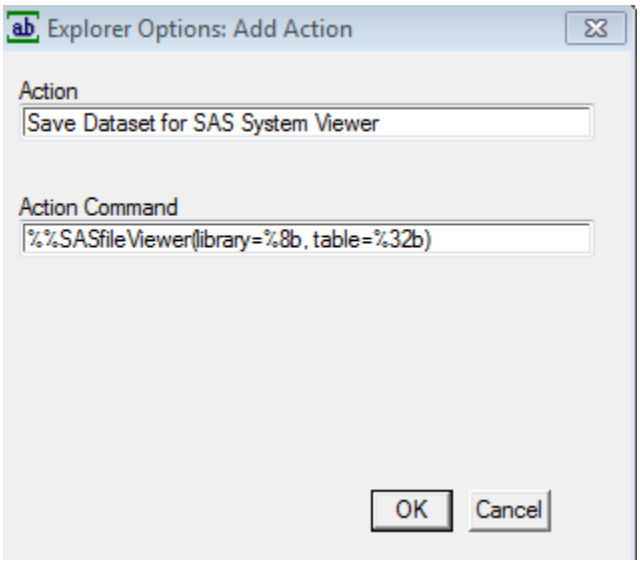


Figure 4. Screen print of SAS Advanced Editor: Add Action

- Type “Save Dataset for SAS System View” in the Action field, and type “%%SASfileViewer(library = %8b, table = %32b)” in the Action Commend field. And then click the OK button.

As a result, when the user right clicks a dataset in the Explorer window, a pop up menu appears with the option “Save Dataset for SAS System Viewer”. See below for the screen print.

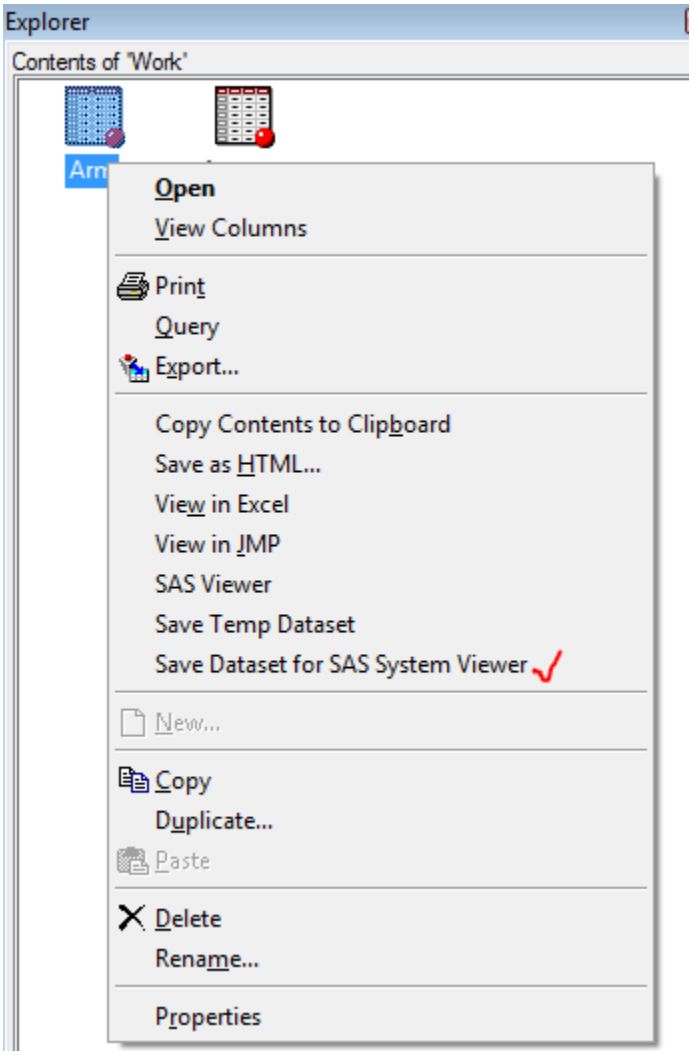
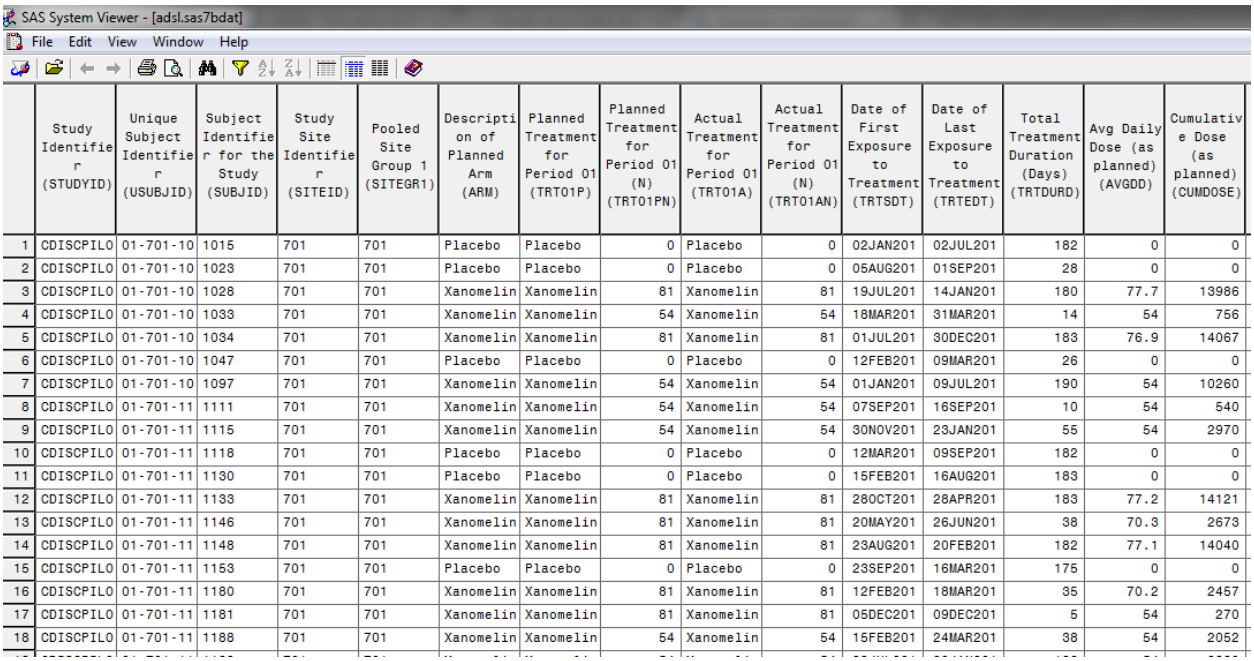


Figure 5. Screen print of SAS Advanced Editor: An option of “Save Dataset for SAS System Viewer”

- Once user chooses this option, A SAS dataset will be saved in the temporary location “C:\temp” with the same file name. This dataset can be opened by using SAS System Viewer in a separate window. Users can easily check the contents and meta data of the dataset, search text of interest, sort the observations, filter the observations based on a specified conditions, etc.


SAS System Viewer - [adsl.sas7bdat]

File Edit View Window Help

	Study Identifier (STUDYID)	Unique Subject Identifier (USUBJID)	Subject Identifier for the Study (SUBJID)	Study Site Identifier (SITEID)	Pooled Site Group 1 (SITEGR1)	Description of Planned Arm (ARM)	Planned Treatment for Period 01 (TRT01P)	Planned Treatment for Period 01 (N) (TRT01PN)	Actual Treatment for Period 01 (TRT01A)	Actual Treatment for Period 01 (N) (TRT01AN)	Date of First Exposure to Treatment (TRTSDT)	Date of Last Exposure to Treatment (TRTEDT)	Total Treatment Duration (Days) (TRTDURD)	Avg Daily Dose (as planned) (AVGDD)	Cumulative Dose (as planned) (CUMDOSE)
1	CDISCPILO	01-701-10	1015	701	701	Placebo	Placebo	0	Placebo	0	02JAN201	02JUL201	182	0	0
2	CDISCPILO	01-701-10	1023	701	701	Placebo	Placebo	0	Placebo	0	05AUG201	01SEP201	28	0	0
3	CDISCPILO	01-701-10	1028	701	701	Xanomelin	Xanomelin	81	Xanomelin	81	19JUL201	14JAN201	180	77.7	13986
4	CDISCPILO	01-701-10	1033	701	701	Xanomelin	Xanomelin	54	Xanomelin	54	18MAR201	31MAR201	14	54	756
5	CDISCPILO	01-701-10	1034	701	701	Xanomelin	Xanomelin	81	Xanomelin	81	01JUL201	30DEC201	183	76.9	14067
6	CDISCPILO	01-701-10	1047	701	701	Placebo	Placebo	0	Placebo	0	12FEB201	09MAR201	26	0	0
7	CDISCPILO	01-701-10	1097	701	701	Xanomelin	Xanomelin	54	Xanomelin	54	01JAN201	09JUL201	190	54	10260
8	CDISCPILO	01-701-11	1111	701	701	Xanomelin	Xanomelin	54	Xanomelin	54	07SEP201	16SEP201	10	54	540
9	CDISCPILO	01-701-11	1115	701	701	Xanomelin	Xanomelin	54	Xanomelin	54	30NOV201	23JAN201	55	54	2970
10	CDISCPILO	01-701-11	1118	701	701	Placebo	Placebo	0	Placebo	0	12MAR201	09SEP201	182	0	0
11	CDISCPILO	01-701-11	1130	701	701	Placebo	Placebo	0	Placebo	0	15FEB201	16AUG201	183	0	0
12	CDISCPILO	01-701-11	1133	701	701	Xanomelin	Xanomelin	81	Xanomelin	81	28OCT201	28APR201	183	77.2	14121
13	CDISCPILO	01-701-11	1146	701	701	Xanomelin	Xanomelin	81	Xanomelin	81	20MAY201	26JUN201	38	70.3	2673
14	CDISCPILO	01-701-11	1148	701	701	Xanomelin	Xanomelin	81	Xanomelin	81	23AUG201	20FEB201	182	77.1	14040
15	CDISCPILO	01-701-11	1153	701	701	Placebo	Placebo	0	Placebo	0	23SEP201	16MAR201	175	0	0
16	CDISCPILO	01-701-11	1180	701	701	Xanomelin	Xanomelin	81	Xanomelin	81	12FEB201	18MAR201	35	70.2	2457
17	CDISCPILO	01-701-11	1181	701	701	Xanomelin	Xanomelin	81	Xanomelin	81	05DEC201	09DEC201	5	54	270
18	CDISCPILO	01-701-11	1188	701	701	Xanomelin	Xanomelin	54	Xanomelin	54	15FEB201	24MAR201	38	54	2052

Figure 6. Screen print of SAS System Viewer 91 when opening a SAS dataset using work around solution.

CONCLUSION

The value of the option EXTENDOBSCOUNTER has been set to “Yes” by default in SAS 9.4, which causes some back-compatibility issues in datasets for earlier version of SAS system, as well as applications like SAS System Viewer. This paper presents a work around solution that enables users to continue using SAS System Viewer even in datasets created in SAS 9.4.

REFERENCES

What’s New in Base SAS 9.4: Details.
http://documentation.sas.com/?cdcId=pgmsascdc&cdcVersion=9.4_3.2&docsetId=basewn&docsetTarget=titlepage.htm&locale=en

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