



A free tool to automate user documentation creation for SAS macro libraries

Renos Kakoullis, Julien Vanwinsberghe, Loizos Nicolaou

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SM05

Summary

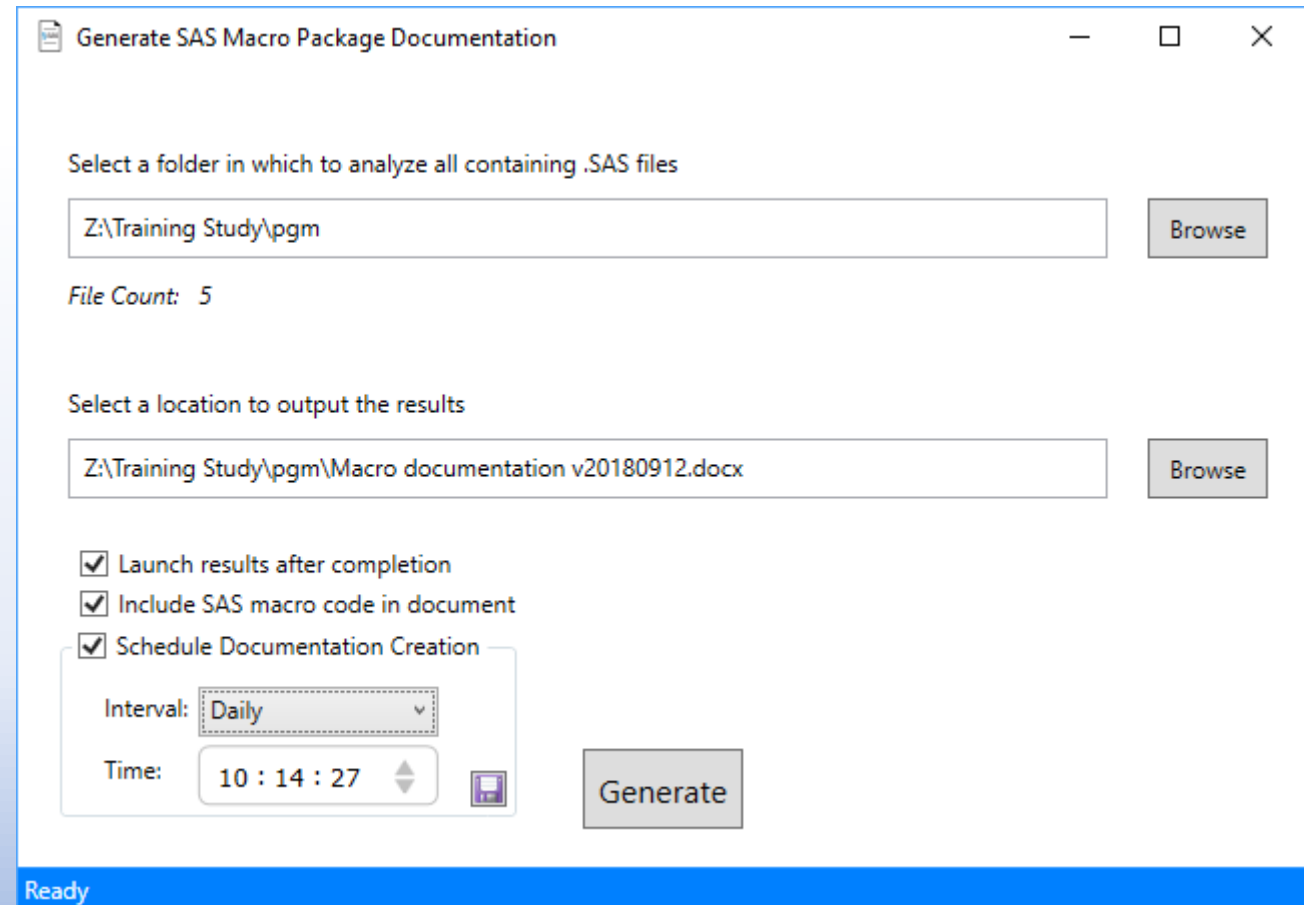
1. What is the SAS Macro Library Documentation Creator?
2. Objectives
3. Quick Tour
4. User Document
5. Accessing the Tool

What is the SAS Macro Library Documentation Creator?

- A free tool to automatically create up-to-date macro package documentation for SAS macro libraries.
- Available as installed software or portable version.

What is the SAS Macro Library Documentation Creator?

- It produces a formatted Word document .docx file with links and bookmarks for easy navigation
- Can include full SAS macro code in annex
- Contains the ability to setup automatic tasks to update documentation on an interval basis



The screenshot shows a Windows-style dialog box titled "Generate SAS Macro Package Documentation". It contains the following elements:

- A text field for "Select a folder in which to analyze all containing .SAS files" with the value "Z:\Training Study\pgm" and a "Browse" button.
- A "File Count: 5" label.
- A text field for "Select a location to output the results" with the value "Z:\Training Study\pgm\Macro documentation v20180912.docx" and a "Browse" button.
- Three checked checkboxes:
 - ☒ Launch results after completion
 - ☒ Include SAS macro code in document
 - ☒ Schedule Documentation Creation
- A sub-section for scheduling with an "Interval:" dropdown set to "Daily" and a "Time:" spinner set to "10 : 14 : 27".
- A "Generate" button.
- A blue status bar at the bottom with the text "Ready".

Objectives

1. Helps inexperienced programmers become familiar with SAS macro libraries
2. Maintains up-to-date documentation for SAS libraries
3. Ease-of-use for creating documentation
4. No need for user intervention for updating documentation

Quick Tour

Interface of the tool

Count of .sas files in library folder

Options to open document directly after completion, and to include SAS program code in document

Option to set up daily/weekly/ monthly document updating

The screenshot shows a Windows-style dialog box titled "Generate SAS Macro Package Documentation". It contains the following elements:

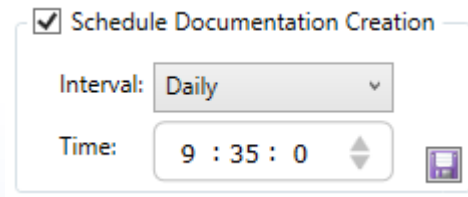
- A text field for "Select a folder in which to analyze all containing .SAS files" with the value "Z:\Training Study\pgm" and a "Browse" button to its right.
- A label "File Count: 5" below the folder selection field.
- A text field for "Select a location to output the results" with the value "Z:\Training Study\pgm\Macro documentation v20180912.docx" and a "Browse" button to its right.
- Three checked checkboxes: "Launch results after completion", "Include SAS macro code in document", and "Schedule Documentation Creation".
- A sub-section for scheduling with an "Interval:" dropdown set to "Daily" and a "Time:" spinner set to "10 : 14 : 27".
- A "Generate" button at the bottom right.
- A blue status bar at the bottom left with the text "Ready".

Browse button to choose SAS library folder

Browse button to choose output location of documentation file

Quick Tour

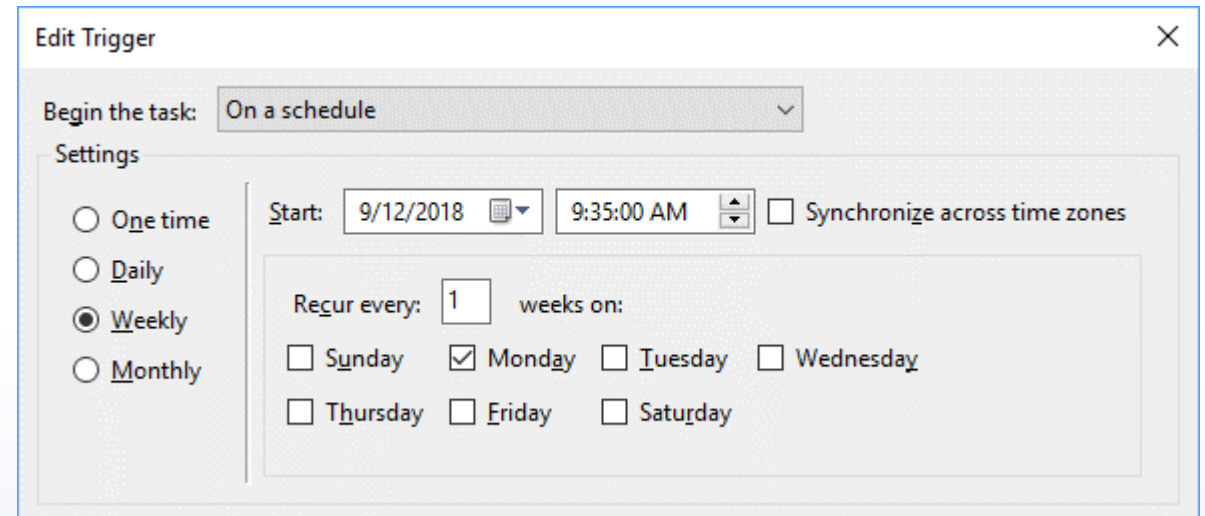
Task Scheduling for Full Automation



☒ Schedule Documentation Creation

Interval: Daily

Time: 9 : 35 : 0



Edit Trigger

Begin the task: On a schedule

Settings

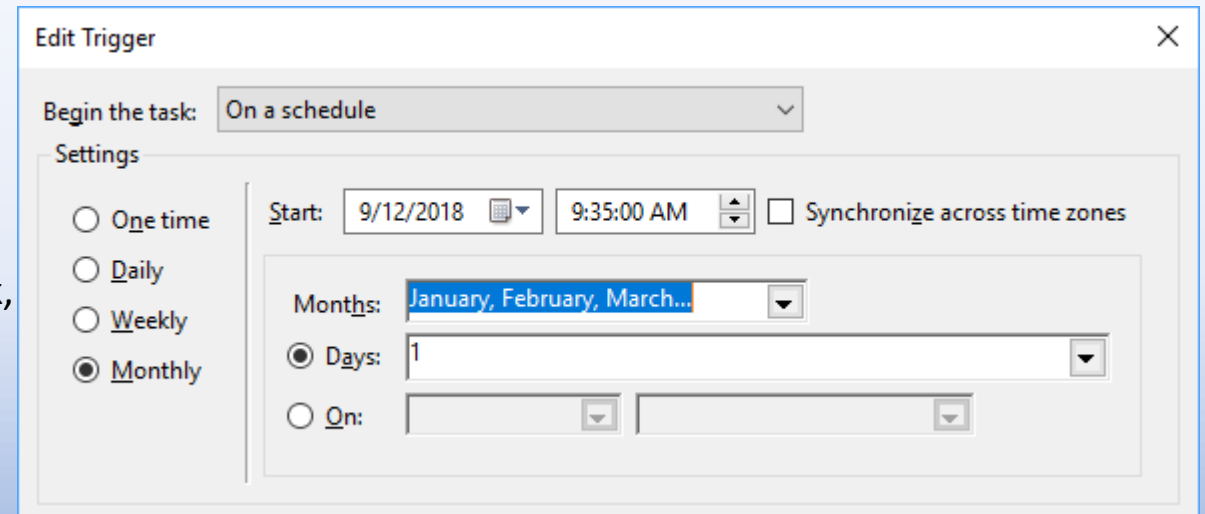
☐ One time
☐ Daily
☒ Weekly
☐ Monthly

Start: 9/12/2018 9:35:00 AM ☐ Synchronize across time zones

Recur every: 1 weeks on:

☐ Sunday ☒ Monday ☐ Tuesday ☐ Wednesday
☐ Thursday ☐ Friday ☐ Saturday

- Allows to update documentation without user intervention
- Choice between daily, weekly, or monthly update
- Choice of time
- Further parameters in Windows Task Scheduler to fine tune task, e.g. specific days of the week, or specific months of the year.



Edit Trigger

Begin the task: On a schedule

Settings

☐ One time
☐ Daily
☐ Weekly
☒ Monthly

Start: 9/12/2018 9:35:00 AM ☐ Synchronize across time zones

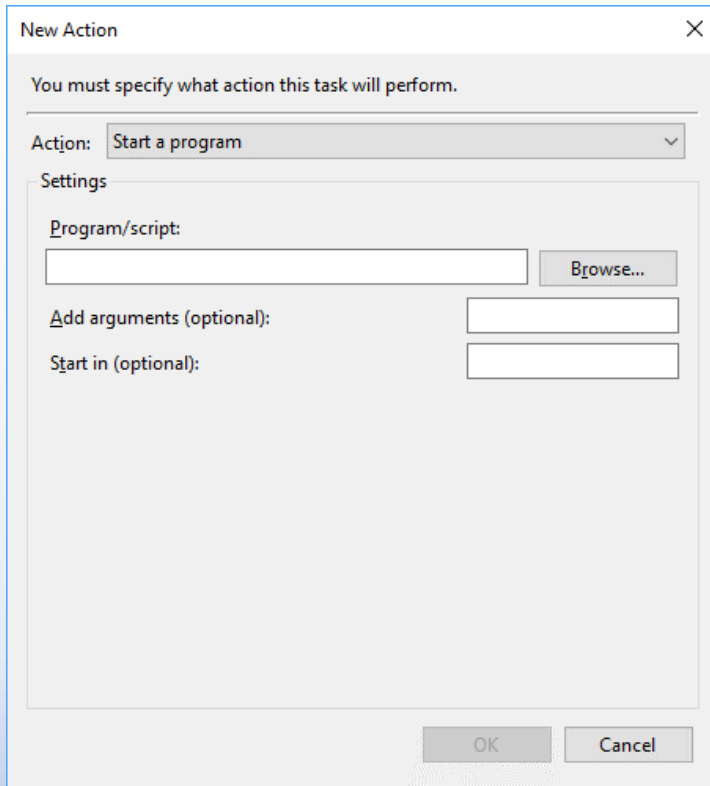
Months: January, February, March...

☒ Days: 1

☐ On:

Quick Tour

Task Scheduling for Full Automation



- If the user would like to schedule multiple SAS macro package documentation updates, they can make use of the “New Action” section in the Windows Task Scheduler (WTS).
- Each action represents a SAS library to update.
- Steps to add Actions:
 1. Launch WTS
 2. Locate UpdateSASDoc task
 3. Right click > Properties
 4. Click Actions tab + New
 5. Fill “Program/script” & “Add arguments” fields. Tip: copy fields data from already existing action to new action and change location parameters for new SAS library

User Document

Document sections

1. Macro Summary
2. Macro package Introduction / User Guide **(optional)**
3. Macro information
4. SAS program code **(optional)**

User Document

Macro summary

Path of SAS library

Table summarizing contents of document. It displays the SAS file name, the included macros, and the last date change of the file. The file name and macro name are clickable hyperlinks which navigate directly to their respective content in the document.

SAS Macro Documentation

Path: Z:\Training Study\pgm

File Name	Macro	Date Changed
m_param.sas	change from baseline change from baseline 2 fix missing param unit	9/1/2016 9:35:40 AM
m_pds.sas	setup pds metadata close pds metadata	9/10/2018 7:25:11 PM
p_mergelist.sas	p_mergelist	9/1/2017 4:13:30 PM
m_suppqual.sas	suppqual	11/13/2015 9:23:30 AM

User Document

Macro package Introduction / User Guide (optional)

Macro User Guide

ClinBAY ADaM macros programmer User Guide

Introduction

This document has for objective to guide ClinBAY ADaM programmers in the process of creating ADaM datasets using the ClinBAY ADaM macros.

Table of Contents

Introduction	1
Key information.....	1

- An optional section can be included in the documentation
- Place a .docx introduction document within the SAS library folder to import it into the documentation
- Appears after summary section

m_suppqual.sas	5/17/2018 1:51 PM	SAS System Program	9 KB
m_trtvars.sas	9/18/2018 12:56 PM	SAS System Program	17 KB
macro_user_guide.docx	2/13/2018 9:37 AM	Microsoft Word Document	149 KB
MergeComVar_ADSL.sas	11/13/2015 9:23 AM	SAS System Program	1 KB
metadata.sas	9/15/2018 9:11 AM	SAS System Program	18 KB
p_mergelist.sas	10/23/2017 9:10 AM	SAS System Program	6 KB

User Document

Macro information

File Name: m_param.sas

[change from baseline](#)

```
%change_from_baseline (in=, out=, byvar=, byvarsq1=, basetype=%nrquote (BASELINE VISIT),  
calcpchg=0)
```

This macro can be used to calculate change from baseline.

Input parameters:

- in: Name of input dataset
- out: Name of output dataset
- byvar: to be used only when computing baseline not by subject and parameter (e.g. by period). Should not contain ANL01FL VISITNUM ADTM variables.
- byvarsq1: comma-separated version of byvar
- basetype: description of the type of baseline value to be defined in the variable BASETYPE (e.g. BASELINE VISIT)
- calcpchg: Set to 1 to calculate percent change from baseline in a variable PCHG

Comments:

The variable ABLFL should be created in a data step before calling this macro, with baseline values flagged with ABLFL='Y'. For

example:

```
data abs12;  
set abs1;  
by ANL01FL USUBJID PARCAT1 PARAMCD VISITNUM;  
length ABLFL $ 1;  
label ABLFL = "Baseline Record Flag";  
if VISITNUM eq 2 and ANL01FL eq 'Y' and first.VISITNUM then ABLFL='Y';  
run;
```

The file name

The macro name. Can be clicked to navigate to full macro code

The macro definition line including parameters

The macro description. This is defined in the SAS program code as a comment placed directly above the macro definition. Input parameter descriptions can also be entered here. See next slide.

User Document

Macro information

```
/* This macro can be used to calculate change from baseline.
```

```
Input parameters:
```

- in: Name of input dataset
- out: Name of output dataset
- byvar: to be used only when computing baseline not by subject and parameter (e.g. by period). Should not contain ANLO1FL VISITNUM ADTM variables.
- byvarsql: comma-separated version of byvar
- basetype: description of the type of baseline value to be defined in the variable BASETYPE (e.g. BASELINE VISIT)
- calcpchg: Set to 1 to calculate percent change from baseline in a variable PCHG
- adam_dataset: Name of ADaM dataset (to be used for PDS metadata)

```
Comments:
```

```
The variable ABLFL should be created in a data step before calling this macro, with baseline values flagged with ABLFL='Y'. For example:
```

```
data abs12;
    set abs1;
    by ANLO1FL USUBJID PARCAT1 PARAMCD VISITNUM;
    length ABLFL $ 1;
    label ABLFL = "Baseline Record Flag";
    if VISITNUM eq 2 and ANLO1FL eq 'Y' and first.VISITNUM then ABLFL='Y';
run;

*/
```

```
%macro change_from_baseline(in=,out=, byvar=, byvarsql=, basetype=%nrquote(BASELINE visit), calcpchg=0, adam_dataset=);
```

User Document

SAS program code section (optional)

```
change_from_baseline
%macro change_from_baseline(in=,out=, byvar=, byvarsq1=, basetype=%nrquote(BASELINE
visit), calcpchg=0);

%local macroname;
%let macroname=change_from_baseline;
%if %dsexists(&in) eq 0 %then %do;
    %put ERROR: &macroname. - The dataset &in does not exist. Macro is aborted.;
    %goto exitmac;
%end;

data abs1; set &in.; run;

%let ab1fl_exists=%varexist(abs1, ABLFL);
%let parcat1_exists=%varexist(abs1, PARCAT1);

%local timevar;
%let timevar=;
%if %varexist(&in.,ADTM) %then %let timevar=ADTM;
%else %if %varexist(&in.,ASTDTM) %then %let timevar=ASTDTM;
%else %put WARNING: No timing variable has been found in the dataset &in.;

%local subjvar;
%if %varexist(&in.,USUBJID) %then %let subjvar=USUBJID;
%else %if %varexist(&in.,SUBJID) %then %let subjvar=SUBJID;
%else %put WARNING: No subject ID variable has been found in the dataset &in.;

%if %length(%trim(%nrquote(&byvar.))) eq 0 %then %do;
    %if &parcat1_exists. %then %do;
```

The macro name

The full macro code

Accessing the Tool

The tool is free to download and use

Installer available at: www.clinbay.tk/macrodoctool/setup.html

Portable version available at: www.clinbay.tk/macrodoctool/portable.html

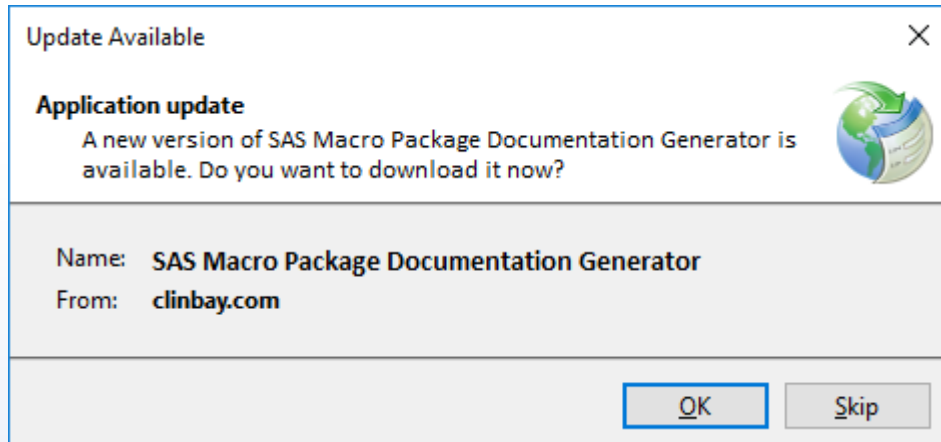
Technical Requirements

- Windows XP or later
- .NET Framework 4.0 Client Profile or newer

Note: SAS and Microsoft Word are not required for functioning of the program

Accessing the Tool

Automatic Updates



- The tool is constantly being updated with new features and bug fixes.
- You can choose to perform an update when one becomes available.
- Internet connection is required for the update.

For technical support contact us at
support@clinbay.com

Thank you for your attention!



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