

Maximizing and Managing Your SAS® Job Run Capabilities When Using Enterprise Guide® or Standalone PC SAS®

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Focus - Enterprise Guide

PC SAS:

- Same Functions
- Different Environment

How To Get More
Out Of Enterprise Guide
I.e., how to get around
its limitations

Agenda

- Why EGBatch was developed
- Accessory tools - purpose & demo
- EGBatch Demo of seven test cases
- Closing
- See paper for references about EG user/usage monitors

All Code in the Paper for Macros

- EGbatch
- TerminateProcess
- ShowMyProcessID
- DisplayAllMySASprocesses

Why EGBatch was developed

- Why is my program taking so long?
- I would like to see my SAS log
- I won't see my log or my in-Enterprise-Guide report until all processing is complete
- I need to shutdown my laptop but my program is still running
- My PC or my EG Session froze up, and I had to reboot or kill the EG session

Why EGBatch was developed

Compelling business case:

- Assurant Health announced new policy: shut down your laptop at end of business day, and lock it in your desk.
- Many users had long-running programs that they wanted or NEEDED to run overnight.

How EGBatch Works

- It runs your program disconnected from EG
- Your SAS log is written to disk
- Any reports or other final output you create must be defined in your program to go to permanent disk.
- This environment is analogous to running a program via the Windows Task Scheduler or an automated scheduler such as AUTOSYS.

The EGBatch User

- To develop the program that will work as required when submitted with EGBatch, you need to be a SAS programmer, not just a point-and-click user of EG
- **Caution:** I have not experimented with filing off the code created by EG point-and-click, and modifying it to make it EGBatch-ready
- Might need to add some things
- Might need to extract some extra EG paraphernalia needed only by EG

Why TerminateProcess was developed

- EG won't respond to my request for termination
- I don't want to try to get SAS Administrator to do it for me
- Even if I ask, I can't expect instant action

Need know SAS Process ID (PID)

- **TerminateProcess** macro needs it
- Run **ShowProcessID** at start of EG
- Your EG Process ID is not that of the program you submit from EG
- You need to be able to distinguish your program's PID from EG's PID if you decide to terminate the program
- Run **DisplayAllMySASprocesses** to see all of yours (EG's PID will be among them)

Using the ShowProcessID Macro

In the Code Window,
submit this statement:

```
%ShowProcessID;
```

Look in the Log Window for feedback.

You will get a message of this form:

```
Process ID for this SAS Enterprise  
Guide session or SAS batch job is 6212
```

Using %DisplayAllMySASprocesses

In the Code Window, submit this:

```
%DisplayAllMySASprocesses;
```

Look in the Log Window for feedback.

You will get a message of this form

(I have removed several columns):

Image Name	PID	Mem Usage	CPU Time	Window Title
===== sas.exe	===== 13600	===== 59,864 K	===== 0:00:04	===== Batch SAS
sas.exe	8060	44,668 K	0:00:00	Batch SAS

From %DisplayAllMySASprocesses

Image Name	PID	Mem Usage	CPU Time	Window Title
=====	=====	=====	=====	=====
sas.exe	13600	59,864 K	0:00:04	Batch SAS
sas.exe	8060	44,668 K	0:00:00	Batch SAS

"Batch SAS" means it's an EG session.

For PC SAS, the Window Title is different.

Columns not shown above are:

Session Name - mine said "Console"

Session# - mine were all 1

Status - mine were all "Running"

User Name - my Windows user name

Using the TerminateProcess Macro

(Must be used in EG session other than the one that submitted the process you want to terminate.)

In the Code Window, submit this statement:
`%TerminateProcess(ProcessID=NNNNNN);`

Look in the Log Window for feedback.

If your request succeeded, you find this:
`SUCCESS: The process with PID 5052 has been terminated.`

To Verify Termination

(Must be used in EG session other than the one that submitted the process you wanted to terminate.)

In the Code Window, resubmit:

```
%DisplayAllMySASprocesses;
```

You should not find the process.

When Using the TerminateProcess Macro

If you try to kill a process that is not yours, you will get this message

(where ABCDEFGH will be your user ID):

Process ID NNNNNN is not for User ID
ABCDEFGH and will not be killed.

If you try to kill a non-existent process,
you will get this message:

Process ID NNNNNN was not found.

```
%EGbatch(exe=  
,CodeFolder= /* mandatory */  
,CodeFile= /* mandatory */  
,LogFolder= /* mandatory */  
,DefaultRptFolder= /* mandatory */  
,RptFolder=  
,RptName=  
,InfraStructureFolder= /* mandatory */  
,FolderForAnomalyHistory= /* mandatory */  
,DateTime=NO /* I prefer YES */  
,Notify= /* mandatory */  
,CCemail=  
,BCCemail=  
,FROMemail= /* mandatory */  
,SupportPerson=  
,SUPPORTemail=);
```

About EGBatch macro parameter exe

Set as a macro default approp to your site.

For me, it is:

exe=

%str(C:\Program Files\SASHome\SASFoundation\9.4\sas.exe)

NOTE: imbedded blank requires %str(...)

About EGbatch RptFolder= & RptName=

Optional, but require references in your application program, as in:

ods listing

```
file("&FolderForRpt.\&RptFileName..txt";
```

where FolderForRpt & RptFileName are programmatically derived at run time from RptFolder & RptName

If you use DateTime=YES, the FINAL report filename will have a datetime suffix, as in:
PROCprintOfSASHELPdotCLASS-D20160518T123644

About EGBatch macro Support parameters

Optional, used in End Status Email:

SupportPerson=

SUPPORTemail=

You can specify a person,
and optionally omit the email address.

If giving email address, name is mandatory.

NOTE: imbedded blank requires %str(...) as in

SupportPerson=&str(LeRoy Bessler)

SAS Log Is Always Accessible

- You can view the SAS log while your program is running
- Do not try to modify it
- If you use the `DateTime=YES` option, every time you run the same `CodeFile` you will get a separate log

In a multi-step program, any complete report is accessible

- If you use the `DateTime=YES` option and the `RptFolder` & `RptName` options, every time you run the same `CodeFile` you will get a separate report file

Minimal Way To Use It

- Macro source code provided has no defaults
- Revise it to define YOUR defaults
- One default (exe=) must be specific to YOUR SAS environment
- With enough defaulted:
`%EGbatch(CodeFile=YourSASprogramName);`
- If multiple program libraries (folders), need:
`CodeFolder=PathToFolder`

Monitoring Progress

- When you launch your program, you get a Job Started email
- When your program ends, you get a Job Ended email
- After SAS log for your Job Run is parsed, you get a Job End Status email

Job End Status Email

- Two possible SUBJECT lines:
 - SAS Process 123 Ended with
No Unexpected Messages in SAS Log
 - SAS Process 123 Ended with
Unexpected Messages in SAS Log
- If unexpected messages, you get
 - Count of messages
 - Disk Location of Anomalies Summary Report
- In either case, get disk Location of SAS Log

Test Case 1.

PROC PRINT Runs Perfectly

CodeFile (abbreviated)

```
ods listing  
file("&FolderForRpt.\&RptFileName..txt";  
title1 "Listing";  
title2 "From Program  
&FolderForCode.\&CodeFileName";  
title3 "Run by Process &sysjobid";  
proc print data=sashelp.class; run;  
ods listing close;
```

CodeFile=PROCprintRunsPerfectly

The file extension for CodeFile must be .sas

FROMemail=Le_Roy_Bessler@wi.rr.com

This email address can be ANY valid email address that belongs to anyone. Spoofing could get you in trouble, however.

Note (which I did not investigate yet):

When I used my wife's email address for FROMemail, but mine for Sender, the inbound email showed hers as From, with no trace of Sender. I don't recall function of Sender.







```
%EGbatch(  
CodeFolder=D:\!EGbatch\PgmLib  
,CodeFile=PROCprintRunsPerfectly  
,LogFolder=D:\!EGbatch\LogLib  
,DefaultRptFolder=D:\!EGbatch\PrintLib  
,RptFolder=D:\!EGbatch\RptLib  
,RptName=PROCprintOfSASHELPdotCLASS  
,InfraStructureFolder=  
                D:\!EGbatch\InfraStructure  
,FolderForAnomalyHistory=D:\!EGbatch\AnomHist  
,DateTime=YES  
,Notify='Bessler@wi.rr.com'  
,FROMemail=Le_Roy_Bessler@wi.rr.com  
,SupportPerson=%str(LeRoy Bessler)  
,SUPPORTemail=Le_Roy_Bessler@wi.rr.com);
```

Email InBox for Notified Address

The screenshot shows the Microsoft Outlook interface for the account 'Inbox - Bessler@wi.rr.com'. The ribbon includes 'File', 'Home', 'Send / Receive', 'Folder', 'View', 'Norton', and 'Adobe PDF'. The 'Home' ribbon is active, showing various actions like 'New E-mail', 'Clean Up', 'Delete', 'Reply', 'Forward', 'Move', 'Unread/Read', 'Find a Contact', and 'Filter E-mail'. The left sidebar shows the 'Favorites' pane with 'Inbox (1643)', 'Sent Items', and 'Deleted Items (30)'. The main pane displays a search bar and a list of three emails from 'Le_Roy_Bessler@wi.rr.com' received on 'Wed 6/29/2016 4:05 AM'. The status bar at the bottom indicates 'Items: 2,009' and 'Unread: 764'.

From	Subject	Received
Le_Roy_Bessler@wi.rr.com	SAS Process 11540 Ended with No Unexpected Messages in SAS Log	Wed 6/29/2016 4:05 AM
Le_Roy_Bessler@wi.rr.com	SAS Process 11540 Ended	Wed 6/29/2016 4:05 AM
Le_Roy_Bessler@wi.rr.com	SAS Process 11540 Started	Wed 6/29/2016 4:05 AM

Email InBox for Notified Address

		From	Subject	Received 
		Le_Roy_Bessler@wi.rr.com	SAS Process 11540 Ended with No Unexpected Messages in SAS Log	Wed 6/29/2016 4:05 AM
		Le_Roy_Bessler@wi.rr.com	SAS Process 11540 Ended	Wed 6/29/2016 4:05 AM
		Le_Roy_Bessler@wi.rr.com	SAS Process 11540 Started	Wed 6/29/2016 4:05 AM

Started Email

The screenshot shows an email client window with the title "SAS Process 11540 Started - Message (Plain Text)". The interface includes a ribbon with tabs for "File", "Message", and "Adobe PDF". The "Message" tab is active, displaying various actions such as "Ignore", "Delete", "Reply", "Reply All", "Forward", and "More". There are also sections for "Quick Steps", "Move", "Tags", "Editing", and "Zoom".

The email header information is as follows:

- From: Le_Roy_Bessler@wi.rr.com
- To: Bessler@wi.rr.com
- Cc:
- Subject: SAS Process 11540 Started
- Sent: Wed 6/29/2016 4:04 AM

The main body of the email contains the following text:

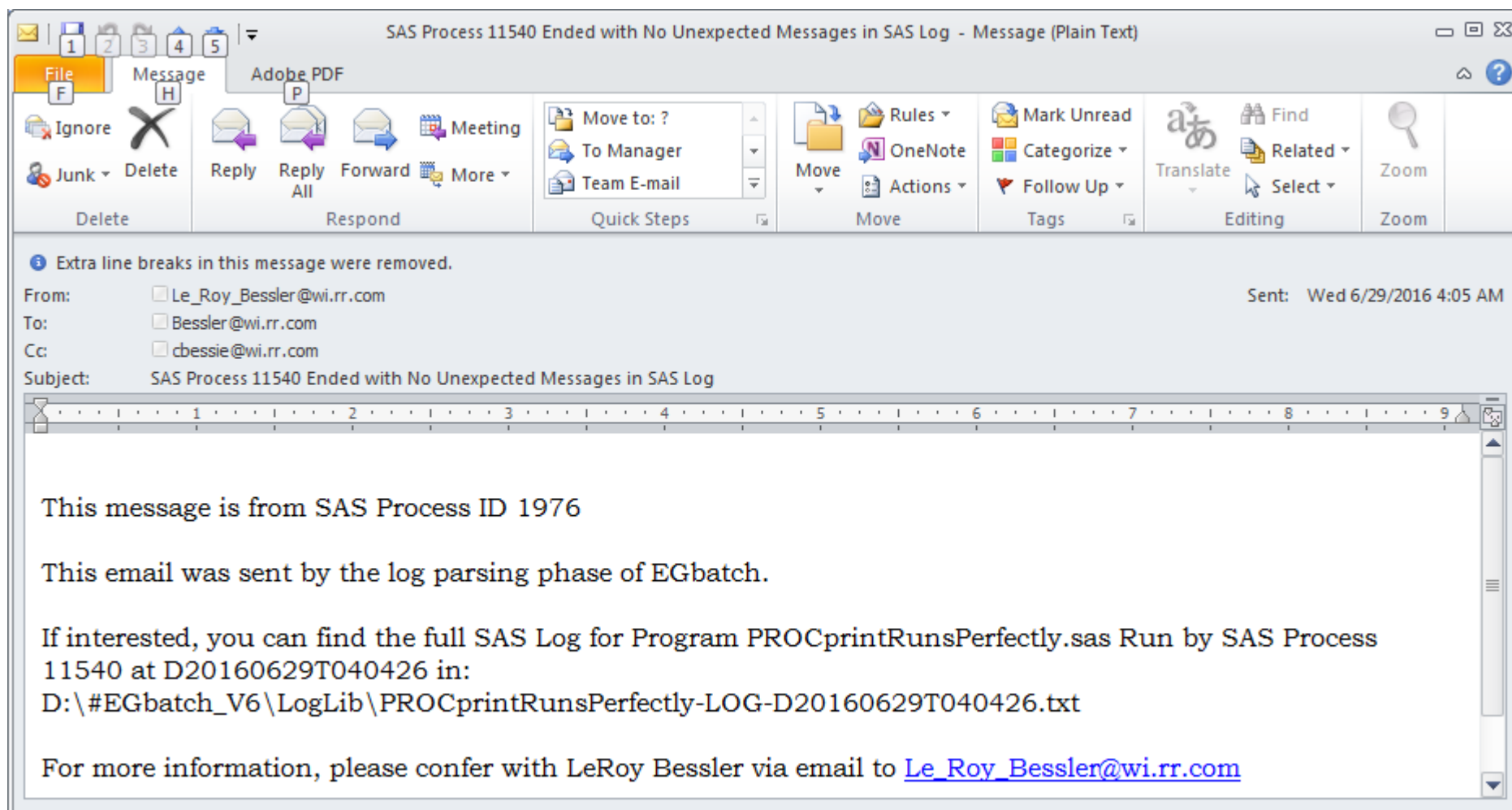
```
For Code: D:\#EGbatch_V6\PgmLib\PROCprintRunsPerfectly.sas
```

Ended Email

The screenshot shows an email client window with the following details:

- Title Bar:** SAS Process 11540 Ended - Message (Plain Text)
- Toolbar:** Includes icons for File, Message, Adobe PDF, Ignore, Delete, Reply, Reply All, Forward, Meeting, More, Move, Actions, Mark Unread, Categorize, Follow Up, Translate, Find, Related, Select, and Zoom.
- Header:**
 - From:** Le_Roy_Bessler@wi.rr.com
 - To:** Bessler@wi.rr.com
 - Cc:**
 - Subject:** SAS Process 11540 Ended
 - Sent:** Wed 6/29/2016 4:04 AM
- Body:** For Code: D:\#EGbatch_V6\PgmLib\PROCprintRunsPerfectly.sas

End Status Email



The screenshot shows an email client window with the following details:

- Title Bar:** SAS Process 11540 Ended with No Unexpected Messages in SAS Log - Message (Plain Text)
- Toolbar:** Includes icons for File, Message, Adobe PDF, Ignore, Delete, Reply, Reply All, Forward, Meeting, More, Move to, To Manager, Team E-mail, Quick Steps, Move, Rules, OneNote, Actions, Mark Unread, Categorize, Follow Up, Tags, Translate, Find, Related, Select, and Zoom.
- Message Header:**
 - From: Le_Roy_Bessler@wi.rr.com
 - To: Bessler@wi.rr.com
 - Cc: cbessie@wi.rr.com
 - Subject: SAS Process 11540 Ended with No Unexpected Messages in SAS Log
 - Sent: Wed 6/29/2016 4:05 AM
- Message Body:**

Extra line breaks in this message were removed.

This message is from SAS Process ID 1976

This email was sent by the log parsing phase of EGbatch.

If interested, you can find the full SAS Log for Program PROCprintRunsPerfectly.sas Run by SAS Process 11540 at D20160629T040426 in:
D:\#EGbatch_V6\LogLib\PROCprintRunsPerfectly-LOG-D20160629T040426.txt

For more information, please confer with LeRoy Bessler via email to Le_Roy_Bessler@wi.rr.com

End Status Email

This message is from SAS Process ID 1976

This email was sent by the log parsing phase of EGbatch.

If interested, you can find the full SAS Log for Program PROCprintRunsPerfectly.sas Run by SAS Process 11540 at D20160629T040426 in:

D:\#EGbatch_V6\LogLib\PROCprintRunsPerfectly-LOG-D20160629T040426.txt

For more information, please confer with LeRoy Bessler via email to Le_Roy_Bessler@wi.rr.com

Report Result (stored in RptLib folder)

```
PROCprintOfSASHELPdotCLASS-D20160629T040426 - Notepad
File Edit Format View Help

Listing

                                04:04 Wednesday, June 29, 2016    1
From Program D:\#EGbatch_V6\PgmLib\PROCprintRunsPerfectly.sas
Run by Process 11540
Using OPTIONS nocenter linesize=max pagesize=max
This PROC PRINT runs perfectly

Obs      Name      Sex      Age      Height      Weight
  1      Alfred      M        14       69.0       112.5
  2      Alice      F        13       56.5       84.0
  3      Barbara      F        13       65.3       98.0
  4      Carol      F        14       62.8       102.5
  5      Henry      M        14       63.5       102.5
  6      James      M        12       57.3       83.0
  7      Jane      F        12       59.8       84.5
  8      Janet      F        15       62.5       112.5
  9      Jeffrey      M        13       62.5       84.0
 10      John      M        12       59.0       99.5
 11      Joyce      F        11       51.3       50.5
 12      Judy      F        14       64.3       90.0
 13      Louise      F        12       56.3       77.0
 14      Mary      F        15       66.5       112.0
 15      Philip      M        16       72.0       150.0
 16      Robert      M        12       64.8       128.0
 17      Ronald      M        15       67.0       133.0
 18      Thomas      M        11       57.5       85.0
 19      William      M        15       66.5       112.0
```

Report FileName with DateTime=YES



PROCprintOfSASHELPdotCLASS-D20160629T040426 - Notepad

File Edit Format View Help

Listing

04:04 Wednesday, June 29, 2016

From Program D:\#EGbatch_V6\PgmLib\PROCprintRunsI

Run by Process 11540

Using OPTIONS nocenter linesize=max pagesize=max

This PROC PRINT runs perfectly

Obs	Name	Sex	Age	Height	Weight
-----	------	-----	-----	--------	--------

Test Case 2.




PROC PRINT Runs

With A Bad LABEL Statement

CodeFile (abbreviated)

```
ods listing  
file="&FolderForRpt.\&RptFileName..txt";  
title1 "Listing";  
title2 "From Program  
&FolderForCode.\&CodeFileName";  
title3 "Run by Process &sysjobid";  
proc print data=sashelp.class;  
label Gender='Sex'; /* Gender variable  
is not present in SASHELP.CLASS */  
run;  
ods listing close;
```


Email InBox

	From	Subject	Received
	Le_Roy_Bessler@wi.rr.com	SAS Process 8396 Ended with Unexpected Messages in SAS Log	Wed 6/29/2016 4:23 AM
	Le_Roy_Bessler@wi.rr.com	SAS Process 8396 Started	Wed 6/29/2016 4:22 AM
	Le_Roy_Bessler@wi.rr.com	SAS Process 8396 Ended	Wed 6/29/2016 4:22 AM

End Status Email:

Unexpected Messages in SAS Log

Anomalies Summary: WARNING Message Found

Summary Of Anomalies for Program PROCprintBadLabelStatement.sas Run by SAS Process 8396 at D201 - Internet Explorer

D:\#EGbatch_V6/AnomHi

Summary Of Anomalies for P...

File Edit View Favorites Tools Help

Distinct Anomalies in SAS Log for Program PROCprintBadLabelStatement.sas Run by SAS Process 8396 at D20160629T042217

LogLine
WARNING: Variable GENDER not found in data set SASHELP.CLASS.

Counts of Anomalies By Type in SAS Log for Program PROCprintBadLabelStatement.sas Run by SAS Process 8396 at D20160629T042217

The FREQ Procedure

Anomaly	Frequency	Cumulative Frequency
WARNING	1	1

100%

Report Result is the same as for Test Case 1

Test Case 3.

PROC PRINT **Fails**

Due To Bad FORMAT Statement

CodeFile (abbreviated)

```
ods listing
file("&FolderForRpt.\&RptFileName..txt";
title1 "Listing";
title2 "From Program
&FolderForCode.\&CodeFileName";
title3 "Run by Process &sysjobid";
proc print data=sashelp.class;
format Sex 1.; /* The Sex variable
                 is character, M or F */
run;
ods listing close;
```

Email Messages Like Those of Test Case 2

Anomalies Summary: ERROR Message Found

Summary Of Anomalies for Program PROCprintBadFormatStatement.sas Run by SAS Process 12128 at D2 - Internet Explorer

D:\#EGbatch_V6/AnomHi

Summary Of Anomalies for P...

File Edit View Favorites Tools Help

Distinct Anomalies in SAS Log for Program PROCprintBadFormatStatement.sas Run by SAS Process 12128 at D20160629T043119

LogLine
ERROR: You are trying to use the numeric format F with the character variable Sex in data set SASHELP.CLASS.

Counts of Anomalies By Type in SAS Log for Program PROCprintBadFormatStatement.sas Run by SAS Process 12128 at D20160629T043119

The FREQ Procedure

Anomaly	Frequency	Cumulative Frequency
ERROR	1	1

100%

No Report: PROC PRINT failed with ERROR

Test Case 4.
PROC PRINT Fails
Due To Bad VAR Statement

CodeFile (abbreviated)

```
ods listing
file="&FolderForRpt.\&RptFileName..txt";
title1 "Listing";
title2 "From Program
&FolderForCode.\&CodeFileName";
title3 "Run by Process &sysjobid";
proc print data=sashelp.class;
var Name Gender Age Height Weight;
/* Sex, not Gender, in SASHELP.CLASS */
run;
ods listing close;
```

Email Messages Like Those of Test Case 2

Anomalies Summary: ERROR Message Found

Summary Of Anomalies for Program PROCprintBadVarStatement.sas Run by SAS Process 10832 at D2016 - Internet Explorer

D:\#EGbatch_V6/AnomHi

Summary Of Anomalies for P...

File Edit View Favorites Tools Help

Distinct Anomalies in SAS Log for Program PROCprintBadVarStatement.sas Run by SAS Process 10832 at D20160629T043719

LogLine
ERROR: Variable GENDER not found.

Counts of Anomalies By Type in SAS Log for Program PROCprintBadVarStatement.sas Run by SAS Process 10832 at D20160629T043719

The FREQ Procedure

Anomaly	Frequency	Cumulative Frequency
ERROR	1	1

100%

No Report: PROC PRINT failed with ERROR

Test Case 5.
Probably Bad Merge

CodeFile - See paper for details

```
/* prepares fake two fake data sets,  
   each with non-unique keys */
```



```
%EGbatch(  
CodeFile=ProbablyBadMerge  
< everything else the same as Test Case 1,  
  but no RptFolder and no RptName >  
);
```

Email Messages Like Those of Test Case 2

This code produces only a special NOTE,
no WARNING, no ERROR

Anomalies Summary: Special NOTE Found

merge non-unique keys in both files is not normal

Summary Of Anomalies for Program ProbablyBadMerge.sas Run by SAS Process 10412 at D20160629T044 - Internet Explorer

D:\#EGbatch_V6/AnomHi

Summary Of Anomalies for P...

File Edit View Favorites Tools Help

Distinct Anomalies in SAS Log for Program ProbablyBadMerge.sas Run by SAS Process 10412 at D20160629T044121

LogLine
NOTE: MERGE statement has more than one data set with repeats of BY values.

Counts of Anomalies By Type in SAS Log for Program ProbablyBadMerge.sas Run by SAS Process 10412 at D20160629T044121

The FREQ Procedure

Anomaly	Frequency	Cumulative Frequency
non-distinct keys both sides of merge?	1	1

100%

Next Two Test Cases

Could be harmless code leftovers
that should have been deleted

OR

Could be leaving something out
due to a typo

Next Two Test Cases

In both cases,
an output data set IS created

Test Case 6.

DATA Step

with variable uninitialized

```
CodeFile=DATAstepWithVarUninitialized
data work.ClassButExtraVarUninitialized;
set sashelp.class;
label City="Student's City";
/* City not present in SASHELP.CLASS */
run;
```


Email Messages Like Those of Test Case 2

Anomalies Summary: Special NOTE Found

Summary Of Anomalies for Program DATAstepWithVarUninitialized.sas Run by SAS Process 10588 at D - Internet Explorer

D:\#EGbatch_V6/AnomHi

Summary Of Anomalies for P...

File Edit View Favorites Tools Help

Distinct Anomalies in SAS Log for Program DATAstepWithVarUninitialized.sas Run by SAS Process 10588 at D20160629T044922

LogLine
NOTE: Variable City is uninitialized.

Counts of Anomalies By Type in SAS Log for Program DATAstepWithVarUninitialized.sas Run by SAS Process 10588 at D20160629T044922

The FREQ Procedure

Anomaly	Frequency	Cumulative Frequency
var(s) uninitialized	1	1

100%

Test Case 7.

DATA Step

with variable not referenced

```
CodeFile=DATAstepWithVarNeverReferenced
data work.ClassButNonVarCannotBeKept
(keep=Name Sex Age Height Weight School);
/* School not present in SASHELP.CLASS */
set sashelp.class;
run;
```

Email Messages Like Those of Test Case 2

Anomalies Summary: WARNING Message

Summary Of Anomalies for Program DATAstepWithVarNeverReferenced.sas Run by SAS Process 10068 at - Internet Explorer

D:\#EGbatch_V6/AnomHi

Summary Of Anomalies for P...

File Edit View Favorites Tools Help

Distinct Anomalies in SAS Log for Program DATAstepWithVarNeverReferenced.sas Run by SAS Process 10068 at D20160629T045148

LogLine
WARNING: The variable School in the DROP, KEEP, or RENAME list has never been referenced.

Counts of Anomalies By Type in SAS Log for Program DATAstepWithVarNeverReferenced.sas Run by SAS Process 10068 at D20160629T045148

The FREQ Procedure

Anomaly	Frequency	Cumulative Frequency
some variable was never referenced	1	1

100%

Anomaly Summary Design

- List of distinct messages
- Count of each message type found
- Use full SAS log saved on disk for deep dive to understand context
- No report to list all of the messages

Test Case 8.
Minimal Assignment
of Macro Parameters

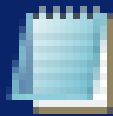
CodeFile=Hello_SAS_Users

```
data work.ToPROCprint;
length line $ 6;
line = 'Hello,'; output;
line = 'SAS';    output;
line = 'Users!'; output;
run;
title;
options nocenter nodate nonumber;
proc print data=work.ToPROCprint noobs
label;
label line='Greeting';
run;
```

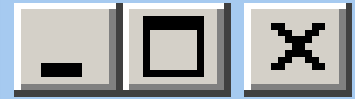
Macro Invocation:

```
%EGbatch(  
CodeFolder=D:\#EGbatch_V6\PgmLib  
,CodeFile=Hello_SAS_Users  
,LogFolder=D:\#EGbatch_V6\LogLib  
,DefaultRptFolder=D:\#EGbatch_V6\PrintLib  
    /* essential for Test Case 8 */  
,InfrastructureFolder=  
    D:\#EGbatch_V6\Infrastructure  
,FolderForAnomalyHistory=  
    D:\#EGbatch_V6\AnomHist  
,Notify='Bessler@wi.rr.com'  
,FROMemail=Le_Roy_Bessler@wi.rr.com  
);
```

Report Result (stored in DefaultRptFolder)



Hello_SAS_Users-PRINT - Notepad



File Edit Format View Help

Greeting

Hello,
SAS
Users!



BAT File Created by EGBatch

```
"C:\Program
Files\SASHome\SASFoundation\9.4\sas.exe"
-sysin
"D:\#EGBatch_V6\InfraStructure\Hello_SAS_Users-
RUN.sas"
-work "C:\Users\Dr LeRoy
Bessler\AppData\Local\Temp\SEG1364\SAS
Temporary Files"
-log "D:\#EGBatch_V6\LogLib\Hello_SAS_Users-
LOG.txt"
-print
"D:\#EGBatch_V6\PrintLib\Hello_SAS_Users-
PRINT.txt"
-unbuflog -nosplash -nologo -icon
EXIT
```

-unbuflog

- Normally, SAS buffers log content, and does not write lines to disk as soon as possible
- UNBUFLOG says: "Don't buffer the log, write content as soon as you know what it is."
- If you want to monitor program progress by inspecting the log, you want to see the **current status**
- Log will show start of DATA or PROC step
- Further messages **might not** appear until END of DATA step or PROC step

What we saw, What can be

- I built the EGBatch log parser to find
 - ERROR & WARNING messages
 - NOTEs that I regard indicative of trouble or useless code left in due to oversight
- You can customize the log parser to capture anything that you regard as important
- You can remove the RptFolder & RptName features if you prefer

Your questions, comments, and suggestions
are always welcome:

LeRoy Bessler PhD

Bessler Consulting and Research

Strong Smart Systems™

Visual Data Insights™

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