

# SAS<sup>®</sup> GLOBAL FORUM 2019

USERS PROGRAM

APRIL 28 - MAY 1, 2019 | DALLAS, TX



# Batch File Exchange between SAS and Excel---the Magic of Call Execute

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## Abstract

Frequently we need to transfer data between SAS and MS Excel. Either SAS libname engine or PROC IMPORT/EXPORT by default could only transfer single files between SAS and Excel. In the case of multiple files, it will be too tedious to transfer files one by one. SAS CALL EXECUTE is a data step call routine with two magic features: 1) mix SAS data step and proc procedures and 2) pass SAS data step values to SAS procedures or into a parameter of a macro. These two features make it the best candidate for dynamic data processing and repeated tasks like batch file exchange between SAS and Excel, and allow a programmer/analyst to write compact and high efficient codes. This poster will focus on solutions of batch file exchange (import from or export to multiple Excel files or multiple data sheets in one Excel file by either SAS libname engine or PROC IMPORT/EXPORT) between SAS and Excel through SAS CALL EXECUTE.

## Introduction

SAS libname engine and PROC IMPORT/EXPORT had made it very convenient to transfer back and forth single files between them. However, a lot of times, multiple files need to be transferred in batch between them. SAS CALL EXECUTE is a data step call routine. Two of its most important features are its abilities to 1) mix SAS data step and proc steps and 2) pass SAS data step values to SAS procedures or into a parameter of a macro. These are essential for dynamic data processing and repeated task like batch file exchange, and also allow for compact and high efficient codes.

### SAS Libname and Proc Import/Export

1. Three SAS Libname engines with different Limitations and characteristics

- Excel
- Pcfles
- Xlsx:

2. Proc import/Export

- DBMS=EXCEL for 32bit SAS
- DBMS=XLS/XLSX for 64 bit SAS

### Call execute routine

A powerful tool to stack up many statements and automate tasks. An example:

```
data _null_;
length dsn $30;
do dsn='class','company','cars';
call execute
('proc print data=sashelp.' || dsn || ' (obs=10) noobs;
run;');
end;
run;
```

## Methods

### Import Multiple Files

#### IMPORT MULTIPLE EXCEL SHEETS

```
libname myexcel xlsx 'H:\NR_607\nr607_final.xlsx';

data _null_;
set sashelp.vmember(where=(libname='MYEXCEL'));
call execute
('data work.' || dequote(memname) || '|';
set myexcel.' || quote(dequote(memname)) || '|';
run;');
run;
```

#### IMPORT MULTIPLE EXCEL FILES

```
filename dirlist pipe 'dir "H:\Personal\sas exercises\test\" /b';
data files;
length fname $20;
infile dirlist trunccover length= reclen;
input fname $varying20. reclen;
fname=scan(fname,1,' ');
run;
data _null_;
set files;
call execute('proc import datafile="H:\Personal\sas
exercises\Test\' || strip(fname) || '|'.xlsx"
out=work.' || strip(fname) || '|
dbms=xlsx replace;
run;');
run;
```

### Export Multiple Files

#### EXPORT MULTIPLE FILES INTO DIFFERENT EXCEL FILES

```
%let mypath=H:\Personal\sas exercises\test2;
data _null_;
set sashelp.vmember(where=(libname='WORK' and memtype="DATA"));
call execute('proc export data=' || memname || '|
outfile="&mypath\combined.xlsx"
dbms=xlsx replace;
sheet=' || memname || '|';
run;');
run;
```

#### EXPORT MULTIPLE FILES INTO DIFFERENT EXCEL FILES

```
%let mypath=H:\Personal\sas exercises\test2;
data _null_;
length dsn $30;
do dsn='class','company','cars';
call execute
('proc export data=sashelp.' || dsn || '|
outfile="&mypath\' || strip(dsn) || '|'.xlsx"
dbms=xlsx replace;
run;');
end;
run;
```

## Conclusion

The magic features of SAS CALL EXECUTE make it a powerful and flexible tool for dynamic data processing and repeated tasks like batch file exchange between SAS and Excel using either SAS libname engine or PROC IMPORT/EXPORT

## Reference

SAS Tutorials: Importing Excel Files into SAS. Available at <https://libguides.library.kent.edu/SAS/ImportData>

Call execute: how and why. Available at <http://www2.sas.com/proceedings/sugi22/CODERS/PAPER70.PDF>

CALL EXECUTE: A Hidden Treasure and Powerful Function. Available at <https://www.lexjansen.com/pharmasug/2008/po/PO11.pdf>

MAGIC WITH CALL EXECUTE. Available at <http://www2.sas.com/proceedings/sugi22/CODERS/PAPER86.PDF>

Comparing SAS LIBNAME Engines for Microsoft Excel Data. Available at <https://documentation.sas.com/?docsetId=acpcref&docsetTarget=p05hxa7xihwolmn1sdjpfui9nosc.htm&docsetVersion=9.4&locale=en>

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