



PowerSAS - SAS Interactive Line Mode (NODMS) on Microsoft Windows using PowerShell

PHUSE EU Connect 2021 – SD06

Stuart.Malcolm@Veramed.co.uk

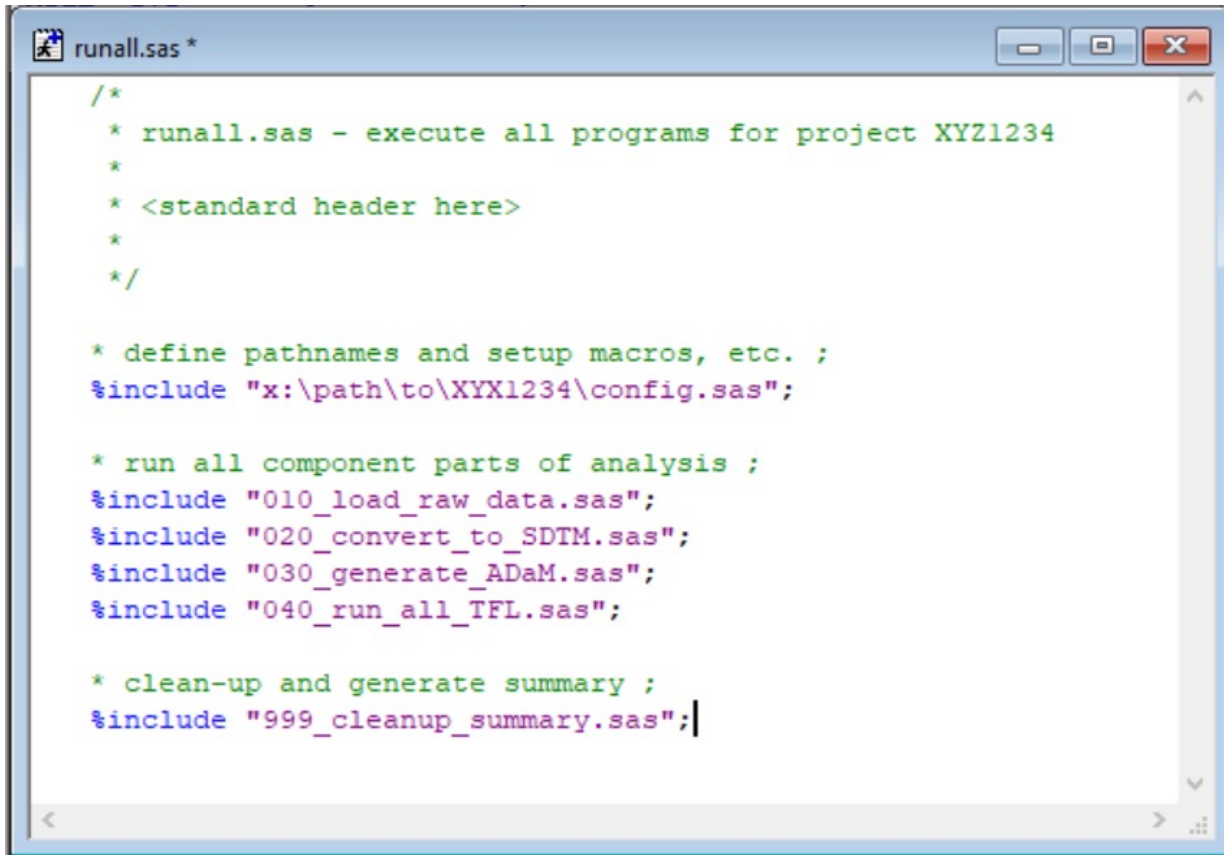
”

**My system is built from
multiple inter-dependent
programs which are run
locally and remotely.**

**How do I glue it all
together?**

You

One SAS program to rule them all



```
/*
 * runall.sas - execute all programs for project XYZ1234
 *
 * <standard header here>
 *
 */

* define pathnames and setup macros, etc. ;
%include "x:\path\to\XYZ1234\config.sas";

* run all component parts of analysis ;
%include "010_load_raw_data.sas";
%include "020_convert_to_SDTM.sas";
%include "030_generate_ADaM.sas";
%include "040_run_all_TFL.sas";

* clean-up and generate summary ;
%include "999_cleanup_summary.sas";
```

- Runall.sas with %include
- Hardwired paths headache
- PROC PRINTTO
- Did it run ok?
- Fails at step 1 but keeps going!!
- Pass QC then edit for Production

.BAT Command Shell

```

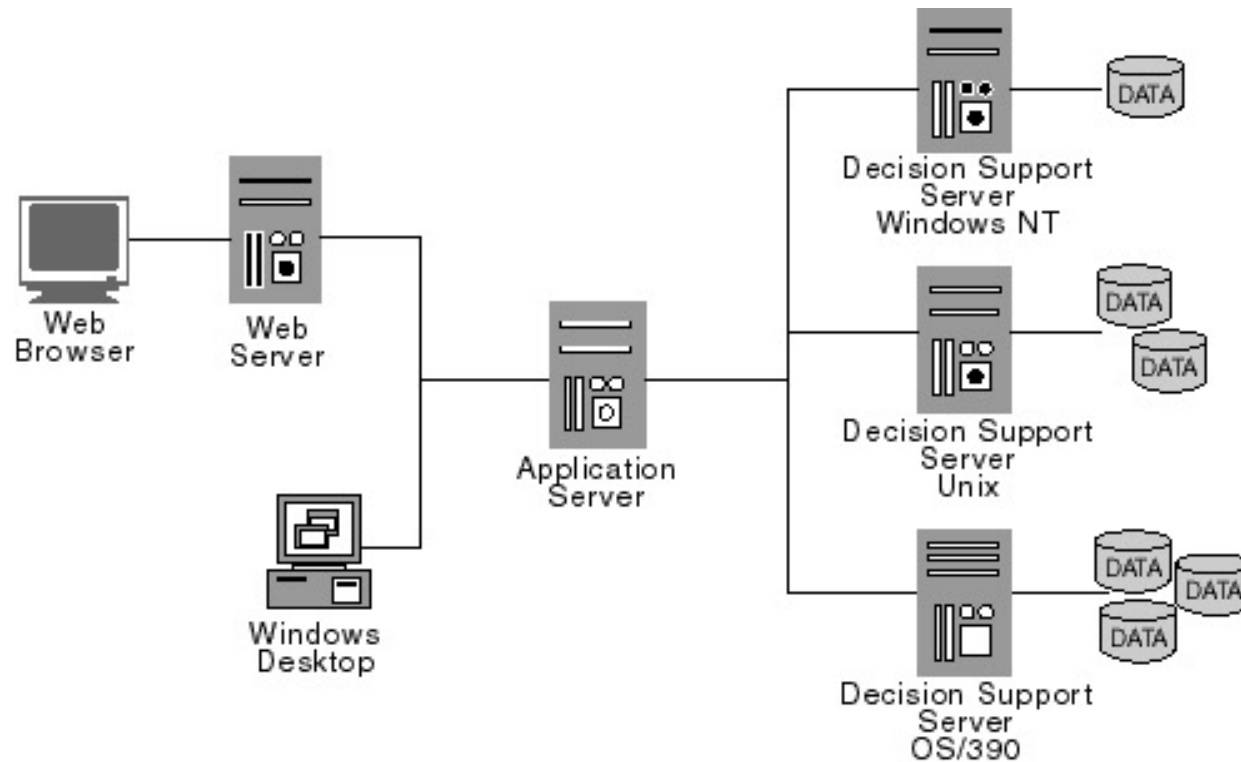
run_all.cmd C:\Users\StuartMalcolm\Projects\CAPA026_Compare_Lib\prod\test\run_all.cmd
59
60 ::- define the name of the sas program to run, this does not have
61 ::- a path (assume
62 ::- to be .sas so
63 SET SASPGM=run_all
64
65 ::- define the SAS
66 SET SASCMD="C:\Pro
67 SET SASOPT=-no$syn
68 SET SASOUT=-log "s
69 SET SASINT=-initst
70 ::- comment out ne
71 SET SASINT=
72
73 ::- before startin
74 ::- this file is g
75 ::- top-level summ
76 ::- after SASUnit
77 del /F %PWD_ROOT%\
78
79 echo "Starting SAS ..."
80 %SASCMD% %SASOUT% %SASOPT% %SASINT%
81
82 if %ERRORLEVEL%==0 goto normalexit
83 @echo.
84 @echo Exit code: %ERRORLEVEL%
85 @echo.
86 if %ERRORLEVEL%==1 @echo SAS ended with warnings. Review run_all.log for details.
87 if %ERRORLEVEL%==2 @echo SAS ended with errors! Check run_all.log for details!
88 @echo.
89 goto quit
90 :normalexit
  
```

- Runall written in DOS!



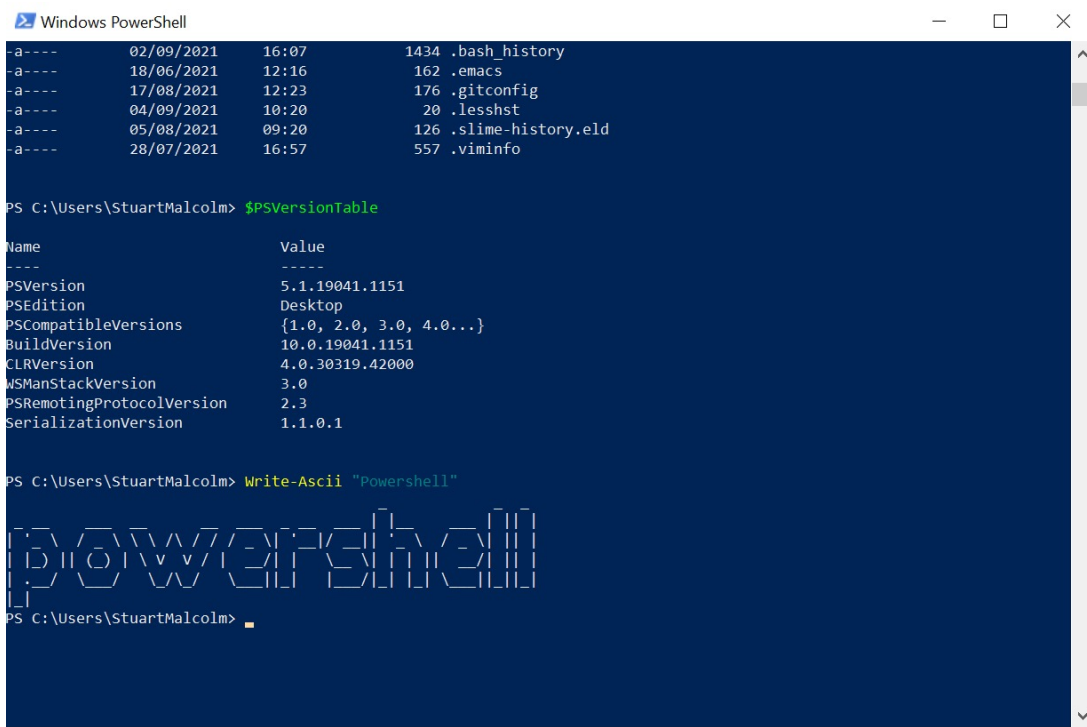
- Hardwired to this machine
- Linear one prog after another
- SAS Popup Window 'feature'

Introducing SAS Integration Technologies



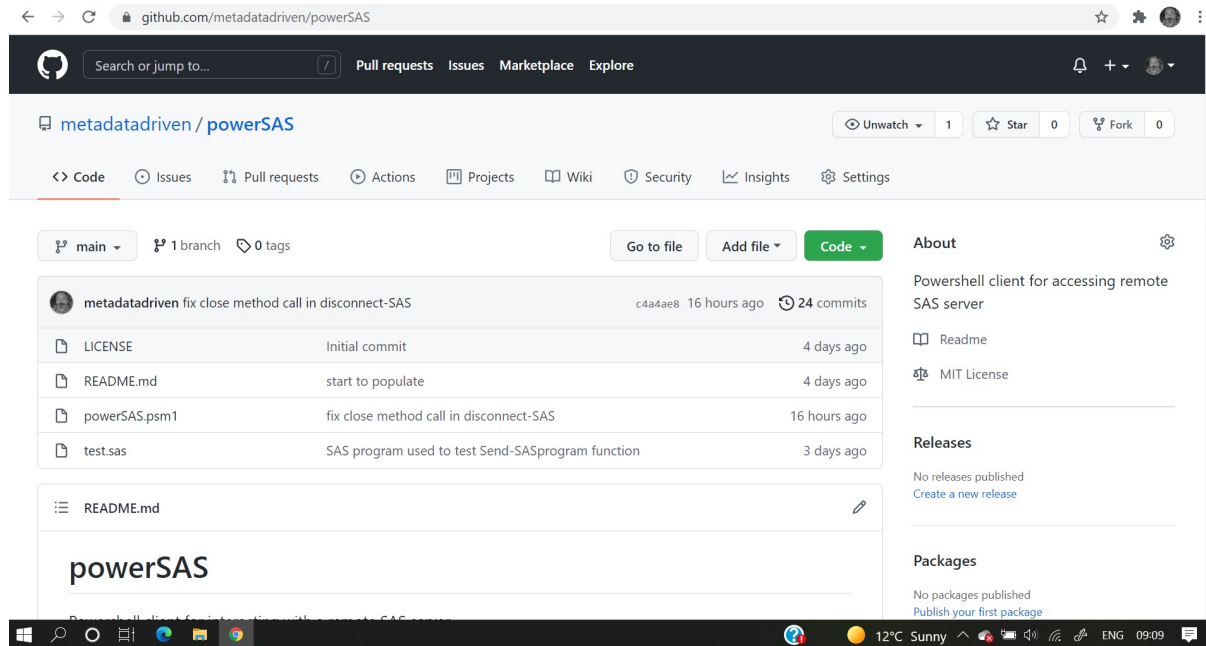
- Download client from SAS
- Bundled with SAS DM/EG install
- IOM = COM or Java to SAS
- COM/DCOM = Microsoft interface
- Note IOM v8 to v9 changes
- Intended for distributed processing deployments

Introducing Powershell



- Task automation and configuration management framework from Microsoft
- Bundled with MS Windows 2006
- Open-Source and Cross-Platform
- Command-line shell + scripting language
- Built on .NET and provides access to COM and WMI objects
- www.powershellgallery.com

PowerSAS = PowerShell + SAS



- Windows Powershell module to interact with SAS
- Open Source MIT License
- Available on Github
- Local or remote SAS connection
- No popup windows
- Interactive shell (NODMS)
- PowerShell functions

<https://github.com/metadatadriven/powerSAS>

Demo



Summary

powerSAS is an open-source DevOps tool



USE MICROSOFT POWERSHELL
TO INTERACT WITH SAS



GLUE SAS AND NON-SAS
DISTRIBUTED SYSTEMS
TOGETHER



PACKAGE MANAGER WITH >8000
MODULES AVAILABLE

**Get in
touch**

Stuart.Malcolm@veramed.co.uk

Head of Standards, Efficiency and
Automation

Veramed London

TW1 3QS, UK

**Thank
You**