

White Paper From SMF to Excel: graphs and reports in one click

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1 Introduction

In this paper we will now explain how to use EPV SMF2XL (SMF2XL). If you have not already done so, please read "From SMF to Excel: graphs and reports in one click Part I" first.

SMF2XL is a productivity tool that allows you to read an SMF dump on a PC and automatically load it into Excel spreadsheets—as many as there are input SMF record types and subtypes.

In order to use the tool it must be installed on a PC that also has Excel installed. Move an SMF dump to the input folder, run the tool and you will get the results in the output folder.

Only the IBM standard SMF records are supported, from record 0 to 127.

After installing the tool on your PC, you'll see the folders shown in Figure 1 below.

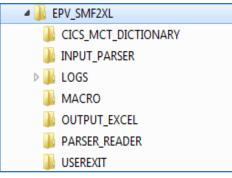


Figure 1

Now take the SMF dump that was selected for analysis, transfer it in binary mode to your PC¹ and then move it to the folder named INPUT_PARSER. You can feed SMF2XL with extremely large SMF dumps, but the tool is really designed to perform a quick ad-hoc analysis, so it is better to make a sub-selection of only the hours and the record types you need to analyze.

SEGUS Inc = 14151 Park Meadow Drive = Chantilly, VA 20151= 800.327.9650 = www.segus.com

¹ Please follow the manual notes when transferring the data to your PC to avoid corrupting the SMF dump.

Once the input SMF dump is in the correct folder, run the EPVsmf2xl.exe program. This step may take some time, depending on the contents of the input file.

When the process has finished, you will find in the OUTPUT_EXCEL folder, as many Excel sheets as there are SMF record types and subtypes in the input (see Figure 2 below). Please, be aware that every time you run SMF2XL, all of the contents of the OUTPUT_EXCEL folder will be erased and replaced.

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Figure 2

Figure 3 on the next page shows the contents of one of the sheets created; all of the column names have the same name as in the SMF manuals².

At this point you can use all of Excel's capabilities to filter the data or create graphs or whatever else may be required.

² This is true for all native SMF fields.

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For example, you can filter the SMF30JBN column (Address Space Name) in order to select only a specific address space, as shown in the Figure 4, where we selected the DMSAR address space. The results are shown in Figure 5 on the next page.

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Figure 4

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At this point it is very simple to produce a pivot table and a graph like the ones shown in Figure 6.

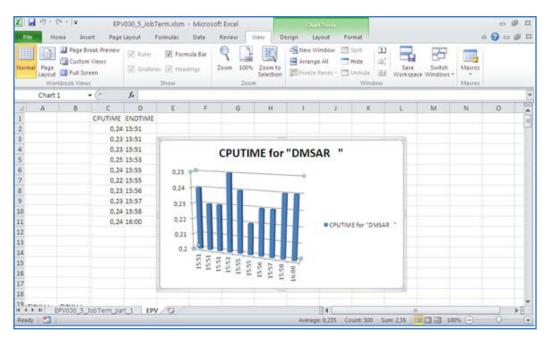


Figure 6

2 SMF2XL Advanced Function

In a similar way to the EPV HTML pages (please refer to Part I, Chapter 3.2), SMF2XL also provides an advanced function to exploit Excel macros. The aim of this function is to fully utilize Excel's capabilities and avoid repetitive steps when performing the same analyses on a specific record type. The more knowledgable you are about Excel, the more you could be interested in the contents of this chapter. Novices, however, can just ignore it, and everything explained in Chapter 1 will be executed anyway.

In this chapter we will provide an example that you may use as a template to implement what you really need.

Open the particular sheet that you're interested in, select VIEW, and then macros, as shown in Figure 7.

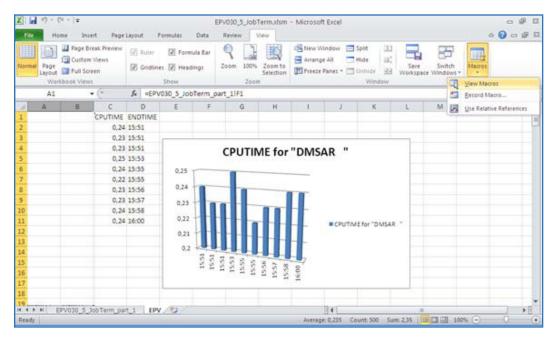
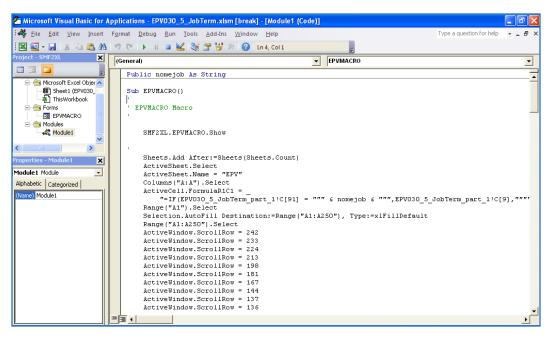


Figure 7

This will open the macro editor, which can be filled by generating the code using the Excel "record and run" functionality, or by directly writing your own visual basic code.

In Figure 8, on the next page, there's an example of some partial code (the full code is available, as an example, in Appendix A).





You can even create a form, allowing for even more flexibility in your analysis; see the next figure.

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In this example, we have created a form that requests the name of the Address Space to be analyzed. The simple code is shown in Figure 10.

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Figure 10

Once finished, the sheet must be saved with the .xlsm extension. In our example, we have created two different macros, as you can see in Figure 11.

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In the main SMF2XL folder you will find an application named "extract_vba.exe" (see Figure 12).

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When executed, this application will automatically detect all the sheets with an .xlsm extension, and create in the SMF2XL MACRO folder the code used by the tool; see Figure 13.

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Figure 13

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Conventionally the extension .bin is used for Visual Basic programs. When executed, SMF2XL automatically searches for the ".bin" extension " of the sheet with the same name in the /MACRO folder; if it's there it will automatically be included and will eventually be executed if you select the "Run" choice. Otherwise the standard Excel will run.

The next time SMF2XL is executed with a new SMF DUMP in the INPUT, new Excel sheets will be created, as many as there are SMF record types and subtypes in input.

If SMF record 30 is in the INPUT, a new version of EPV030_5_Jobterm will be created, replacing the old one.

When you open this new sheet, you will be prompted by a window asking you what you want to do with the macro (See Figure 14).

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Figure 14

When the macro is executed, the form created previously will be displayed and you can enter the Address Space name you wish to analyze. This will provide the final result, as instructed in the macro (see Figures 15 and 16).

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13	209	0	0							0	0	0	0	
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15	2319	0	0							0	0	0	0	
16	162	0	0							0	0	0	0	
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19	6	0	0	0 XPW70X	J0041550	JES2HA	0	0	0	0	0	0	0	
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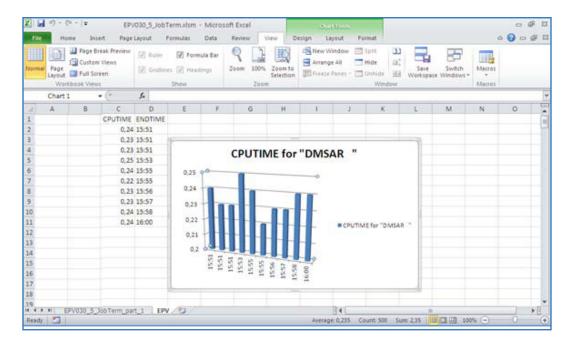


Figure 16

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3 Conclusions

Producing graphs and reports using Excel is a very common practice at many z/OS sites. However the associated process is usually manual and very time consuming.

In this paper we have discussed many different possibilities for making this process much more straightforward, and for saving a lot of time and effort by exploiting the integration of EPV products and tools with Excel.

Appendix A

Sub EPVMACRO()

ActiveWindow.ScrollRow = 36

```
١.
' EPVMACRO Macro
' Dim indloop Dim indcell Dim cella
' nomejob = "TSOSPAWF"
Sheets.Add After:=Sheets(Sheets.Count)
                                              Sheets("Sheet1").Select
Sheets("Sheet1").Name = "EPV" ' Range("A1").Select Columns("A:A").Select
ActiveCell.
FormulaR1C1 = _ "=IF(EPV030_5_JobTerm_part_1!C[90]=""" & nomejob &
""",MID(EPV030_5_JobTerm_part_1!C[9],12,5),""NULL"")" Range("A1").Select Selec-
tion.AutoFill Destination:=Range("A1:A250"), Type:=xlFillDefault Range("A1:A250").
Select
           Range("B1").Select
                                Selection.AutoFill Destination:=Range("B1:B250"),
                       Range("B1:B250").Select
Type:=xlFillDefault
    ActiveWindow.ScrollRow = 248
    ActiveWindow.ScrollRow = 245
    ActiveWindow.ScrollRow = 239
    ActiveWindow.ScrollRow = 231
    ActiveWindow.ScrollRow = 218
    ActiveWindow.ScrollRow = 203
    ActiveWindow.ScrollRow = 173
    ActiveWindow.ScrollRow = 171
    ActiveWindow.ScrollRow = 168
    ActiveWindow.ScrollRow = 163
    ActiveWindow.ScrollRow = 154
    ActiveWindow.ScrollRow = 140
    ActiveWindow.ScrollRow = 119
    ActiveWindow.ScrollRow = 99
    ActiveWindow.ScrollRow = 78
    ActiveWindow.ScrollRow = 66
    ActiveWindow.ScrollRow = 65
    ActiveWindow.ScrollRow = 64
    ActiveWindow.ScrollRow = 63
    ActiveWindow.ScrollRow = 61
    ActiveWindow.ScrollRow = 58
    ActiveWindow.ScrollRow = 55
    ActiveWindow.ScrollRow = 51
    ActiveWindow.ScrollRow = 45
    ActiveWindow.ScrollRow = 42
    ActiveWindow.ScrollRow = 38
```

```
ActiveWindow.ScrollRow = 29
   ActiveWindow.ScrollRow = 27
   ActiveWindow.ScrollRow = 24
   ActiveWindow.ScrollRow = 21
   ActiveWindow.ScrollRow = 18
   ActiveWindow.ScrollRow = 16
   ActiveWindow.ScrollRow = 14
   ActiveWindow.ScrollRow = 11
   ActiveWindow.ScrollRow = 9
   ActiveWindow.ScrollRow = 6
   ActiveWindow.ScrollRow = 5
   ActiveWindow.ScrollRow = 3
   ActiveWindow.ScrollRow = 2
   ActiveWindow.ScrollRow = 1
Sheets("EPV").Select
   Range("A1").Select
   ActiveCell.FormulaR1C1 = "=EPV030_5_JobTerm_part_1!RC[9]"
   Range("B1").Select
   ActiveCell.FormulaR1C1 = "=EPV030_5_JobTerm_part_1!RC[9]"
   cella = "x"
   Do While (cella <> "")
 indloop = indloop + 1
 cella = Range("A" & indloop)
 If cella <> "NULL" Then
    indcell = indcell + 1
   Cells(indcell, 3) = Cells(indloop, 1)
   Cells(indcell, 4) = Cells(indloop, 2)
End If
Loop
   ActiveSheet.Shapes.AddChart.Select
   ActiveChart.ChartType = xl3DColumnClustered
   ActiveChart.Axes(xlValue).MajorGridlines.Select
   ActiveChart.SeriesCollection(1).Name = "=EPV!$C$1"
   ActiveChart.SeriesCollection(1).Values = "=EPV!$C$2:$C$36"
   ActiveChart.SeriesCollection(1).XValues = "=EPV!$B$1" End Sub
```

ActiveWindow.ScrollRow = 33

To download the product...

http://support.segus.com/general/Downloads/EPVSMF2XL.ZIP



Danilo Gipponi has been involved with Service Levels and Cost Accounting projects sind 1986.

After 9 years with the SAS Institute, and 5 years with BMC, he founded EPV Technologies in 2003.

He has been an officer of CMG-Italia (The Computer Measurement Group) since 1993, and was President of the group between 2001 and 2004. He has also been the current President of the group since 2011.

Danilo Gipponi is a regular speaker at many international conferences.



Enzo Rossi has been involved with several Service Levels and Cost Accounting projects since 1981.

His experience includes 7 years at Enidata in the role of service levels analyst, 2 years at Olivetti Syntax as a consultant in Cost Accounting projects, and from 1990—2004 as a Systems Engineer DB / DC.

Enzo Rossi has been working with EPV Technoliges in Capacity Planning projects now since 2004.

Other EPV products

• EPV for z/OS

Hardware and software cost control, Performance Analysis and Capacity Planning knowhow, advanced statistical analysis, automatic control of configuration changes, and much, much more.

• EPV Graph for z/OS

Adds graphics functionality to EPV for z/OS for simpler analysis of hardware costs, software costs, "values" produced, and virtually any other data.

• EPV for DB2

DB2 subsystem tuning, DB2 application tuning, daily or monthly trends for proactive tuning.

EPV zParser

An alternative tool to interpret, store and use SMF data on any major platform (Mainframe, UNIX, Windows & LINUX) using your favorite database, and to greatly reduce resources and hardware costs.

• EPV for UNIX

An integrated enterprise view. System grouping by user-defined criteria, Performance Analysis know-how, advanced statistical analysis, Capacity Planning.

EPV for Windows

An integrated enterprise view. System grouping by user-defined criteria, Performance Analysis know-how, advanced statistical analysis, Capacity Planning.

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