



EPV for MQ Preparing Input for a Demo



Supporting
EPV for MQ V15 (SAS based)
EPV for MQ V15

October 2020



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About this manual

This manual is intended to help anyone who wants to provide the data needed to prepare an EPV for MQ demo.

Changes

Technical changes or additions to the text are indicated by a vertical line to the left of the change.

Terminology

A “view” is an EPV report presented in an HTML page.



1 Introduction

The best way to evaluate the benefits provided by EPV for MQ for customers is to have a demo based on their data in their own environment.

Providing the data needed to prepare a demo is a quick and easy task to perform.

In this manual, after a short description of EPV for MQ input data, a simple four step process to do that is presented.

Sample JCLs are also provided.



2 Mandatory input data

Some SMF records data are mandatory in order to run EPV for MQ. If you don't provide them EPV will not produce any usable output.

They are:

- Record 30 subtype 2,3 (Address Space Interval activity);
- Record 70 (RMF CPU activity);
- Record 115 subtype 1, 2, 201, 215¹ (MQ Class 1 Statistics Trace);
- Record 116 subtype 0 (MQ Class 1 Accounting Trace).

2.1 SMF 30 subtype 2, 3 records

SMF 30 subtype 2 and 3 records are not produced by default.

To activate SMF interval accounting using the global recording interval the following parameters have to be set in the SMFPRMxx member of the SYS1.PARMLIB library:

- INTVAL(mm) where mm is the interval duration; suggested values are 10 or 15 minutes;
- SYNCVAL(nn) where nn is the minute in the hour that starts the interval; suggested value is 00;

In addition the following parameter have to be set under SYS and SUBSYS sections:

- INTERVAL(SMF,SYNC).

Writing of these records has to be allowed in SMFPRMxx (under the TYPE sub parameter).

2.2 RMF and MQ records synchronization

It's very important you synchronise SMF and RMF data; to do that you must set the following parameter in the ERBRMFxx member, used by RMF Monitor I, of your SYS1.PARMLIB library:

- SYNC(SMF).

It's also very important you synchronise MQ SMF records; to do that you must set to zero the time interval specified by the STATIME parameter provided in CSQ6SYSP.

2.3 SMF 70 records

SMF 70 records are produced by default.

¹ Subtype 215 is only available for MQ V8 and above.



However the following parameters are normally explicitly specified in RMF monitor I (ERBRMFxx member of the SYS1.PARMLIB library):

- CPU, to produce CPU activity information;

Writing of these records also has to be allowed in SMFPRMxx (under the TYPE sub parameter).

2.4 SMF 115 records

To produce the mandatory SMF 115 records, Class 1 of the MQ Statistics Trace has to be activated.

Writing of SMF 115 records also has to be allowed in SMFPRMxx (under the TYPE sub parameter).

2.5 SMF 116 records

To produce the mandatory SMF 116 records, Class 1 of the MQ Accounting Trace has to be activated.

Writing of SMF 116 records also has to be allowed in SMFPRMxx (under the TYPE sub parameter).



3 Other suggested input data

Using only the mandatory data will result in a subset of the EPV for MQ views and analysis. If you want to get the complete set of views you have to provide the following additional SMF records:

- Record 74 subtype 4, (Coupling Facility Structure activity); produced by default; only when using MQ shared queues;
- Record 115 subtype 7, by activating Class 2 of the MQ Statistics Trace;
- Record 115 subtype 231, by activating Class 4² of the MQ Statistics Trace;
- Record 116, subtype 1, 2, by activating Class 3 of the MQ Accounting Trace;
- Record 116, subtype 10, by activating Class 4³ of the MQ Accounting Trace and by allowing data collection in the STATCHL attribute on queue manager and channel definitions.

² Class 4 of the Statistics Trace is only available for MQ V8.1 and above.

³ Class 4 of the Accounting Trace is only available for MQ V8.1 and above.



4 Optional input data

EPV shows QMGR parameter settings, collected by running a JCL that executes specific IBM MQ commands. See example in 5.1.2.

The needed information must be gathered daily from each subsystem.



5 Preparing data for a demo

To have a good demo, a few hours of data are enough. If you have more systems sharing resources the result will be better. If you had a bad day, with lot of problems, the EPV demo will probably help you understand what happened.

The following steps have to be performed in order to prepare input data for an EPV demo.

5.1 Collecting the data – Standard JCLs

When transferring variable data (VB or VBS) from the mainframe to other platforms it is important to do that without corrupting the logical structure of the records.

There are different possibilities to reach this goal. In this chapter, the standard JCLs to be used are provided. An alternative JCL to collect SMF data is provided in Chapter 6.

5.1.1 SMF

The following JCL will collect all the necessary SMF records.

It will also convert the SMF file to undefined format to avoid data corruption during the file transfer.

Cut and paste it in your JCL library, and do the following customizations:

- CHANGE *smfinput* TO YOUR SMF INPUT FILE NAME
- CHANGE *smfpref* TO OUTPUT FILE PREFIX
- CHANGE *yyyyxxx* to the starting and ending Julian date you want to select
- CHANGE *hhmm* to the starting and ending hours you want to select
- CHANGE FTP parameters (*your.ftp.address, user and password*) to appropriate values

```
//SELSMF EXEC PGM=IFASMFDP
//SYSPRINT DD SYSOUT=*
//INDD1 DD DSN=smfinput,DISP=SHR
//OUTDD1 DD DSN=smfpref.VBS,DISP=(,CATLG),
// UNIT=SYSDA,SPACE=(CYL,(100,100),RLSE),
// DCB=(LRECL=32760,BLKSIZE=27998,RECFM=VBS)
//SYSIN DD *
INDD(INDD1,OPTIONS(DUMP))
OUTDD(OUTDD1,TYPE(30(2,3),70,74,115,116))
DATE(yyyyxxx,yyyyxxx)
START(hhmm)
END(hhmm)
/*
/* DO NOT CHANGE RECFM=U ON BOTH DD
//UNDSMF EXEC PGM=IEBGGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1 DD DSN=smfpref.VBS,DISP=SHR,
// DCB=(RECFM=U)
//SYSUT2 DD DSN=smfpref.UND,DISP=(,CATLG),
// DCB=(RECFM=U),
// UNIT=SYSDA,SPACE=(CYL,(100,100),RLSE)
```



```
//SYSIN DD DUMMY
/*
//FTPSMF EXEC PGM=FTP, PARM='(EXIT'
//SYSPRINT DD SYSOUT=*
//OUTPUT DD SYSOUT=*
//INPUT DD *
your.ftp.address
user password
quote PASV
bin
put 'smfpref.UND' /smfpref.smf
close
quit
/*
```

5.1.2 MQ settings

The following JCL will produce a file containing MQ parameter settings by executing some standard IBM MQ commands.

Cut and paste it in your JCL library, and do the following customizations:

- CHANGE *mqprefix* TO YOUR MQ LIB PREFIX
- CHANGE *wmqid* TO YOUR MQ ID
- CHANGE *seqpref* TO OUTPUT FILE PREFIX
- CHANGE FTP parameters (*your.ftp.address*, *user* and *password*) to appropriate values

```
/*
//STEPSIEB EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSIN DD DUMMY
//SYSUT1 DD DATA,DLM=MM
/* REXX */
TRACE 'O'
CVTADDR = C2D(STORAGE(10,4)) /* CVTADDR FROM PSA + X'10' */
AMB = STORAGE(D2X(CVTADDR+X2D('154')),8)
R.0=2
R.1=' EPV ==> SYSNAME' AMB
"EXECIO * DISKW OUT (STEM R. FINIS"
IF RC <> 0 THEN EXIT 8
EXIT 0
MM
/*
//SYSUT2 DD DSN=&&PDS(SYS),UNIT=SYSDA,
// DISP=(NEW,PASS,DELETE),
// SPACE=(TRK,(1,1,1)),
// DCB=(LRECL=80,BLKSIZE=3120,RECFM=FB,DSORG=PO)
/*
//AMB EXEC PGM=IRXJCL, PARM='SYS'
//SYSEXEC DD DSN=&&PDS,DISP=(OLD,DELETE,DELETE)
//SYSTSPRT DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
```



```
//OUT      DD DISP=SHR,DSN=userid.wmqid.MQCONF
//          UNIT=SYSDA,SPACE=(CYL,(1,2)),
//          DCB=(LRECL=125,BLKSIZE=27930,RECFM=VBA)
//*
//QDEFS    EXEC PGM=CSQUTIL,PARM='mqid'
//STEPLIB  DD DISP=SHR,DSN=mqprefix.SCSQANLE
//          DD DISP=SHR,DSN=mqprefix.SCSQAUTH
//SYSPRINT DD DISP=MOD,DSN=seqpref.wmqid.MQCONF
//SYSIN    DD *
COMMAND DDNAME(CMDINP)
/*
//CMDINP   DD *
DISPLAY QMGR ALL
DISPLAY TRACE
DISPLAY LOG
DISPLAY USAGE PSID(*)
DISPLAY STGCLASS(*) ALL
DISPLAY CFSTRUCT(*) ALL
DISPLAY QUEUE(*) ALL
/*
//FTPSTAT EXEC PGM=FTP,PARM='(EXIT'
//SYSPRINT DD SYSOUT=*
//OUTPUT   DD SYSOUT=*
//INPUT    DD *
your.ftp.address
user password
quote PASV
ascii
put `seqpref.wmqid.MQCONF'  wmqid.MQCONF.TXT
close
quit
/*
```



5.2 Compressing the data

Before sending the data to EPV Technologies, you should compress them (the compression factor is usually very high).

Please be aware that compression tools may have limitations on the size of the file they can compress.

5.3 Sending the data

You can send data to EPV Technologies in two main ways:

- Uploading the data to the EPV FTP server;
- Creating a CD/DVD and sending it to our local distributor or directly to EPV Technologies via a courier service.

It's always better before sending the data to send a small file with only one SMF record type (e.g. SMF 70) by FTP or e-Mail, so we can confirm everything is correct before spending time sending large amounts of data.



6 Alternative JCL to collect SMF data

If you use the standard IBM FTP you can improve processing performance by eliminating the step performing the conversion to undefined by using the JCL provided in this chapter.

In the FTP step, records are read as if in undefined format in order to avoid FTP eliminating the VB and VBS headers and so corrupting the records. As stated in the comments it is essential not to change the RECFM parameter. It's also required that the transfer is done in binary mode.

Cut and paste it in your JCL library, and do the following customizations:

- CHANGE *smfinput* TO YOUR SMF INPUT FILE NAME
- CHANGE *smfpref* TO OUTPUT FILE PREFIX
- CHANGE *yyyyxxx* to the starting and ending Julian date you want to select
- CHANGE *hhmm* to the starting and ending hours you want to select
- CHANGE FTP parameters (*your.ftp.address*, *user* and *password*) to appropriate values

```
//SELSMF EXEC PGM=IFASMFDP
//SYSPRINT DD SYSOUT=*
//INDD1 DD DSN=smfinput,DISP=SHR
//OUTDD1 DD DSN=smfpref.VBS,DISP=(,CATLG),
// UNIT=SYSDA, SPACE=(CYL,(100,100),RLSE),
// DCB=(LRECL=32760,BLKSIZE=27998,RECFM=VBS)
//SYSIN DD *
INDD(INDD1,OPTIONS(DUMP))
OUTDD(OUTDD1,TYPE(30(2,3),70,74,115,116))
DATE(yyyyxxx,yyyyxxx)
START(hhmm)
END(hhmm)
/*
/* DO NOT CHANGE RECFM=U ON //DDSMF
//FTPSMF EXEC PGM=FTP,PARM=(EXIT)
//SYSPRINT DD SYSOUT=*
//OUTPUT DD SYSOUT=*
//DDSMF DD DSN=smfpref.VBS,RECFM=U,BLKSIZE=32760,DISP=SHR
//INPUT DD *
your.ftp.address
user password
quote PASV
bin
put //DD:DDSMF /smfpref.smf
close
quit
/*
```



7 Customer support

For any technical problem with or question about EPV for MQ please write an email to:

epv.support@epvtech.com

For any other issue about EPV for MQ please write an email to:

epv.info@epvtech.com



Related documentation

The following manuals complement the information provided in this manual:

- *EPV for MQ V15 (SAS based) Installation and Customization Guide*
- *EPV for MQ V15 Installation and Customization Guide*
- *EPV for MQ V15 List of Views*
- *EPV for MQ V15 Release Notes*
- *EPV for MQ V15 DataBase Layout*
- *EPV for MQ V15 Refresh Mode*
- *EPV V15 User Interface*