



# SMF Data Management and Movement Utility

Is SMF data critical to the success of your data center? If so...ASPG and WOVEN Software bring you a unique solution to your SMF data collection and retention problems. SMFUTIL is a powerful SMF data movement utility that combines speed with extreme flexibility and versatility in the handling of SMF data. It is designed to greatly enhance the availability and accessibility of SMF data while reducing the resources required in processing. It also eliminates the need to write and maintain special purpose SMF processing routines.

## SMFUTIL Product Overview

SMFUTIL is an SMF data management system. SMFUTIL operates as a replacement for the IFASMFDP system utility in dumping and clearing the SYS1 .MANxx datasets and as a SMF data selection processor to retrieve SMF data from archive files to be used by another SMF data Processing program (such as \*SAS or \*RMF). This data retrieval is based upon user supplied data selection and/or validation functions to be performed. In addition, concatenation of unlike input device types (i.e. disk and tape) is supported. This can greatly reduce the number of steps required to produce “current versus historical” types of reports from SMF data where the current data resides in a disk-based GDG and the historical data is on tape.

SMFUTIL is also designed to greatly enhance the availability and accessibility of SMF data while reducing the resources required in processing and for storage. SMFUTIL supports any block size on any output device type. Block size may be specified by the user or SMFUTIL will optimize automatically for any supported device in use (i.e. 32k for tapes).

Unlike other SMF management programs SMFUTIL will produce clean archived masterfiles that are cataloged as normal datasets. All datasets produced by SMFUTIL are usable for direct input to any program requiring SMF data. SMFUTIL is not required as a “front-end” processor each time any SMF data is to be accessed, although it can be efficiently used as one to reduce data volume input to an SMF application such as SAS when a large archive file is to be processed. Access to SMF data may be granted selectively based on “site specified criteria” by utilizing a security exit point built into SMFUTIL. SMF data records selected may optionally be passed to one or more user defined exit modules for processing.

A unique feature is SMFUTIL’s ability to create multiple output datasets with a single pass of the input data. This enables the user to simultaneously create a daily and a month-to-month archive file and optionally create user-defined datasets containing specific record types.

SMFUTIL has the ability to remember where it has archived SMF data, utilizing a proprietary SMF archive data directory. This enables users to retrieve data by supplying the date/time range and system Id required without having to know the datasets the data is stored on. They will be dynamically allocated by SMFUTIL.

Use of the ARCHIVE for data retrieval also greatly reduces the time required to access data, especially on high-density media such as the 3590. SMFUTIL maintains block identification pointers in the ARCHIVE for each day of the data on the media. This allows high-speed device forwarding to the required data start point.

In addition, output datasets can be set up to be dynamically allocated if they are to be used. This avoids using output devices unless they are actually required, such as during a month split operation.

## Key Features

- Full Year 2000 compliance
- Full SMS support
- Fully automates the dumping process
- Extensive data selection controls and validation criteria
- Supports concatenation of unlike input device types
- Extensive error correction and recovery features to ensure SMF data integrity
- Produces clean archived master files that are cataloged as normal datasets
- Allows creation of multiple subsets of records with a single pass of the data
- Eliminates duplicated SMF records
- Eliminates abends due to missing record segments or wrong data length blocks
- Reduces the total CPU and EXCP resources required to archive and post process SMF data
- Eliminates the processing of huge amounts of SMF data by poor I/O performing SMF applications
- Provides “diagnostics” for bad records
- Supports MVS/SP, MVS/XA, MVS/ESA
- Can be installed and fully implemented in less than one hour
- Substantially faster than the standard IBM dump utility
- High speed access to archived data

## Using SMFUTIL

SMFUTIL is a highly efficient SMF data selection processor that retrieves SMF data from both online and archived files, so they can be used by SMF data processing programs. Data retrieval is based upon user supplied data selection and/or validation criteria, performed through control keywords.

There are more than 125 user controlled selection or validation options available. SMFUTIL supports the creation of multiple subsets of records with a single pass of the data. Users are then able to process the SMF data they require without wasting resources passing data they don't need.

SMFUTIL is invulnerable to missing records segments or incomplete datasets. SMFUTIL will continue processing regardless of condition of the input data. Even permanent I/O errors due to damaged tapes will not stop SMFUTIL from running!

SMFUTIL also features a unique internal checkpoint restart capability that eliminates the duplication of data on 'mod' disposition output tapes. If a run is aborted for any reason, SMFUTIL will return the output tapes to their original condition when the job is restarted.



# An ISPF Based Full Screen Browser and Editor

- SMFVIEW operates as an ISPF based full screen browser and editor for any SMF data source. Using the powerful filtering and data selection capabilities of SMFUTIL, SMFVIEW allows a Systems Programmer quick and easy access to selected SMF data. A scrollable full screen display of each selected record is presented. The SMFVIEW display mode is a “DUMP” mode that displays a hexadecimal dump and EBCDIC translation of the record. Each line on the display is noted with the hex and decimal offset of that line into the record, beginning with the record descriptor word (RDW). This mode allows the data content of the record to be altered at the hex or character level.
- Input sources for data input may be SMFUTIL archive files, current SMF MANx files, or a user specified sequential SMF dataset. Record selection is by type and subtype as well as by date and time. Filtering criteria available are SMF system ID, jobname, userid, account code, dataset name, and volume serial. Masking is fully supported for each filter.
- The title lined identify the type, optional subtype, date, time and length of each record displayed. Each data element that matched a requested filtering specification is also displayed.
- An output dataset may be optionally specified to receive selected data. Function options allow all selected records to be written to the output or only selected records specifically saved by the user. While in the “DUMP” mode, each record displayed may be altered (Edited) at both the hexadecimal and EBCDIC level (or both at once). The altered record may then be written to the output dataset. Note that the input record is not altered in its original source location.
- SMFVIEW offers the first viable method of examining and repairing critical SMF data that is damaged. In addition, it allows a developer quick access to examine development. A particular record type causing a problem may be examined just after it is produced, or last month’s archive may be scanned for a particular dataset name. The power and flexibility is controlled by the user within the confines of the existing security environment.
- SMFVIEW brings the speed and agility of the SMFUTIL product to the TSO screen in a unique and functional way.

SMFVIEW allows the user to select specific record types and subtypes or exclude certain rectypes, as seen in the panel below.

```

-----SMFVIEW V7.0 - RECORD TYPE SELECTION-----
COMMAND====>

Enter OPTIONS on the command line to change processing default options.

SPECIFY THE DATA TO BE VIEWED

Record types to be viewed: (optional)
=> 30 =>   =>   =>   =>   =>   =>   =>

If you do not specify a record type, all types will be presented.

If you specified one or more record types above, you may
Limit the data selected to specific record subtypes below:
=>   =>   =>   =>   =>   =>

Each subtype specified will apply to ALL record types selected.

Record types to be excluded: (Optional)
=>   =>   =>   =>   =>   =>   =>

Press ENTER to proceed to the next panel.
Press END to terminate SMFVIEW.

```

In addition, the following panel allows additional filtering criteria to be applied.

```

-----SMFVIEW V7.0 - SELECTED RECORD MAP-----Row 1 of 692
COMMAND ===>                                SCROLL ===> CSR
Records Read => 116          Records Written => 0
Record Type => 30          Date => 1997.328   Time => 17:56:49.94   Length => 2.052
COMMANDS: S=Save P=Print  LINE CMDS: I=Field Information G=Go To Section
SYSID => P390

  OFFSET          DEC          FIELD          FIELD          DISPLAY          FIELD
  HEX  DEC        FIELD          LEN  DESCRIPTION        TYPE        CONTENTS
-----
0000 00000 SMF30HDR          4  Common Address Space Work
0000 00000 SMF30LEN          2  Record Length          DEC          2,052
0002 00002 SMF30SEG          2  Segment Description    HEX          0000
0004 00004 SMF30FLG          1  Systems Indicator      BIN          11011110
0005 00005 SMF30RTY          1  Record Type            DEC          30
0006 00006 SMF30TME          4  Time since midnight    TIME         17:56:49.94
000A 00010 SMF30DTE          4  Date moved to buffer    DATE         1997.328
000E 00014 SMF30SID          4  System Identification  CHAR         P390
0012 00018 SMF30WID          4  Work Type Indicator    CHAR         TSO
0016 00022 SMF30STP          2  Record Subtype         DEC          2
0018 00024 SMF30SOF          4  Subsystem Section Pointer PTR          OFFSET =00A4
001C 00028          2          LENGTH=0026
001E 00030          2          COUNT =0001

```

The Selected Record Map is the formatted display of the record. Each record type is mapped in its native format. SMFVIEW is “intelligent” about each record type and its structure. Fields are displayed by offset, name, length, description and content in context.

```
-----SMFVIEW V7.0 - SELECTED FIELD HELP-----Row 1 of 16
COMMAND ===>                                SCROLL ===>  CSR
Field Name - SMF30FLG
Field Description - SYSTEM INDICATOR
Field Type - BIN
Field Contents - 11011110

Extended field content definition
-----
Record version number / System Indicator:
Bit  Meaning When Set
0  Subsystem identification follows system id
1  Subtypes used
2  Reserved
3  MVS/SP Version 4 and above.
   Bits 3,4,5 and 6 are on. *
4  MVS/SP Version 3.
   Bits 4, 5, and 6 are on.
5  MVS/SP Version 2.
   Bits 5 and 6 are on.
6  VS2. Bit 6 is on.
7  Reserved.
* IBM recommends that you use information located.
```

Each field is backed by complete help descriptions as to the fields content, source and usage.



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