



SMF Data Management and Movement Utility





The Overview

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 is an SMF data management system. SMFUTIL operates as a replacement for the IFASMFDP/IFASMF DL system utilities in dumping and clearing the SYS1 .MANx datasets, copying data from the SMF LOGR recording dataset, and as a SMF data selection processor to retrieve SMF data from archive files to be used by other SMF data processing programs (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). In addition, SMFUTIL supports the Large Block Interface for 3490 and 3590 type devices. The LBI block size for 3490's is 64K and for 3590 it's 256K.

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.

“ We improved our DUMP and CLEAR processing time by 70% ”

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

- Fully automates the SMF dumping process, for both standard MANx based and LOGR based SMF data repositories.
- Substantially faster than the standard IBM dump utility
- Allows creation of multiple subsets of records with a single pass of the data
- High speed access to archived data
- Archive Index Database knows where SMF data is archived for easy retrieval.
- Extensive data selection controls and validation criteria
- English-like syntax - no learning curve.
- 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
- Eliminates duplicated SMF records
- Eliminates abends due to missing record segments or wrong length data 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
- Optional SMFUTIL Clearing of MANx datasets to prevent reuse until dumped
- Optional LBI interface for more efficient tape usage in long term archives
- Internal GDG control at the full dataset name level prevents 'lockout' of the entire GDG prefix during usage of a single dataset
- Full SMS support

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.

“SMFUTIL has guaranteed time and again that no SMF data is lost and no charges are duplicated. The result is that we have greatly improved our internal credibility.”

“SMFUTIL provides extensive selection criteria which results in a substantial reduction in the resources utilized for SMF processing.”

“Our savings in DASD storage alone will be in the vicinity of \$60,000 per year... and based on our current number of systems, overhead will be reduced by \$50,000 per year.”

“We have realized substantial time and resource savings being able to dump in parallel for multiple copies at the vault and for disaster recovery.”

“I don't have to rush into the office every day to check on the SMF daily routine. SMFUTIL has never failed us.”

“The monthly time savings for one job alone is 70 hours of clock time and 50 minutes of CPU time.”

SMFVIEW

The Highlights

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 for quick and easy access to selected SMF data.

SMFVIEW is an optional component to SMFUTIL which allows users a viable method of examining and repairing critical SMF data that is damaged. 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 record types under 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.

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