Systems Software Services Technical Bulletin

Number: 0028
Issued Date: April 6, 1983
Effective Date:
Section/Groups:
Submitted By:
Approved By:

CA-SORT

Release 6.2 of CA-SORT has been installed and tested. It will be implemented according to the following schedule:

MVS3	Monday, March 28, 1983
MVS2	Monday, April 11, 1983
MVS1	Monday, April 18, 1983

This replaces release 6.1 of CA-SORT which was implemented on October 18, 1981 and documented by means of Technical Bulletin #2, October 15, 1981.

Please contact Gordon Graham at 533-3257 for assistance in ordering CA-SORT.

Please contact Phil Stephenson at 533-3262 for assistance in using CA-SORT.

If you wish to write your own JCL please note the following required libraries:

```
//STEPLIB   DD   DSNAME=SYS1.CASORT.LINKLIB,DISP=SHR
//SORTLIB   DD   DSNAME=SYS1.SORTLIB,DISP=SHR
```

Actually it is not required to code a "steplib" statement since this library will be searched via the system "linklist"; however, using "steplib" will speed up the execution of your sort.

Please find attached a copy of Technical Bulletin #2 and a list of the SORT JCL procedure.

CA-SORT/OS Sort/Merge: Introduction

I.1. New Features of CA-SORT/OS Release 6.1—August 1980

1. Automatic In-Core Sort

CA-SORT will attempt to perform every sort entirely within main storage, without the need to provide intermediate work files or change existing JCL statements to invoke the facility. The work files will only be opened and the space allocated if an in-core sort could be performed.

2. Multiple Sorted Output Files

A unique capability of CA-SORT, which provides the ability to produce up to nine different output data sets, each in a different sequence, if desired, from a single pass of the input data set. The multiple output file facility uses SRAM internally to save jobstep execution time, reduce I/O activity and disk work space usage, as well as simplify JCL streams. A new control statement, SORTx, where x is a digit 1-9, will be used to provide this capability.

3. VSAM Enhancements

CA-SORT will now allow VSAM data sets to be input and output to a merge-only execution, for compatibility with the DOS product. Previously VSAM data sets could only be used for sort executions. In addition, the "REUSE" option may be specified if the data set has been defined as reusable in the VSAM catalog.

4. Sum Control Statement

For compatibility with the DOS product, the "SUM" control statement may be used to summarize numeric fields when the sort/merge control fields are found to be equal.

5. OUTREC Control Statement

The "OUTREC" control statement may be submitted, as in the DOS product, to reformat the output records before writing them to the output data set, to eliminate or move fields in each record.

6. Work File Enhancements

CA-SORT will now support, the definition of up to 99 separate work files, if desired. In addition, the number of secondary extents supported has been increased to 15 for each work file defined.

7. Mixed Sort Work Device Support

CA-SORT will support, for intermediate work devices, any combination of DASD devices. The blocking factor chosen for the work data sets will be calculated to facilitate any combination.

8. SORT Control Statement Override

The control statements used by an invoked sort/merge can be overridden using the "SORTCNTL" data set, in which any CA-SORT control statements may be placed to replace ones passed by an invoking program. This allows application programs to be changed (e.g., the SORT key) without the need to recompile the program.

9. Generation Option Override

Any option set at CA-SORT generation time (e.g., OPT, SVC, etc.) may be overridden using the "PARM" field for a JCL sort/merge or the OPTION card for an invoked sort/merge application. This allows tuning or diagnostic work to be done easily without the need to PTF CA-SORT or perform other cumbersome changes.

10. Enhanced Checkpointing

CA-SORT will perform a checkpoint, if requested, at end-of-volume for tape output, in addition to the checkpoint taken at the start of Phase-3.

11. Exits in High-Level Languages

CA-SORT permits five exit routines (E18/E39, E15, E32, and E35) to be written in a high-level language such as COBOL, OL/I or FORTRAN. This means that installations need not have expert assembly language programmers on the staff in order to perform specialized sort/merge functions such as supplying VSAM passwords in a sort/merge execution.

12. Chained Scheduling for QSAM Files

This OS/VS facility increases CA-SORT performance and efficiency when processing QSAM input and output data sets.

13. Better Diagnostics, Messages and Internal Checks

CA-SORT has enhanced the messages and diagnostic tuning aids provided to allow the most efficient sort possible to be run. In addition, a number of new internal checks have been added to insure validity of the sort/merge process.

14. SIO Counts Under MVS

Previously, work data set start I/O counts were not available to MVS users due to the manner in which that I/O was performed by CA-SORT. If a generation parameter COUNT=YES is set in an MVS installation, CA-SORT will report these counts as well.

I.1. New Features of CA-SORT/OS Release 6.2

1. Support has been added to allow 3375 and 3380 CKD disk devices to be used for input, output and work datasets by both CA-SORT and CA-SRAM. These devices may be mixed with other device types if desired. This release is, in all other respects, completely compatible with JCL, sort/merge control statements and features found in Release 6.1.