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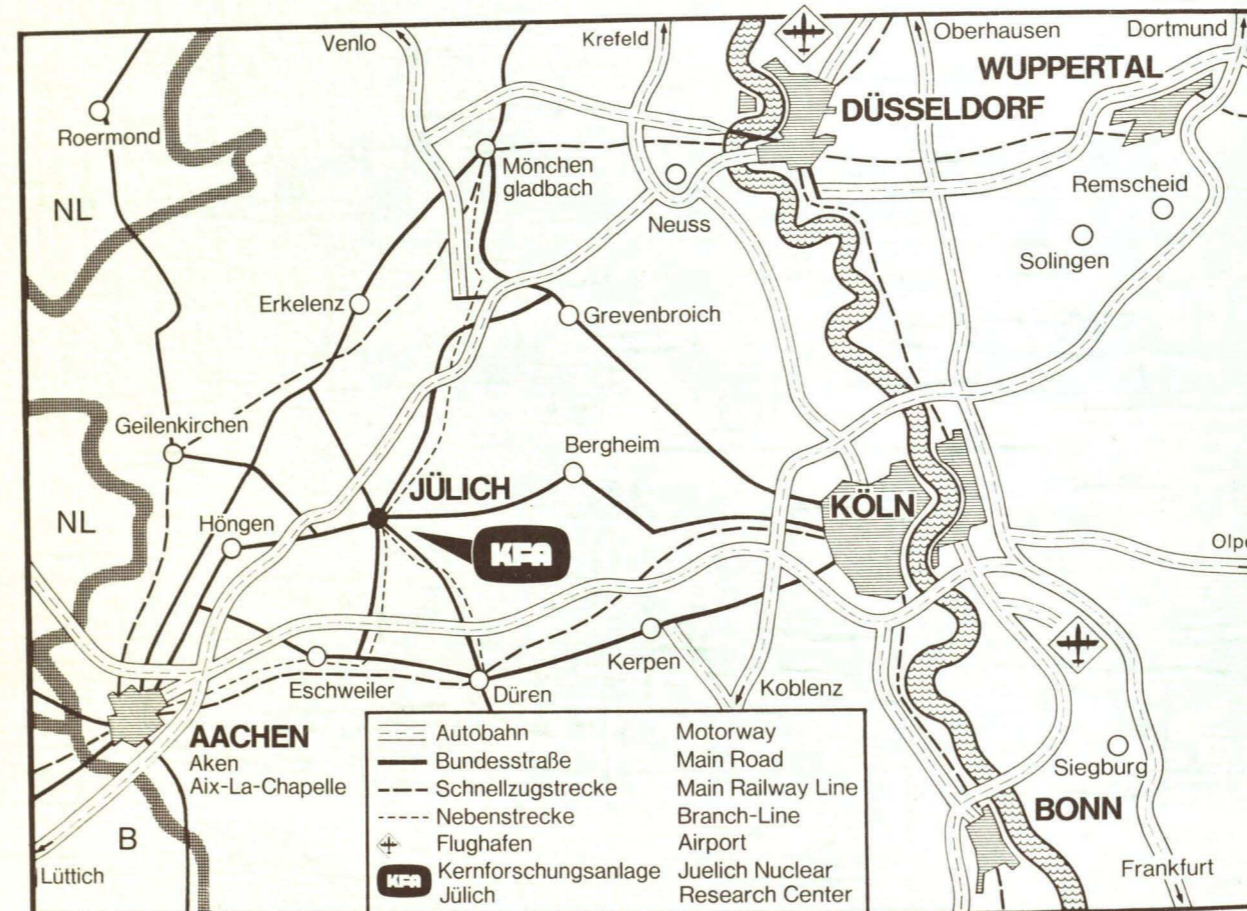
**A Timesharing
Benchmark on an IBM/370-168**

by

R. Alexander, B. Mertens and R.D. Rumler

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Abstract

For the preparation of a planned exchange of an IBM/370-158 CPU with an 168 CPU, a benchmark was run. Five different configurations were investigated using two types of benchmark scripts and the two timesharing operating systems, OS/VS2 Rel. 3 and TSS/370 Rel. 2. The description of the measurements and the results are presented.

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1. Introduction

Since the Kernforschungsanlage Jülich planned to exchange the IBM System 370 Model 158 CPU running under the timesharing operating system TSS/370 with a Model 168 CPU, benchmark measurements were performed by the Zentralinstitut für Angewandte Mathematik (ZAM) of KFA in cooperation with IBM. These measurements took place between August 25th and September 17th, 1975 at the World Trade System Center (WTSC) in Poughkeepsie, New York (USA). The participants were:

K. Barthelmes	(IBM)
H. Devore	(IBM)
R. Ingebrandt	(IBM)
P. Schiffeler	(IBM)
R. Alexander	(KFA)

The aim of the project was to identify the best of five 168 configurations under consideration. This had to be done for the present operating system, TSS/370, as well as for the possible successor, OS/VS2 Rel. 3 (MVS) with TSO.

The benchmark scripts used for the measurements should reflect the usage of the timesharing facilities in KFA.

This report presents the environment, the layout and the mere results of the measurements. A deeper interpretation is supposed to be published later.

2. Scope of the Measurements

Five different 168 configurations were to be investigated:

- 1) the "base" configuration: a model 168-1 with
 - 3 MByte of main storage
 - 16 kByte high speed buffer
 - one fixed-head storage 2305-2 ("drum") at its own BMPX channel
 - a reasonable number of disk-drives 3330 at its own BMPX channel

- 2) the base configuration with an additional
 - drum at same BMPX channel
- 3) the base configuration with an additional
 - string of disk-drives at its own BMPX channel
- 4) the base configuration with an additional
 - MByte of main storage (4 MByte totally)
- 5) the base configuration with an additional
 - drum at same BMPX channel
 - but two MByte main storage only

Two kinds of benchmark scripts were to be run for each of these configurations:

TS only: a pure timesharing script simulating
80 active terminal users

Mixed : a script simulating 40 active timesharing users and a
batch job-stream. The operating systems had to be set
up so that the execution time of the job-stream (first job
started to last job ended) was twice the time that the
batch-stream took without timesharing users. In other
words: a batch degradation of approximately 100% should
be achieved.

The five configurations were to be evaluated using two types of benchmark
scripts and the operating systems MVS and TSS, giving a total of 20
measurements.

For each of the measurements the following results were expected:

- response times (see definition below).

The different timesharing commands issued in
the scripts were divided into three classes:
trivial, non-trivial and execution commands
(see Appendix A). For each class the average
response time was considered to be a relevant number.

- CPU and channel utilization.
 These numbers were supposed to
 be gained by a hardware monitor (SMI).

3. The Structure of the Time-Sharing-Scripts

In principle all of the interactive work was performed by the same script. The master script contained four logically independent parts plus a house-keeping section. The driver script was composed of 4 combinations of the 4 independent sections. The order of the four scripts were as follows:

<u>Script1</u>	<u>Script2</u>	<u>Script3</u>	<u>Script4</u>
Housekeeping	Housekeeping	Housekeeping	Housekeeping
Data Mgmt	Editing	Comp. & Exec. Procedures	
Editing	Comp. & Exec. Procedures	Data Mgmt	
Comp. & Exec. Procedures	Data Mgmt	Editing	
Procedures	Data Mgmt	Editing	Comp. & Exec.

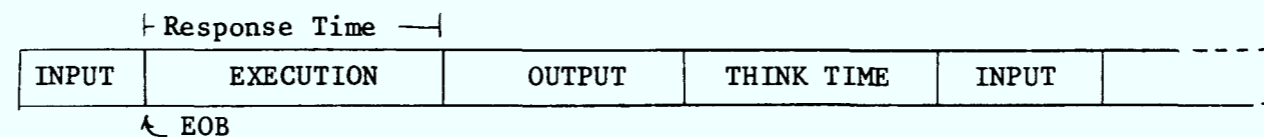
Since the command languages for TSS and TSO are different, the timesharing scripts for the TSS and the MVS benchmarks could not be identical. However the functions performed by the script are identical or at least equivalent. The TSO and TSS Scripts are attached as Appendix B.

4. The Structure of the Batch Stream

The given job stream emulates the job mix typical to the KFA. The MVS and TSS jobs are described in Appendix C. These jobs were taken five times to get an actual jobstream of 20 jobs. They were identical for both, TSS and MVS (see Appendix C).

5. Definitions

The following is a definition of the phases of a timesharing command:



The Input Time of a command was calculated by multiplying the number of input characters by the typing speed. The Typing Speed for these runs was two characters per second. The Execution Time is to be measured as Response Time. It was measured from the time the carriage return was hit until the first character of output arrived at the terminal. The Output Time was calculated using the Typing Speed of 15 characters per second. For all runs a Think Time of 5 seconds was used.

6. Measurement Procedures

For all runs the system performance was measured during the period between the 15th and the 30th minute after the first timesharing user LOGON Command.

The timesharing users terminals were simulated by a /370-158 executing the Teleprocessing Network Simulator (TPNS) under VS2 Rel. 3. The '158 was connected with the '168 under investigation via two TP controlunits, 3705, and the corresponding number of communication lines. During the measurements a log-tape was written by TPNS for later evaluation.

This evaluation was done by the data reduction program RTAP1 (Response Time Analysis Program).

CPU and channel utilization was measured by a SMI hardware monitor which was started shortly after the beginning of a measurement period and stopped at its end. A certain amount of tuning was done for each run, however, it was felt that optimal values were not obtained in every case.

7. The MVS measurements

The System

For the MVS measurements the standard operating system of the WTSC was used, namely a VS2 Rel. 3. Different IPS (Installation Performance Specifications) values were used for the different types of runs (see Appendix D and E).

Two modifications were applied to the system:

- The number of TSO users being in main storage at the same time was limited.

The limit values for the different runs are listed in Appendix D. The limitation was accomplished by the patch described in Appendix F.1.

- The swapping algorithm in MVS was changed (see Appendix F. 2), so that the working set of TSO users at swap-out time was reduced to a minimum.

External Storage and Data Set Distribution

12 disk-drives (channel 2 and 7) were used for the MVS measurements. This was in principle more than needed since none of the disk volumes were filled more than 50%. The data set distribution is depicted in Appendix G. The TSO user data sets were cataloged in a VSAM user catalog which was defined as a STEPCAT.

Batch-only Run

The batch-only run was performed for configuration 1 (base configuration).

It was found that the batch-only execution time (i.e. the time for executing the batch job stream without any timesharing users) was minimal using two initiators only (7 min. 25 sec). Thus two initiators were used for all the MVS measurements.

Remarks for the Mixed Runs

The philosophy of the mixed measurements was to run 40 timesharing users and a batch stream with 100% batch degradation concurrently. However a problem arose in obtaining 100% degradation.

The System Resource Manager (SRM) showed the tendency to swap out batch jobs toooften for the benefit of the TSO users. Using the normal SRM algorithm with the corresponding IPS values it was not possible to allot enough CPU-power to the batch jobs so that a 100% batch degradation was achieved. Therefore a modification to the SRM control algorithm was applied which limited the number of TSO tasks in main storage. With this limitation of the effective multiprogramming level it was possible to keep the batch tasks in main storage long enough.

Note

MF/1 was active for all the MVS runs. This was necessary to recognize bottle-necks easily when unsatisfactory results were obtained. The influence of the MF/1 overhead was considered negligible and to be the same for all the results.

8. The TSS MeasurementsThe System

The System used for the measurements was the field test version of TSS/370 Release 2.

Several modifications had been applied to this system (see Appendix F. 3):

TAM II was patched to solve some problems in interfacing with TPNS:

- Patched TAM II to do its own unit exception handling.
- TSS and TAM II do a logical disconnect instead of a physical one.
TAM II was patched to do a physical disconnect since TPNS does not understand a logical disconnect.
- TAM II was patched to NO-OP the reverse break feature for 2741' s since TPNS does not support it.
- The TAM II 2 minute LOGON-timer was patched out since without reverse break support in TPNS it could result in the loss of lines.

The following TSS Release 2.0 software problems were found:

- A loop in page migration which caused RE-IPL. The problem was found prior to the runs and was merely applied to the system.
- A great deal of Virtual Memory locking was uncovered in the early testing. It was discovered that the PAT-page handling routines were not processing the locks properly. This was fixed during the measurements.

External Storage and Data Set Distribution

Six disk drives 3330-1 (channel 2 and 7) were used, one for the Auxiliary

Control Volume (ACV) and five for Public Storage. On each of the public volumes there was paging space. The drums were dedicated to paging (channel 1).

Batch-only Run

The batch-only run on the basic configuration took 6 min. 27 sec. Five parallel batch tasks were used.

Remarks for the Mixed Runs

The major work done on the schedule table (see Appendix F) was to treat the batch levels in the same philosophy as the interactive levels. The only other work was to improve the Logon-scheduling. This was done by tuning up level 8.

The mixed mode batch time could be brought into a range of approximately 100% batch degradation by decreasing the delta time on the batch lock levels of the schedule table and varying the number of concurrent jobs running.

The primary performance problems in the interactive area are caused by performance of the customer provided editor and its commands REDIT and FILE. It did not seem appropriate for the TSS-group to tune up a customer provided editor.

Remarks for the TS-only Runs

The runs were done with an old Schedule Table, used by KFA under Rel. 1. (See Appendix H for the listing of the table).

9. The Results

The results of the measurements are presented in Appendix J. They are divided into MVS and TSS measurements, with each group being further divided by mixed and TS-only runs, and then again subdivided by the 5 different configurations.

Each measurement protocol contains:

- the results of the hardware monitor measurement
(CPU and channel utilization)
Channel 1 was used for the drums, channels 2 and 7 for the disks.
- the response times for
 - trivial commands
(see Appendix I for the input transactions
not listed in Appendix A.1)
 - non-trivial commands
 - execution commands

For each command the following numbers are given:

- NUMBER (How often issued during test)
- LOW RESPONSE (least response time observed)
- AVG RESPONSE (average over all observed times)
- HIGH RESPONSE (largest response time observed)

The values given for SUMMEN mean that all the commands of one type (trivial, non-trivial, exec) are considered to be one command only.

Further the value for the elapsed time for the batch stream is given with the measurement (BATCH).

Acknowledgements

The authors would like to express their gratitude to Dr. F. Hoßfeld for his stimulating interest in this work.

They would like to thank the members of the TSS Marketing and Support Group and the staff of IBM Germany for their support and effort in performing the measurements. The authors are especially indebted to Mr. P. Schiffeler for his help during all phases of this work.

Appendix A

TSO and TSS

Command Distribution

A.1 Distribution of TSO Commands

TRIVIAL

CHANGE	2
DOWN	2
FIND	3
INPUT	24
INSERT	4
LIST	2
TIME	7
TOP	1
VERIFY	1

NONTRIVIAL

ALLOCATE	5
COPY	2
DELETE	13
EDIT	2
END	3
EXEC	5
LISTCAT	1
LIST DS	2
RENUM	1
SAVE	2

EXECUTE

FORT	1
LOADGO	1

A.2 Distribution of TSS Commands

TRIVIAL

CHANGE	2
INPUT	14
INSERT	4
NEXT	1
NEXTPRINT	1
PRINT	1
REVISE	1
TSKTM	6

NONTRIVIAL

CDS'	1
DDEF	5
DSS?	1
END	1
ERASE	12
FILE	1
GAS(PROC)	5
LOCATE	3
PC?	1
POD?	1
PROCDEF	1
QUIT	1
REDIT	1
REKEY	1
VV	2

EXECUTE

CALL	1
FTN	1

Appendix B

TSO and TSS

SCRIPT

B.1 TSO - Script

```
*****  
* HOUSEKEEPING *  
*****
```

```
TIME  
DELETE TEST.FORT  
DELETE FT01  
DELETE FT02  
DELETE FT03  
DELETE FT04  
DELETE FT07  
DELETE GAS.CLIST  
DELETE SOURCE.FORT  
DELETE SOURCE.LIST  
DELETE TEST1.FORT  
COPY 'SOURCE.FORT' SOURCE.FORT
```

```
*****  
* DATA MANAGEMENT *  
*****
```

```
TIME  
LISTCAT  
LISTDS SOURCE.FORT  
LISTDS 'SUBLOAD' MEMBERS  
COPY SOURCE.FORT TEST1.FORT  
DELETE TEST1.FORT
```

```
*****  
* EDIT *  
*****
```

```
TIME  
COPY SOURCE.FORT TEST.FORT  
EDIT TEST FORTGI  
VERIFY  
FIND /DIMENSION  
LIST * 10  
INSERT C THIS IS THE 1. INSERT  
CHANGE /C AAA/C  
TOP  
FIND /DIME  
INSERT C THIS IS THE 2. INSERT  
DOWN 10  
LIST * 2  
FIND /J  
CHANGE * 20 /J/$$$  
DOWN 10  
INSERT C $$$  
INSERT C THIS IS THE 4 INSERT  
RENUM 100 100  
SAVE  
END  
DELETE TEST.FORT  
*****
```

B.2 TSO - Script

```
*****  
EXECUTION *  
*****
```

```
IME  
ELETE SOURCE.OBJ  
ORT SOURCE LIST PRINT  
IME  
LLOCATE FILE (FT01F001) DATASET (FT01) NEW  
LLOCATE FILE(FT02F001) DATASET(FT02) NEW  
LLOCATE FILE (FT03F001) DATASET (FT03) NEW  
LLOCATE FILE (FT04F001) DATASET (FT04) NEW  
LLOCATE FILE(FT07F001) DATASET (FT07) NEW  
DADGO (SOURCE) FORTLIB LIB('SUB.LOAD')  
NMA5=0000010,NDET=0000002,I TYPE=00,NC PURP=0000000,NPASS=01,PUNCH=0,RUNID=IO  
NMA5=0000000,NDET=0000000,I TYPE=03,NC PURP=0000002,NPASS=02,PUNCH=0,RUNID=EXTPRE  
NMA5=0000010,NDET=0000002,I TYPE=01,NC PURP=0000010,NPASS=02,PUNCH=0,RUNID=MIXED  
NMA5=0000000,NDET=0000000,I TYPE=10,NC PURP=0000001,NPASS=02,PUNCH=0,RUNID=PAGING  
NMA5=0000000,NDET=0000000,I TYPE=00,NC PURP=0000000,NPASS=00,PUNCH=0,RUNID=DUMY
```

```
*****  
PROCEDURES *  
*****
```

```
IME  
DIT GAS CLIST NEW  
ROC 0 KM(0) LITERS(0)  
F &KM = 0 THEN -  
DO  
WRITE ONE MUST GIVE KILOMETERS,PLEASE  
GOTO END  
END  
F &LITERS = 0 THEN -  
DO  
WRITE ONE MUST GIVE LITERS,PLEASE  
GOTO END  
END  
RITE KM/LITER = &EVAL(&KM*100/&LITERS)  
RITE LITERS/100KM = &EVAL(&LITERS*100/&KM)  
RITE  
RITE MILES = &EVAL(&KM*1000/1609)  
RITE  
RITE GALLONS = &EVAL(&LITERS*1000/3785)  
RITE MILES/GALLON = &EVAL((&KM*1000000/1609)/(&LITERS*10000/3785))  
ND: EXIT  
AVE  
ND  
XEC GAS 'KM(1010) LITERS(1000)'  
XEC GAS 'LITERS(500)'  
XEC GAS 'KM(10)'  
XEC GAS 'KM(400) LITERS(4000)'  
XEC GAS  
IME
```

```
*****
```

NEW MASTER

IEBUPDTE LOG PAGE 0001

RCE=0,LIST=ALL

TEXT=80,SCAN=YES,LOG=1

LOGON US????,TSS

ERASE FT07

ERASE FT01

ERASE FT02

ERASE FT03

ERASE FT04

ERASE TEST

ERASE TEST1

ERASE LIST,BMMD(0)

ERASE SOURCE,BMMD

CDS KFASRC,SOURCE,BMMD

TSKTM

PC?

DSS? USERLIB

POD? USERLIB

VV SOURCE,BMMD,TEST1

ERASE TEST1

TSKTM

VV SOURCE,BMMD,TEST

REDIT TEST

LOC/DIMENSION/

PR 10

I C THIS IS AN INSERT

CH/C AAAA/C

LOC/DIME/

I C THIS IS A SECOND LOCATE

NP 10 2

LOC/J/

CH/J/\$\$\$/20

N 10

I C \$\$\$

I C THIS IS THE 4TH INSERT

REKEY

FILE TEST

QUIT

ERASE TEST

TSKTM

ERASE USERLIB(BMMD)

FTN BMMD,Y

TSKTM

DDEF FT01F001,VS,FT01,RET=TL,DISP=NEW

DDEF FT02F001,VS,FT02,RET=TL,DISP=NEW

DDEF FT03F001,VS,FT03,RET=TL,DISP=NEW

DDEF FT04F001,VS,FT04,RET=TL,DISP=NEW

DDEF FT07F001,VS,FT07,RET=TL,DISP=NEW

CALL BMMD

NMAS=0000010,NDET=0000002,ITYPE=00,NCPURP=0000000,NPASS=01,PUNCH=0,RUNID=10

NMAS=0000000,NDET=0000000,ITYPE=03,NCPURP=0000002,NPASS=02,PUNCH=0,RUNID=EXTPRI

NMAS=0000010,NDET=0000002,ITYPE=01,NCPURP=0000010,NPASS=02,PUNCH=0,RUNID=MIXED

HOUSEKEEPING

DATA MANAGEMENT

EDIT

EXECUTION

B.4 TSS - SCRIPT

NEW MASTER

IEBUPDTE LOG PAGE 0002

NMAS=0000000,NDET=0000000,ITYPE=10,NCPURP=0000001,NPASS=02,PUNCH=0,RUNID=PAGING
NMAS=0000000,NDET=0000000,ITYPE=00,NCPURP=0000000,NPASS=00,PUNCH=0,RUNID=END

TSKTM

PROCDEF GAS

_REVISE 100, LAST

PARAM KM=\$KM,LITERS=\$LITERS

IF '\$KM'='';DISPLAY 'ONE MUST GIVE KILOMETERS PLEASE';GOTO 'END'

IF '\$LITERS'='';DISPLAY 'ONE MUST GIVE LITERS AS THE SECOND PARM,PLEASE,K1';GOTO

DISPLAY 'KM/LITER= :',\$KM/\$LITERS

DISPLAY 'LITERS/100KM= :',\$LITERS*100./\$KM

DISPLAY 'MILES= :',\$KM/1.609

DISPLAY 'GALLONS= :',\$LITERS/3.785

DISPLAY 'MILES/GAL= :',\$KM/1.609)/(\$LITERS/3.785)

'END'

_END

PROCEDURES

GAS 1010.,10.

GAS .5.

GAS 10.

GAS 400.,40.

GAS

TSKTM

Y NM DIRECTORY. ITR IS NOW ALTERED.

Appendix C

MVS and TSS

JOBSTREAM
and
SOURCE PROGRAM

```

*****
*   JOBSTREAM   *
*****

//A JOB 41724,SCHIFFELER,MSGLEVEL=(1,1),REGICN=1000K
//JOBLIB DD DSN=LOAD,VOL=SER=KFABM1,DISP=SHR,UNIT=3330
/*JOBPARM T=1,L=5
//S1 EXEC PGM=BMLARGE1
//FT01F001 DD DSNAME=&&FT01,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT02F001 DD DSNAME=&&FT02,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT03F001 DD DSNAME=&&FT03,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT04F001 DD DSNAME=&&FT04,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT06F001 DD SYSCUT=A
//FT07F001 DD SYSOUT=B
//FT05F001 DD *
  NMAS=0000000,NDET=0000000,ITYPE=10,NCPURP=0000010,NPASS=04,PUNCH=1,RUNID=LXMPG
  NMAS=0000000,NDET=0000000,ITYPE=00,NCPURP=0000000,NPASS=00,PUNCH=0,RUNID=DUMY
/*      END CF JOB
//S2 EXEC PGM=BMLARGE1
//FT01F001 DD DSNAME=&&FT01,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT02F001 DD DSNAME=&&FT02,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT03F001 DD DSNAME=&&FT03,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT04F001 DD DSNAME=&&FT04,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT06F001 DD SYSOUT=A
//FT07F001 DD SYSCUT=B
//FT05F001 DD *
  NMAS=0000050,NDET=0000005,ITYPE=10,NCPURP=0000002,NPASS=04,PUNCH=1,RUNID=LXMX
  NMAS=0000000,NDET=0000000,ITYPE=00,NCPURP=0000000,NPASS=00,PUNCH=0,RUNID=DUMY
/*      END OF JOB
//S3 EXEC PGM=BMLARGE1
//FT01F001 DD DSNAME=&&FT01,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT02F001 DD DSNAME=&&FT02,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT03F001 DD DSNAME=&&FT03,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT04F001 DD DSNAME=&&FT04,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT06F001 DD SYSOUT=A
//FT07F001 DD SYSOUT=B
//FT05F001 DD *
  NMAS=0000050,NDET=0000005,ITYPE=00,NCPURP=0000000,NPASS=04,PUNCH=1,RUNID=LXMI
  NMAS=0000000,NDET=0000000,ITYPE=00,NCPURP=0000000,NPASS=00,PUNCH=0,RUNID=DUMY
/*      END OF JOB

```

C.2 MVS - JOBSTREAM

```

//B JOB 41724,SCHIFFELER,MSGLEVEL=(1,1)
//JOB LIB DD DSN=LOAD,VOL=SER=KFABM1,DISP=SHR,UNIT=3330
/*JOBPARM T=1,L=5
//S1 EXEC PGM=SYNTHJOB
//FT01F001 DD DSN=FT01,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT02F001 DD DSN=FT02,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT03F001 DD DSN=FT03,DISP=(,DELETE),SPACE=(CYL,2),
//FT04F001 DD DSN=FT04,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT06F001 DD SYSOUT=A
//FT07F001 DD SYSOUT=B
//FT05F001 DD *
NMAS=0000000,NDET=0000000,IType=10,NCPURP=0000007,NPASS=04,PUNCH=1,RUNID=LMXPG
NMAS=0000000,NDET=0000000,IType=00,NCPURP=0000000,NPASS=00,PUNCH=0,RUNID=DUMY
/*      END OF JOB
//S2 EXEC PGM=SYNTHJOB
//FT01F001 DD DSN=FT01,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT02F001 DD DSN=FT02,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT03F001 DD DSN=FT03,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT04F001 DD DSN=FT04,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT06F001 DD SYSOUT=A
//FT07F001 DD SYSOUT=B
//FT05F001 DD *
NMAS=0000100,NDET=0000010,IType=10,NCPURP=0000007,NPASS=04,PUNCH=1,RUNID=LMXMX
NMAS=0000000,NDET=0000000,IType=00,NCPURP=0000000,NPASS=00,PUNCH=0,RUNID=DUMY
/*      END OF JOB
//S3 EXEC PGM=SYNTHJOB
//FT01F001 DD DSN=FT01,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT02F001 DD DSN=FT02,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT03F001 DD DSN=FT03,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT04F001 DD DSN=FT04,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT06F001 DD SYSOUT=A
//FT07F001 DD SYSOUT=B
//FT05F001 DD *
NMAS=0000100,NDET=0000010,IType=00,NCPURP=0000000,NPASS=04,PUNCH=1,RUNID=LMXIO
NMAS=0000000,NDET=0000000,IType=00,NCPURP=0000000,NPASS=00,PUNCH=0,RUNID=DUMY
/*      END OF JOB

```

C.3 MVS - JOBSTREAM

```

//C JOB 41724,SCHIFFELER,MSGLEVEL=(1,1)
//JOBLIB DD DSN=LOAD,VOL=SER=KFABM1,DISP=SHR,UNIT=3330
/*JOBPARM T=1,L=5
//S1 EXEC PGM=SYNTHJOB
//FT01F001 DD DSN=##FT01,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT02F001 DD DSN=##FT02,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT03F001 DD DSN=##FT03,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT04F001 DD DSN=##FT04,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT06F001 DD SYSOUT=A
//FT07F001 DD SYSOUT=B
//FT05F001 DD *
  NMAS=0000000,NDET=0000000,I TYPE=10,NCPURP=0000010,NPASS=20,PUNCH=1,RUNID=LCPG1
  NMAS=0000010,NDET=0000001,I TYPE=02,NCPURP=0000010,NPASS=20,PUNCH=1,RUNID=LCSP
  NMAS=0000000,NDET=0000000,I TYPE=10,NCPURP=0000010,NPASS=20,PUNCH=1,RUNID=LCPG2
  NMAS=0000010,NDET=0000001,I TYPE=03,NCPURP=0000010,NPASS=20,PUNCH=1,RUNID=LCDP
  NMAS=0000000,NDET=0000000,I TYPE=00,NCPURP=0000000,NPASS=00,PUNCH=0,RUNID=DUMY
/*      END OF JCB
//D JOB 41724,SCHIFFELER,MSGLEVEL=(1,1),REGION=1000K
//JOBLIB DD DSN=LOAD,VOL=SER=KFABM1,DISP=SHR,UNIT=3330
/*JOBPARM T=1,L=5
//S1 EXEC PGM=BMLARGE1
//FT01F001 DD DSN=##FT01,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT02F001 DD DSN=##FT02,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT03F001 DD DSN=##FT03,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT04F001 DD DSN=##FT04,DISP=(,DELETE),SPACE=(CYL,2),
// UNIT=SYSDA,DCB=(BLKSIZE=3988,LRECL=208,RECFM=VBS,BUFNO=2)
//FT06F001 DD SYSOUT=A
//FT07F001 DD SYSOUT=B
//FT05F001 DD *
  NMAS=0000000,NDET=0000000,I TYPE=10,NCPURP=0000010,NPASS=06,PUNCH=1,RUNID=LCPG1
  NMAS=0000005,NDET=0000001,I TYPE=02,NCPURP=0000010,NPASS=07,PUNCH=1,RUNID=LCSP
  NMAS=0000000,NDET=0000000,I TYPE=10,NCPURP=0000010,NPASS=07,PUNCH=1,RUNID=LCPG2
  NMAS=0000010,NDET=0000001,I TYPE=03,NCPURP=0000010,NPASS=07,PUNCH=1,RUNID=LCDP
  NMAS=0000000,NDET=0000000,I TYPE=00,NCPURP=0000000,NPASS=00,PUNCH=0,RUNID=DUMY
/*      END OF JOB

```

```
LOGON USER81
ERASE FT01
ERASE FT02
ERASE FT03
ERASE FT04
ERASE FT071
ERASE FT072
ERASE FT073
DDEF FT01F001,VS,FT01,DISP=NEW,RET=TL
DDEF FT02F001,VS,FT02,DISP=NEW,RET=TL
DDEF FT03F001,VS,FT03,DISP=NEW,RET=TL
DDEF FT04F001,VS,FT04,DISP=NEW,RET=TL
DDEF FT07F001,VS,FT071,DISP=NEW,DCB=(RECFM=F,LRECL=80),RET=TL
CALL BMSM1
  NMAS=0000000,NDET=0000000,I TYPE=10,NCPURP=0000007,NPASS=04,PUNCH=1,RUNID=LXPG
  NMAS=0000000,NDET=0000000,I TYPE=00,NCPURP=0000000,NPASS=00,PUNCH=0,RUNID=DUMY
RELEASE FT07F001
DDEF FT07F001,VS,FT072,DISP=NEW,DCB=(RECFM=F,LRECL=80),RET=TL
CALL BMSM1
  NMAS=0000100,NDET=0000010,I TYPE=10,NCPURP=0000007,NPASS=04,PUNCH=1,RUNID=LXMX
  NMAS=0000000,NDET=0000000,I TYPE=00,NCPURP=0000000,NPASS=00,PUNCH=0,RUNID=DUMY
RELEASE FT07F001
DDEF FT07F001,VS,FT073,DISP=NEW,DCB=(RECFM=F,LRECL=80),RET=TL
CALL BMSM1
  NMAS=0000100,NDET=0000010,I TYPE=00,NCPURP=0000000,NPASS=04,PUNCH=1,RUNID=LXIO
  NMAS=0000000,NDET=0000000,I TYPE=00,NCPURP=0000000,NPASS=00,PUNCH=0,RUNID=DUMY
PUNCH FT071,ERASE=Y
PUNCH FT072,ERASE=Y
PUNCH FT073,ERASE=Y
LOGOFF
LOGON USER82
ERASE FT01
ERASE FT02
ERASE FT03
ERASE FT04
ERASE FT071
ERASE FT072
ERASE FT073
DDEF FT01F001,VS,FT01,DISP=NEW,RET=TL
DDEF FT02F001,VS,FT02,DISP=NEW,RET=TL
DDEF FT03F001,VS,FT03,DISP=NEW,RET=TL
DDEF FT04F001,VS,FT04,DISP=NEW,RET=TL
DDEF FT07F001,VS,FT071,DISP=NEW,DCB=(RECFM=F,LRECL=80),RET=TL
DEMON
  *BMLA1
  NMAS=0000000,NDET=0000000,I TYPE=10,NCPURP=0000010,NPASS=04,PUNCH=1,RUNID=LXPG
  NMAS=0000000,NDET=0000000,I TYPE=00,NCPURP=0000000,NPASS=00,PUNCH=0,RUNID=DUMY
RELEASE FT07F001
DDEF FT07F001,VS,FT072,DISP=NEW,DCB=(RECFM=F,LRECL=80),RET=TL
CALL BMLA1
  NMAS=0000050,NDET=0000005,I TYPE=10,NCPURP=0000002,NPASS=04,PUNCH=1,RUNID=LXMX
  NMAS=0000000,NDET=0000000,I TYPE=00,NCPURP=0000000,NPASS=00,PUNCH=0,RUNID=DUMY
RELEASE FT07F001
DDEF FT07F001,VS,FT073,DISP=NEW,DCB=(RECFM=F,LRECL=80),RET=TL
CALL BMLA1
  NMAS=0000050,NDET=0000005,I TYPE=00,NCPURP=0000000,NPASS=04,PUNCH=1,RUNID=LXIO
  NMAS=0000000,NDET=0000000,I TYPE=00,NCPURP=0000000,NPASS=00,PUNCH=0,RUNID=DUMY
PUNCH FT071,ERASE=Y
PUNCH FT072,ERASE=Y
PUNCH FT073,ERASE=Y
```

```
LOGOFF
LOGON USER83
ERASE FT01
ERASE FT02
ERASE FT03
ERASE FT04
ERASE FT071
DDEF FT01F001,VS,FT01,DISP=NEW,RET=TL
DDEF FT02F001,VS,FT02,DISP=NEW,RET=TL
DDEF FT03F001,VS,FT03,DISP=NEW,RET=TL
DDEF FT04F001,VS,FT04,DISP=NEW,RET=TL
DDEF FT07F001,VS,FT071,DISP=NEW,DCB=(RECFM=F,LRECL=80),RET=TL
CALL BSM1
NMAS=0000000,NDET=0000000,I TYPE=10,NCPURP=0000010,NPASS=20,PUNCH=1,RUNID=LCPG1
NMAS=0000010,NDET=0000001,I TYPE=02,NCPURP=0000010,NPASS=20,PUNCH=1,RUNID=LCSP
NMAS=0000000,NDET=0000000,I TYPE=10,NCPURP=0000010,NPASS=20,PUNCH=1,RUNID=LCPG2
NMAS=0000010,NDET=0000001,I TYPE=03,NCPURP=0000010,NPASS=20,PUNCH=1,RUNID=LCDP
NMAS=0000000,NDET=0000000,I TYPE=00,NCPURP=0000000,NPASS=00,PUNCH=0,RUNID=DUMY
PUNCH FT071,ERASE=Y
LOGOFF
LOGON USER84
ERASE FT01
ERASE FT02
ERASE FT03
ERASE FT04
ERASE FT071
DDEF FT01F001,VS,FT01,DISP=NEW,RET=TL
DDEF FT02F001,VS,FT02,DISP=NEW,RET=TL
DDEF FT03F001,VS,FT03,DISP=NEW,RET=TL
DDEF FT04F001,VS,FT04,DISP=NEW,RET=TL
DDEF FT07F001,VS,FT071,DISP=NEW,DCB=(RECFM=F,LRECL=80),RET=TL
CALL BMLA1
NMAS=0000000,NDET=0000000,I TYPE=10,NCPURP=0000010,NPASS=06,PUNCH=1,RUNID=LCPG1
NMAS=0000005,NDET=0000001,I TYPE=02,NCPURP=0000010,NPASS=07,PUNCH=1,RUNID=LCSP
NMAS=0000000,NDET=0000000,I TYPE=10,NCPURP=0000010,NPASS=07,PUNCH=1,RUNID=LCPG2
NMAS=0000010,NDET=0000001,I TYPE=03,NCPURP=0000010,NPASS=07,PUNCH=1,RUNID=LCDP
NMAS=0000000,NDET=0000000,I TYPE=00,NCPURP=0000000,NPASS=00,PUNCH=0,RUNID=DUMY
PUNCH FT071,ERASE=Y
LOGOFF
```

```

                                C.6 SOURCE - PROGRAM
0000100 //A1ZDV006 JOB (1,2),ALEXANDER,CLASS=S
0000150 /*JOBPARM T=1,L=5
0000200 /*A019SYNT JCB (A01I,BERRY),'SYNTHETIC JOB',CLASS=A
0000300 // EXEC CASSF
0000400 /*ASM.SYSIN DD *
0000500 //C.SYSIN DD *
0000600 * ROUTINE TO COMPUTE TIME IN BINARY
0000700 * CALL DATIME (ARRAY)
0000800 CATIME CSECT
0000900 B 12(15)
0001000 DC X'C7' LENGTH OF NAME
0001100 DC CL7'DATIME'
0001200 STM 14,12,12(13) SAVE REGISTERS
0001300 BALR 10,0
0001400 USING *,10
0001500 ST 13,SAVEA+4
0001600 LA 13,SAVEA
0001700 L R2,C(R1) GET ADDRESS OF ARRAY
0001800 *
0001900 TIME BIN GET TIME AS BINARY INTEGER
0002000 *
0002100 ST RC,0(R2)
0002200 L 13,SAVEA+4
0002300 LM 14,12,12(13)
0002400 MVI 12(13),X'FF'
0002500 BR 14
0002600 SAVEA DS 18F
0002700 RO EQU 0
0002800 R1 EQU 1
0002900 R2 EQU 2
0003000 END
0003100 /*
0003200 // EXEC CLFORT1,DS='SYS2.KFALINK',NAME=BMLARGE1
0003300 /* THIS IS TO STORE INTO MVS THE BMLARGE1
0003400 /*F0RT.SYSIN DD *
0003500 //C.SYSIN DD *
0003600 C
0003700 C
0003800 C ORIGINAL STRUCTURE OF THIS JCB PRESENTED BY W. BUCHFCLZ IN
0003900 C IBM SYSTEMS JOURNAL, VOL. 8, NO. 4
0004000 C TRANSLATED TO FORTRAN BY J. F. MARAZANO, BELL TEL. LABS
0004100 C MODIFIED TO PROVIDE MORE DATA AND ADAPTED FOR CERTAIN
0004200 C EXPERIMENTAL DESIGNS BY T. E. BELL, THE RAND CORP.
0004300 C MODIFIED TO BETTER EXERCISE THE CPU BY C. L. HENMAN, MCAUTO
0004400 C FURTHER MODIFIED BY T. E. BELL TO EASE DATA ANALYSIS AND TO
0004500 C RUN ON MCRE MACHINES
0004600 C MODIFIED TO REQUIRE MCRE MAIN STORAGE AND CAUSE PAGING IN
0004700 C A VIRTUAL SYSTEM BY GAYLE HALL, LITTON RESTON COMPUTER CENTER
0004720 C MODIFIED TO REQUIRE EVEN MCRE MAIN CORE (548K) BY RICHARD
0004740 C ALEXANDER, KFA-JUELICH 28 JANUARY 1975
0004800 C
0004900 C
0005000 C THIS PROGRAM IS FOR USE IN GENERATING A SYNTHETIC BATCH STREAM
0005100 C PARAMETERS ON INPUT CARDS CAUSE THE JOB TO USE THE COMPUTER

```

C.7 SOURCE - PROGRAM

0005200 C
 0005300 C
 0005400 C
 0005500 C
 0005600 C
 0005700 C
 0005800 C
 0005900 C
 0006000 C
 0006100 C
 0006200 C
 0006300 C
 0006400 C
 0006500 C
 0006600 C
 0006700 C
 0006800 C
 0006900 C
 0007000 C
 0007100 C
 0007200 C
 0007300 C
 0007400 C
 0007500 C
 0007600 C
 0007700 C
 0007800 C
 0007900 C
 0008000 C
 0008100 C
 0008200 C
 0008300 C
 0008400 C
 0008500 C
 0008600 C
 0008700 C
 0008800 C
 0008900 C
 0009000 C
 0009100 C
 0009200 C
 0009300 C
 0009400 C
 0009500 C
 0009600 C
 0009700 C
 0009800 C
 0009900 C
 0010000 C
 0010100 C
 0010200 C
 0010300 C
 0010400 C
 0010500 C

SYSTEM LIKE A CPU-BOUND JOB, AN I/O BOUND JOB, OR A JOB WITH ANY DEGREE OF CPU AND I/O MIX. EACH PARAMETER CARD CAUSES ONE OR MORE TIMED PASSES THROUGH THE SPECIFIED PASS. AT THE END OF WORK FOR ONE PARAMETER CARD, THE RESULTS ARE PRINTED OUT. DIFFERENT TYPES OF PASSES CAN BE SPECIFIED BY INPUTTING SEVERAL PARAMETER CARDS. END OF INPUT IS INDICATED BY A DUMMY PARAMETER CARD WITH NPASS=0.

THE JOB FIRST INITIALIZES FILES FOR A SET OF PASSES (SPECIFIED BY ONE PARAMETER CARD). EACH PASS HAS ITS OWN INITIALIZATION AND TERMINATION TO REWIND FILES AND TO SUMMARIZE RESULTS. HOWEVER, OUTPUT IS HELD UNTIL ALL PASSES OF THE PARAMETER CARD ARE COMPLETED. THIS ELIMINATES SYSOUT BEING OVERLAPPED WITH TESTS.

I/O CAN BE DIRECTED TO TAPE, DISC, OR DRUM. READING AND WRITING ARE UNFORMATTED TO REDUCE FORTRAN CONVERSION ROUTINE EXECUTION. I/O UNITS ARE USED AS FOLLOWS -

1. MASTER FILE WRITTEN DURING PASS SET INITIALIZATION. IT IS SUBSEQUENTLY READ FOR WRITING TO FILE 4.
2. DETAIL FILE WRITTEN DURING PASS SET INITIALIZATION. IT IS SUBSEQUENTLY READ FOR WRITING TO FILE 3.
3. DETAIL FILE WRITTEN DURING PASS FROM FILE 2.
4. MASTER FILE WRITTEN DURING PASS FROM FILE 1.

IF A PASS HAS MASTER RECORDS, ONE OR MORE MASTER RECORDS ARE PROCESSED FOR EACH DETAIL RECORD. EACH DETAIL RECORD PROCESSED IS FOLLOWED BY THE NUMBER OF CPU REPETITIONS INDICATED ON THE PARAMETER CARD. IF NDET = 0, NO CPU REPETITIONS WILL BE PERFORMED. HOWEVER, IF NCPURP = 0, DETAIL RECORDS WILL BE PROCESSED IF REQUESTED.

IF A PASS HAS NO MASTER RECORDS, NCPURP REPETITIONS OF THE CPU LOOP WILL BE PERFORMED.

THE PROGRAM IS WRITTEN IN FORTRAN, AND CALLS A ROUTINE NAMED ZTIME TO OBTAIN THE CURRENT COMPUTER CLOCK VALUE. THIS ROUTINE MUST BE WRITTEN FOR EACH SYSTEM.

INPUT:

NMAS	NUMBER OF MASTER RECORDS. NMAS MUST BE GREATER THAN ZERO FOR ANY I/O TO BE DONE.
NDET	NUMBER OF DETAIL RECORDS (LESS THAN OR EQUAL TO NMAS)
ITYPE	INDICATOR OF THE TYPE CPU ACTIVITY USED WITHIN THE CPU MINCR LOOP AS FOLLOWS:
	ITYPE CPU ACTIVITY
	1 INTEGER ARITHMETIC
	2 FLOATING POINT ARITHMETIC
	3 DOUBLE PRECISION ARITHMETIC
	4 SUBROUTINE CALLS
	5 MOVE SEQUENTIALLY BETWEEN CCNTIG

```

C.8 SOURCE - PROGRAM
0010600 C          BLCKS
0010700 C          6      MOVE RANDCMLY BETWEEN CONTIGUOUS
0010800 C          BLOCKS
0010900 C          7      MOVE RANDCMLY BETWEEN NON-CONTIG
0011000 C          BLOCKS
0011100 C          8      LOOP WITHOUT DO STATEMENT
0011200 C          9      LOOP WITH  DO STATEMENT
0011300 C          10     PAGING
0011400 C          NCPURP  NUMBER OF REPETITIONS OF CPU MINOR LOOP FOR
0011500 C          EACH DETAIL RECORD.  IF NO DETAIL OR MASTER
0011600 C          RECORDS, NCPUR IS THE TOTAL NUMBER OF
0011700 C          REPETITIONS PER PASS IN TOTALLY CPU-BOUND
0011800 C          PASSES.
0011900 C          NPASS    NUMBER OF IDENTICAL PASSES THROUGH LOOP DEFINED
0012000 C          BY NPASS, NDET, ITYPE, AND NCPURP.
0012100 C          *****INPLT BELOW HERE CAN BE IGNORED IF DESIRED*****
0012200 C          *      PUNCH  IF 0, NO RESULTS WILL BE PUNCHED.  THE
0012300 C          *          FINAL TIME WILL BE PUNCHED IF THE
0012400 C          *          DUMMY LAST PARAMETER CARD HAS PUNCH
0012500 C          *          NOT EQUAL TO 0.
0012600 C          *      RUNID  IDENTIFIER OF EXPERIMENTAL RUN.  (MAY BE
0012700 C          *          LEFT BLANK IF NOT NEEDED.)
0012800 C          *****INPLT ABOVE HERE CAN BE IGNORED IF DESIRED*****
0012900 C
0013000 C          THE FORMAT OF THE PARAMETER INPUT CARD IS AS SHOWN BELOW.
0013100 C          THE ZERCS WOULD, OF COURSE, BE REPLACED WITH THE DESIRED
0013200 C          VALUES.  THE VARIABLE IDENTIFIERS ARE PRESENT ONLY FOR
0013300 C          CONVENIENCE.  (PARAMETER CARDS ARE READ UNDER FORMAT 88.)
0013400 C
0013500 C          1          2          3          4          5          6          7
0013600 C 2345678901234567890123456789012345678901234567890123456789012
0013700 C NMAS=0000000,NDET=0000000,ITYPE=00,NCPURP=0000000,NPASS=(0,PUNCH=0,RUNID
0013800 C
0013900 C
0014000 C
0014100 C          THE MASTER FILE AND DETAIL FILE ARE DEFINED HERE
0014200 C          BY THE LENGTH OF THE 'RECORD' VARIABLE WHICH WILL BE WRITTEN.
0014300 C          'RECORD' MUST BE DIMENSIONED AS RECORD(N) WITH N 1 OR MORE.
0014400 C          INTEGER RECCRD (47)
0014500 C          INTEGER START, SUM, TABLE(1000), PUNCH
0014600 C          DIMENSION TIMES(100,2)
0014700 C          DIMENSION ARRAY(1000), INDEX(1000)
0014810 C
0014820 C          CHANGED BY R. ALEXANDER KFA, 28 JAN 75
0014830 C          DIMENSION MATRX1(1024,6),MATRX2(1024,6)
0014840 C          |   |   |   |   |   |   |
0014850 C          DIMENSION MATRX1(1024,50),MATRX2(1024,50)
0014900 C          DOUBLE PRECISION DP1,DP2,DP3,DP4,DP5,DSUM
0015000 C
0015100 C          CALL ZTIME(TIMEN)
0015200 C          N = 10
0015300 C          START = 100
0015400 C
0015500 C          WRITE(6,87)

```

C.9 SOURCE - PROGRAM

```

0015600 C
0015700 C      READ INPUT PARAMETERS
0015800 C
0015900 1000 READ (5,88) NMAS, NDET, ITYPE, NCPURP, NPASS, PUNCH, RUN
0016000      WRITE(6,89) NMAS, NDET, ITYPE, NCPURP, NPASS, PUNCH, RUN
0016100 C
0016200 C      CHECK FOR UNUSUAL INPLT
0016300 C
0016400 C      END OF INPLT CARDS
0016500 C      IF (NPASS .LE. 0) GO TO 9000
0016600 C      MORE DETAIL THAN MASTER -- DISREGARD
0016700 C      IF(NMAS .GE. NDET) GO TO 30
0016800 C      WRITE(6, 90)
0016900 C      GC TO 1000
0017000 C      REQUESTED CPU REPETITIONS, BUT NDET = 0, NMAS GT 0
0017100 30      IF((NMAS .LE. 0) .OR. (NDET .GT. 0) .OR. (NCPURP .LE. 0)) GO TO 32
0017200 C      WRITE(6,91)
0017300 32      IF(ITYPE .NE. 0 .OR. NCPURP .EQ. 0) GO TO 33
0017400 C      WRITE(6, 92)
0017500 C      ITYPE = 1
0017600 C      GO TO 33
0017700 31      IF (ITYPE.LE.11) GO TO 33
0017800 C      WRITE (6,92)
0017900 C      ITYPE = 1
0018000 33      CCNTINUE
0018100 C      PUNCH PARAMETERS IF REQUESTED
0018200 C      IF(PUNCH .NE. 0) WRITE (7, 86) NMAS, NDET, ITYPE, NCPURP,
0018300 1      NPASS, PUNCH, RUN
0018400 C
0018500 C      END OF PARAMETER INPUT PROCESSING
0018600 C
0018700 C
0018800 C      SET UP ARRAYS FOR CPU ACTIVITY
0018900 C
0019000 C      MKEY = 0
0019100 C      LKEY = 0
0019200 C      IF(ITYPE .EQ. 1) GO TO 201
0019300 C      IF(ITYPE .EQ. 6 .OR. ITYPE .EQ. 7) GO TO 202
0019400 C      NO SETUP REQUIRED
0019500 C      GO TO 249
0019600 C
0019700 C      INTEGER TABLE SETUP
0019800 201      K = N**3
0019900 C      DO 200 I=1,K
0020000 200      TABLE(I) = START+I-1
0020100 C
0020200 C      GO TO 249
0020300 C      MOVES -- SETUP INDEX FOR 'RANDOM' MOVES
0020400 C      'RANDOMNESS' AMOUNTS TO REGULAR JUMPS AROUND AN ARRAY
0020500 C      INSTEAD OF SEQUENTIALLY REFERENCING CORE. IT IS
0020600 C      DESIGNED TO APPEAR RANDOM ON SOME MACHINES.
0020700 C
0020800 202      DO 220 I = 1, 1000
0020900 C      J = I - 1

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                                C.10 SOURCE - PROGRAM
0021000 INDEX(I) = 1 + (I/20) + 50 * MCD(J, 20)
0021100 22C CCNTINUE
0021200 GO TO 249
0021300 C
0021400 C SET UP FILES FOR I/O ACTIVITY
0021500 C
0021600 249 IF(NMAS .EQ.0) GO TO 280
0021700 C
0021800 C MASTER GENERATION
0021900 RECORD(1) = 0
0022000 DO 250 MKEY=1,NMAS
0022100 RSUM = 0.
0022200 MCHK = MKEY
0022300 250 WRITE (1) MKEY, RSUM, MCHK, RECCRD
0022400 RECORD(1) = 1
0022500 WRITE (1) MKEY, RSUM, MCHK, RECCRD
0022600 RECORD(1) = 0
0022700 ENDFILE 1
0022800 C
0022900 251 IF(NDET .EQ. 0)GO TO 280
0023000 C
0023100 C DETAIL GENERATION
0023200 NRATO = NMAS/NDET
0023300 DO 275 LKEY = NRATC,NMAS,NRATO
0023400 DSUM =0.
0023500 LCHK = LKEY
0023600 275 WRITE (2) LKEY, DSUM, LCHK, RECCRD
0023700 RECORD(1) = 1
0023800 WRITE (2) LKEY, DSUM, LCHK, RECORD
0023900 RECORD(1) = 0
0024000 ENDFILE 2
0024100 C
0024200 C
0024300 C
0024400 28C CCNTINUE
0024500 C
0024600 C
0024700 C DO LOOP NPASS TIMES
0024800 C
0024900 DO 1 ICNT = 1, NPASS
0025000 C
0025100 C IF NO MASTER OR DETAILED RECORDS, SKIP I/O SETUP
0025200 IF(NMAS .EQ. 0) GO TO 285
0025300 KCNT = 0
0025400 REWIND 4
0025500 REWIND 1
0025600 READ (1) MKEY, RSUM, MCHK, RECORD
0025700 IF(NDET .GT. 0) GO TO 283
0025800 LKEY = 999999
0025900 GO TO 285
0026000 283 REWIND 3
0026100 REWIND 2
0026200 READ (2) LKEY, DSUM, LCHK, RECORD
0026300 C

```

C.11 SOURCE - PROGRAM

```

0026400 C
0026500 C          START TIMED PASS          *****
0026600 C
0026700 285  CALL ZTIME(FSTRM)
0026800          TIMES(ICNT, 1) = FSTRM
0026900 C
0027000 C
0027100 400  IF(MKEY-LKEY) 475,450,425
0027200 C          SEQUENCE ERROR
0027300 425  WRITE(6,94)
0027400          STOP 6
0027500 C          IF NOT REQUESTED, SKIP THE CCMPUTE KERNEL
0027600 450  IF(NCPURP .LE. 0) GO TO 301
0027700 C
0027800 C
0027900 C          COMPUTE KERNELS
0028000 C
0028100 C          REPEAT NCPUR TIMES FOR EACH DETAIL RECORD (OR JUST NCPUR IF
0028200 C          NMAS = NDET = 0)
0028300 C
0028400 C          START CPU LOOP          *****
0028500          GO TO (111,222,333,444,555,666,777,888,999,1010),ITYPE
0028600 C
0028700 C          INTEGER ARITHMETIC
0028800 C
0028900 111  CONTINUE
0029000          DO 300 I = 1, NCPURP
0029100          SUM = 0
0029200          IU = 0
0029300          J = 0
0029400          DO 350 K=1,N
0029500          J = J+(6*IU+1)
0029600          SUM = SUM + TABLE(J)
0029700 350  IU =IU +K
0029800          LSUM = (N*(N+1))/2
0029900          IF(START .EQ. (SUM-LSUM*LSUM)/N+1)GO TO 300
0030000          WRITE(6,96)
0030100          STOP 5
0030200 300  CCNTINUE
0030300          GO TO 850
0030400 C
0030500 C          FLOATING POINT ARITHMETIC
0030600 C
0030700 222  CONTINUE
0030800          B = 2.0
0030900          D = 4.0
0031000          E = 5.0
0031100          DO 330 I=1,NCPURP
0031200          SUM1=0.
0031300          DO 325 J=1,N
0031400          G=E*B+D**3/64.-5.*(E-(B+1.))
0031500          H=G+G*G-G/G+2.*G-2.0
0031600 325  SUM1=SUM1+H
0031700 330  CONTINUE

```

```

                                C.12  SOURCE - PROGRAM
0031800      GO TO 850
0031900 C
0032000 C      DOUBLE PRECISION ARITHMETIC
0032100 C
0032200 333  CCNTINUE
0032300      DO 396 I=1,NCPURP
0032400      DP4 = 2.0
0032500      DP5 = 4.0
0032600      DSUM=G.
0032700      DO 390 J=1,N
0032800      DP3= E
0032900      DP1=DP3*DP4+DP5**3/64.-5.*(CP3-1.)
0033000      DP2=DP1+DP1*DP1-DP1/DP1+2.*DP1-2.0
0033100 396  DSUM=DSUM+CP2
0033200 396  CCNTINUE
0033300      GO TO 850
0033400 C
0033500 C      SUBROUTINE CALLS
0033600 C
0033700 444  CCNTINUE
0033800      DO 480 I=1,NCPURP
0033900      CALL SUB1
0034000      CALL SUB2
0034100      CALL SUB3
0034200      CALL SUB4
0034300      CALL SUB5
0034400 480  CCNTINUE
0034500      GO TO 850
0034600 C
0034700 C      MOVE SEQUENTIALLY BETWEEN CCNTIGUOUS 1K WORD BLOCKS
0034800 C
0034900 555  CONTINUE
0035000      CALL SUB6 (NCPURP, ARRAY, INDEX, ITYPE)
0035100 C      (ARRAY IS A BLOCK OF DATA USED ELSEWHERE, INDEX PROVIDES
0035200 C      INDICES FOR RANDOM MOVES, AND JTYPE INDICATES THE TYPE OF MOVE
0035300      GO TO 850
0035400 C
0035500 C      MOVE RANDOMLY TO CONTIGUCUS 1K WORD BLCKS
0035600 C
0035700 666  CCNTINUE
0035800      CALL SUB6 (NCPURP, ARRAY, INDEX, ITYPE)
0035900      GO TO 850
0036000 C
0036100 C      MOVE RANDOMLY TO NON-CCNTIGUOUS 1K BLOCKS
0036200 C
0036300 777  CCNTINUE
0036400      CALL SUB6 (NCPURP, ARRAY, INDEX, ITYPE)
0036500      GO TO 850
0036600 C
0036700 C      LOOP WITHCUT DO STATEMENT
0036800 C
0036900 888  CCNTINUE
0037000      I1 = 1
0037100 810  I = 1

```

C.13 SOURCE - PROGRAM

```

0037200 812 J = 1
0037300 813 K = 1
0037400 814 L = 1
0037500 815 I1 = I1 + 1
0037600 L = L + 1
0037700 IF (L .LE. N) GO TO 815
0037800 K = K + 1
0037900 IF (K .LE. N) GO TO 814
0038000 J = J + 1
0038100 IF (J .LE. N) GO TO 813
0038200 I = I + 1
0038300 IF (I .LE. NCPURP) GO TO 812
0038400 GO TO 850
0038500 C
0038600 C LOOP WITH DO STATEMENT
0038700 C
0038800 999 CONTINUE
0038900 I1 = 1
0039000 DO 830 I = 1, NCPURP
0039100 DO 829 J = 1, N
0039200 DO 828 K = 1, N
0039300 DO 827 L = 1, N
0039400 I1 = I1 + 1
0039500 827 CCNTINUE
0039600 828 CONTINUE
0039700 829 CCNTINUE
0039800 830 CONTINUE
0039900 C
0040000 C PAGING
0040100 C
0040200 1010 CCNTINUE
0040300 DO 831 I=1,NCPURP
0040400 DO 832 J=1,1024
0040510 C
0040520 C CHANGED BY R.ALEXANDER TO INCREASE PAGING
0040530 C DO 832 K=1,6
0040540 C
0040550 DO 832 K=1,50
0040600 MATRX1(J,K) = 1
0040700 832 MATRX2(J,K) = 0
0040800 DO 833 J=1,1024
0040820 C
0040910 C CHANGED BY R.ALEXANDER TO INCREASE PAGING
0040920 C DO 833 K=1,6
0040930 C
0040940 DO 833 K=1,50
0041000 MATRX1(J,K) = MATRX2(J,K)
0041100 833 MATRX2(J,K) = 1
0041200 831 CONTINUE
0041300 850 CCNTINUE
0041400 C END OF CPU LCGP
0041500 C
0041600 C IF NO I/O REQUESTED, SKIP I/O SECTION
0041700 301 IF(NMAS .EQ. 0) GO TO 600

```

C.14 SOURCE - PROGRAM

```

0041800 C
0041900 C
0042000 C          START OF I/O SECTION          *****
0042100 C
0042200 460 CONTINUE
0042300 C          WRITE DETAIL RECCRDS
0042400          RSUM = SUM
0042500          DSUM = SUM
0042600          ICHK = LCHK
0042700          KCNT = KCNT+1
0042800          WRITE (3) LKEY, DSUM, LCHK, RECORD
0042900          READ (2) LKEY, DSUM, LCHK, RECCRD
0043000          IF(RECORD(1) .EQ. 1) GO TO 500
0043100 C
0043200 C          WRITE MASTER
0043300 C
0043400 475          WRITE (4) MKEY, RSUM, MCHK, RECCRD
0043500          READ (1) MKEY, RSUM, MCHK, RECCRD
0043600          IF(RECORD(1) .EQ. 1) GO TO 600
0043700          GO TO 400
0043800 C
0043900 C          NO DETAILED RECORDS LEFT
0044000 500          LKEY = 999999
0044100          GO TO 475
0044200 C
0044300 C          NO MASTER RECORDS LEFT
0044400 C
0044500 600 CONTINUE
0044600 C          GET END TIME
0044700          CALL ZTIME(FENDTM)
0044800          TIMES (ICNT, 2) = FENDTM
0044900 C
0045000 C          END OF I/O SECTION          *****
0045100 C
0045200 C
0045300 C          END OF TIMED PASS          *****
0045400 C
0045500 C          IF I/O SECTION HAS BEEN USED, CHECK FOR CORRECT OPERATION
0045600          IF((NMAE.EQ.0) .OR. (NDET.EQ.0)) GO TO 1
0045700          IF(ICHK - (KCNT*NRATC))700,1,700
0045800 700          WRITE(6,93) ICHK,ICNT,NRATC
0045900 C
0046000 C
0046100 1          CONTINUE
0046200 C
0046300 C
0046400 C          COMPUTE RESULTS
0046500 C
0046600          WRITE(6,97)
0046700          STIME = 0.
0046800          SSTIME = 0.
0046900          DO 1100 ICNT = 1, NPASS
0047000          TIMEON = TIMES(ICNT, 1)
0047100          TIMEOF = TIMES(ICNT, 2)

```

I/O LG

C.15 SOURCE - PROGRAM

```

0047200      DIFF = TIMECF - TIMECN
0047300      WRITE(6,99) TIMECN, TIMEOF, DIFF
0047400      STIMES = STIMES + DIFF
0047500      SSTIME = SSTIME + DIFF ** 2
0047600 1100 CONTINUE
0047700      TMEAN = STIMES / FLCAT(NPASS)
0047800      TSTDEV = SQRT((SSTIME / FLOAT(NPASS)) - TMEAN ** 2)
0047900      WRITE(6,98) TMEAN, TSTDEV
0048000 C      PUNCH INDIVIDUAL RUN TIMES IF REQUESTED
0048100      IF(PUNCH .EQ. 0) GO TO 1110
0048200      NUM = (NPASS + 3)/4
0048300      DO 1120 I = 1, NUM
0048400      IDONE = (I - 1) * 4
0048500      LEFT = MIN0(NPASS-IDONE, 4)
0048600      I1 = IDONE + 1
0048700      I2 = IDONE + LEFT
0048800      WRITE (7, 85) ((TIMES(J1, J2), J2 = 1, 2), J1 = I1, I2)
0048900 1120 CONTINUE
0049000 C
0049100 C      GO GET NEXT CONTROL CARD
0049200 C
0049300 1110 REWIND 1
0049400      REWIND 2
0049500      REWIND 3
0049600      REWIND 4
0049700      GO TO 1000
0049800 C
0049900 C
0050000 9000 CONTINUE
0050100 C
0050200 C
0050300 C      PUT OUT TOTAL ELAPSED TIME
0050400 C
0050500 C
0050600      CALL ZTIME(TIMEF)
0050700      DIFF = TIMEF - TIMEN
0050800      WRITE(6,95) TIMEN, TIMEF, DIFF
0050900 C      PUNCH FINAL OUTPUT IF REQUESTED
0051000      IF(PUNCH .EQ. 0) GO TO 1130
0051100      WRITE (7, 86) NPAS, NDET, ITYPE, NCPURP, NPASS, PUNCH, RUN
0051200      WRITE (7, 84) TIMEN, TIMEF, DIFF
0051300 C
0051400 1130 CALL EXIT
0051500 C
0051600 C      FORMAT STATEMENTS
0051700 C
0051800 84      FORMAT (3F12.3)
0051900 85      FORMAT (8F10.3)
0052000 86      FORMAT (6H NPAS=, I7, 6H NDET=, I7, 7H ITYPE=, I2, 8H NCPURP=,
0052100 1      I7, 7H NPASS=, I2, 7H PUNCH=, I1, 7H RUNID=, A4)
0052200 87      FORMAT(24H1 SYNTHETIC BATCH STREAM)
0052300 88      FORMAT(6X, I7, 6X, I7, 7X, I2, 8X, I7, 7X, I2, 7X, I1, 7X, A4)
0052400 89      FORMAT(10H0 MASTER =, I7, 4X, 8HDETAIL =, I7, 4X, 19HCPU ACTIVITY TYPE =
0052500 1      , I2, 4X, 17HCPU REPETITIONS =, I8, 4X, 8HPASSES =, I3, 4X,

```

```

                                C.16 SOURCE - PROGRAM
0052600      1 7HPUNCH =, I1, 4X, 7HRUNID =, A4)
0052700 90  FORMAT(38H MORE DETAILS THAN MASTERS SPECIFIED.)
0052800 91  FCRMAT(30H NO CPU LCCPS SINCE NCET = 0.)
0052900 92  FORMAT(45H ITYPE WRCNG -- EQUALS ZERO. ITYPE SET TO 1 )
0053000 93  FORMAT(23H CHECKSUM ERROR, ICHK= ,I6,7H KCNT= ,I6,8H NRATC= ,I6)
0053100 94  FORMAT(15H SEQUENCE ERROR)
0053200 95  FORMAT(10HGCN-TIME =,F10.3,4X,10HCFF-TIME =,F10.3,
0053300      1 4X,20HTOTAL ELAPSED TIME =,F10.3)
0053400 96  FORMAT(14H CCMPLTE ERROR)
0053500 97  FORMAT(1H0,11X,5HSTART,11X,3HEND,12X,12HELAPSED TIME)
0053600 98  FORMAT(1H ,22X,19HMEAN ELAPSED TIME =,F10.3,
0053700      1 22H STANDARD DEVIATION =,F10.3//)
0053800 99  FCRMAT(1H , 8X, F10.3, 6X, F10.3, 7X, F10.3)
0053900      END
0054000      SUBROUTINE ZTIME(TME)
0054100 C
0054200 C      THIS SUBROUTINE CALLS THE SYSTEM TIMER FOR TIME OF DAY. IT MUST
0054300 C      BE WRITTEN FOR THE PARTICULAR SYSTEM. IT RETURNS THE TIME OF DAY
0054400 C      IN FLOATING POINT SECONDS
0054500 C
0054600      CALL DATIME(ITIME)
0054700      TME = FLOAT(ITIME) / 100.
0054800      RETURN
0054900      END
0055000      SUBROUTINE SUB1
0055100 C
0055200 C      THIS IS A DUMMY SUBROUTINE TO BE CALLED
0055300 C
0055400      X = Y
0055500      RETURN
0055600      END
0055700      SUBROUTINE SUB2
0055800 C
0055900 C      THIS IS A DUMMY SUBROUTINE TO BE CALLED
0056000 C
0056100      X = Y
0056200      RETURN
0056300      END
0056400      SUBROUTINE SUB3
0056500 C
0056600 C      THIS IS A DUMMY SUBROUTINE TO BE CALLED
0056700 C
0056800      X = Y
0056900      RETURN
0057000      END
0057100      SUBROUTINE SUB4
0057200 C
0057300 C      THIS IS A DUMMY SUBROUTINE TO BE CALLED
0057400 C
0057500      X = Y
0057600      RETURN
0057700      END
0057800      SUBROUTINE SUB5
0057900 C

```

C.17 SOURCE - PROGRAM

```

0058000 C      THIS IS A DUMMY SUBROUTINE TO BE CALLED
0058100 C
0058200 C      X = Y
0058300 C      RETURN
0058400 C      END
0058500 C      SUBROUTINE SUB6(NCPURP, ARRAY, INDEX, ITYPE)
0058600 C
0058700 C      THIS SUBROUTINE MOVES DATA AROUND BETWEEN 1K BLOCKS. THE
0058800 C      MODE OF MOVEMENT IS INDICATED BY THE PASSED VARIABLE ITYPE:
0058900 C      ITYPE = 5  MCVE SEQUENTIALLY BETWEEN CCNTIGUOUS BLCKS
0059000 C      ITYPE = 6  MCVE RANDCMLY BETWEEN CONTIGUOUS BLOCKS
0059100 C      ITYPE = 7  MCVE RANDCMLY BETWEEN NON-CCNTIGUOUS BLOCKS
0059200 C
0059300 C      ALL BLOCKS ARE 1K WORDS LONG, ONE IS PASSED AND CALLED ARRAY,
0059400 C      ONE IS LOCAL AND CALLED ARRAY1, AND THE OTHER IS ALSO LOCAL
0059500 C      AND CALLED ARRAY2
0059600 C      INDEX PROVIDES INDICES FOR RANDCM MOVES -- IT ACTUALLY PROVIDES
0059700 C      NON-RANDCM INDICES THAT JUMP AROUND IN A DATA BLOCK
0059800 C
0059900 C      DIMENSION ARRAY1(1000), ARRAY2(1000)
0060000 C      DIMENSION ARRAY(1000), INDEX(1000)
0060100 C      IF(ITYPE .NE. 5) GO TO 1000
0060200 C
0060300 C      MOVE WORDS SEQUENTIALLY BETWEEN CONTIGUOUS BLOCKS OF
0060400 C      1K WORDS
0060500 C
0060600 C      DO 201 III = 1, NCPURP
0060700 C      DO 200 I = 1, 1000, 5
0060800 C      ARRAY1(I) = ARRAY2(I)
0060900 C      ARRAY1(I+1) = ARRAY2(I+1)
0061000 C      ARRAY1(I+2) = ARRAY2(I+2)
0061100 C      ARRAY1(I+3) = ARRAY2(I+3)
0061200 C      ARRAY1(I+4) = ARRAY2(I+4)
0061300 200 CONTINUE
0061400 201 CCNTINUE
0061500 C      GO TO 5000
0061600 C
0061700 1000 IF(ITYPE .NE. 6) GO TO 2000
0061800 C
0061900 C      MOVE WORDS RANDCMLY BETWEEN CCNTIGUOUS BLOCKS
0062000 C
0062100 C      DO 1201 III = 1, NCPURP
0062200 C      DO 1200 I = 1, 1000
0062300 C      J = INDEX(I)
0062400 C      ARRAY1(I) = ARRAY2(J)
0062500 1200 CONTINUE
0062600 1201 CONTINUE
0062700 C      GO TO 5000
0062800 C
0062900 2000 IF(ITYPE .NE. 7) GO TO 3000
0063000 C
0063100 C
0063200 C      MOVE WORDS RANDOMLY BETWEEN NON-CONTIGUOUS BLOCKS
0063300 C

```

```
                                C.18 SOURCE - PROGRAM
0063400      DD 2201 III = 1, NCPURP
0063500      DD 2200 I = 1, 1000
0063600      J = INDEX(I)
0063700      ARRAY2(I) = ARRAY(J)
0063800 2200  CCNTINUE
0063900 2201  CONTINUE
0064000      GO TO 5000
0064100 C
0064200 C          SOMETHING IS WRONG
0064300 C
0064400 3000  WRITE(6, 11) ITYPE
0064500 11    FORMAT (1H , 28HCPU MOVE TYPE IS WRONG -- , 15)
0064600      STOP 8
0064700 5000  RETURN
0064800      END
0064900 /*LKED.SYSLMOD DD DSN=&SYSLMOD,DISP=&LMO DISP,UNIT=,SPACE=
0065000 /*L.SYSLIN DD DSN=&OBJSET,DISP=(OLD,DELETE)
0065100 // DD DSN=&ASS,DISP=(OLD,DELETE)
0065200 /*LKED.SYSIN DD DSN=&&SYSGO,DISP=(OLD,DELETE)
0065300 /*          END OF JOB
```

Appendix D

MVS

LIMIT VALUES

and

IPS MEMBERS

LIMIT VALUES and IPS-MEMBERS

Configuration	<u>MIX - RUN</u>		<u>TSO-ONLY RUN</u>	
	LIMIT Value	IPS-Member No.	LIMIT Value	IPS-Member No.
1	5	5	7	4
2	4	6	7	4
3	5	5	7	4
4	10	5	∞	4
5	2	8	3	4

Appendix E

MVS

IPS - MEMBERS

E.1 IPS - MEMBERS

```
*****  
* IEAIPSO4 *  
*****
```

```
CPU=9.9,IOC=5.0,MSO=1.0  
WKL=(1,4,7,12,17,22)  
OBJ=1,SRV=(400,400,400,400,400,400)  
OBJ=2,SRV=(400,300,*,*,*,0)  
OBJ=3,SRV=(400,300,*,0,0,0)  
OBJ=4,SRV=(400,300,0,0,0,0)  
OBJ=5,SRV=(400,100,*,*,*,0)  
OBJ=6,SRV=(400,100,*,*,0,0)  
OBJ=7,SRV=(400,100,*,0,0,0)  
OBJ=8,SRV=(2000,*,*,*,*,0)  
PGN=1,(OBJ=8,ISV=999K,RTB=0)  
PGN=2,(OBJ=5,DUR=5,ISV=150,RTB=0,UNT=R)  
      (OBJ=7,ISV=300,RTB=1)
```

```
*****  
* IEAIPSO5 *  
*****
```

```
CPU=9.9,IOC=5.0,MSO=1.0  
WKL=(1,4,7,12,17,22,27)  
OBJ=1,SRV=(400,400,400,400,400,400)  
OBJ=2,SRV=(400,300,*,*,*,0)  
OBJ=3,SRV=(400,300,*,0,0,0)  
OBJ=4,SRV=(400,300,0,0,0,0)  
OBJ=5,SRV=(400,100,*,*,*,0)  
OBJ=6,SRV=(400,100,*,*,0,0)  
OBJ=7,SRV=(400,100,*,0,0,0)  
OBJ=8,SRV=(2000,*,*,*,*,0)  
PGN=1,(OBJ=8,ISV=999K,RTB=0)  
PGN=2,(OBJ=5,DUR=2,ISV=150,RTB=0,UNT=R)  
      (OBJ=7,ISV=300,RTB=1)
```

```
*****
```

E.2 IPS - MEMBERS

* IEAIPS06 *

CPU=9.9,IOC=5.0,MSO=1.0
WKL=(1,4,7,12,17,22,32)
OBJ=1,SRV=(400,400,400,400,400,400)
OBJ=2,SRV=(400,300,*,*,*,0)
OBJ=3,SRV=(400,300,*,0,0,0)
OBJ=4,SRV=(400,300,0,0,0,0)
OBJ=5,SRV=(400,100,*,*,*,0)
OBJ=6,SRV=(400,100,*,*,0,0)
OBJ=7,SRV=(400,100,*,0,0,0)
OBJ=8,SRV=(2000,*,*,*,*,0)
PGN=1,(OBJ=8,ISV=999K,RTB=0)
PGN=2,(OBJ=5,DUR=2,ISV=150,RTB=0,UNT=R)
(OBJ=7,ISV=300,RTB=1)

* IEAIPS08 *

CPU=9.9,IOC=5.0,MSO=1.0
WKL=(1,4,7,12,17,22,100)
OBJ=1,SRV=(400,400,400,400,400,400)
OBJ=2,SRV=(400,300,*,*,*,0)
OBJ=3,SRV=(400,300,*,0,0,0)
OBJ=4,SRV=(400,300,0,0,0,0)
OBJ=5,SRV=(400,100,*,*,*,0)
OBJ=6,SRV=(400,100,*,*,0,0)
OBJ=7,SRV=(400,100,*,0,0,0)
OBJ=8,SRV=(2000,*,*,*,*,0)
PGN=1,(OBJ=8,ISV=999K,RTB=0)
PGN=2,(OBJ=5,DUR=2,ISV=150,RTB=0,UNT=R)
(OBJ=7,ISV=300,RTB=1)

Appendix F

MVS and TSS

PATCHES

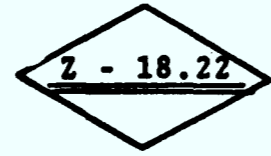
F.1 LIMIT OF CONCURRENT TSO-USERS

```

//
//
//LIMITIN JOB 02050,'SEE SECTION 3.1',MSGLEVEL=1
//ZAP EXEC PGM=AMASPZAP
//SYSPRINT DD SYSOUT=A
//SYSLIB DD DSN=SYS1.NUCLEUS,DISP=SHR
//SYSABEND DD SYSOUT=A
//SYSIN DD *
NAME IEANUC02 IRARMCTL
* LIMIT NUMBER OF CONCURRENT TSO ADDRESS SPACES IN IN QUEUE.
VER 050A 58504020,58105094 * L ASCBPTR,OUCBASCU(,OUCBPTR) L R1,ASCB0UXB
VER 0ADC 00000000,00000000 * IRAPTCTL = PATCH AREA DC 30A(0)
VER 0B1C 00000000 * END OF PATCH
REP 050A 47F0CADA * R IRAPTCTL
REP 0ADC 91204012,47B0CB06 * TM OUCBYFL(OUCBPTR),OUCBLOG.BZ RETURN
REP 0AEA 58502078,41100003 * L *5,RMCTINQE(,RMCTPTR) LA *1,TREE
* N O T E LA *1,TREE SPECIFIES THE NUMBER OF CONCURRENT TSO AS'S
* OUCBLOOP DS 0H
REP 0AEC 58505008,91205012 * L *5,OUCCBCK(,*5) TM OUCBYFL(*5),OUCBLOG
REP 0AFA 47B0CAFE,4610CAFE * UZ NOLOGTYP BCT *1,FINDMORE
REP 0AFC 47F0CH0E * U NOMORLOG
* NOLOGTYP FINDMORE DS 0H
REP 0B00 55502078,4770CAEA * CL *5,RMCTINQE(,RMCTPTR) BNE OUCBLOOP
* RETUTN DS 0H
REP 0B08 58504020,47F0C50C * L ASCBPTR,OUCBASCB(,OUCBPTR) B TO MAIN-LIN
* NOMORLOG DS 0H
REP 0B10 58502084,5E5022CC * L *5,RMCTTOD(,RMCTPTR) AL *5,RRCTTMN(,RMCT
REP 0B18 5050403C,47F0CB06 * ST *5,OUCCBTF(,OUCBPTR) B RETURN
* EOZ
DUMP IEANUC02 IRARMCTL
/*

```

F.2 PATCH OF SWAPPING ALGORITHM



STEAL MAXIMUM AT SWAPOUT TIME

NAME	IEANUC01	IRARMSTM
VER	0050	91013009
VER	0DF0	00000000
REP	0050	45E0CDEE
REP	0DF0	58605094,1B77,40706032,91013009,07FE

F.3 TSS Patches

QUALIFY \$RM

CSET \$DOUT=\$IO(002)
 CSET CHBSTE.(X'20'X'37'+8,2)=X'0030'
 CSET CHBSTE.(X'20'X'38'+8,2)=X'0050'
 CSET CHBSTE.(X'20'X'39'+8,2)=X'0060'
 CSET CHBSTE.(X'20'X'3A'+8,2)=X'0080'
 CSET CHBSTE.(X'20'X'3B'+8,2)=X'00A0'
 CSET CHBSTE.(X'20'X'3C'+8,2)=X'0020'
 CSET CHBSTE.(X'20'X'3D'+8,2)=X'0040'
 CSET CHBSTE.(X'20'X'3E'+8,2)=X'0060'
 CSET CHBSTE.(X'20'X'3F'+8,2)=X'0080'
 CSET CHBSTE.(X'20'X'40'+8,2)=X'00A0'

System Table Parameters

CSET CHBSYS.(X'0A',2)=X'0020'
 CSET CHBSYS.(X'12',2)=X'0030'
 CSET CHBSYS.(X'1C',2)=X'0040'
 CSET CHBSYS.(X'1E',2)=X'0050'
 CSET CHBSYS.(X'6E',2)=X'0064'
 CSET CHBSYS.(X'C8',2)=X'002E'
 CSET CHBSYS.(X'D8',4)=X'015C0120'
 CSET CHBSYS.(X'18A',1)=X'03'
 CSET CHBSYS.(X'1C4',4)=X'00030003'
 CSET CHBSYS.(X'CA',2)=X'005A'
 CSET CHBSYS.(X'16C',4)=X'00780030'
 CSET CHBSYS.(X'184',4)=X'00200000'
 CSET CHBSYS.(X'C6',2)=X'7FFF'
 CSET CHBSYS.(X'24',2)=X'2802'

PREJUDICE LEVEL 1
 PREJUDICE LEVEL 2
 PREJUDICE LEVEL 3
 PREJUDICE LEVEL 4
 SYSBUF
 MAX SHARED PAGES TO PURGE
 SYSMXD AND SYSMND
 SYSPMT
 BLOCK PAGE SIZE
 SHR PAGES SCAN THRESHOLD
 SHR PAGE IN CORE MAX-MIN
 TSEND DELAY = 2SECONDS
 NOP BIG TASK
 SHARED PAGE MIGRATION DELTAS

Locking Fix

CSET CEAKTO.(X'8DC',4)=X'01E84800'
 CSET CEAAQC.(X'3B8',4)=X'07004700'
 CSET CEAHQP.(X'2BE',4)=X'47FO0FO0'
 CSET L'FOO'.(,10)=X'5000B038470000000700'
 CSET L'FOA'.(,8)=X'94BFB0569680B056'
 CSET L'F12'.(,8)=X'9640B06247F0718C'
 CSET CEAHQP.(X'3D0',4)=X'00030D40'

32 SECOND LOCK TIMEOUT
 RESET WAITING ON LOCK
 RESET WAITING ON LOCK
 RESET WAITING ON LOCK
 RESET WAITING ON LOCK
 LOCK EXTENSION

CSET CEDMO2C.(X'111E',2)=X'4700'

TURN OFF BREAK CCWS FOR TAM 11
 TPDRIVER
 FORCE PHYSICAL DISCONNECT
 FORCE PHYSICAL DISCONNECT
 -TURNS OFF LOGON
 -UNIT EXCEPTION

CSET CEDMO2C.(C'B98',2)=X'9220'
 CSET CEDMO2C.(X'B9C',2)=X'47FO'
 CSET CEDLO2C.(X'134',1)=X'00'
 CSET CEDLO2C.(X'2B5',1)=X'CC'
 CSET CEATCC.(X'6CE',4)=X'47F0B230'
 CSET BASREP =X'FF'

QUALIFY \$VM

CSET CZAYDC.(X'A08',4)=X'4190D450'
 CSET CHBTDT.(X'390',1)=X'71'
 CSET \$VM.CZCMD1.(,4)=X'1BFF07FE'
 QUALIFY \$RM
 CDISPLAY C'TAM11 RIDES AGAIN
 CRUN

FIX MONIT ON...SCA BASE REG
 SET SYSVCT TO VISAM
 NOP PRINTER BUFFER LOAD

3066 Bug

Appendix G

MVS

EXTERNAL STORAGE

and

DATASET DISTRIBUTION

G.1 Data Space Distribution for MVS

Configuration	Drum 1 (channel 1)	Drum 2 (channel 1)		1-Drive 3330-1 (channel 7)	
	TS-Only and MIX	TS-Only	MIX	TS-Only	MIX
1	2 User Paging DS	-	-	PLPA DS	PLPA DS
2	"	1 User Paging DS	PLPA DS	PLPA DS	1 User Paging DS
3	"	-	-	"	"
4	"	-	-	"	"
5	"	PLPA DS	PLPA DS	1 User Paging DS	1 User Paging DS

In Addition the following drives were used (on channel 7 unless otherwise stated):

2 x 3330-11	System + SPOOL	
4 x 3330-1	USER STORAGE (TSO)	(2 of them on channel 2 for configuration 3)
4 x 3330-1	USER PAGING	(3 of them on channel 2 for configuration 3)
1 x 3330-1	SOURCE, LOAD LIBRARIES, USER CATALOG	(on channel 2 for configuration 3)

Appendix H

TSS

SCHEDULE TABLE

H.4 SCHEDULE TABLE

```

* EXPRESS SECOND TIME SLICE
DC X°4913004C0300002000200040546B00004B4A4B038059595E544B4B4A00000000° 06
* EXPRESS 3RD TIME SLICE
DC X°4A13004C0300002000300060646B00004B4E4B038059595E544B4B4A00000000° 06
* EXPRESS DELAY 16
DC X°4813004C1005002000100020506B00004B514B038159595E544C4B5100000000° 07
* EXPRESS DELAY 32
DC X°4C13004C080A00200040506B00004B524B038159595E544C4B5200000000° 07
* EXPRESS DELAY 48
DC X°4D13004C040F002000300060546B00004B534B038059595E544C4B5300000000° 07
* EXPRESS DELAY 64
DC X°4E13004C03140020004000805A6B00004BBF4B038059595E544C4BBF00000000° 07
* EXPRESS DELAY 80
DC X°4F13004C03190020005000A05A6B00004B504B038059595E544C4BBF00000000° 07
* EXPRESS DELAY 80
DC X°5013004C03190020005000A05A6B00004B504B038059595E544C4BBF00000000° 07
* EXPRESS GROW 32
DC X°5113004C0300002000200040646B00004B4D4B038059595E544C4B5100000000° 07
* EXPRESS GROW 48
DC X°5213004C0300002000300060646B00004B4E4B038059595E544C4B5200000000° 07
* EXPRESS GROW 64
DC X°5313004C0300002000400080646B00004BBF4B038059595E544C4B5300000000° 07
* EXPRESS WRITE 16
DC X°5413004C1001002000100020506B00004B514B039159595E544C4B5100000000° 07
* EXPRESS WRITE 32
DC X°5513004C0805002000200040506B00004B524B038059595E544C4B5200000000° 07
* EXPRESS WRITE 48
DC X°5613004C0405002000300060546B00004B534B038059595E544C4B5300000000° 07
* EXPRESS WRITE 64
DC X°5713004C030A0020004000805A6B00004B4E4B038059595E544C4BBF00000000° 07
* EXPRESS WRITE 80
DC X°5813004C030F0020005000A05A6B00004BBF4B038059595E544C4BBF00000000° 08
* EXPRESS HOLDING LOCK 16
DC X°5913004C1001002000100020506B00004B514B03814B4B5E544C4B5100000000° 08
* EXPRESS HOLDING LOCK 32
DC X°5A13004C0801002000200040506B00004B524B03804B4B5E544C4B5200000000° 08
* EXPRESS HOLDING LOCK 48
DC X°5B13004C0405002000300060546B00004B534B03804B4B5E544C4B5300000000° 08
* EXPRESS HOLDING LOCK 64
DC X°5C13004C030A0020004000805A6B00004B4E4B03804B4B5E544C4BBF00000000° 08
* EXPRESS HOLDING LOCK 80
DC X°5D13004C030F0020005000A05A6B00004B4F4B03804B4B5E544C4BBF00000000° 08
* EXPRESS WAIT FOR LOCK 16
DC X°5E13004C1017002000100020506B00004B514B038159595E544C4B5100000000° 08
* EXPRESS WAIT FOR LOCK 32
DC X°5F13004C0817002000200040506B00004B524B038059595E544C4B5200000000° 08
* EXPRESS WAIT FOR LOCK 48
DC X°6013004C0420002000300060546B00004B534B038059595E544C4B5300000000° 08
* EXPRESS WAIT FOR LOCK 64
DC X°6113004C03400020004000805A6B00004B4E4B038059595E544C4BBF00000000° 08
* EXPRESS WAIT FOR LOCK 80
DC X°6213004C03400020005000A05A6B00004BBF4B038059595E544C4BBF00000000° 08
* UNUSED
DC X°6300000000000000000000000000000000000000000000000000000000000000° 08
* UNUSED
DC X°6400000000000000000000000000000000000000000000000000000000000000° 08
* UNUSED
DC X°6500000000000000000000000000000000000000000000000000000000000000° 09
* MTT 16
DC X°6614004C20010020001000205066012F66676666916666666666666666700000000° 09

```

H.5 SCHEDULE TABLE

* MTT 32 09
DC X°6714004C18010020002000405067012F66686666A0666666666666800000000° 09
* MTT 48 09
DC X°6814004C100I0020003000604B68012F66696666A0666666666666900000000° 09
* MTT 64 09
DC X°6914004C10070020003000604B69012F666A6666A0666666666666A00000000° 09
* MTT 64 09
DC X°6A14004C10090020004000804B6A012F666A6666A0666666666666A00000000° 09
* EXPRESS PULSE 24 09
DC X°6813004C03000020001800304B6B00006C6E6B03A159595E544C6C6F00000000° 09
* EXPRESS PULSE TIME 09
DC X°6C13004C08010020001800304B6B00006C6E6C038159595E544C6C6F00000000° 09
* EXPRESS PULSE TIME 09
DC X°6D13004C08010020001800304B6B00006C6E6C038059595E544C6C6F00000000° 09
* EXPRESS PULSE SPACE 09
DC X°6E13004C08010020001800304B6B00006C6E6C038059595E544C6C6F00000000° 09
* EXPRESS STEAL 1 09
DC X°6F13004C08000020001800304B6B00006C6E6C03A059595E544C6C7000000000° 09
* EXPRESS STEAL 2 09
DC X°7013004C08000020001800304B6B00006C6E6C03A059595E544C6C7100000000° 09
* EXPRESS STEAL 3 09
DC X°7113004C08000020001800304B6B00006C6E6C03A059595E544C6C7200000000° 09
* EXPRESS STEAL 4 1C
DC X°7213004C0800002000180030646B00006C6E6C03A059595E544C6C7200000000° 1C
* LABEL 1C
DC X°7305009804010020005000A04C73012F73737300A07373737373737300000000° 1C
* OPERATOR DELAY 24 1C
DC X°7405004C10010020001800404B74012F7475747481B9B97A7474007500000000° 1C
* OPERATOR DELAY 32 1C
DC X°7505004C08010020002000504B75012F74767474A0B9B97A7475007600000000° 1C
* OPERATOR DELAY 40 1C
DC X°7605004C04050020002800604B76012F74777474A0B9B97A7476007700000000° 1C
* OPERATOR DELAY 64 1C
DC X°7705004C030A0020004000804B77012F74787474A0B9B97A7477007800000000° 1C
* OPERATOR DELAY 80 1C
DC X°7805004C030A0020005000A04B78012F74797474A0B9B97A7478007900000000° 1C
* OPERATOR DELAY 80 1C
DC X°7905004C030A0020005000A04B79012F7479747480B9B97A7479000000000000° 1C
* OPERATOR WAITING ON LOCK 16 1C
DC X°7A05004C1017002000180030507A00007475747581B9B97A7475747500000000° 1C
* OPERATOR WAITING ON LOCK 32 1C
DC X°7B05004C0817002000280050507B00007476747580B9B97A7475747500000000° 1C
* OPERATOR WAITING ON LOCK 48 1C
DC X°7C05004C0440002000300060507C00007477747580B9B97A7475747600000000° 1C
* OPERATOR WAITING ON LOCK 64 1C
DC X°7D05004C03400020004000805A7D00007478747580B9B97A7475747700000000° 1C
* OPERATOR WAITING ON LOCK 80 1C
DC X°7E05004C03400020005000A05A7E00007479747580B9B97A7475747800000000° 1C
* BULKID DELAY 16 11
DC X°7F04004C10010020001800304B7F00007F807F80A185858A7F807F8000000000° 11
* BULKID DELAY 32 11
DC X°8004004C08010020002000404B8000007F817F80A185858A7F807F8100000000° 11
* BULKID DELAY 48 11
DC X°8104004C0405002000300060508100007F827F808085858A7F807F8100000000° 11
* BULKID DELAY 64 11
DC X°8204004C030A0020004000805A8200007F837F808085858A7F807F8200000000° 11
* BULKID DELAY 80 11
DC X°8304004C030A0020005000A05A8300007F847F808085858A7F807F8300000000° 11
* BULKID DELAY 80 11
DC X°8404004C030A0020005000A05A8400007F847F808085858A7F807F8400000000° 11

H.6 SCHEDULE TABLE

* BULKIO HOLDING LOCK 16	11
DC X°8504004C1001002000180030508500007F807F808185858A7F807F8000000000°	11
* BULKIO HOLDING LOCK 32	11
DC X°8604004C0801002000280050508600007F817F808085858A7F807F8000000000°	11
* BULKIO HOLDING LOCK 48	11
DC X°8704004C0405002000300060508700007F827F808085858A7F807F8100000000°	11
* BULKIO HOLDING LOCK 64	11
DC X°8804004C03050020004000805A8800007F837F808085858A7F807F8200000000°	11
* BULKIO HOLDING LOCK 80	11
DC X°8904004C03050020005000A05A8900007F847F808085858A7F807F8200000000°	11
* BULKIO WAITING FOR LOCK 16	11
DC X°8A04004C1017002000180030508A00007F807F808185858A7F807F8000000000°	11
* BULKIO WAITING FOR LOCK 32	11
DC X°8B04004C0817002000280050508B00007F817F808085858A7F807F8000000000°	11
* BULKIO WAITING FOR LOCK 48	12
DC X°8C04004C0440002000300060508C00007F827F808085858A7F807F8100000000°	12
* BULKIO WAITING FOR LOCK 64	12
DC X°8D04004C03400020004000805A8D00007F837F808085858A7F807F8200000000°	12
* BULKIO WAITING FOR LOCK 80	12
DC X°8E04004C03400020005000A05A8E00007F847F808085858A7F807F8300000000°	12
* BATCH DELAY 16	12
DC X°8F15004C1017003000200040458F012F8F908F8FE19A9A9F8F8F900000000°	12
* BATCH DELAY 48	12
DC X°9015004C10230030003000604590012F8F918F8FE19A9A9F8F908F910000000°	12
* BATCH DELAY 64	12
DC X°9115004C10380030004000804591012F8F928F8FE09A9A9F8F908F920000000°	12
* BATCH DELAY 80	12
DC X°9215004C10480030005000A04592012F8F938F8FE09A9A9F8F908F930000000°	12
* BATCH DELAY 112	12
DC X°9315004C10580030007000E04593012F8F948F8FE09A9A9F8F908F940000000°	12
* BATCH DELAY 144	12
DC X°9415004C10680030009001204594012F8F948F8FC09A9A9F8F908F000000000°	12
* UNUSED	12
DC X°9500°	12
* UNUSED	12
DC X°9600°	12
* UNUSED	12
DC X°9700°	12
* UNUSED	12
DC X°9800°	12
* UNUSED	13
DC X°9900°	13
* BATCH HOLDING LOCK 16	13
DC X°9A15004C1004002000100020509A012F8F8F8F8F818F9A9F8F908F0000000000°	13
* BATCH HOLDING LOCK 32	13
DC X°9B15004C0804002000200040509B012F8F908F8F808F9A9F8F908F0000000000°	13
* BATCH HOLDING LOCK 48	13
DC X°9C15004C0404002000300060509C012F8F918F8F808F9A9F8F908F0000000000°	13
* BATCH HOLDING LOCK 64	13
DC X°9D15004C0304002000400080509D012F8F928F8F808F9A9F8F908F0000000000°	13
* BATCH HOLDING LOCK 80	13
DC X°9E15004C0304002000500090509E012F8F938F8F808F9A9F8F908F0000000000°	13
* BATCH WAIT FOR LOCK 16	13
DC X°9F15004C1005002000100020509F012F8F908F8FC19A9A9F8F908F0000000000°	13
* BATCH WAIT FOR LOCK 32	13
DC X°A015004C080500200020004050A0012F8F918F8FC09A9A9F8F908F0000000000°	13
* BATCH WAIT FOR LOCK 48	13
DC X°A115004C040500200030006054A1012F8F928F8FC09A9A9F8F908F0000000000°	13
* BATCH WAIT FOR LOCK 64	13
DC X°A215004C03050020004000805AA2012F8F938F8FC09A9A9F8F908F0000000000°	13

H.7 SCHEDULE TABLE

* BATCH WAIT FOR LOCK 80 13
DC X*A315005C04050020005000905AA3012F8F948F8FC09A9A9F8F908F000000000 13
* EXPRESS BATCH DELAY 16 13
DC X*A413004C101700200010002050A4012FA4ABA4A481AF8FB4A4A5A4AB00000000 13
* EXPRESS BATCH DELAY 32 13
DC X*A513004C081700200020004050A5012FA4ACA4A481AF8FB4A4A5A4AC00000000 13
* EXPRESS BATCH DELAY 48 14
DC X*A613004C042300200030006054A6012FA4ADA4A480AF8FB4A4A5A4AD00000000 14
* EXPRESS BATCH DELAY 64 14
DC X*A713004C03380020004000805AA7012FA4AEA4A480AF8FB4A4A5A4AE00000000 14
* EXPRESS BATCH DELAY 80 14
DC X*A813004C03480020005000A05AA8012FA4AEA4A480AF8FB4A4A5A4AE00000000 14
* EXPRESS BATCH DELAY 80 14
DC X*A913004C03480020005000A05AA9012FA4AEA4A480AF8FB4A4A5A4AE00000000 14
* EXPRESS BATCH GROW 16 14
DC X*AA13004C030000200010002064AA012FA4A5A4A480AF8FB4A4A5A4AA00000000 14
* EXPRESS BATCH GROW 32 14
DC X*AB13004C030000200020004064AB012FA4A6A4A480AF8FB4A4A5A4AB00000000 14
* EXPRESS BATCH GROW 48 14
DC X*AC13004C030000200030006064AC012FA4A7A4A480AF8FB4A4A5A4AC00000000 14
* EXPRESS BATCH GROW 64 14
DC X*AD13004C030000200040008064AD012FA4A8A4A480AF8FB4A4A5A4AD00000000 14
* EXPRESS BATCH GROW 80 14
DC X*AE13004C03000020005000A064AE012FA4A9A4A480AF8FB4A4A5A4AE00000000 14
* EXPRESS BATCH HOLDING LOCK 16 14
DC X*AF13004C1001002000100020508F012FA4ABA4A4A1AF8FB4A4A5A4AB00000000 14
* EXPRESS BATCH HOLDING LOCK 32 14
DC X*BO13004C080100200020004050B0012FA4ACA4A480AF8FB4A4A5A4AC00000000 14
* EXPRESS BATCH HOLDING LOCK 48 14
DC X*B113004C040500200030006054B1012FA4ADA4A480AF8FB4A4A5A4AD00000000 14
* EXPRESS BATCH HOLDING LOCK 64 14
DC X*B213004C030A0020004000805AB2012FA4AEA4A480AF8FB4A4A5A4AE00000000 14
* EXPRESS BATCH HOLDING LOCK 80 15
DC X*B313004C030A0020005000A05AB3012FA4AEA4A480AF8FB4A4A5A4AE00000000 15
* EXPRESS BATCH WAITING LOCK 16 15
DC X*B413004C101700200010002050B4012FA4ABA4A481AF8FB4A4A5A4AB00000000 15
* EXPRESS BATCH WAITING LOCK 32 15
DC X*B513004C081700200020004050B5012FA4ACA4A480AF8FB4A4A5A4AC00000000 15
* EXPRESS BATCH WAITING LOCK 48 15
DC X*B613004C042000200030006054B6012FA4ADA4A480AF8FB4A4A5A4AD00000000 15
* EXPRESS BATCH WAITING LOCK 64 15
DC X*B713004C03200020004000805AB7012FA4AEA4A480AF8FB4A4A5A4AE00000000 15
* EXPRESS BATCH WAITING LOCK 80 15
DC X*B813004C03200020005000A05AB8012FA4AEA4A480AF8FB4A4A5A4AE00000000 15
* OPERATOR HOLDING LOCK 16 15
DC X*B905004C100100200018003050B900007475747581B9B97A7475747500000000 15
* OPERATOR HOLDING LOCK 32 15
DC X*BA05004C080100200028005050BA00007476747580B9B97A7475747500000000 15
* OPERATOR HOLDING LOCK 48 15
DC X*BB05004C040500200030006050BB00007477747580B9B97A7475747600000000 15
* OPERATOR HOLDING LOCK 64 15
DC X*BC05004C03050020004000805ABC00007478747580B9B97A7475747700000000 15
* OPERATOR HOLDING LOCK 80 15
DC X*BD05004C03050020005000A05ABD00007479747580B9B97A7475747800000000 15
* UNUSED 15
DC X*BE00 15
* EXPRESS GROW 80 15
DC X*BF13004C03400020005000A0646B00004B504B038059595E545048BF00000000 15
CHBSTLN EQU * BEGINING OF LEVEL USAGE COUNTERS 16
END 16

Appendix I

TSO and TSS

INPUT TRANSACTIONS

I.1 TSO - INPUT TRANSACTIONS

NAME	SIGNIFICANT PART OF INPUT
NMAS1	ID=IO
NMAS2	ID=EX
NMAS3	ID=MI
NMAS4	ID=PA
NMAS5	ID=DU
INPUT2	PROC
INPUT3	IF
INPUT4	DO
INPUT5	
INPUT7	WRITE
INPUT8	END:

I.2 TSS - INPUT TRANSACTIONS

NAME	SIGNIFICANT PART OF INPUT
INP 1	PARAM
INP 2	IF
INP 3	DISPLAY
INP 4	'END'
NMAS 1	ID=IO
NMAS 2	ID=EX
NMAS 3	ID=MI
NMAS 4	ID=PA
NMAS 5	ID=EN

A p p e n d i x J

Results of Measurements

RUN 25

SUMMARY REPORT MVS, MIXED, CONF. 1

J.1

REGISTER	USER IDENTIFICATION	TOTAL		AVERAGE	
R 0	REFERENCE TIMER	950.59	SECONDS		
R 1	WAIT TIME	157.61	SECONDS	16.58	PERCENT
R 2	TOTAL CPU TIME	792.98	SECONDS	83.42	PERCENT
R 3	PROBLEM PROGRAM CPU TIME	405.59	SECONDS	42.67	PERCENT
R 4	SUPERVISOR CPU TIME	387.39	SECONDS	40.75	PERCENT
R 5		0.	NOT USED		
R 6	ANY CHANNEL BUSY (EXCEPT 0)	691.09	SECONDS	72.70	PERCENT
R 7	CPU AND CHANNEL OVERLAP	555.38	SECONDS	58.43	PERCENT
R 8	CHANNEL 0 BUSY	0.96	SECONDS	0.10	PERCENT
R 9	CHANNEL 1 BUSY	320.72	SECONDS	33.74	PERCENT
R10	CHANNEL 2 BUSY	0.0	SECONDS	0.0	PERCENT
R11	CHANNEL 4 BUSY	0.0	SECONDS	0.0	PERCENT
R12	= INSTRUCTIONS	1687466291.	COUNTS		
R13	= BUFFER FETCHES	2676580461.	COUNTS		
R14	= BLOCK FETCHES	201653910.	COUNTS		
R15	= MAIN STORAGE STORES	535196124.	COUNTS		
R16	= PAGE EXCEPTIONS	1416275.	COUNTS		
R17		0.	NOT USED		
R18	CHANNEL 5 BUSY	0.0	SECONDS	0.0	PERCENT
R19	CHANNEL 6 BUSY	0.0	SECONDS	0.0	PERCENT
R20	CHANNEL 7 BUSY	601.08	SECONDS	63.23	PERCENT
R21		0.	NOT USED		
R22		0.	NOT USED		
R23		0.	NOT USED		
R24		0.	NOT USED		
R25		0.	NOT USED		
R26		0.	NOT USED		
R27		0.	NOT USED		
R28		0.	NOT USED		
R29		0.	NOT USED		
R30		0.	NOT USED		
R31		0.	NOT USED		
R32		0.	NOT USED		
R33		0.	NOT USED		
R34		0.	NOT USED		
R35		0.	NOT USED		

J.2

KFA 40L 10S B=Y TRIVIAL 9-5-5

TIME= 22

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CHANGE	34	1.10	4.27	9.30
DOWN	35	1.70	3.63	11.10
FIND	47	1.40	3.72	9.70
NMAS1	09	1.10	2.35	5.00
NMAS2	10	1.10	3.63	8.60
NMAS3	08	1.10	2.03	3.30
NMAS4	07	1.20	4.01	5.30
NMAS5	07	1.20	3.01	5.70
INPUT 2	05	1.00	1.10	1.50
INPUT 3	12	1.00	1.04	1.30
INPUT 4	12	1.00	1.04	1.30
INPUT 5	43	.90	1.33	4.80
INPUT 7	66	.90	1.01	1.30
INPUT 8	10	1.00	1.01	1.10
INSERT	67	.80	3.07	7.70
LIST IN	33	1.00	3.30	8.00
TIME	52	1.10	2.81	8.40
VERIFY	12	1.00	3.05	7.90
TOP	17	.90	2.52	6.20
ALL CMD	00	.00	.00	.00
SUMMEN	466	.80	2.62	11.10

START TIME= 22:51:26 END TIME= 23:06:26 RATE= .54 PER SECOND

KFA 40L 10S B=Y NON-TRIVIAL 9-5-5

7.3

TIME= 22

TRANSACTION ID	NUMEFR	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
ALLOC	45	18.40	35.16	63.20
COPY	23	58.20	121.40	192.80
DELETE	42	61.30	154.04	→ 204.40
EDIT N	18	17.40	32.76	59.40
END	38	→ 1.00	3.92	9.60
EXEC	55	20.00	37.66	59.60
LISTCA	10	17.90	31.97	51.70
LISTDS	21	1.80	13.90	34.00
LOGON	00	.00	.00	.00
RENUM	16	5.50	7.97	11.80
SAVE	27	6.00	32.04	89.60
ALL CMD	00	.00	.00	.00
SUMMEN	295	1.00	51.72	204.40

START TIME= 22:51:26 END TIME= 23:06:26 RATE= .32 PER SECOND

KFA 40L 10S B=Y EXEC 9-5-5

7.4

TIME= 22:

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
FORT	13	90.70	120.04	149.00
LOADGO	09	34.00	50.67	63.20
ALL CMD	00	.00	.00	.00
SUMMEN	22	34.00	91.66	149.00

START TIME= 22:51:26 END TIME= 23:06:26 RATE= .02 PER SECOND

0000 22.51.04		\$HASP000 OK		
4000 22.51.07 JOB	22	\$HASP373 A	STARTED - INIT 5 - CLASS A - SYS H168	
4000 22.51.07 JOB	23	\$HASP373 B	STARTED - INIT 6 - CLASS A - SYS H168	
4000 22.52.17 JOB	23	\$HASP395 B	ENDED	3.5
4000 22.52.21 JOB	24	\$HASP373 C	STARTED - INIT 6 - CLASS A - SYS H168	
4000 22.52.49 JOB	22	\$HASP395 A	ENDED	
4000 22.52.51 JOB	25	\$HASP373 D	STARTED - INIT 5 - CLASS A - SYS H168	
4000 22.53.29 JOB	24	\$HASP395 C	ENDED	
4000 22.53.34 JOB	26	\$HASP373 E	STARTED - INIT 6 - CLASS A - SYS H168	
4000 22.55.11 JOB	25	\$HASP395 D	ENDED	
4000 22.55.15 JOB	27	\$HASP373 F	STARTED - INIT 5 - CLASS A - SYS H168	
4000 22.55.25 JOB	26	\$HASP395 E	ENDED	23.07.19
4000 22.55.31 JOB	28	\$HASP373 G	STARTED - INIT 6 - CLASS A - SYS H168	22.51.07
4000 22.55.57 JOB	27	\$HASP395 F	ENDED	
4000 22.56.00 JOB	29	\$HASP373 H	STARTED - INIT 5 - CLASS A - SYS H168	
4000 22.56.33 JOB	28	\$HASP395 G	ENDED	
4000 22.56.36 JOB	30	\$HASP373 I	STARTED - INIT 6 - CLASS A - SYS H168	BATCH 16.12
4000 22.58.15 JOB	29	\$HASP395 H	ENDED	
4000 22.58.19 JOB	31	\$HASP373 J	STARTED - INIT 5 - CLASS A - SYS H168	
4000 22.59.08 JOB	31	\$HASP395 J	ENDED	
4000 22.59.08 JOB	30	\$HASP395 I	ENDED	
4000 22.59.12 JOB	33	\$HASP373 L	STARTED - INIT 6 - CLASS A - SYS H168	
4000 22.59.12 JOB	32	\$HASP373 K	STARTED - INIT 5 - CLASS A - SYS H168	
4000 23.01.00 JOB	32	\$HASP395 K	ENDED	
4000 23.01.00 JOB	33	\$HASP395 L	ENDED	
4000 23.01.04 JOB	35	\$HASP373 N	STARTED - INIT 6 - CLASS A - SYS H168	
4000 23.01.04 JOB	34	\$HASP373 M	STARTED - INIT 5 - CLASS A - SYS H168	
4000 23.02.13 JOB	35	\$HASP395 N	ENDED	
4000 23.02.16 JOB	36	\$HASP373 O	STARTED - INIT 6 - CLASS A - SYS H168	
4000 23.02.25 JOB	34	\$HASP395 M	ENDED	
4000 23.02.28 JOB	37	\$HASP373 P	STARTED - INIT 5 - CLASS A - SYS H168	
4000 23.03.32 JOB	36	\$HASP395 O	ENDED	
4000 23.03.36 JOB	38	\$HASP373 Q	STARTED - INIT 6 - CLASS A - SYS H168	
4000 23.04.23 JOB	37	\$HASP395 P	ENDED	
4000 23.04.25 JOB	39	\$HASP373 R	STARTED - INIT 5 - CLASS A - SYS H168	
4000 23.05.19 JOB	39	\$HASP395 R	ENDED	
4000 23.05.19 JOB	38	\$HASP395 Q	ENDED	
4000 23.05.24 JOB	41	\$HASP373 T	STARTED - INIT 6 - CLASS A - SYS H168	
4000 23.05.24 JOB	40	\$HASP373 S	STARTED - INIT 5 - CLASS A - SYS H168	
4000 23.06.35 JOB	40	\$HASP395 S	ENDED	

C000 23.06.38		\$HASP309	INIT 5 INACTIVE ***** C=A
4000 23.07.19 JOB	41	\$HASP395 T	ENDED
C000 23.07.20		\$HASP309	INIT 6 INACTIVE ***** C=A

SUMMARY REPORT MVS, MIXED, CONF. 2

7.6

REGISTER	USER IDENTIFICATION	TOTAL		AVERAGE	
R 0	REFERENCE TIMER	960.45	SECONDS		
R 1	WAIT TIME	77.19	SECONDS	8.04	PERCENT
R 2	TOTAL CPU TIME	883.26	SECONDS	91.96	PERCENT
R 3	PROBLEM PROGRAM CPU TIME	426.39	SECONDS	44.40	PERCENT
R 4	SUPERVISOR CPU TIME	456.86	SECONDS	47.57	PERCENT
R 5		0.	NOT USED		
R 6	ANY CHANNEL BUSY (EXCEPT 0)	691.34	SECONDS	70.94	PERCENT
R 7	CPU AND CHANNEL OVERLAP	609.29	SECONDS	63.44	PERCENT
R 8	CHANNEL 0 BUSY	1.22	SECONDS	0.13	PERCENT
R 9	CHANNEL 1 BUSY	471.48	SECONDS	49.09	PERCENT
R10	CHANNEL 2 BUSY	0.0	SECONDS	0.0	PERCENT
R11	CHANNEL 4 BUSY	0.0	SECONDS	0.0	PERCENT
R12	= INSTRUCTIONS	1911565918.	COUNTS		
R13	= BUFFER FETCHES	2997577177.	COUNTS		
R14	= BLOCK FETCHES	232659121.	COUNTS		
R15	= MAIN STORAGE STORES	586671532.	COUNTS		
R16	= PAGE EXCEPTIONS	1571199.	COUNTS		
R17		0.	NOT USED		
R18	CHANNEL 5 BUSY	0.0	SECONDS	0.0	PERCENT
R19	CHANNEL 6 BUSY	0.0	SECONDS	0.0	PERCENT
R20	CHANNEL 7 BUSY	489.55	SECONDS	50.97	PERCENT
R21		0.	NOT USED		
R22		0.	NOT USED		
R23		0.	NOT USED		
R24		0.	NOT USED		
R25		0.	NOT USED		
R26		0.	NOT USED		
R27		0.	NOT USED		
R28		0.	NOT USED		
R29		0.	NOT USED		
R30		0.	NOT USED		
R31		0.	NOT USED		
R32		0.	NOT USED		
R33		0.	NOT USED		
R34		0.	NOT USED		
R35		0.	NOT USED		

7.7

KFA 40L 105 B=Y EXEC 9-7-5

TIME= 4:

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CHANGE	33	1.30	4.36	10.20
DOWN	35	1.40	4.97	14.40
FIND	46	1.50	4.20	11.00
NMAS1	14	1.00	4.07	12.40
NMAS2	13	1.10	4.80	13.70
NMAS3	13	1.10	3.89	8.90
NMAS4	13	1.10	3.66	11.10
NMAS5	14	1.20	3.05	8.80
INPUT 2	13	1.00	1.01	1.10
INPUT 3	26	1.00	1.01	1.20
INPUT 4	26	1.00	1.01	1.10
INPUT 5	36	.90	1.61	12.30
INPUT 7	119	.90	1.00	1.10
INPUT 8	18	.90	1.00	1.30
INSERT	66	.80	3.94	13.00
LIST IN	30	1.10	4.56	11.20
TIME	71	1.10	3.19	12.00
VERIFY	12	1.30	4.92	9.70
TOP	15	1.00	2.34	6.00
ALL CMD	00	.00	.00	.00
SUMMEN	003	.80	2.77	14.40

START TIME= 4:08:36 END TIME= 4:21:36 RATE= .73 PER SECOND

KFA 40L IUS 5=Y EXEC 9-7-5

7.8

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
ALLOC	76	1.80	19.12	52.10
COPY	21	7.40	61.03	159.00
DELETE	44	3.50	67.61	158.30
EDIT N	24	1.90	17.83	53.70
END	51	.90	3.39	9.00
EXEC	69	2.70	16.70	42.70
LISTCA	13	3.30	16.06	39.40
LISTDS	25	1.50	9.29	28.00
LOGON	00	.00	.00	.00
RENUM	18	4.20	8.89	21.30
SAVE	33	3.90	18.20	58.90
ALL CMD	00	.00	.00	.00
SUMMEN	374	.90	23.17	159.00

START TIME= 4:06:36 END TIME= 4:21:36 RATE= .41 PER SECOND

KFA 40L IUS 5=Y EXEC 9-7-5

7.9

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
FORT	17	9.70	57.10	114.80
LOADGU	13	17.80	33.05	50.20
ALL CMD	00	.00	.00	.00
SUMMEN	30	9.70	48.68	114.90

START TIME= 4:06:36 END TIME= 4:21:36 RATE= .03 PER SECOND

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4000 04.11.50 STC 19 IRB1001 MF/1 IS ACTIVE
0000 04.12.00 $AQ
0000 04.12.00 $HASP000 OK
-----
4000 04.12.01 JOB 42 $HASP373 B STARTED - INIT 6 - CLASS A - SYS H168
4000 04.12.01 JOB 41 $HASP373 A STARTED - INIT 5 - CLASS A - SYS H168
4000 04.12.40 JOB 42 $HASP395 B ENDED
-----
4000 04.12.44 JOB 43 $HASP373 C STARTED - INIT 6 - CLASS A - SYS H168
4000 04.14.02 JOB 43 $HASP395 C ENDED
4000 04.14.05 JOB 44 $HASP373 D STARTED - INIT 6 - CLASS A - SYS H168
4000 04.14.50 JOB 41 $HASP395 A ENDED
4000 04.14.52 JOB 45 $HASP373 E STARTED - INIT 5 - CLASS A - SYS H168
4000 04.16.23 JOB 44 $HASP395 D ENDED
-----
4000 04.16.26 JOB 46 $HASP373 F STARTED - INIT 6 - CLASS A - SYS H168
4000 04.17.12 JOB 45 $HASP395 E ENDED
4000 04.17.14 JOB 47 $HASP373 G STARTED - INIT 5 - CLASS A - SYS H168
4000 04.17.14 JOB 46 $HASP395 F ENDED
4000 04.17.17 JOB 48 $HASP373 H STARTED - INIT 6 - CLASS A - SYS H168
4000 04.18.29 JOB 47 $HASP395 G ENDED
-----
4000 04.18.32 JOB 49 $HASP373 I STARTED - INIT 5 - CLASS A - SYS H168
4000 04.19.55 JOB 48 $HASP395 H ENDED
4000 04.19.57 JOB 50 $HASP373 J STARTED - INIT 6 - CLASS A - SYS H168
4000 04.20.22 JOB 49 $HASP395 I ENDED
4000 04.20.24 JOB 51 $HASP373 K STARTED - INIT 5 - CLASS A - SYS H168
4000 04.20.33 JOB 50 $HASP395 J ENDED
-----
4000 04.20.35 JOB 52 $HASP373 L STARTED - INIT 6 - CLASS A - SYS H168
4000 04.21.49 JOB 51 $HASP395 K ENDED
4000 04.21.52 JOB 53 $HASP373 M STARTED - INIT 5 - CLASS A - SYS H168
4000 04.22.29 JOB 52 $HASP395 L ENDED
4000 04.22.30 JOB 54 $HASP373 N STARTED - INIT 6 - CLASS A - SYS H168
4000 04.23.19 JOB 54 $HASP395 N ENDED
-----
4000 04.23.23 JOB 55 $HASP373 O STARTED - INIT 6 - CLASS A - SYS H168
4000 04.23.30 JOB 53 $HASP395 M ENDED
4000 04.23.33 JOB 56 $HASP373 P STARTED - INIT 5 - CLASS A - SYS H168
4000 04.24.23 JOB 55 $HASP395 O ENDED
4000 04.24.25 JOB 57 $HASP373 Q STARTED - INIT 6 - CLASS A - SYS H168
4000 04.25.19 JOB 56 $HASP395 P ENDED
-----
4000 04.25.22 JOB 58 $HASP373 R STARTED - INIT 5 - CLASS A - SYS H168
4000 04.26.07 JOB 58 $HASP395 R ENDED
4000 04.26.11 JOB 59 $HASP373 S STARTED - INIT 5 - CLASS A - SYS H168
4000 04.26.19 JOB 57 $HASP395 Q ENDED
4000 04.26.23 JOB 60 $HASP373 T STARTED - INIT 6 - CLASS A - SYS H168
4000 04.27.13 JOB 59 $HASP395 S ENDED
-----
C000 04.27.15 $HASP309 INIT 5 INACTIVE ***** C=A
4000 04.28.09 JOB 60 $HASP395 T ENDED
0000 04.28.10 P MF
-----
C000 04.28.10 $HASP309 INIT 6 INACTIVE ***** C=A
4000 04.28.14 STC 19 IRB102I MF/1 TERMINATED
4000 04.28.14 STC 14 $HASP395 MF1 ENDED

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J.10

BATCH

16 MIN 9 SEC

RUN 30

SUMMARY REPORT MVS, MIXED, CONF 3

J.11

REGISTER	USER IDENTIFICATION	TOTAL	AVERAGE
R 0	REFERENCE TIMER	960.77 SECONDS	
R 1	WAIT TIME	91.98 SECONDS	9.57 PERCENT
R 2	TOTAL CPU TIME	868.79 SECONDS	90.43 PERCENT
R 3	PROBLEM PROGRAM CPU TIME	425.47 SECONDS	44.28 PERCENT
R 4	SUPERVISOR CPU TIME	443.32 SECONDS	46.14 PERCENT
R 5		0. NOT USED	
R 6	ANY CHANNEL BUSY (EXCEPT 0)	667.46 SECONDS	69.47 PERCENT
R 7	CPU AND CHANNEL OVERLAP	589.92 SECONDS	61.40 PERCENT
R 8	CHANNEL 0 BUSY	1.20 SECONDS	0.12 PERCENT
R 9	CHANNEL 1 BUSY	320.21 SECONDS	33.33 PERCENT
R10	CHANNEL 2 BUSY	431.74 SECONDS	44.94 PERCENT
R11	CHANNEL 4 BUSY	0.0 SECONDS	0.0 PERCENT
R12	= INSTRUCTIONS	1674482829. COUNTS	
R13	= BUFFER FETCHES	2949546094. COUNTS	
R14	= BLOCK FETCHES	225770129. COUNTS	
R15	= MAIN STORAGE STORES	579949767. COUNTS	
R16	= PAGE EXCEPTIONS	1599304. COUNTS	
R17		0. NOT USED	
R18	CHANNEL 5 BUSY	0.0 SECONDS	0.0 PERCENT
R19	CHANNEL 6 BUSY	0.0 SECONDS	0.0 PERCENT
R20	CHANNEL 7 BUSY	304.74 SECONDS	31.72 PERCENT
R21		0. NOT USED	
R22		0. NOT USED	
R23		0. NOT USED	
R24		0. NOT USED	
R25		0. NOT USED	
R26		0. NOT USED	
R27		0. NOT USED	
R28		0. NOT USED	
R29		0. NOT USED	
R30		0. NOT USED	
R31		0. NOT USED	
R32		0. NOT USED	
R33		0. NOT USED	
R34		0. NOT USED	
R35		0. NOT USED	

7.42

KFA 40L 10S B=Y TRIVIAL 9-5-5

TIME= 4

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CHANGE	19	1.40	4.17	12.30
DOWN	19	1.70	4.56	12.00
FIND	24	1.90	6.06	12.40
NMAS1	13	1.00	2.76	6.50
NMAS2	13	1.10	3.47	12.80
NMAS3	12	1.20	2.52	7.40
NMAS4	11	1.20	3.90	11.70
NMAS5	12	1.10	4.23	14.80
INPUT 2	15	1.00	1.00	1.00
INPUT 3	32	.90	1.00	1.10
INPUT 4	32	1.00	1.00	1.20
INPUT 5	92	.90	1.42	6.90
INPUT 7	102	.90	1.01	2.20
INPUT 8	14	1.00	1.00	1.10
INSERT	44	.80	5.30	16.20
LIST IN	17	1.10	3.72	14.20
TIME	75	1.10	3.74	12.60
VERIFY	09	1.00	1.84	4.40
TOP	05	.80	1.92	5.10
ALL CMD	00	.00	.00	.00
SUMMEN	560	.80	2.58	16.20

START TIME= 4:38:03 END TIME= 4:53:03 RATE= .62 PER SECOND

J.13

KFA 40L 10S B=Y NON-TRIVIAL 9-5-5

TIME= 4:

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
ALLOC	95	2.70	22.07	72.60
COPY	24	5.90	77.36	184.70
DELETE	51	2.70	63.78	176.80
EDIT M	24	1.90	23.11	71.10
END	47	1.00	3.63	12.90
EXEC	74	4.00	25.82	67.00
LISTCA	17	6.70	25.71	62.80
LISTDS	37	1.30	11.24	42.90
LOGON	00	.00	.00	.00
RENUM	18	3.60	10.48	19.60
SAVE	31	3.00	24.68	71.10
ALL CMD	00	.00	.00	.00
SUMMEN	418	1.00	27.88	184.70

START TIME= 4:38:03 FND TIME= 4:53:03 RATE= .46 PER SECOND

J.14

KFA 40L 10S B=Y EXEC 9-5-5

TIME= 4:

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
FORT	16	16.50	79.38	165.10
LOADGO	17	16.90	40.73	88.60
ALL CMD	00	.00	.00	.00
SUMMEN	33	16.90	59.47	165.10

START TIME= 4:38:03 END TIME= 4:53:03 RATE= .03 PER SECOND

4000	04.37.27	JOB	1	\$HASP373 A	STARTED - INIT 5 - CLASS A - SYS H168
4000	04.37.26	JOB	2	\$HASP373 B	STARTED - INIT 6 - CLASS A - SYS H168
4000	04.38.36	JOB	2	\$HASP395 B	ENDED
4000	04.38.40	JOB	3	\$HASP373 C	STARTED - INIT 6 - CLASS A - SYS H168
4000	04.39.15	JOB	1	\$HASP395 A	ENDED
4000	04.39.19	JOB	4	\$HASP373 D	STARTED - INIT 5 - CLASS A - SYS H168
4000	04.40.25	JOB	3	\$HASP395 C	ENDED
4000	04.40.30	JOB	5	\$HASP373 E	STARTED - INIT 6 - CLASS A - SYS H168
4000	04.41.13	JOB	4	\$HASP395 D	ENDED
4000	04.41.15	JOB	6	\$HASP373 F	STARTED - INIT 5 - CLASS A - SYS H168
4000	04.41.53	JOB	6	\$HASP395 F	ENDED
4000	04.41.57	JOB	7	\$HASP373 G	STARTED - INIT 5 - CLASS A - SYS H168
4000	04.42.20	JOB	5	\$HASP395 E	ENDED
4000	04.42.24	JOB	8	\$HASP373 H	STARTED - INIT 6 - CLASS A - SYS H168
4000	04.43.03	JOB	7	\$HASP395 G	ENDED
4000	04.43.06	JOB	9	\$HASP373 I	STARTED - INIT 5 - CLASS A - SYS H168
4000	04.44.53	JOB	8	\$HASP395 H	ENDED
4000	04.44.57	JOB	10	\$HASP373 J	STARTED - INIT 6 - CLASS A - SYS H168
4000	04.45.14	JOB	9	\$HASP395 I	ENDED
4000	04.45.17	JOB	11	\$HASP373 K	STARTED - INIT 5 - CLASS A - SYS H168
4000	04.45.36	JOB	10	\$HASP395 J	ENDED
4000	04.45.40	JOB	12	\$HASP373 L	STARTED - INIT 6 - CLASS A - SYS H168

7-15
 4.53.37
 4.37.27
 BATCH 16.10

4000	04.46.21	JOB	11	\$HASP395 K	ENDED
4000	04.46.23	JOB	13	\$HASP373 M	STARTED - INIT 5 - CLASS A - SYS H168
4000	04.47.52	JOB	12	\$HASP395 L	ENDED
4000	04.47.56	JOB	14	\$HASP373 N	STARTED - INIT 6 - CLASS A - SYS H168
4000	04.48.20	JOB	13	\$HASP395 M	ENDED
4000	04.48.24	JOB	15	\$HASP373 O	STARTED - INIT 5 - CLASS A - SYS H168
4000	04.48.40	JOB	14	\$HASP395 N	ENDED
4000	04.48.44	JOB	16	\$HASP373 P	STARTED - INIT 6 - CLASS A - SYS H168
4000	04.49.26	JOB	15	\$HASP395 O	ENDED
4000	04.49.30	JOB	17	\$HASP373 Q	STARTED - INIT 5 - CLASS A - SYS H168
4000	04.50.29	JOB	16	\$HASP395 P	ENDED
4000	04.50.31	JOB	18	\$HASP373 R	STARTED - INIT 6 - CLASS A - SYS H168
4000	04.51.33	JOB	17	\$HASP395 Q	ENDED
4000	04.51.33	JOB	18	\$HASP395 R	ENDED
4000	04.51.35	JOB	20	\$HASP373 T	STARTED - INIT 6 - CLASS A - SYS H168
4000	04.51.35	JOB	19	\$HASP373 S	STARTED - INIT 5 - CLASS A - SYS H168
4000	04.53.15	JOB	19	\$HASP395 S	ENDED
4000	04.53.17			\$HASP309	INIT 5 INACTIVE ***** C=A
4000	04.53.37	JOB	20	\$HASP395 T	ENDED
4000	04.53.38			\$HASP309	INIT 6 INACTIVE ***** C=A

RUN 27

SUMMARY REPORT MVS, MIXED, CONF 4

J.16

REGISTER	USER IDENTIFICATION	TOTAL	AVERAGE
R 0	REFERENCE TIMER	920.84 SECONDS	
R 1	WAIT TIME	51.51 SECONDS	5.59 PERCENT
R 2	TOTAL CPU TIME	869.33 SECONDS	94.41 PERCENT
R 3	PROBLEM PROGRAM CPU TIME	439.84 SECONDS	47.76 PERCENT
R 4	SUPERVISOR CPU TIME	429.49 SECONDS	46.64 PERCENT
R 5		0. NOT USED	
R 6	ANY CHANNEL BUSY (EXCEPT 0)	595.54 SECONDS	64.67 PERCENT
R 7	CPU AND CHANNEL OVERLAP	556.52 SECONDS	60.44 PERCENT
R 8	CHANNEL 0 BUSY	1.67 SECONDS	0.18 PERCENT
R 9	CHANNEL 1 BUSY	252.64 SECONDS	27.44 PERCENT
R10	CHANNEL 2 BUSY	0.0 SECONDS	0.0 PERCENT
R11	CHANNEL 4 BUSY	0.0 SECONDS	0.0 PERCENT
R12	= INSTRUCTIONS	1890786317. COUNTS	
R13	= BUFFER FETCHES	2977035224. COUNTS	
R14	= BLOCK FETCHES	221096792. COUNTS	
R15	= MAIN STORAGE STORES	581620126. COUNTS	
R16	= PAGE EXCEPTIONS	1761920. COUNTS	
R17		0. NOT USED	
R18	CHANNEL 5 BUSY	0.0 SECONDS	0.0 PERCENT
R19	CHANNEL 6 BUSY	0.0 SECONDS	0.0 PERCENT
R20	CHANNEL 7 BUSY	507.11 SECONDS	55.07 PERCENT
R21		0. NOT USED	
R22		0. NOT USED	
R23		0. NOT USED	
R24		0. NOT USED	
R25		0. NOT USED	
R26		0. NOT USED	
R27		0. NOT USED	
R28		0. NOT USED	
R29		0. NOT USED	
R30		0. NOT USED	
R31		0. NOT USED	
R32		0. NOT USED	

KFA 80L 10S B=N TRIVIAL 9-5-5

4.17

TIME= 0:

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CHANGE	29	1.20	2.86	12.00
DOWN	32	1.50	2.70	7.40
FIND	46	1.30	3.64	19.30
NMAS1	18	1.10	2.67	9.90
NMAS2	18	1.00	2.22	8.90
NMAS3	19	1.00	1.47	4.00
NMAS4	22	1.00	1.53	3.00
NMAS5	22	1.10	2.18	7.10
INPUT 2	22	1.00	1.07	2.60
INPUT 3	44	.90	1.01	1.60
INPUT 4	40	.80	1.00	1.30
INPUT 5	117	.90	1.51	19.00
INPUT 7	89	.90	1.01	1.40
INPUT 8	11	.90	.99	1.00
INSERT	67	.80	2.82	24.30
LIST IN	31	1.00	2.40	8.20
TIME	107	1.00	2.87	17.90
VERIFY	18	.80	4.30	19.40
TOP	13	.80	1.64	5.30
ALL CMD	00	.00	.00	.00
SUMMEN	765	.80	2.08	24.30

START TIME= 0:39:45 END TIME= 0:54:45 RATE= .85 PER SECOND

KFA 60L 10S B=N NON-TRIVIAL 9-5-5

7.18

TIME= 0:

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
ALLOC	113	1.90	8.88	45.20
COPY	38	9.10	23.89	65.20
DELETE	70	2.00	11.85	35.30
EDIT N	41	1.50	8.31	26.10
END	46	.90	3.45	26.00
EXEC	63	1.60	6.28	20.90
LISTCA	16	4.30	11.16	24.80
LISTDS	35	1.00	4.59	25.30
LOGON	00	.00	.00	.00
RENUM	22	3.60	6.61	17.80
SAVE	35	3.70	12.06	31.50
ALL_CMD	00	.00	.00	.00
SUMMEN	479	.90	9.48	65.20

START TIME= 0:39:45 END TIME= 0:54:45 RATE= .53 PER SECOND

KFA 80L 10S B=N EXEC 9-5-5

7.19

TIME= 0:

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
FORT	25	4.20	16.54	43.00
LOADGO	19	13.10	31.09	58.90
ALL_CMD	00	.00	.00	.00
SUMMEN	44	4.20	22.82	58.90

START TIME= 0:39:45 END TIME= 0:54:45 RATE= .04 PER SECOND

```

4000 00.28.52 STC 6 IRB305I NORECORD
4000 00.28.52 STC 6 IRB305I CYCLE(250)
4000 00.28.52 STC 6 IRB305I INTERVAL(60M)
4000 00.28.52 STC 6 IRB305I STOP(600M)
4000 00.28.52 STC 6 IRB305I SYSOUT(A)
4000 00.28.52 STC 6 IRB305I REPORT(DEFER)
4000 00.28.53 STC 6 IRB305I MEMBER(00)
8020 00.28.53 STC 6 *03 IRB306D REPLY WITH MF/1 OPTIONS OR GO
0000 00.38.05 D T
0000 00.38.05 IEE136I TIME=00.38.05 DATE=75.249
0000 00.39.01 3GO
0000 00.39.01 R 03,GO
4000 00.39.01 IEF1701 1 CONSOLE IEE6001 REPLY TO 03 IS GO
8020 00.39.01 IEE6001 REPLY TO 03 IS GO
4000 00.39.05 STC 6 IRB1001 MF/1 IS ACTIVE
0000 00.39.09 $AQ
0000 00.39.09 $HASP000 OK
4000 00.39.10 JOB 2 $HASP373 B STARTED - INIT 6 - CLASS A - SYS H168
4000 00.39.10 JOB 1 $HASP373 A STARTED - INIT 5 - CLASS A - SYS H168
4000 00.39.44 JOB 2 $HASP395 B ENDED
4000 00.39.46 JOB 3 $HASP373 C STARTED - INIT 6 - CLASS A - SYS H168
0200 00.39.47 JOB 2 $HASP150 B ON PRINTER3
0000 00.39.56 $PPRT3
0000 00.39.58 $HASP000 OK
0300 00.40.01 $HASP097 PRINTER3 IS DRAINED
4000 00.40.49 JOB 3 $HASP395 C ENDED
4000 00.40.50 JOB 1 $HASP395 A ENDED
4000 00.40.53 JOB 5 $HASP373 E STARTED - INIT 6 - CLASS A - SYS H168
4000 00.40.53 JOB 4 $HASP373 D STARTED - INIT 5 - CLASS A - SYS H168
4000 00.43.01 JOB 5 $HASP395 E ENDED
4000 00.43.05 JOB 6 $HASP373 F STARTED - INIT 6 - CLASS A - SYS H168
4000 00.43.29 JOB 4 $HASP395 D ENDED
4000 00.43.33 JOB 7 $HASP373 G STARTED - INIT 5 - CLASS A - SYS H168
4000 00.43.42 JOB 6 $HASP395 F ENDED
4000 00.43.43 JOB 8 $HASP373 H STARTED - INIT 6 - CLASS A - SYS H168
4000 00.44.37 JOB 7 $HASP395 G ENDED
4000 00.44.40 JOB 9 $HASP373 I STARTED - INIT 5 - CLASS A - SYS H168
4000 00.46.11 JOB 8 $HASP395 H ENDED
4000 00.46.14 JOB 10 $HASP373 J STARTED - INIT 6 - CLASS A - SYS H168
4000 00.46.24 JOB 9 $HASP395 I ENDED
4000 00.46.26 JOB 11 $HASP373 K STARTED - INIT 5 - CLASS A - SYS H168
4000 00.46.47 JOB 10 $HASP395 J ENDED
4000 00.46.50 JOB 12 $HASP373 L STARTED - INIT 6 - CLASS A - SYS H168

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4000 00.49.00 JOB 14 $HASP373 N STARTED - INIT 5 - CLASS A - SYS H168
4000 00.49.16 JOB 12 $HASP395 L ENDED
4000 00.49.19 JOB 15 $HASP373 O STARTED - INIT 6 - CLASS A - SYS H168
4000 00.49.31 JOB 14 $HASP395 N ENDED
4000 00.49.32 JOB 16 $HASP373 P STARTED - INIT 5 - CLASS A - SYS H168
4000 00.50.18 JOB 15 $HASP395 O ENDED
4000 00.50.21 JOB 17 $HASP373 Q STARTED - INIT 6 - CLASS A - SYS H168
4000 00.52.00 JOB 16 $HASP395 P ENDED
4000 00.52.04 JOB 18 $HASP373 R STARTED - INIT 5 - CLASS A - SYS H168
4000 00.52.05 JOB 17 $HASP395 Q ENDED
4000 00.52.07 JOB 19 $HASP373 S STARTED - INIT 6 - CLASS A - SYS H168
4000 00.52.39 JOB 18 $HASP395 R ENDED
4000 00.52.42 JOB 20 $HASP373 T STARTED - INIT 5 - CLASS A - SYS H168
4000 00.53.02 JOB 19 $HASP395 S ENDED

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J.21

BATCH
14 MIN 57 SEC

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C000 00.53.04 $HASP309 INIT 6 INACTIVE ***** C=A
0000 00.53.22 IGF002I CHANNEL DETECTED ERROR ON 034,00,CHAN,01,0C44
4000 00.53.23 STC 5 IEF170I 1 MSTRJCL IEA000I 034,CCC,01,0C44,,,TCAMKF ,00.53.22
01F6 00.53.22 STC 5 IEA000I 034,CCC,01,0C44,,,TCAMKF ,00.53.22
4000 00.53.36 STC 5 IEF170I 1 MSTRJCL IEA000I 034,CCC,01,0C44,,,TCAMKF ,00.53.36
01F6 00.53.36 STC 5 IEA000I 034,CCC,01,0C44,,,TCAMKF ,00.53.36
0000 00.53.37 IGF002I CHANNEL DETECTED ERROR ON 034,00,CHAN,01,0C44
4000 00.53.48 STC 5 IEF170I 1 MSTRJCL IEA000I 034,CCC,01,0C46,,,TCAMKF ,00.53.48
01F6 00.53.48 STC 5 IEA000I 034,CCC,01,0C46,,,TCAMKF ,00.53.48
0000 00.53.48 IGF002I CHANNEL DETECTED ERROR ON 0XX,00, ,00,0C44
4000 00.54.03 STC 5 IEF170I 1 MSTRJCL IEA000I 034,CCC,01,0C44,,,TCAMKF ,00.54.03
01F6 00.54.03 STC 5 IEA000I 034,CCC,01,0C44,,,TCAMKF ,00.54.03
0000 00.54.04 IGF002I CHANNEL DETECTED ERROR ON 034,00,CHAN,01,0C44
4000 00.54.07 JOB 20 $HASP395 T ENDED
C000 00.54.08 $HASP309 INIT 5 INACTIVE ***** C=A
4000 00.54.15 STC 5 IEF170I 1 MSTRJCL IEA000I 034,CCC,01,0C46,,,TCAMKF ,00.54.15
01F6 00.54.15 STC 5 IEA000I 034,CCC,01,0C46,,,TCAMKF ,00.54.15
0000 00.54.15 IGF002I CHANNEL DETECTED ERROR ON 0XX,00, ,00,0C44
4000 00.54.27 STC 5 IEF170I 1 MSTRJCL IEA000I 034,CCC,01,0C46,,,TCAMKF ,00.54.27
01F6 00.54.27 STC 5 IEA000I 034,CCC,01,0C46,,,TCAMKF ,00.54.27
0000 00.54.27 IGF002I CHANNEL DETECTED ERROR ON 0XX,00, ,00,0C44
4000 00.54.40 STC 5 IEF170I 1 MSTRJCL IEA000I 034,CCC,01,0C46,,,TCAMKF ,00.54.40
01F6 00.54.40 STC 5 IEA000I 034,CCC,01,0C46,,,TCAMKF ,00.54.40
0000 00.54.40 IGF002I CHANNEL DETECTED ERROR ON 0XX,00, ,00,0C44
0000 00.54.51 P MFF T,TS=STOP
0000 00.54.51 IEE341I MFF NOT ACTIVE
4000 00.54.53 STC 5 IEF170I 1 MSTRJCL IEA000I 034,CCC,01,0C46,,,TCAMKF ,00.54.53
01F6 00.54.53 STC 5 IEA000I 034,CCC,01,0C46,,,TCAMKF ,00.54.53
0000 00.54.53 IGF002I CHANNEL DETECTED ERROR ON 0XX,00, ,00,0C44

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SUMMARY REPORT MVS, MIXED, CONF. 5

J.22

REGISTER	USER IDENTIFICATION	TOTAL	AVERAGE
R 0	REFERENCE TIMER	1235.91 SECONDS	
R 1	WAIT-TIME	451.43 SECONDS	36.53 PERCENT
R 2	TOTAL CPU TIME	784.48 SECONDS	63.47 PERCENT
R 3	PROBLEM PROGRAM CPU TIME	388.63 SECONDS	31.45 PERCENT
R 4	SUPERVISOR CPU TIME	395.80 SECONDS	32.02 PERCENT
R 5		0. NOT USED	
R 6	ANY CHANNEL BUSY (EXCEPT 0)	668.54 SECONDS	54.09 PERCENT
R 7	CPU AND CHANNEL OVERLAP	307.23 SECONDS	24.86 PERCENT
R 8	CHANNEL 0 BUSY	0.97 SECONDS	0.08 PERCENT
R 9	CHANNEL 1 BUSY	524.76 SECONDS	42.46 PERCENT
R 10	CHANNEL 2 BUSY	0.0 SECONDS	0.0 PERCENT
R 11	CHANNEL 4 BUSY	0.0 SECONDS	0.0 PERCENT
R 12	= INSTRUCTIONS	1680110572. COUNTS	
R 13	= BUFFER FETCHES	2625336711. COUNTS	
R 14	= BLOCK FETCHES	208632813. COUNTS	
R 15	= MAIN STORAGE STORES	540360766. COUNTS	
R 16	= PAGE EXCEPTIONS	1266510. COUNTS	
R 17		0. NOT USED	
R 18	CHANNEL 5 BUSY	0.0 SECONDS	0.0 PERCENT
R 19	CHANNEL 6 BUSY	0.0 SECONDS	0.0 PERCENT
R 20	CHANNEL 7 BUSY	341.94 SECONDS	27.67 PERCENT
R 21		0. NOT USED	
R 22		0. NOT USED	
R 23		0. NOT USED	
R 24		0. NOT USED	
R 25		0. NOT USED	
R 26		0. NOT USED	
R 27		0. NOT USED	
R 28		0. NOT USED	
R 29		0. NOT USED	
R 30		0. NOT USED	
R 31		0. NOT USED	
R 32		0. NOT USED	
R 33		0. NOT USED	
R 34		0. NOT USED	
R 35		0. NOT USED	

KFA 40L 10S B=Y EXEC 9-7-5

7.23

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CHANGE	19	1.30	8.02	18.00
DOWN	20	1.60	6.93	23.80
FIND	28	1.60	6.20	20.70
NMAS1	05	1.40	2.98	5.70
NMAS2	04	1.40	11.97	38.00
NMAS3	02	1.20	2.90	4.60
NMAS4	02	1.30	1.45	1.60
NMAS5	01	1.20	1.20	1.20
INPUT 2	02	1.00	1.75	2.50
INPUT 3	07	1.00	1.01	1.10
INPUT 4	07	1.00	1.00	1.00
INPUT 5	33	1.00	2.13	16.70
INPUT 7	58	.90	1.00	1.30
INPUT 6	09	1.00	1.00	1.00
INSERT	40	1.10	7.19	50.60
LIST IN	19	1.90	11.99	51.70
TIME	35	1.20	4.95	27.70
VERIFY	08	1.00	5.66	14.60
TOP	10	1.90	7.23	13.70
ALL CMD	00	.00	.00	.00
SUMMEN	309	.90	4.85	51.70

START TIME= 23:05:03 END TIME= 23:20:03 RATE= .34 PER SECOND

H KFA 40L 10S B=Y EXEC 9-7-5

724

LS00000FFFFF

I900

F9999

P90

ON

TALLOC <10 ALLOCATE*

TCOPY <10 COPY *

TDELETE <10 DELETE*

TEDIT N <10 EDIT*

TEND <10 END*

TEXEC <10 EXEC*

TLISTCA <10 LISTCAT*

TLISTDS <10 LISTDS*

TLOGON <10 LOGON*

TRENUM <10 RENUM*

TSAVE <10 SAVE*

END

7.25

KFA 40L 10S B=Y EXEC 9-7-5

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
ALLOC	41	1.80	63.44	144.50
COPY	16	111.40	272.90	440.60
DELETE	22	1.30	306.35	488.60
EDIT N	08	1.30	59.40	103.80
END	29	1.00	9.45	61.40
EXEC	48	24.60	78.21	146.00
LISTCA	08	34.50	63.21	143.50
LISTDS	09	1.90	32.44	69.90
LOGON	00	.00	.00	.00
RENUM	10	2.00	19.29	61.00
SAVE	20	3.60	61.65	175.10
ALL CMD	00	.00	.00	.00
SUMMEN	211	1.00	96.84	488.60

START TIME= 23:05:03 END TIME= 23:20:03 RATE= .23 PER SECOND

H KFA 40L 10S B=Y EXEC 9-7-5
LS00000FFFF
I900
F9999
P90
ON
TFORT <10 FORT *
TLOADGO <10 LOADGO*
END

7.26

KFA 40L 10S B=Y EXEC 9-7-5

7.27

TRANSACTION ID	NUMBER	LOW RESPONSE	AVC RESPONSE	HIGH RESPONSE
FORT	09	6.90	189.33	304.80
LOADGO	05	1.10	65.24	146.40
ALL CMD	00	.00	.00	.00
SUMMEN	14	1.10	145.01	304.80

START TIME= 23:05:03 END TIME= 23:20:03 RATE= .01 PER SECOND

4000	11.03.31	JOB	1	\$HASP373	A	STARTED - INIT 5 - CLASS A - SYS H168	7.28
4000	11.03.31	JOB	2	\$HASP373	B	STARTED - INIT 6 - CLASS A - SYS H168	
4000	11.04.21	JOB	2	\$HASP395	B	ENDED	11.24.14
4000	11.04.24	JOB	3	\$HASP373	C	STARTED - INIT 6 - CLASS A - SYS H168	11.03.31
4000	11.04.29	JOB	3	\$HASP395	C	ENDED	
4000	11.05.02	JOB	4	\$HASP373	D	STARTED - INIT 6 - CLASS A - SYS H168	20.43
4000	11.05.26	JOB	1	\$HASP395	A	ENDED	BATCH
4000	11.05.27	JOB	5	\$HASP373	E	STARTED - INIT 5 - CLASS A - SYS H168	
4000	11.08.53	JOB	5	\$HASP395	E	ENDED	
4000	11.08.55	JOB	6	\$HASP373	F	STARTED - INIT 5 - CLASS A - SYS H168	
4000	11.09.25	JOB	6	\$HASP395	F	ENDED	
4000	11.09.29	JOB	7	\$HASP373	G	STARTED - INIT 5 - CLASS A - SYS H168	
4000	11.10.09	JOB	7	\$HASP395	G	ENDED	
4000	11.10.11	JOB	8	\$HASP373	H	STARTED - INIT 5 - CLASS A - SYS H168	
4000	11.10.33	JOB	4	\$HASP395	D	ENDED	
4000	11.10.40	JOB	9	\$HASP373	I	STARTED - INIT 6 - CLASS A - SYS H168	
4000	11.11.40	JOB	8	\$HASP395	H	ENDED	
4000	11.11.42	JOB	10	\$HASP373	J	STARTED - INIT 5 - CLASS A - SYS H168	
4000	11.12.21	JOB	10	\$HASP395	J	ENDED	
4000	11.12.24	JOB	11	\$HASP373	K	STARTED - INIT 5 - CLASS A - SYS H168	
4000	11.12.34	JOB	11	\$HASP395	K	ENDED	
4000	11.13.07	JOB	12	\$HASP373	L	STARTED - INIT 5 - CLASS A - SYS H168	
4000	11.13.53	JOB	9	\$HASP395	I	ENDED	
4000	11.13.55	JOB	13	\$HASP373	M	STARTED - INIT 6 - CLASS A - SYS H168	
4000	11.17.16	JOB	12	\$HASP395	L	ENDED	
4000	11.17.19	JOB	14	\$HASP373	N	STARTED - INIT 5 - CLASS A - SYS H168	
4000	11.17.52	JOB	14	\$HASP395	N	ENDED	
4000	11.17.55	JOB	15	\$HASP373	O	STARTED - INIT 5 - CLASS A - SYS H168	
4000	11.18.38	JOB	15	\$HASP395	O	ENDED	

4000	11.18.40	JOB	16	\$HASP373	P	STARTED - INIT 5 - CLASS A - SYS H168	
4000	11.19.44	JOB	16	\$HASP395	P	ENDED	
4000	11.19.45	JOB	17	\$HASP373	Q	STARTED - INIT 5 - CLASS A - SYS H168	
4000	11.20.29	JOB	17	\$HASP395	Q	ENDED	
4000	11.20.32	JOB	18	\$HASP373	R	STARTED - INIT 5 - CLASS A - SYS H168	
4000	11.20.58	JOB	18	\$HASP395	R	ENDED	
4000	11.21.01	JOB	19	\$HASP373	S	STARTED - INIT 5 - CLASS A - SYS H168	
4000	11.21.39	JOB	19	\$HASP395	S	ENDED	
4000	11.21.42	JOB	20	\$HASP373	T	STARTED - INIT 5 - CLASS A - SYS H168	
4000	11.22.07	JOB	13	\$HASP395	M	ENDED	
C000	11.22.08			\$HASP309		INIT 6 INACTIVE ***** C=A	
4000	11.24.14	JOB	20	\$HASP395	T	ENDED	
C000	11.24.15			\$HASP309		INIT 5 INACTIVE ***** C=A	

RUN 26

SUMMARY REPORT MVS, TS ONLY, CONF.1

7.29

REGISTER	USER IDENTIFICATION	TOTAL	AVERAGE	
R 0	REFERENCE TIMER	890.62	SECONDS	
R 1	WAIT TIME	530.79	SECONDS	59.60 PERCENT
R 2	TOTAL CPU TIME	359.83	SECONDS	40.40 PERCENT
R 3	PROBLEM PROGRAM CPU TIME	26.05	SECONDS	2.92 PERCENT
R 4	SUPERVISOR CPU TIME	333.78	SECONDS	37.48 PERCENT
R 5		0.	NOT USED	
R 6	ANY CHANNEL BUSY (EXCEPT 0)	673.37	SECONDS	75.61 PERCENT
R 7	CPU AND CHANNEL OVERLAP	233.66	SECONDS	26.24 PERCENT
R 8	CHANNEL 0 BUSY	0.65	SECONDS	0.07 PERCENT
R 9	CHANNEL 1 BUSY	418.85	SECONDS	47.03 PERCENT
R10	CHANNEL 2 BUSY	0.0	SECONDS	0.0 PERCENT
R11	CHANNEL 4 BUSY	0.0	SECONDS	0.0 PERCENT
R12	= INSTRUCTIONS	921094893.	COUNTS	
R13	= BUFFER FETCHES	1348491383.	COUNTS	
R14	= BLOCK FETCHES	122455039.	COUNTS	
R15	= MAIN STORAGE STORES	199966292.	COUNTS	
R16	= PAGE EXCEPTIONS	536278.	COUNTS	
R17		0.	NOT USED	
R18	CHANNEL 5 BUSY	0.0	SECONDS	0.0 PERCENT
R19	CHANNEL 6 BUSY	0.0	SECONDS	0.0 PERCENT
R20	CHANNEL 7 BUSY	546.62	SECONDS	61.38 PERCENT
R21		0.	NOT USED	
R22		0.	NOT USED	
R23		0.	NOT USED	
R24		0.	NOT USED	
R25		0.	NOT USED	
R26		0.	NOT USED	
R27		0.	NOT USED	
R28		0.	NOT USED	
R29		0.	NOT USED	
R30		0.	NOT USED	
R31		0.	NOT USED	
R32		0.	NOT USED	
R33		0.	NOT USED	
R34		0.	NOT USED	
R35		0.	NOT USED	

KFA ROL 105 B=N TRIVIAL 9-5-5

7.30

TIME= 23:

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CHANGE	20	1.40	2.78	7.60
DOWN	19	1.30	3.11	5.30
FIND	37	1.30	3.63	6.30
NMAS1	03	1.10	1.86	2.90
NMAS2	02	1.10	1.15	1.20
NMAS3	02	1.20	1.40	1.60
NMAS4	02	1.30	2.65	4.00
NMAS5	02	1.60	1.80	2.00
INPUT 2	22	1.00	1.00	1.10
INPUT 3	43	1.00	1.00	1.10
INPUT 4	42	.90	1.00	1.30
INPUT 5	123	.90	1.30	8.50
INPUT 7	124	.90	1.00	1.20
INPUT 8	15	1.00	1.01	1.10
INSERT	40	.70	2.50	11.70
LIST IN	26	1.00	2.69	9.10
TIME	88	1.00	2.19	8.50
VERIFY	19	.90	1.64	3.70
TOP	12	.70	1.76	3.90
ALL CMD	00	.00	.00	.00
SUMMEN	641	.70	1.70	11.70

START TIME= 23:36:02 END TIME= 23:51:02 RATE= .71 PER SECOND

7.31

KFA 80L 10S B=N NON-TRIVIAL 9-5-5

TIME= 23:

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
ALLOC	16	21.80	31.94	53.10
COPY	107	90.90	137.05	208.00
DELFTE	256	37.50	103.20	216.00
EDIT N	41	21.50	39.00	60.50
END	28	1.00	2.32	8.30
EXEC	27	28.10	44.06	81.50
LISTCA	20	19.90	29.63	45.20
LISTDS	42	1.00	18.19	48.50
LOGON	00	.00	.00	.00
RENUM	07	3.20	6.07	8.20
SAVE	14	4.00	37.08	83.00
ALL CMD	00	.00	.00	.00
SUMMEN	556	1.00	83.09	216.00

START TIME= 23:36:02 END TIME= 23:51:02 RATE= .62 PER SECOND

7.32

KFA 80L 10S B=N EXEC 9-5-5

TIME= 23:

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
FORT	05	81.50	110.34	140.60
LOADGO	03	44.30	59.50	86.40
ALL CMD	00	.00	.00	.00
SUMMEN	03	44.30	41.27	140.60

START TIME= 23:36:02 END TIME= 23:51:02 RATE= .00 PER SECOND

SUMMARY REPORT MVS, TS ONLY, CONF. 2

7.33

REGISTER	USER IDENTIFICATION	TOTAL	AVERAGE
R 0	REFERENCE TIMER	890.84 SECONDS	
R 1	WAIT TIME	484.88 SECONDS	54.43 PERCENT
R 2	TOTAL CPU TIME	405.96 SECONDS	45.57 PERCENT
R 3	PROBLEM PROGRAM CPU TIME	38.33 SECONDS	4.30 PERCENT
R 4	SUPERVISOR CPU TIME	367.63 SECONDS	41.27 PERCENT
R 5		0. NOT USED	
R 6	ANY CHANNEL BUSY (EXCEPT 0)	664.52 SECONDS	74.59 PERCENT
R 7	CPU AND CHANNEL OVERLAP	271.78 SECONDS	30.51 PERCENT
R 8	CHANNEL 0 BUSY	0.69 SECONDS	0.08 PERCENT
R 9	CHANNEL 1 BUSY	489.59 SECONDS	54.96 PERCENT
R 10	CHANNEL 2 BUSY	0.0 SECONDS	0.0 PERCENT
R 11	CHANNEL 4 BUSY	0.0 SECONDS	0.0 PERCENT
R 12	= INSTRUCTIONS	1050961423. COUNTS	
R 13	= BUFFER FETCHES	1541317423. COUNTS	
R 14	= BLOCK FETCHES	135967915. COUNTS	
R 15	= MAIN STORAGE STORES	224307537. COUNTS	
R 16	= PAGE EXCEPTIONS	600866. COUNTS	
R 17		0. NOT USED	
R 18	CHANNEL 5 BUSY	0.0 SECONDS	0.0 PERCENT
R 19	CHANNEL 6 BUSY	0.0 SECONDS	0.0 PERCENT
R 20	CHANNEL 7 BUSY	439.77 SECONDS	49.37 PERCENT
R 21		0. NOT USED	
R 22		0. NOT USED	
R 23		0. NOT USED	
R 24		0. NOT USED	
R 25		0. NOT USED	
R 26		0. NOT USED	
R 27		0. NOT USED	
R 28		0. NOT USED	
R 29		0. NOT USED	
R 30		0. NOT USED	
R 31		0. NOT USED	
R 32		0. NOT USED	
R 33		0. NOT USED	
R 34		0. NOT USED	
R 35		0. NOT USED	

7.34

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CHANGE	27	1.20	3.15	6.00
DOWN	21	1.60	2.92	6.90
FIND	44	1.40	3.02	11.60
NMAS1	03	1.60	2.13	2.70
NMAS2	02	1.30	3.35	5.40
NMAS3	01	1.00	1.00	1.00
NMAS4	01	2.10	2.10	2.10
NMAS5	01	1.50	1.50	1.50
INPUT 2	20	1.00	1.01	1.10
INPUT 3	41	.90	1.04	3.10
INPUT 4	41	.90	1.00	1.20
INPUT 5	124	.90	1.24	9.50
INPUT 7	143	.90	1.00	1.50
INPUT 8	20	.90	1.00	1.20
INSERT	45	.80	1.97	4.10
LIST IN	30	1.00	1.83	6.10
TIME	94	1.00	1.82	9.00
VERIFY	18	.80	1.65	2.70
TOP	17	.80	2.20	6.60
ALL CMD	00	.00	.00	.00
SUMMEN	693	.80	1.59	11.60

START TIME= 19:55:03 END TIME= 20:10:03 RATE= .77 PER SECOND

KFA 30L IOS B=N TRIVIAL 9-7-5

7.35

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
ALLOC	30	15.20	34.78	62.80
COPY	103	69.00	124.51	186.40
DELETE	271	27.30	88.86	225.50
EDIT N	38	19.40	31.97	58.20
END	36	.90	2.09	10.30
EXEC	28	19.00	37.67	68.30
LISTCA	19	16.60	33.26	61.90
LISTDS	35	1.00	19.67	55.90
LOGON	00	.00	.00	.00
RENUM	06	2.90	5.50	8.90
SAVE	17	4.70	53.70	100.50
ALL CMD	00	.00	.00	.00
SUMMEN	563	.90	73.00	225.50

START TIME= 19:55:03 END TIME= 20:10:03 RATE= .64 PER SECOND

KFA 30L IOS B=N TRIVIAL 9-7-5

7.36

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
FORT	15	83.20	119.12	151.60
LOADGO	03	46.90	64.83	76.00
ALL CMD	00	.00	.00	.00
SUMMEN	18	46.90	110.07	151.60

START TIME= 19:55:03 END TIME= 20:10:03 RATE= .02 PER SECOND

REGISTER	USER IDENTIFICATION	TOTAL	AVERAGE
R 0	REFERENCE TIMER	860.67 SECONDS	
R 1	WAIT TIME	407.40 SECONDS	47.34 PERCENT
R 2	TOTAL CPU TIME	453.26 SECONDS	52.66 PERCENT
R 3	PROBLEM PROGRAM CPU TIME	40.87 SECONDS	4.75 PERCENT
R 4	SUPERVISOR CPU TIME	412.39 SECONDS	47.92 PERCENT
R 5		0. NOT USED	
R 6	ANY CHANNEL BUSY (EXCEPT 0)	704.90 SECONDS	81.90 PERCENT
R 7	CPU AND CHANNEL OVERLAP	348.69 SECONDS	40.51 PERCENT
R 8	CHANNEL 0 BUSY	0.86 SECONDS	0.10 PERCENT
R 9	CHANNEL 1 BUSY	456.90 SECONDS	53.09 PERCENT
R10	CHANNEL 2 BUSY	364.18 SECONDS	42.31 PERCENT
R11	CHANNEL 4 BUSY	0.0 SECONDS	0.0 PERCENT
R12	= INSTRUCTIONS	1165835697. COUNTS	
R13	= BUFFER FETCHES	1706248602. COUNTS	
R14	= BLOCK FETCHES	152527721. COUNTS	
R15	= MAIN STORAGE STORES	252412954. COUNTS	
R16	= PAGE EXCEPTIONS	721305. COUNTS	
R17		0. NOT USED	
R18	CHANNEL 5 BUSY	0.0 SECONDS	0.0 PERCENT
R19	CHANNEL 6 BUSY	0.0 SECONDS	0.0 PERCENT
R20	CHANNEL 7 BUSY	450.90 SECONDS	52.39 PERCENT
R21		0. NOT USED	
R22		0. NOT USED	
R23		0. NOT USED	
R24		0. NOT USED	
R25		0. NOT USED	
R26		0. NOT USED	
R27		0. NOT USED	
R28		0. NOT USED	
R29		0. NOT USED	
R30		0. NOT USED	
R31		0. NOT USED	
R32		0. NOT USED	
R33		0. NOT USED	
R34		0. NOT USED	
R35		0. NOT USED	

KFA ROL 10S B=N EXEC 9-5-5

7.38

TIME= 5:3

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CHANGE	48	1.40	2.51	6.50
DOWN	48	1.80	3.18	7.30
FIND	76	1.50	3.10	8.30
NMAS1	06	1.80	3.18	5.10
NMAS2	05	1.10	2.14	3.50
NMAS3	05	1.00	1.38	1.90
NMAS4	05	1.10	1.70	3.50
NMAS5	05	1.10	1.84	3.00
INPUT 2	20	1.00	1.01	1.10
INPUT 3	43	.90	1.00	1.10
INPUT 4	44	.90	.99	1.10
INPUT 5	132	1.00	1.20	3.60
INPUT 7	160	.90	1.01	2.20
INPUT 6	23	.90	1.00	1.20
INSERT	94	.70	2.10	7.70
LIST IN	49	1.00	1.71	5.20
TIME	110	1.00	1.88	6.20
VERIFY	26	.90	2.03	4.00
TOP	25	.80	2.15	5.70
ALL CMD	00	.00	.00	.00
SUMMEN	924	.70	1.74	8.30

START TIME= 5:32:42 END TIME= 5:47:42 RATE= 1.02 PER SECOND

KFA 80L 10S B=N NON-TRIVIAL 9-5-5

7.39

TIME= 5:

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
ALLOC	35	18.70	27.70	58.30
COPY	107	69.40	95.69	161.10
DELFTE	237	24.30	82.18	177.30
EDIT N	46	14.90	24.51	36.70
END	64	.90	2.80	8.20
EXEC	75	15.60	29.63	60.40
LISTCA	24	15.20	25.40	51.20
LISTDS	46	1.10	11.93	32.50
LOGON	00	.00	.00	.00
RENUM	22	3.60	6.13	9.50
SAVE	43	3.90	28.21	72.30
ALL CMD	00	.00	.00	.00
SUMMEN	699	.90	52.53	177.30

START TIME= 5:32:42 END TIME= 5:47:42 RATE= .77 PER SECOND

KFA 80L 10S B=N TRIVIAL 9-5-5

7.40

TIME= 5:

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
FORT	10	62.60	84.09	108.00
LOADGO	06	26.50	45.61	76.20
ALL CMD	00	.00	.00	.00
SUMMEN	16	26.50	69.66	108.00

START TIME= 5:32:42 END TIME= 5:47:42 RATE= .01 PER SECOND

JN 29. 2.

SUMMARY REPORT MVS, TS ONLY, CONF. 4

J.41

REGISTER	USER IDENTIFICATION	TOTAL		AVERAGE
R 0	REFERENCE TIMER	640.48	SECONDS	
R 1	WAIT TIME	377.40	SECONDS	58.92 PERCENT
R 2	TOTAL CPU TIME	263.08	SECONDS	41.08 PERCENT
R 3	PROBLEM PROGRAM CPU TIME	28.85	SECONDS	4.50 PERCENT
R 4	SUPERVISOR CPU TIME	234.23	SECONDS	36.57 PERCENT
R 5		0.	NOT USED	
R 6	ANY CHANNEL BUSY (EXCEPT 0)	501.13	SECONDS	78.24 PERCENT
R 7	CPU AND CHANNEL OVERLAP	176.99	SECONDS	27.63 PERCENT
R 8	CHANNEL 0 BUSY	0.58	SECONDS	0.09 PERCENT
R 9	CHANNEL 1 BUSY	297.87	SECONDS	46.51 PERCENT
R10	CHANNEL 2 BUSY	0.0	SECONDS	0.0 PERCENT
R11	CHANNEL 4 BUSY	0.0	SECONDS	0.0 PERCENT
R12	= INSTRUCTIONS	681769678.	COUNTS	
R13	= BUFFER FETCHES	997079833.	COUNTS	
R14	= BLOCK FETCHES	86888048.	COUNTS	
R15	= MAIN STORAGE STORES	147244614.	COUNTS	
R16	= PAGE EXCEPTIONS	463972.	COUNTS	
R17		0.	NOT USED	
R18	CHANNEL 5 BUSY	0.0	SECONDS	0.0 PERCENT
R19	CHANNEL 6 BUSY	0.0	SECONDS	0.0 PERCENT
R20	CHANNEL 7 BUSY	421.75	SECONDS	65.85 PERCENT
R21		0.	NOT USED	
R22		0.	NOT USED	
R23		0.	NOT USED	
R24		0.	NOT USED	
R25		0.	NOT USED	
R26		0.	NOT USED	
R27		0.	NOT USED	
R28		0.	NOT USED	
R29		0.	NOT USED	
R30		0.	NOT USED	
R31		0.	NOT USED	
R32		0.	NOT USED	
R33		0.	NOT USED	
R34		0.	NOT USED	
R35		0.	NOT USED	

* SMi wurde vorerhalten erst 4 d
nach Beginn der Meßperiode gestr

KFA 80L 10S B=N TRIVIAL 9-5-5

7.42

TIME= 2:4

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CHANGE	34	1.10	1.77	3.10
DOWN	36	1.50	2.38	5.70
FIND	52	1.30	2.39	4.10
NMAS1	08	1.10	1.23	1.40
NMAS2	08	1.10	1.26	1.50
NMAS3	08	1.10	1.25	1.60
NMAS4	07	1.10	1.28	1.60
NMAS5	06	1.10	1.43	2.00
INPUT 2	20	1.00	1.00	1.00
INPUT 3	41	1.00	1.01	1.50
INPUT 4	40	.90	1.00	1.20
INPUT 5	117	.90	1.15	5.60
INPUT 7	114	.90	1.02	4.30
INPUT 8	17	.90	.98	1.00
INSERT	70	.80	1.48	3.60
LIST IN	35	1.00	1.23	1.80
TIME	95	1.10	1.42	2.60
VERIFY	17	.90	1.19	2.00
TOP	17	.80	1.24	4.90
ALL CMD	00	.00	.00	.00
SUMMEN	742	.80	1.36	5.70

START TIME= 2:43:21 END TIME= 2:58:21 RATE= .82 PER SECOND

KFA 80L 10S B=N NON-TRIVIAL 9-5-5

7.43

TIME= 2:4

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
ALLOC	47	18.10	28.67	45.10
COPY	87	79.80	137.73	240.20
DELETE	248	32.10	65.41	256.60
EDIT N	37	22.50	35.33	56.60
END	45	.90	1.88	3.50
EXEC	49	17.00	32.22	71.00
LISTCA	21	16.90	32.23	52.50
LISTDS	43	1.00	17.31	64.70
LOGON	00	.00	.00	.00
RENUM	18	2.30	4.73	8.60
SAVE	31	4.70	33.07	101.20
ALL CMD	00	.00	.00	.00
SUMMEN	626	.90	63.92	258.60

START TIME= 2:43:21 END TIME= 2:58:21 RATE= .69 PER SECOND

KFA 80L 10S B=N EXEC 9-5-5

7.44

TIME= 2:

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
FORT	09	99.70	126.75	144.70
LOADGO	08	38.10	57.60	88.20
ALL CMD	00	.00	.00	.00
SUMMEN	17	38.10	94.21	144.70

START TIME= 2:43:21 END TIME= 2:58:21 RATE= .01 PER SECOND

SUMMARY REPORT MVS, TS ONLY, CONF. 5

J.44a

REGISTER	USER IDENTIFICATION	TOTAL	AVERAGE
R 0	REFERENCE TIMER	895.54 SECONDS	
R 1	WAIT TIME	583.46 SECONDS	65.15 PERCENT
R 2	TOTAL CPU TIME	312.03 SECONDS	34.85 PERCENT
R 3	PROBLEM PROGRAM CPU TIME	25.27 SECONDS	2.82 PERCENT
R 4	SUPERVISOR CPU TIME	286.81 SECONDS	32.03 PERCENT
R 5		0. NOT USED	
R 6	ANY CHANNEL BUSY (EXCEPT 0)	646.36 SECONDS	72.18 PERCENT
R 7	CPU AND CHANNEL OVERLAP	171.40 SECONDS	19.14 PERCENT
R 8	CHANNEL 0 BUSY	0.47 SECONDS	0.05 PERCENT
R 9	CHANNEL 1 BUSY	490.63 SECONDS	54.79 PERCENT
R 10	CHANNEL 2 BUSY	0.0 SECONDS	0.0 PERCENT
R 11	CHANNEL 4 BUSY	0.0 SECONDS	0.0 PERCENT
R 12	# INSTRUCTIONS	888894070. COUNTS	
R 13	# BUFFER FETCHES	1312933506. COUNTS	
R 14	# BLOCK FETCHES	87909665. COUNTS	
R 15	# MAIN STORAGE STORES	186405580. COUNTS	
R 16	# PAGE EXCEPTIONS	434379. COUNTS	
R 17		0. NOT USED	
R 18	CHANNEL 5 BUSY	0.0 SECONDS	0.0 PERCENT
R 19	CHANNEL 6 BUSY	0.0 SECONDS	0.0 PERCENT
R 20	CHANNEL 7 BUSY	388.52 SECONDS	43.33 PERCENT
R 21		0. NOT USED	
R 22		0. NOT USED	
R 23		0. NOT USED	
R 24		0. NOT USED	
R 25		0. NOT USED	
R 26		0. NOT USED	
R 27		0. NOT USED	
R 28		0. NOT USED	
R 29		0. NOT USED	
R 30		0. NOT USED	
R 31		0. NOT USED	
R 32		0. NOT USED	
R 33		0. NOT USED	
R 34		0. NOT USED	
R 35		0. NOT USED	

KFA 40L 10S R=Y TRIVIAL 9-3-5

J.44b

TIME=

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CHANGE	34	1.40	4.55	12.90
DOWN	34	1.40	4.36	16.40
FIND	52	1.40	3.90	11.60
NMAS1	04	2.30	5.05	7.50
NMAS2	04	1.50	3.35	5.90
NMAS3	03	3.20	4.40	6.00
NMAS4	03	1.70	3.43	4.30
NMAS5	03	3.90	4.96	6.80
INPUT 2	11	1.00	1.09	1.30
INPUT 3	25	1.00	1.00	1.10
INPUT 4	25	1.00	1.01	1.10
INPUT 5	81	.90	1.70	13.40
INPUT 7	105	1.00	1.00	1.10
INPUT 8	16	1.00	1.00	1.00
INSERT	63	1.00	3.56	7.90
LIST IN	35	1.00	3.43	10.50
TIME	64	1.10	3.64	11.70
VERIFY	17	.90	4.25	9.00
TOP	17	1.00	5.37	12.50
ALL CMD	00	.00	.00	.00
SUMMEN	596	.90	2.75	16.40

START TIME= 0:56:09 END TIME= 1:11:09 RATE= .66 PER SECOND

KFA 40L 10S B=Y NON-TRIVIAL 9-3-5

J.44c

TIME=

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
ALLOC	23	39.30	72.05	110.00
COPY	65	145.00	244.32	385.00
DELETE	39	73.20	275.60	444.30
EDIT N	28	40.10	63.62	141.10
END	43	1.00	3.38	8.50
EXEC	50	43.60	76.67	114.30
LISTCA	14	40.60	61.23	96.80
LISTDS	29	1.30	35.33	92.40
LOGON	00	.00	.00	.00
RENUM	11	4.60	15.50	61.50
SAVE	27	4.50	84.27	167.80
ALL CMD	00	.00	.00	.00
SUMMEN	334	1.00	116.01	444.30

START TIME= 0:56:09 END TIME= 1:11:09 RATE= .37 PER SECOND

KFA 40L 10S B=Y EXEC 9-3-5

TIME=

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
FORT	05	156.10	217.76	271.50
LOADGO	04	58.90	69.42	93.50
ALL CMD	00	.00	.00	.00
SUMMEN	09	58.90	151.83	271.50

START TIME= 0:56:09 END TIME= 1:11:09 RATE= .01 PER SECOND

SUMMARY REPORT TSS, MIXED, CONF. 1

7.45

REGISTER	USER IDENTIFICATION	TOTAL	AVERAGE
R 0	REFERENCE TIME	1251.00 SECONDS	
R 1	WAIT TIME	414.69 SECONDS	33.15 PERCENT
R 2	TOTAL CPU TIME	836.31 SECONDS	66.85 PERCENT
R 3	PROBLEM PROGRAM CPU TIME	360.80 SECONDS	28.64 PERCENT
R 4	SUPERVISOR CPU TIME	475.50 SECONDS	38.01 PERCENT
R 5		0. NOT USED	
R 6	ANY CHANNEL BUSY (EXCEPT 0)	976.68 SECONDS	78.07 PERCENT
R 7	CPU AND CHANNEL OVERLAP	631.90 SECONDS	50.51 PERCENT
R 8	CHANNEL 0 BUSY	1.75 SECONDS	0.14 PERCENT
R 9	CHANNEL 1 BUSY	776.02 SECONDS	62.03 PERCENT
R 10	CHANNEL 2 BUSY	525.30 SECONDS	41.99 PERCENT
R 11	CHANNEL 4 BUSY	0.0 SECONDS	0.0 PERCENT
R 12	# INSTRUCTIONS	2229349337. COUNTS	
R 13	# BUFFER FETCHES	2927718710. COUNTS	
R 14	# BLOCK FETCHES	196419217. COUNTS	
R 15	# MAIN STORAGE STORES	624784242. COUNTS	
R 16	# PAGE EXCEPTIONS	0. COUNTS	
R 17		0. NOT USED	
R 18	CHANNEL 5 BUSY	0.0 SECONDS	0.0 PERCENT
R 19	CHANNEL 6 BUSY	0.0 SECONDS	0.0 PERCENT
R 20	CHANNEL 7 BUSY	0.0 SECONDS	0.0 PERCENT
R 21		0. NOT USED	
R 22		0. NOT USED	
R 23		0. NOT USED	
R 24		0. NOT USED	
R 25		0. NOT USED	
R 26		0. NOT USED	
R 27		0. NOT USED	
R 28		0. NOT USED	
R 29		0. NOT USED	
R 30		0. NOT USED	
R 31		0. NOT USED	
R 32		0. NOT USED	
R 33		0. NOT USED	
R 34		0. NOT USED	
R 35		0. NOT USED	

BATCH S 21.30.13
E 21.50.38

20 MIN. 25

7.46

TIME= 21:2

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
I C	79	1.00	1.61	4.70
CH	38	1.10	1.64	3.90
INP 1	20	1.40	2.52	5.20
INP 2	40	1.30	2.15	5.70
INP 3	114	1.20	2.38	5.40
INP 4	25	1.40	1.86	2.90
LOC	51	1.30	2.42	5.20
N 10	20	1.20	1.62	3.40
NMAS 1	24	1.20	2.04	2.90
NMAS 2	27	1.10	1.82	4.20
NMAS 3	29	1.10	1.88	5.20
NMAS 4	30	1.20	1.44	2.30
NMAS 5	50	1.10	1.79	3.60
NP	20	1.20	1.56	2.50
PR	33	1.20	7.63	27.70
_REVIS	20	2.30	4.26	11.60
TSKTM	116	1.60	2.74	7.00
ALL CMD	00	.00	.00	.00
SUMMEN	715	1.00	2.42	27.70

START TIME= 21:23:47 END TIME= 21:43:47 RATE= .79 PER SECOND

7.47

TIME= 21:

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CDS	02	20.50	25.20	29.90
DDDF	96	1.30	2.59	7.40
DSS?	20	1.60	2.30	4.30
_END	00	.00	.00	.00
ERASE	233	1.30	7.72	19.70
FILE	21	5.00	16.47	38.20
GAS	143	1.60	4.84	13.30
LOGON	30	3.10	7.06	13.80
PC?	20	2.40	4.87	9.70
POD?	20	2.30	5.73	14.00
PRUCDE	20	3.00	11.16	27.70
QUIT	21	1.50	2.45	4.20
REDIT	12	0.50	14.00	26.00
REKEY	20	1.60	3.38	5.90
VV	31	5.60	14.06	33.20
ALL CMD	00	.00	.00	.00
SUMMEN	095	1.30	6.61	36.20

START TIME= 21:28:47 END TIME= 21:43:47 RATE= .77 PER SECOND

7.48

TIME= 21::

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CAL?	24	4.50	12.61	42.20
FTN	15	16.10	28.48	40.90
ALL CMD	00	.00	.00	.00
SUMMEN	39	4.50	18.72	42.20

START TIME= 21:28:47 END TIME= 21:43:47 RATE= .04 PER SECOND

SUMMARY REPORT TSS, MIXED, CONF. 2

7.49

REGISTER	USER IDENTIFICATION	TOTAL	AVERAGE
R 0	REFERENCE TIMER	805.68 SECONDS	
R 1	WAIT TIME	149.25 SECONDS	18.52 PERCENT
R 2	TOTAL CPU TIME	656.43 SECONDS	81.48 PERCENT
R 3	PROBLEM PROGRAM CPU TIME	337.14 SECONDS	41.84 PERCENT
R 4	SUPERVISOR CPU TIME	319.29 SECONDS	39.63 PERCENT
R 5		0. NOT USED	
R 6	ANY CHANNEL BUSY (EXCEPT 0)	602.78 SECONDS	74.82 PERCENT
R 7	CPU AND CHANNEL OVERLAP	477.91 SECONDS	59.32 PERCENT
R 8	CHANNEL 0 BUSY	1.18 SECONDS	0.15 PERCENT
R 9	CHANNEL 1 BUSY	490.25 SECONDS	60.85 PERCENT
R10	CHANNEL 2 BUSY	278.75 SECONDS	34.60 PERCENT
R11	CHANNEL 4 BUSY	0.0 SECONDS	0.0 PERCENT
R12	# INSTRUCTIONS	1797117231. COUNTS	
R13	# BUFFER FETCHES	2239710084. COUNTS	
R14	# BLOCK FETCHES	154503309. COUNTS	
R15	# MAIN STORAGE STORES	528265253. COUNTS	
R16	# PAGE EXCEPTIONS	0. COUNTS	
R17		0. NOT USED	
R18	CHANNEL 5 BUSY	0.0 SECONDS	0.0 PERCENT
R19	CHANNEL 6 BUSY	0.0 SECONDS	0.0 PERCENT
R20	CHANNEL 7 BUSY	0.0 SECONDS	0.0 PERCENT
R21		0. NOT USED	
R22		0. NOT USED	
R23		0. NOT USED	
R24		0. NOT USED	
R25		0. NOT USED	
R26		0. NOT USED	
R27		0. NOT USED	
R28		0. NOT USED	
R29		0. NOT USED	
R30		0. NOT USED	
R31		0. NOT USED	
R32		0. NOT USED	
R33		0. NOT USED	
R34		0. NOT USED	
R35		0. NOT USED	

BATCH
12 MIN 40

7.50

TIME= 22:2

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
I C	77	1.00	1.52	4.40
CH	38	1.10	1.68	2.50
INP 1	20	1.30	1.97	2.70
INP 2	40	1.30	1.91	2.90
INP 3	112	1.20	1.95	5.00
INP 4	24	1.20	1.74	2.70
LOC	51	1.20	2.09	4.20
N 10	20	1.00	1.41	2.40
NMAS 1	24	1.20	1.86	5.30
NMAS 2	27	1.10	1.65	2.80
NMAS 3	29	1.10	1.53	2.70
NMAS 4	29	1.00	1.46	2.60
NMAS 5	28	1.10	1.55	2.40
NP	20	1.20	1.61	3.30
PR	33	1.20	3.65	8.30
_REVIS	20	1.60	3.24	4.40
TSKTM	110	1.30	2.22	5.60
ALL CMD	00	.00	.00	.00
SUMMEN	702	1.00	1.96	8.30

START TIME= 22:26:03 END TIME= 22:39:20 RATE= .08 PER SECOND

751

TIME= 22:2

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CDS	00	.00	.00	.00
DDEF	92	1.30	2.38	5.70
DSS?	20	1.40	2.32	5.20
_END	00	.00	.00	.00
ERASE	161	1.40	3.66	14.70
FILE	20	5.20	9.77	17.10
GAS	139	1.70	3.90	14.50
LOGON	25	1.50	2.74	4.30
PC?	20	2.10	4.08	6.80
POD?	20	2.00	3.27	4.90
PROCDE	20	3.10	4.94	8.30
QUIT	20	1.40	2.11	4.40
REDIT	11	3.10	6.08	12.70
REKEY	20	1.50	2.69	4.00
VV	30	3.20	8.01	19.00
ALL CMD	00	.00	.00	.00
SUMMEN	598	1.30	3.86	19.00

START TIME= 22:26:03 END TIME= 22:39:20 RATE= .74 PER SECOND

752

TIME= 22:

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CALL	23	4.60	8.82	19.40
FTN	15	12.10	18.06	28.10
ALL CMD	00	.00	.00	.00
SUMMEN	38	4.60	12.47	28.10

START TIME= 22:26:03 END TIME= 22:39:20 RATE= .04 PER SECOND

SUMMARY REPORT

TSS, MIXED, CONF. 3

7.53

REGISTER	USER IDENTIFICATION	TOTAL		AVERAGE
R 0	REFERENCE TIMER	1250.88	SECONDS	
R 1	WAIT TIME	401.01	SECONDS	32.06 PERCENT
R 2	TOTAL CPU TIME	849.86	SECONDS	67.94 PERCENT
R 3	PROBLEM PROGRAM CPU TIME	358.71	SECONDS	28.68 PERCENT
R 4	SUPERVISOR CPU TIME	491.14	SECONDS	39.26 PERCENT
R 5		0.	NOT USED	
R 6	ANY CHANNEL BUSY (EXCEPT 0)	1054.19	SECONDS	84.28 PERCENT
R 7	CPU AND CHANNEL OVERLAP	698.53	SECONDS	55.84 PERCENT
R 8	CHANNEL 0 BUSY	1.52	SECONDS	0.12 PERCENT
R 9	CHANNEL 1 BUSY	797.34	SECONDS	63.74 PERCENT
R10	CHANNEL 2 BUSY	239.45	SECONDS	19.14 PERCENT
R11	CHANNEL 4 BUSY	0.0	SECONDS	0.0 PERCENT
R12	# INSTRUCTIONS	2262816719.	COUNTS	
R13	# BUFFER FETCHES	2981489077.	COUNTS	
R14	# BLOCK FETCHES	198630479.	COUNTS	
R15	# MAIN STORAGE STORES	630339824.	COUNTS	
R16	# PAGE EXCEPTIONS	0.	COUNTS	
R17		0.	NOT USED	
R18	CHANNEL 5 BUSY	0.0	SECONDS	0.0 PERCENT
R19	CHANNEL 6 BUSY	0.0	SECONDS	0.0 PERCENT
R20	CHANNEL 7 BUSY	566.69	SECONDS	45.30 PERCENT
R21		0.	NOT USED	
R22		0.	NOT USED	
R23		0.	NOT USED	
R24		0.	NOT USED	
R25		0.	NOT USED	BATCH
R26		0.	NOT USED	
R27		0.	NOT USED	20 MIN 50
R28		0.	NOT USED	
R29		0.	NOT USED	
R30		0.	NOT USED	
R31		0.	NOT USED	
R32		0.	NOT USED	
R33		0.	NOT USED	
R34		0.	NOT USED	
R35		0.	NOT USED	

7.54

TIME= 21:

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
I C	76	1.10	1.49	2.70
CH	38	1.10	1.48	2.70
INP 1	20	1.50	2.59	3.90
INP 2	40	1.30	2.14	3.50
INP 3	113	1.20	2.18	4.60
INP 4	24	1.20	1.96	4.10
LOC	51	1.30	2.47	4.80
N 10	20	1.10	1.38	2.50
NMAS 1	24	1.20	1.82	3.80
NMAS 2	27	1.10	1.88	4.30
NMAS 3	28	1.00	1.46	3.00
NMAS 4	30	1.20	1.90	5.10
NMAS 5	30	1.10	1.94	4.90
NP	20	1.10	1.48	3.10
PR	33	1.10	5.59	13.20
_REVIS	20	2.10	4.53	8.00
TSKTM	116	1.40	2.81	6.30
ALL CMD	00	.00	.00	.00
SUMMEN	710	1.00	2.30	13.20

START TIME= 21:09:11 END TIME= 21:24:11 RATE= .78 PER SECOND

7.55

TIME= 21:01

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CDS	00	.00	.00	.00
DDEF	93	1.30	2.38	6.60
DSS?	20	1.70	2.89	8.90
_END	00	.00	.00	.00
ERASE	217	1.70	8.32	22.50
FILE	20	7.10	19.23	31.90
GAS	141	1.60	5.34	15.20
LOGON	35	2.70	7.34	11.70
PC?	20	1.80	5.40	16.60
POD?	20	2.50	5.61	12.60
PROCDE	20	3.40	8.04	13.20
QUIT	22	1.40	2.64	4.90
REDIT	12	4.10	12.53	18.40
REKEY	20	1.60	2.95	4.80
VV	30	6.10	15.24	32.80
ALL CMD	00	.00	.00	.00
SUMMEN	670	1.30	6.84	32.80

START TIME= 21:09:11 END TIME= 21:24:11 RATE= .74 PER SECOND

7.56

TIME= 21:2

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CDS	40	10.10	26.09	51.20
DDEF	38	1.30	2.25	5.00
DSS?	10	1.60	2.62	4.10
_END	00	.00	.00	.00
ERASE	218	1.70	7.67	20.50
FILE	00	.00	.00	.00
GAS	07	3.60	4.91	6.50
LOGON	05	4.80	7.00	8.80
PC?	10	4.00	8.80	16.50
POD?	10	3.30	6.42	10.70
PROCDE	10	4.10	6.28	8.20
QUIT	00	.00	.00	.00
REDIT	18	2.10	5.12	11.60
REKEY	00	.00	.00	.00
VV	28	6.10	15.68	41.30
ALL CMD	00	.00	.00	.00
SUMMEN	394	1.30	9.25	51.20

START TIME= 21:24:11 END TIME= 21:30:37 RATE= 1.02 PER SECOND

7.57

TIME= 21:0

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CALL	24	5.40	12.10	22.70
FTN	14	18.20	39.70	81.50
ALL CMD	00	.00	.00	.00
SUMMEN	38	5.40	22.27	81.50

START TIME= 21:09:11 END TIME= 21:24:11 RATE= .04 PER SECOND

SUMMARY REPORT TSS, MIXED, CONF. 4

7.58

REGISTER	USER IDENTIFICATION	TOTAL	AVERAGE
R 0	REFERENCE TIMER	1150.74 SECONDS	
R 1	WAIT TIME	306.30 SECONDS	26.62 PERCENT
R 2	TOTAL CPU TIME	844.44 SECONDS	73.38 PERCENT
R 3	PROBLEM PROGRAM CPU TIME	357.57 SECONDS	31.07 PERCENT
R 4	SUPERVISOR CPU TIME	486.86 SECONDS	42.31 PERCENT
R 5		0. NOT USED	
R 6	ANY CHANNEL BUSY (EXCEPT 0)	938.26 SECONDS	81.53 PERCENT
R 7	CPU AND CHANNEL OVERLAP	672.91 SECONDS	58.48 PERCENT
R 8	CHANNEL 0 BUSY	1.59 SECONDS	0.14 PERCENT
R 9	CHANNEL 1 BUSY	739.61 SECONDS	64.27 PERCENT
R10	CHANNEL 2 BUSY	547.85 SECONDS	47.61 PERCENT
R11	CHANNEL 4 BUSY	0.0 SECONDS	0.0 PERCENT
R12	# INSTRUCTIONS	2253520730. COUNTS	
R13	# BUFFER FETCHES	2970329004. COUNTS	
R14	# BLOCK FETCHES	197132277. COUNTS	
R15	# MAIN STORAGE STORES	628404922. COUNTS	
R16	# PAGE EXCEPTIONS	0. COUNTS	
R17		0. NOT USED	
R18	CHANNEL 5 BUSY	0.0 SECONDS	0.0 PERCENT
R19	CHANNEL 6 BUSY	0.0 SECONDS	0.0 PERCENT
R20	CHANNEL 7 BUSY	0.0 SECONDS	0.0 PERCENT
R21		0. NOT USED	
R22		0. NOT USED	
R23		0. NOT USED	
R24		0. NOT USED	
R25		0. NOT USED	
R26		0. NOT USED	
R27		0. NOT USED	
R28		0. NOT USED	
R29		0. NOT USED	
R30		0. NOT USED	
R31		0. NOT USED	
R32		0. NOT USED	
R33		0. NOT USED	
R34		0. NOT USED	
R35		0. NOT USED	

BATCH
18 MIN 49

7.59

TIME= 0.0

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
I C	76	1.00	1.36	2.50
CH	38	1.10	1.48	3.30
INP 1	20	1.70	2.44	3.90
INP 2	40	1.30	2.28	4.10
INP 3	111	1.20	2.13	4.10
INP 4	24	1.30	2.14	3.10
LOC	50	1.30	2.31	4.30
N 10	20	1.10	1.56	3.50
NMAS 1	24	1.20	1.94	3.30
NMAS 2	27	1.10	1.71	3.30
NMAS 3	29	1.00	1.48	2.50
NMAS 4	30	1.10	1.44	2.20
NMAS 5	30	1.20	1.60	2.90
NP	20	1.10	1.58	3.00
PR	33	1.20	5.34	17.10
_REVIS	20	2.40	4.84	8.10
TSKTM	120	1.50	2.70	5.80
ALL CMD	00	.00	.00	.00
SUMMEN	712	1.00	2.23	17.10

START TIME= 0:55:36 END TIME= 1:10:36 RATE= .79 PER SECOND

7.60

TIME= 0:5

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CDS	02	11.80	13.10	14.40
DDEF	94	1.30	2.80	7.70
DSS?	20	1.40	2.98	5.50
_END	00	.00	.00	.00
ERASE	229	2.00	8.02	22.20
FILE	20	8.30	16.49	32.00
GAS	142	1.60	4.36	13.40
LOGON	37	2.70	6.10	9.70
PC?	21	2.30	5.07	9.70
POD?	20	2.30	4.30	12.70
PRUCDE	20	3.70	7.76	17.10
QUIT	21	1.50	2.55	4.90
REDIT	12	2.50	9.34	19.00
REKEY	20	2.00	2.95	4.80
VV	30	6.10	12.36	28.80
ALL CMD	00	.00	.00	.00
SUMMEN	688	1.30	6.25	32.00

START TIME= 0:55:36 END TIME= 1:10:36 RATE= .76 PER SECOND

7.61

TIME= 0:55

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
ALL	23	4.20	14.23	38.80
TN	15	8.00	36.53	55.50
LL CMD	00	.00	.00	.00
UMMEN	38	4.20	23.03	55.50

START TIME= 0:55:36 END TIME= 1:10:36 RATE= .04 PER SECOND

SUMMARY REPORT

TSS, MIXED, CONF. 5

7.62

REGISTER	USER IDENTIFICATION	TOTAL	AVERAGE	
R 0	REFERENCE TIMER	1310.70	SECONDS	
R 1	WAIT TIME	497.26	SECONDS	
R 2	TOTAL CPU TIME	813.44	SECONDS	37.94 PERCENT
R 3	PROBLEM PROGRAM CPU TIME	361.22	SECONDS	62.06 PERCENT
R 4	SUPERVISOR CPU TIME	452.21	SECONDS	27.56 PERCENT
R 5		0.	NOT USED	34.50 PERCENT
R 6	ANY CHANNEL BUSY (EXCEPT 0)	933.86	SECONDS	71.25 PERCENT
R 7	CPU AND CHANNEL OVERLAP	530.50	SECONDS	40.47 PERCENT
R 8	CHANNEL 0 BUSY	2.00	SECONDS	0.15 PERCENT
R 9	CHANNEL 1 BUSY	768.44	SECONDS	58.63 PERCENT
R 10	CHANNEL 2 BUSY	384.12	SECONDS	29.31 PERCENT
R 11	CHANNEL 4 BUSY	0.0	SECONDS	0.0 PERCENT
R 12	# INSTRUCTIONS	2169740619.	COUNTS	
R 13	# BUFFER FETCHES	2830560885.	COUNTS	
R 14	# BLOCK FETCHES	192665694.	COUNTS	
R 15	# MAIN STORAGE STORES	612368143.	COUNTS	
R 16	# PAGE EXCEPTIONS	0.	COUNTS	
R 17		0.	NOT USED	
R 18	CHANNEL 5 BUSY	0.0	SECONDS	0.0 PERCENT
R 19	CHANNEL 6 BUSY	0.0	SECONDS	0.0 PERCENT
R 20	CHANNEL 7 BUSY	0.0	SECONDS	0.0 PERCENT
R 21		0.	NOT USED	
R 22		0.	NOT USED	
R 23		0.	NOT USED	
R 24		0.	NOT USED	
R 25		0.	NOT USED	
R 26		0.	NOT USED	
R 27		0.	NOT USED	
R 28		0.	NOT USED	
R 29		0.	NOT USED	
R 30		0.	NOT USED	
R 31		0.	NOT USED	
R 32		0.	NOT USED	
R 33		0.	NOT USED	
R 34		0.	NOT USED	
R 35		0.	NOT USED	

BATCH
21 MIN 21

7.63

TIME= 23:1

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
I C	76	1.10	2.14	7.40
CH	38	1.10	2.25	5.20
INP 1	20	1.40	2.28	4.10
INP 2	40	1.30	2.37	4.70
INP 3	111	1.20	2.62	5.10
INP 4	25	1.30	2.21	3.50
LOC	50	1.50	2.59	5.00
N 10	20	1.10	2.17	4.00
NMAS 1	25	1.20	2.16	4.70
NMAS 2	27	1.00	2.15	5.20
NMAS 3	29	1.10	2.17	6.10
NMAS 4	30	1.10	2.30	5.10
NMAS 5	30	1.20	2.33	5.10
NP	20	1.10	2.26	5.70
PR	33	1.50	6.82	18.20
_REVIS	20	1.70	2.96	4.40
TSKTM	116	1.40	2.78	6.30
ALL CMD	00	.00	.00	.00
SUMMEN	710	1.00	2.64	18.20

START TIME= 23:12:37 END TIME= 23:27:37 RATE= .78 PER SECOND

7.64

TIME= 23:1

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CDS	00	.00	.00	.00
DDEF	92	1.30	2.53	5.90
DSS?	20	1.30	2.83	6.50
_END	00	.00	.00	.00
ERASE	226	1.80	8.55	20.00
FILE	20	9.40	21.57	45.80
GAS	141	1.80	7.09	18.70
LOGON	36	2.20	8.48	14.10
PC?	20	3.10	5.99	10.70
POD?	20	2.50	7.60	14.80
PROCDE	20	4.80	9.72	18.20
QUIT	21	1.40	2.70	4.70
REDIT	11	9.40	16.88	22.90
REKEY	20	1.60	3.04	5.90
VV	30	4.30	11.51	22.20
ALL_CMD	00	.00	.00	.00
SUMMEN	677	1.30	7.49	45.80

START TIME= 23:12:37 END TIME= 23:27:37 RATE= .75 PER SECOND

7.65

TIME= 23:1

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CALL	24	3.20	10.90	22.60
FTN	14	8.40	18.70	30.80
ALL_CMD	00	.00	.00	.00
SUMMEN	38	3.20	13.77	30.80

START TIME= 23:12:37 END TIME= 23:27:37 RATE= .04 PER SECOND

SUMMARY REPORT TSS, TS ONLY, CONF. 1

366

REGISTER	USER IDENTIFICATION	TOTAL	AVERAGE	
R 0	REFERENCE TIMER	870.58	SECONDS	
R 1	WAIT TIME	508.59	SECONDS	58.42 PERCENT
R 2	TOTAL CPU TIME	361.99	SECONDS	41.58 PERCENT
R 3	PROBLEM PROGRAM CPU TIME	80.16	SECONDS	9.21 PERCENT
R 4	SUPERVISOR CPU TIME	281.82	SECONDS	32.37 PERCENT
R 5		0.	NOT USED	
R 6	ANY CHANNEL BUSY (EXCEPT 0)	706.38	SECONDS	81.14 PERCENT
R 7	CPU AND CHANNEL OVERLAP	276.93	SECONDS	31.81 PERCENT
R 8	CHANNEL 0 BUSY	1.49	SECONDS	0.17 PERCENT
R 9	CHANNEL 1 BUSY	523.86	SECONDS	60.17 PERCENT
R10	CHANNEL 2 BUSY	450.64	SECONDS	51.76 PERCENT
R11	CHANNEL 4 BUSY	0.0	SECONDS	0.0 PERCENT
R12	# INSTRUCTIONS	1028690975.	COUNTS	
R13	# BUFFER FETCHES	1652765235.	COUNTS	
R14	# BLOCK FETCHES	49150149.	COUNTS	
R15	# MAIN STORAGE STORES	227327003.	COUNTS	
R16	# PAGE EXCEPTIONS	39.	COUNTS	
R17		0.	NOT USED	
R18	CHANNEL 5 BUSY	0.0	SECONDS	0.0 PERCENT
R19	CHANNEL 6 BUSY	0.0	SECONDS	0.0 PERCENT
R20	CHANNEL 7 BUSY	0.0	SECONDS	0.0 PERCENT
R21		0.	NOT USED	
R22		0.	NOT USED	
R23		0.	NOT USED	
R24		0.	NOT USED	
R25		0.	NOT USED	
R26		0.	NOT USED	
R27		0.	NOT USED	
R28		0.	NOT USED	
R29		0.	NOT USED	
R30		0.	NOT USED	
R31		0.	NOT USED	
R32		0.	NOT USED	
R33		0.	NOT USED	
R34		0.	NOT USED	
R35		0.	NOT USED	

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE	7.67
I C	197	1.10	3.61	18.60	
CH	100	1.20	3.66	8.90	
INP 1	23	1.90	3.89	8.60	
INP 2	45	1.60	4.76	14.80	
INP 3	116	1.50	4.27	13.10	
INP 4	23	1.60	3.94	13.80	
LOC	142	1.50	4.78	15.60	
N 10	48	1.20	3.51	14.00	
NMAS 1	27	1.80	3.91	11.40	
NMAS 2	27	1.80	4.21	9.70	
NMAS 3	25	1.50	4.96	17.40	
NMAS 4	24	1.50	2.76	6.10	
NMAS 5	23	1.60	4.42	13.20	
NP	51	1.30	3.70	16.70	
PR	66	1.30	6.51	40.10	
_REVIS	23	3.30	6.12	9.10	
TSKTM	157	2.30	5.32	20.90	
ALL CMD	00	.00	.00	.00	
SUMMEN	1117	1.10	4.40	40.10	

START TIME= 21:45:24 END TIME= 22:00:24 RATE= 1.24 PER SECOND

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE	7.68
CDS	73	4.70	75.67	195.40	
DDEF	47	1.50	6.51	18.00	
DSS?	26	2.20	8.10	20.70	
_END	00	.00	.00	.00	
ERASE	750	.90	8.11	155.10	
FILE	02	64.40	135.95	207.50	
GAS	41	2.70	6.80	17.00	
LOGON	79	1.50	5.37	20.30	
PC?	27	2.90	12.90	42.60	
PDD?	21	3.20	8.48	15.20	
PROCDE	20	2.40	11.13	48.70	
QUIT	01	7.00	7.00	7.00	
REDIT	22	18.40	84.79	154.10	
REKEY	03	4.80	6.30	9.30	
VV	48	5.50	79.99	194.80	
ALL CMD	00	.00	.00	.00	
SUMMEN	1165	.90	17.13	207.50	

START TIME= 21:30:24 END TIME= 21:45:24 RATE= 1.29 PER SECOND

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CDS	00	.00	.00	.00
DDEF	172	1.70	5.81	26.50
DSS?	23	2.00	5.46	22.80
_END	00	.00	.00	.00
ERASE	116	3.10	14.45	58.60
FILE	46	12.40	65.07	148.30
GAS	126	1.80	5.54	18.10
LOGON	00	.00	.00	.00
PC?	22	2.70	6.44	16.50
POD?	28	2.30	6.07	22.50
PROCDE	23	4.70	12.74	40.10
QUIT	46	2.40	5.14	20.20
REDIT	36	29.30	58.50	100.20
REKEY	48	2.70	6.35	20.70
VV	53	10.20	39.30	113.50
ALL CMD	00	.00	.00	.00
SUMMEN	744	1.70	16.16	148.30

7.69

START TIME= 21:45:24 END TIME= 22:00:24 RATE= .82 PFR SECOND

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CALL	33	11.60	40.73	85.40
FTN	38	55.70	177.50	591.60
ALL CMD	00	.00	.00	.00
SUMMEN	71	11.60	118.58	591.60

7.70

TIME= 21:

START TIME= 21:45:24 END TIME= 22:00:24 RATE= .07 PER SECOND

SUMMARY REPORT TSS, TS ONLY, CONF. 2

J.71

REGISTER	USER IDENTIFICATION	TOTAL	AVERAGE
R 0	REFERENCE TIMER	960.74 SECONDS	
R 1	WAIT TIME	490.59 SECONDS	51.06 PERCENT
R 2	TOTAL CPU TIME	470.14 SECONDS	48.94 PERCENT
R 3	PROBLEM PROGRAM CPU TIME	115.23 SECONDS	11.99 PERCENT
R 4	SUPERVISOR CPU TIME	354.90 SECONDS	36.94 PERCENT
R 5		0. NOT USED	
R 6	ANY CHANNEL BUSY (EXCEPT 0)	794.50 SECONDS	82.70 PERCENT
R 7	CPU AND CHANNEL OVERLAP	363.27 SECONDS	37.81 PERCENT
R 8	CHANNEL 0 BUSY	1.00 SECONDS	0.21 PERCENT
R 9	CHANNEL 1 BUSY	657.06 SECONDS	68.39 PERCENT
R 10	CHANNEL 2 BUSY	424.96 SECONDS	44.23 PERCENT
R 11	CHANNEL 4 BUSY	0.0 SECONDS	0.0 PERCENT
R 12	# INSTRUCTIONS	133222107. COUNTS	
R 13	# BUFFER FETCHES	2126736256. COUNTS	
R 14	# BLOCK FETCHES	65288704. COUNTS	
R 15	# MAIN STORAGE STORES	298968725. COUNTS	
R 16	# PAGE EXCEPTIONS	64. COUNTS	
R 17		0. NOT USED	
R 18	CHANNEL 5 BUSY	0.0 SECONDS	0.0 PERCENT
R 19	CHANNEL 6 BUSY	0.0 SECONDS	0.0 PERCENT
R 20	CHANNEL 7 BUSY	0.0 SECONDS	0.0 PERCENT
R 21		0. NOT USED	
R 22		0. NOT USED	
R 23		0. NOT USED	
R 24		0. NOT USED	
R 25		0. NOT USED	
R 26		0. NOT USED	
R 27		0. NOT USED	
R 28		0. NOT USED	
R 29		0. NOT USED	
R 30		0. NOT USED	
R 31		0. NOT USED	
R 32		0. NOT USED	
R 33		0. NOT USED	
R 34		0. NOT USED	
R 35		0. NOT USED	

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
I C	162	1.10	2.59	7.30
CH	83	1.10	2.54	7.50
INP 1	33	1.80	3.66	7.20
INP 2	64	1.60	3.52	8.00
INP 3	149	1.40	3.53	8.30
INP 4	28	1.60	3.67	7.20
LOC	119	1.30	3.27	7.90
N 10	50	1.20	2.62	4.50
NMAS 1	51	1.30	3.44	8.10
NMAS 2	52	1.10	2.78	5.80
NMAS 3	54	1.30	2.49	6.40
NMAS 4	55	1.10	2.68	5.50
NMAS 5	47	1.10	3.51	7.20
NP	47	1.10	2.39	5.90
PR	63	1.20	4.32	12.00
_REVIS	33	2.00	4.68	7.20
TSKTM	217	1.30	3.99	8.10
ALL CMD	00	.00	.00	.00
SUMMEN	1327	1.10	3.28	12.00

7.72

START TIME= 20:13:50 END TIME= 20:28:50 RATE= 1.47 PER SECOND

7.73

TIME= 19:58

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CDS	80	3.60	50.61	152.40
DOEF	105	1.70	3.84	10.80
DSS2	23	2.20	4.08	11.60
_END	00	.00	.00	.00
ERASE	774	.90	5.61	60.40
FILE	05	9.50	28.12	59.00
GAS	76	2.10	3.86	9.30
LOGON	80	1.50	4.52	12.90
PC2	30	2.00	7.90	47.00
POD?	27	1.80	4.94	18.60
PRICDE	22	2.00	6.42	13.10
QUIT	05	1.80	2.42	3.00
REDIT	42	4.40	38.70	115.70
RKFY	08	2.20	3.86	9.10
VV	71	4.50	25.68	110.10
ALL CMD	00	.00	.00	.00
SUMMEN	1353	.90	10.13	152.40

START TIME= 19:58:50 END TIME= 20:13:50 RATE= 1.50 PER SECOND

7.74

TIME= 20:1

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CDS	00	.00	.00	.00
DDEF	249	1.50	3.89	9.20
DSS?	36	1.80	3.77	8.30
_END	00	.00	.00	.00
ERASE	143	1.80	6.42	28.90
FILE	52	7.00	38.73	204.40
GAS	154	1.70	4.13	8.90
LOGON	03	3.00	5.36	7.10
PC?	34	2.10	4.39	9.70
POD?	35	1.80	3.93	7.40
PRUDE	34	3.30	5.69	12.00
QUIT	52	1.20	3.30	6.60
REDIT	35	2.90	38.12	78.80
REKEY	52	1.70	4.37	8.00
VV	70	5.00	24.77	93.10
ALL CMD	00	.00	.00	.00
SUMMEN	949	1.20	9.10	204.40

START TIME= 20:13:50 END TIME= 20:28:50 RATE= 1.05 PER SECOND

7.75

TIME= 20:1

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CALL	50	6.00	37.00	62.60
FTN	50	15.00	101.33	237.50
ALL CMD	00	.00	.00	.00
SUMMEN	100	6.00	69.16	237.50

START TIME= 20:13:50 END TIME= 20:28:50 RATE= .11 PER SECOND

SUMMARY REPORT TSS, TS ONLY, CONF. 3

7.76

REGISTER	USER IDENTIFICATION	TOTAL	AVERAGE
R 0	REFERENCE TIMER	895.64 SECONDS	
R 1	WAIT TIME	522.28 SECONDS	58.31 PERCENT
R 2	TOTAL CPU TIME	373.36 SECONDS	41.69 PERCENT
R 3	PROBLEM PROGRAM CPU TIME	65.75 SECONDS	9.57 PERCENT
R 4	SUPERVISOR CPU TIME	287.61 SECONDS	32.11 PERCENT
R 5		0. NOT USED	
R 6	ANY CHANNEL BUSY (EXCEPT 0)	775.57 SECONDS	86.59 PERCENT
R 7	CPU AND CHANNEL OVERLAP	308.79 SECONDS	34.48 PERCENT
R 8	CHANNEL 0 BUSY	1.55 SECONDS	0.17 PERCENT
R 9	CHANNEL 1 BUSY	524.56 SECONDS	58.57 PERCENT
R10	CHANNEL 2 BUSY	166.99 SECONDS	20.88 PERCENT
R11	CHANNEL 4 BUSY	0.0 SECONDS	0.0 PERCENT
R12	# INSTRUCTIONS	1056813410. COUNTS	
R13	# HUFFER FETCHES	1700283314. COUNTS	
R14	# HLOCK FETCHES	50498653. COUNTS	
R15	# MAIN STORAGE STORES	233999933. COUNTS	
R16	# PAGE EXCEPTIONS	36. COUNTS	
R17		0. NOT USED	
R18	CHANNEL 5 BUSY	0.0 SECONDS	0.0 PERCENT
R19	CHANNEL 6 BUSY	0.0 SECONDS	0.0 PERCENT
R20	CHANNEL 7 BUSY	513.64 SECONDS	57.37 PERCENT
R21		0. NOT USED	
R22		0. NOT USED	
R23		0. NOT USED	
R24		0. NOT USED	
R25		0. NOT USED	
R26		0. NOT USED	
R27		0. NOT USED	
R28		0. NOT USED	
R29		0. NOT USED	
R30		0. NOT USED	
R31		0. NOT USED	
R32		0. NOT USED	
R33		0. NOT USED	
R34		0. NOT USED	
R35		0. NOT USED	

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE	
I C	201	1.10	2.84	7.60	J. 77
CH	101	1.10	2.77	6.70	
INP 1	21	1.40	4.02	6.80	
INP 2	43	1.80	3.66	8.50	
INP 3	106	1.50	3.41	8.70	
INP 4	22	1.50	3.44	7.70	
LOC	145	1.40	3.90	7.90	
N 10	52	1.10	2.94	7.70	
NMAS 1	27	1.70	4.10	8.50	
NMAS 2	26	2.20	3.80	7.40	
NMAS 3	23	1.60	3.32	5.70	
NMAS 4	23	1.80	3.99	7.10	
NMAS 5	22	2.66	3.67	6.06	
NO	53	1.10	2.79	5.60	
PR	68	1.20	5.55	31.70	
REVIS	22	4.70	6.83	9.30	
TSKTM	156	2.30	4.87	10.30	
ALL CMD	00	.00	.00	.00	
SUMMEN	1111	1.10	3.73	31.70	

START TIME= 22:33:07 END TIME= 22:48:07 RATE= 1.23 PER SECOND

778

TIME= 22:1

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CDS	80	5.50	96.27	235.70
DEF	41	2.00	6.31	17.70
DSS?	25	2.00	6.30	13.90
_END	00	.00	.00	.00
ERASE	759	.90	7.67	81.70
FILE	01	58.10	58.10	58.10
GAS	44	2.40	5.31	11.20
LOGON	80	1.70	6.14	27.10
PC?	25	3.00	9.50	30.80
POD?	23	2.70	7.35	32.30
PROCDE	20	2.70	8.55	25.20
QUIT	01	3.50	3.50	3.50
REDIT	27	53.10	87.36	164.10
REKEY	04	4.10	7.70	11.70
VV	50	9.80	69.75	189.50
ALL CMD	00	.00	.00	.00
SUMMEN	1180	.90	17.95	235.70

START TIME= 22:18:07 END TIME= 22:33:07 RATE= 1.31 PER SECOND

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CDS	00	.00	.00	.00
DDEF	185	1.50	4.09	11.50
DSS?	21	1.90	4.66	7.90
_END	00	.00	.00	.00
ERASE	119	3.30	8.17	31.50
FILE	49	13.50	68.93	206.60
GAS	109	1.90	5.04	12.60
LOGIN	00	.00	.00	.00
PC?	21	3.00	4.67	8.70
PUD?	22	2.10	5.24	8.40
PROCDE	22	4.80	10.78	31.70
QUIT	49	1.70	3.95	7.70
REDIT	35	41.20	65.66	102.50
REKEY	50	2.60	6.40	57.60
VV	56	9.90	45.24	94.00
ALL CMD	00	.00	.00	.00
SUMMEN	738	1.50	15.65	206.60

7.79

START TIME= 22:33:07 END TIME= 22:48:07 RATE= .82 PER SECOND

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CALL	34	12.10	65.13	106.40
FTN	40	73.70	176.70	627.50
ALL CMD	00	.00	.00	.00
SUMMEN	74	12.10	125.44	627.50

7.80

TIME= 22:

START TIME= 22:33:07 END TIME= 22:48:07 RATE= .08 PER SECOND

SUMMARY REPORT TSS, TS ONLY, CONF. 4

7.81

REGISTER	USER IDENTIFICATION	TOTAL	AVERAGE
R 0	REFERENCE TIMER	906.02 SECONDS	
R 1	WAIT TIME	501.00 SECONDS	55.30 PERCENT
R 2	TOTAL CPU TIME	405.03 SECONDS	44.70 PERCENT
R 3	PROBLEM PROGRAM CPU TIME	87.23 SECONDS	9.63 PERCENT
R 4	SUPERVISOR CPU TIME	317.79 SECONDS	35.08 PERCENT
R 5		0. NOT USED	
R 6	ANY CHANNEL BUSY (EXCEPT 0)	752.14 SECONDS	83.02 PERCENT
R 7	CPU AND CHANNEL OVERLAP	320.03 SECONDS	35.32 PERCENT
R 8	CHANNEL 0 BUSY	1.41 SECONDS	0.16 PERCENT
R 9	CHANNEL 1 BUSY	554.25 SECONDS	61.17 PERCENT
R 10	CHANNEL 2 BUSY	505.99 SECONDS	55.85 PERCENT
R 11	CHANNEL 4 BUSY	0.0 SECONDS	0.0 PERCENT
R 12	# INSTRUCTIONS	1153076977. COUNTS	
R 13	# BUFFER FETCHES	1851854763. COUNTS	
R 14	# BLOCK FETCHES	55242266. COUNTS	
R 15	# MAIN STORAGE STORES	255543665. COUNTS	
R 16	# PAGE EXCEPTIONS	45. COUNTS	
R 17		0. NOT USED	
R 18	CHANNEL 5 BUSY	0.0 SECONDS	0.0 PERCENT
R 19	CHANNEL 6 BUSY	0.0 SECONDS	0.0 PERCENT
R 20	CHANNEL 7 BUSY	0.0 SECONDS	0.0 PERCENT
R 21		0. NOT USED	
R 22		0. NOT USED	
R 23		0. NOT USED	
R 24		0. NOT USED	
R 25		0. NOT USED	
R 26		0. NOT USED	
R 27		0. NOT USED	
R 28		0. NOT USED	
R 29		0. NOT USED	
R 30		0. NOT USED	
R 31		0. NOT USED	
R 32		0. NOT USED	
R 33		0. NOT USED	
R 34		0. NOT USED	
R 35		0. NOT USED	

7.82

TIME= 21:0

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
I C	180	1.10	3.21	10.60
CH	90	1.20	3.28	11.00
INP 1	22	2.40	4.84	8.80
INP 2	51	1.90	4.57	10.10
INP 3	116	1.50	4.85	11.70
INP 4	21	1.90	3.54	7.50
LOC	135	1.70	5.22	12.90
N 10	46	1.20	3.80	10.10
NMAS 1	27	2.10	4.48	7.70
NMAS 2	27	1.70	4.35	9.10
NMAS 3	25	1.80	4.32	11.70
NMAS 4	24	2.10	4.96	10.00
NMAS 5	23	1.80	4.87	12.30
NP	45	1.20	4.16	8.70
PR	62	1.40	6.19	26.10
_REVIS	19	5.20	8.97	13.50
TSKTM	158	1.90	6.55	12.80
ALL CMD	00	.00	.00	.00
SUMMEN	1071	1.10	4.75	26.10

START TIME= 21:02:06 END TIME= 21:17:06 RATE= 1.19 PER SECOND

7.83

TIME= 20:4

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CDS	80	5.50	70.43	161.60
DDEF	31	2.00	8.06	47.00
DSS?	26	2.10	7.33	51.80
_END	00	.00	.00	.00
ERASE	753	.90	12.92	110.00
FILE	03	106.00	134.50	160.60
GAS	41	2.60	7.34	16.00
LOGON	80	1.50	11.16	66.30
PC?	27	3.50	15.78	82.30
POD?	22	3.20	7.96	16.00
PROCDE	20	3.60	14.07	72.30
QUIT	02	4.40	7.00	9.60
REDIT	18	6.30	67.63	120.40
REKEY	04	3.70	7.25	10.60
VV	41	8.90	65.05	148.50
ALL CMD	00	.00	.00	.00
SUMMEN	1148	.90	19.36	161.60

START TIME= 20:47:06 END TIME= 21:02:06 RATE= 1.27 PER SECOND

7.84

TIME= 21:

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CDS	00	.00	.00	.00
DDEF	165	2.20	5.79	15.00
DSS?	19	1.90	6.00	11.80
_END	00	.00	.00	.00
ERASE	125	3.50	13.50	57.60
FILE	47	14.10	71.83	166.10
GAS	109	3.20	7.07	12.60
LOGON	00	.00	.00	.00
PC?	19	3.30	6.73	12.10
POD?	23	2.20	6.70	13.40
PROCDE	20	6.50	11.77	26.10
QUIT	48	2.20	5.71	13.40
REDIT	42	10.90	60.64	109.60
REKEY	46	3.10	7.63	14.40
VV	64	14.50	54.99	125.20
ALL CMD	00	.00	.00	.00
SUMMEN	727	1.90	19.42	166.10

START TIME= 21:02:06 END TIME= 21:17:06 RATE= .80 PER SECOND

7.85

TIME= 21

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CALL	31	15.90	63.47	121.40
FTN	39	48.80	164.65	317.50
ALL CMD	00	.00	.00	.00
SUMMEN	70	15.90	119.84	317.50

START TIME= 21:02:06 END TIME= 21:17:06 RATE= .07 PER SECOND

SUMMARY REPORT TSS, TS ONLY, CONF.5

J.86

REGISTER	USER IDENTIFICATION	TOTAL	AVERAGE
R 0	REFERENCE TIMER	930.97 SECONDS	
R 1	WAIT TIME	548.65 SECONDS	58.93 PERCENT
R 2	TOTAL CPU TIME	382.32 SECONDS	41.07 PERCENT
R 3	PROBLEM PROGRAM CPU TIME	99.48 SECONDS	10.69 PERCENT
R 4	SUPERVISOR CPU TIME	282.84 SECONDS	30.38 PERCENT
R 5		0. NOT USED	
R 6	ANY CHANNEL BUSY (EXCEPT 0)	690.30 SECONDS	74.15 PERCENT
R 7	CPU AND CHANNEL OVERLAP	248.63 SECONDS	26.71 PERCENT
R 8	CHANNEL 0 BUSY	2.04 SECONDS	0.22 PERCENT
R 9	CHANNEL 1 BUSY	550.02 SECONDS	59.08 PERCENT
R 10	CHANNEL 2 BUSY	327.93 SECONDS	35.22 PERCENT
R 11	CHANNEL 4 BUSY	0.0 SECONDS	0.0 PERCENT
R 12	# INSTRUCTIONS	1074574102. COUNTS	
R 13	# BUFFER FETCHES	1731400304. COUNTS	
R 14	# BLOCK FETCHES	51645282. COUNTS	
R 15	# MAIN STORAGE STORES	241689022. COUNTS	
R 16	# PAGE EXCEPTIONS	52. COUNTS	
R 17		0. NOT USED	
R 18	CHANNEL 5 BUSY	0.0 SECONDS	0.0 PERCENT
R 19	CHANNEL 6 BUSY	0.0 SECONDS	0.0 PERCENT
R 20	CHANNEL 7 BUSY	0.0 SECONDS	0.0 PERCENT
R 21		0. NOT USED	
R 22		0. NOT USED	
R 23		0. NOT USED	
R 24		0. NOT USED	
R 25		0. NOT USED	
R 26		0. NOT USED	
R 27		0. NOT USED	
R 28		0. NOT USED	
R 29		0. NOT USED	
R 30		0. NOT USED	
R 31		0. NOT USED	
R 32		0. NOT USED	
R 33		0. NOT USED	
R 34		0. NOT USED	
R 35		0. NOT USED	

7.87

TIME= 19:3

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
I C	195	1.20	3.17	8.30
CH	94	1.20	3.26	9.90
INP 1	27	1.80	3.41	8.00
INP 2	49	1.50	3.62	8.80
INP 3	111	1.30	3.77	8.90
INP 4	20	1.60	2.80	6.20
LOC	119	1.20	3.71	9.40
N 10	55	1.10	2.96	9.60
NMAS 1	43	1.30	2.87	7.20
NMAS 2	45	1.20	3.38	8.30
NMAS 3	42	1.30	3.12	9.00
NMAS 4	34	1.30	3.39	9.70
NMAS 5	32	1.40	2.97	6.60
NP	50	1.30	3.01	8.20
PR	62	1.40	4.65	22.90
_REVIS	27	2.40	4.75	8.90
TSKTM	181	1.60	3.78	9.80
ALL CMD	00	.00	.00	.00
SUMMEN	1191	1.10	3.49	22.90

START TIME= 19:30:11 END TIME= 19:45:11 RATE= 1.32 PER SECOND

7.88

TIME= 19:15:

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
EDS	80	4.30	89.91	193.70
DDEF	88	1.40	2.95	9.30
DSS?	27	1.50	3.10	8.50
END	00	.00	.00	.00
ERASE	763	1.10	3.55	16.20
FILE	01	79.80	79.80	79.80
GAS	73	1.70	3.29	7.40
LOGON	80	1.50	2.71	4.60
PC?	27	2.10	4.49	11.00
POD?	26	1.70	3.98	8.30
PROCDE	20	2.30	7.59	33.30
QUIT	00	.00	.00	.00
REDIT	39	29.00	66.41	177.70
REKEY	03	1.90	2.73	3.50
VV	64	6.20	50.02	161.50
ALL CMD	00	.00	.00	.00
SUMMEN	1291	1.10	13.13	193.70

START TIME= 19:15:11 END TIME= 19:30:11 RATE= 1.43 PER SECOND

7.89

TIME= 19:3

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CDS	00	.00	.00	.00
DDEF	195	1.50	3.54	9.40
DSS?	33	1.50	3.56	6.50
_END	00	.00	.00	.00
ERASE	138	2.00	5.78	32.40
FILE	56	7.80	65.19	215.40
GAS	127	1.80	4.08	9.70
LOGON	00	.00	.00	.00
PC?	33	2.30	5.59	37.80
POD?	34	1.70	3.90	10.00
PROCDE	24	3.10	6.46	22.90
QUIT	57	1.50	3.77	11.20
REDIT	21	5.30	52.29	73.70
REKEY	57	2.10	4.52	10.60
VV	55	5.50	38.01	90.60
ALL CMD	00	.00	.00	.00
SUMMEN	835	1.50	11.90	215.40

START TIME= 19:30:11 END TIME= 19:45:11 RATE= .92 PER SECOND

7.90

TIME= 19:3

TRANSACTION ID	NUMBER	LOW RESPONSE	AVG RESPONSE	HIGH RESPONSE
CALL	47	22.00	56.91	101.50
FTN	39	23.40	110.50	690.60
ALL CMD	00	.00	.00	.00
SUMMEN	86	22.00	81.21	690.60

START TIME= 19:30:11 END TIME= 19:45:11 RATE= .09 PER SECOND