


```

TTTTTTTTT1  IIIIII  MM      MM  RRRRRRRR  BBBB88888
TTTTTTTTTT  IIIIII  MM      MM  RRRRRRRR  BBBB88888
TT          II      MMMM  MMMM  RR      RR  BB      BB
TT          II      MMMM  MMMM  RR      RR  BB      BB
TT          II      MM  MM  MM  RR      RR  BB      BB
TT          II      MM  MM  MM  RR      RR  BB      BB
TT          II      MM      MM  RRRRRRRR  BBBB88888
TT          II      MM      MM  RRRRRRRR  BBBB88888
TT          II      MM      MM  RR  RR  BB      BB
TT          II      MM      MM  RR  RR  BB      BB
TT          II      MM      MM  RR  RR  BB      BB
TT          II      MM      MM  RR  RR  BB      BB
TT          IIIIII  MM      MM  RR      RR  BBBB88888
TT          IIIIII  MM      MM  RR      RR  BBBB88888

```

```

LL          IIIIII  SSSSSSSS
LL          IIIIII  SSSSSSSS
LL          II      SS
LL          II      SS
LL          II      SS
LL          II      SS
LL          II      SSSSSS
LL          II      SSSSSS
LL          II      SS
LL          II      SS
LL          II      SS
LL          IIIIII  SSSSSSSS
LLLLLLLLLLL IIIIII  SSSSSSSS
LLLLLLLLLLL IIIIII  SSSSSSSS

```

```
0001 SUBROUTINE TIMRB (LUN)! NOTE BEGINNING OF TIMED INTERVAL
0002 C
0003 C Version: 'V04-000'
0004 C
0005 C*****
0006 C*
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0024 C*
0025 C*
0026 C*****
0027 C
0028 C++
0029 C FACILITY: ERF, Errorlog Report Formatter
0030 C
0031 C ABSTRACT:
0032 C
0033 C Runtime statistics timing package.
0034 C
0035 C ENVIRONMENT:
0036 C
0037 C VAX/VMS operating system, unprivileged, user mode.
0038 C
0039 C MODIFIED BY:
0040 C
0041 C V03-002 SAR0212 Sharon A. Reynolds 22-Mar-1984
0042 C Changed the carriage control in a format statement for
0043 C use with output file.
0044 C
0045 C V03-001 JMG0010 Joel M. Gringorten 02-Feb-1984
0046 C Rewrote the error handling from GETJPI system service to
0047 C utilize LIB$SIGNAL, and the ERFMSG file.
0048 C
0049 C
0050 C SAVE CURRENT PROCESS STATISTICS IN VARIABLES IN COMMON
0051 C USAGE:
0052 C CALL TIMRB !START OF TIMED INTERVAL
0053 C
0054 C EQUATED SYMBOLS:
0055 C
0056 C
0057 C COMMON /STAT_VARS/ TO,BUFIO,CPUTIME,DIRIO,PFLTS
```

```

0058      INTEGER*4 BUFIO,CPUTIME,DIRIO,PFLTS
0059
0060      COMMON /JOB_PARAM/ LEN4A,BUFIO_CODE,BUFIO_ADR,ZERO,
0061      2          LEN4B,CPUTIME_CODE,CPUTIME_ADR,ZERO1,
0062      2          LEN4C,DIRIO_CODE,DIRIO_ADR,ZERO2,
0063      2          LEN4D,PFLTS_CODE,PFLTS_ADR,ZERO3,
0064      2          ZERO4
0065      BYTE          LUN
0066      INTEGER*2 LEN4A,LEN4B,LEN4C,LEN4D
0067      INTEGER*2 BUFIO_CODE,CPUTIME_CODE,DIRIO_CODE,PFLTS_CODE
0068      INTEGER*4 BUFIO_ADR,CPUTIME_ADR,DIRIO_ADR,PFLTS_ADR
0069      INTEGER*4 NEW_BUFIO,NEW_CPUTIME,NEW_DIRIO,NEW_PFLTS
0070      INTEGER*4 ZERO,ZERO1,ZERO2,ZERO3,ZERO4,SYSS$GETJPI,STATUS
0071
0072      LOGICAL*1      ERROR
0073
0074      EXTERNAL      ERF_NOSTATS, ERF_GETJPIERR
0075
0076      C
0077      C
0078      C      **** NOTE THE FOLLOWING CODES ARE VMS SYMBOLLIC PARAMS.
0079      C      .... THEY MAY CHANGE IN FUTURE VERSIONS OF VMS...BEWARE!
0080      DATA BUFIO_CODE /1036/          ! JPI$_BUFIO
0081      DATA CPUTIME_CODE /1031/        ! JPI$_CPUTIM
0082      DATA DIRIO_CODE /1035/         ! JPI$_DIRIO
0083      DATA PFLTS_CODE /1034/         ! JPI$_PAGEFLTS
0084      DATA LEN4A,LEN4B,LEN4C,LEN4D /4,4,4,4/
0085      C
0086      C
0087      =====
0088      TO = SECNDS(0.)
0089      BUFIO_ADR      = %LOC(BUFIO)
0090      CPUTIME_ADR    = %LOC(CPUTIME)
0091      DIRIO_ADR      = %LOC(DIRIO)
0092      PFLTS_ADR      = %LOC(PFLTS)
0093
0094      ERROR = .FALSE.
0095
0096      STATUS = SYSS$GETJPI(,,,LEN4A,,,)
0097      IF (.NOT. STATUS) THEN
0098      CALL LIB$SIGNAL(ERF_GETJPIERR,%VAL(0),%VAL(STATUS))
0099
0100      ERROR = .TRUE.
0101      ENDIF
0102
0103      RETURN
0104
0105      ENTRY TIMRE (LUN)! PRINT EXECUTION STATISTICS FOR INTERVAL
0106      C
0107      C      USAGE:
0108      C          CALL TIMRE          !END OF TIMED INTERVAL
0109      C
0110      C      TIMRE OBTAINS PROCESS STATISTICS AND SUBTRACTS THE
0111      C      BEGINNING-OF-INTERVAL STATISTICS RECORDED BY TIMRB.
0112      C      THE INCREMENTAL VALUES ARE WRITTEN TO UNIT "TTY"
0113      C      (FORTRAN UNIT 6).
0114      C      BUFIO_ADR      = %LOC(NEW_BUFIO)
0115      C      CPUTIME_ADR    = %LOC(NEW_CPUTIME)

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```

0115      DIRIO_ADR      = %LOC(NEW_DIRIO)
0116      PFLTS_ADR     = %LOC(NEW_PFLTS)
0117
0118      C
0119
0120      STATUS = SYSSGETJPI(,,,LEN4A,,)
0121      IF (.NOT. STATUS) THEN
0122      CALL LIB$SIGNAL(ERF_GETJPIERR,%VAL(0),%VAL(STATUS))
0123
0124      ERROR = .TRUE.
0125      ENDIF
0126      C
0127
0128      CLKTIME = SECNDS(TO)
0129
0130      CPUSECS = (NEW_CPUTIME-CPUTIME)/100.
0131      BUFIO = NEW_BUFIO - BUFIO
0132      DIRIO = NEW_DIRIO - DIRIO
0133      PFLTS = NEW_PFLTS - PFLTS
0134
0135      IF (ERROR) THEN
0136      CALL LIB$SIGNAL(ERF_NOSTATS)
0137
0138      ELSE
0139
0140      CALL LINCHK (LUN,7)
0141
0142      WRITE(LUN,110) CPUSECS,CLKTIME,PFLTS,DIRIO,BUFIO
0143      110  FORMAT(' ', 'PROGRAM RUNTIME STATISTICS' //
0144      1 ' ', T8, 'TIMES IN SECONDS', T29, ' PAGE', T39, 'DIRECT', T49, 'BUFFERED' //,
0145      2 ' ', T12, 'CPU ELAPSED', T29, 'FAULTS', T39, ' I/O', T49, ' I/O' //,
0146      3 ' ', T6, F9.1, F9.1, T25, I10, T39, I6, T49, I8, /)
0147      ENDIF
0148
0149      C      SAVE STATE FOR NEXT TIME AROUND
0150      C      THE USER IS SUPPOSED TO CALL TIMRB AGAIN, BUT IN CASE HE DOESN'T ...
0151
0152      TO = SECNDS(0.)
0153      CPUTIME = NEW_CPUTIME
0154      BUFIO = NEW_BUFIO
0155      DIRIO = NEW_DIRIO
0156      PFLTS = NEW_PFLTS
0157      RETURN
0158      END

```

PROGRAM SECTIONS

Name	Bytes	Attributes
0 \$CODE	357	PIC CON REL LCL SHR EXE RD NOWRT LONG
1 \$PDATA	175	PIC CON REL LCL SHR NOEXE RD NOWRT LONG
2 \$LOCAL	116	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3 STAT_VARS	20	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4 JOB_PARAM	52	PIC OVR REL GBL SHR NOEXE RD WRT LONG
Total Space Allocated		720

ENTRY POINTS

Address	Type	Name	Address	Type	Name
0-00000000		TIMRB	0-0000005F		TIMRE

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
3-00000004	I*4	BUFIO	4-00000004	I*4	BUFIO_ADR	4-00000002	I*2	BUFIO_CODE	2-00000018	R*4	CLKTIME
2-0000001C	R*4	CPUSECS	3-00000008	I*4	CPUTIME	4-00000010	I*4	CPUTIME_ADR	4-0000000E	I*2	CPUTIME_CODE
3-0000000C	I*4	DIRIO	4-0000001C	I*4	DIRIO_ADR	4-0000001A	I*2	DIRIO_CODE	2-00000000	L*1	ERROR
4-00000000	I*2	LEN4A	4-0000000C	I*2	LEN4B	4-00000018	I*2	LEN4C	4-00000024	I*2	LEN4D
AP-00000004	L*1	LUN	2-00000004	I*4	NEW_BUFIO	2-00000008	I*4	NEW_CPUTIME	2-0000000C	I*4	NEW_DIRIO
2-00000010	I*4	NEW_PFLTS	3-00000010	I*4	PFLTS	4-00000028	I*4	PFLTS_ADR	4-00000026	I*2	PFLTS_CODE
2-00000014	I*4	STATUS	3-00000000	R*4	T0	4-00000008	I*4	ZERO	4-00000014	I*4	ZERO1
4-00000020	I*4	ZERO2	4-0000002C	I*4	ZERO3	4-00000030	I*4	ZERO4			

LABELS

Address	Label
1-00000008	110'

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name	Type	Name	Type	Name
	ERF_GETJPIERR		ERF_NOSTATS	R*4	FOR\$SECNDS		LIB\$SIGNAL		LINCHK
								I*4	SYSS\$GETJPI

COMMAND QUALIFIERS

FORTRAN /LIS=LISS:TIMRB/OBJ=OBJ\$:TIMRB MSRC\$:TIMRB

/CHECK=(NOBOUNDS,OVERFLOW,NOUNDERFLOW)

/DEBUG=(NOSYMBOLS,TRACEBACK)

/STANDARD=(NOSYNTAX,NOSOURCE_FORM)

/SHOW=(NOPREPROCESSOR,NOINCLUDE,MAP)

/F77 /NOG_FLOATING /I4 /OPTIMIZE /WARNINGS /NOD_LINES /NOCROSS_REFERENCE /NOMACHINE_CODE /CONTINUATIONS=19

