

THE VMS SYSTEM EVENT FILE

The VMS Operating System maintains a System Event File called ERRLOG.SYS. The file is located in the SYS\$SYSROOT:[SYSERR] directory and is used to record certain events that occur during system operation. The types of events that are recorded in the event file are listed in Table 1.

Table 1 Error Message Entry Type Definitions

Entry Code	Description
01	Device Error
02	Machine Check
04	Bus Error
05	SBI Alert
06	Soft ECC Error
07	Asynchronous Write Error
08	Hard ECC Error
09	11/780 Unibus Adapter error
10	11/750 Fault Through SBI Vector
11	11/730 Unibus Error
12	11/780 Massbus Adapter Error
13	11/790 SBIA Error
14	11/790 CRD Log
15	11/790 Environmental Monitor
16	11/790 Processor Error Halt
17	11/790 Console Reboot
32	Cold Start (ie: System Boot)
35	New File Created
36	Warm Start (ie: System Power Recovery)
37	Crash Re-start
38	Time Stamp Entry
39	System Service Message
40	System Bugcheck
41	Operator Message
42	Network Message
64	Volume Mount
65	Volume Dismount
96	Device Timeout
97	Undefined Interrupt
98	Asynchronous Device Attention
99	Software Parameters
100	Logged Message
101	Logged MSCP Message
112	User Bugcheck
273	Unknown Entry

Each time one of these events occur, the normal operation of VMS is interrupted and a special routine is called to handle the event. The routine requests a System Event Buffer and then gathers predefined information about the event (e.g., system status, hardware and software registers, etc.) and puts it in the

buffer. Once the buffer is built the routine queues the buffer to be appended to the System Event File. When the queue is processed the buffer is appended to SYS\$SYSROOT:[SYSERR]ERRLOG.SYS. This process takes place anytime one of the events listed in Table 1 occur.

Two programs (ANALYZE/ERRORLOG and RETRIEVE - a Spear Library function) are available to translate the contents of the System Event File into ASCII reports. Both of these programs use the Error Log Formatter (ERF) to translate the entries in the Event File. Therefore, regardless of which program you use the format of the translated entries will be the same. The main difference between the two programs is the command syntax, the selection criteria, and the format of the Summary reports they produce. In addition to translating system event file entries Spear is capable of analyzing the contents of the event file and calculating system availability.

ANALYZE/ERRORLOG

ANALYZE/ERRORLOG uses a non-interactive command syntax. That is, the Command, Qualifiers and Arguments, are entered in a single string. The Qualifiers allow you to select specific entries from a binary System Event File and either produce a separate binary event file that contains only those entries, or translate the entries and produce an ASCII Report. For a complete description of the this utility, including more information about the ANALYZE/ERRORLOG command and its qualifiers, see the VAX/VMS Utilities Reference Volume.

COMMAND SYNTAX:

```
ANALYZE/ERROR_LOG [/qualifier=argument][,...] [file-spec[,...]]<cr>
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- o The base command can be abbreviated to ANA/ERR.
- o All Qualifiers are preceded by a slash.
- o Multiple Arguments to a Qualifier are separated by a comma.
- o In some case special characters such as the equal sign, parentheses, and colon are required. If the qualifier requires special characters they will appear in the syntax examples shown in Table 2.

THE VMS SYSTEM EVENT FILE

Table 2 summarizes the qualifiers and defaults associated with ANALYZE/ERROR LOG. The full qualifier is spelled out in the left column. In the syntax example to the right of the column the qualifier is abbreviated to its most common form. The effect of the qualifier is described below the syntax example.

Table 2 ANALYZE/ERROR_LOG Command Qualifiers and Defaults

ANALYZE/ERROR_LOG ANA/ERR<cr>

Translate the entire system event file SYS\$SYSROOT:[SYSERR]ERRLOG.SYS and output a full ASCII report of each entry on the terminal.

This is the default case. The defaults are as follows:

INPUT FILE - The default input file spec is SYS\$SYSROOT:[SYSERR]ERRLOG.SYS.

OUTPUT - The default output is an ASCII report, which is sent to SYS\$OUTPUT. The system default for SYS\$OUTPUT is your terminal.

QUALIFIERS - The default qualifiers are: /FULL /ENTRY=(START:1,END:EOF)

ANALYZE/ERROR_LOG ANA/ERR ERRLOG.OLD<cr>

Translate the entire system event file specified (ERRLOG.OLD;5) and output a full ASCII report of each entry on SYS\$OUTPUT.

With the exception of the input file specification the defaults for this case are the same as above. Any binary (untranslated) system event file may be specified as input.

/BEFORE

ANA/ERR/BEF=16-AUG-85-10:35 ERRLOG.OLD;5<cr>
ANA/ERR/BEF=-3-:12:30 ERRLOG.OLD;5<cr>

Select only those entries dated earlier than the "date-time" specified.

The qualifier accepts absolute time (beginning August 16, 1985 at 10:30), delta time (beginning 2 days, 11 hours, and 30 minutes ago), or a combination of both. For further details on specifying times refer to Section 2.5 in the VAX/VMS DCL Dictionary.

/BINARY

ANA/ERR/INCLUDE=(DISKS)/BIN=FS:DISK.ERRORS<cr>
Do not translate the selected entries. Instead write them in the directory and file specified. If no directory is specified use the users default directory. If no file type is specified, use .DAT as the file type.

You must supply a file name. If you omit the directory it will default to the directory you

are using. If you omit the file type it will default to: DAT.

The following qualifiers should not be used in conjunction with the /Binary qualifier:

/BRIEF /OUTPUT /SUMMARY
/FULL /REGISTER_DUMP

/BRIEF

ANA/ERR/BRI ERRLOG.OLD;5<cr>

Do not generate a full report for each selected entry. Instead generate an abbreviated report containing key only information about each entry.

/ENTRY

ANA/ERR/ENT=(START:12,END:29)<cr>

Select only the Entry Numbers specified. If either the START or END argument is omitted default to START:1,END:EOF.

/EXCLUDE

ANA/ERR/EXC=(MTA0,DRA5) ERRLOG.OLD;5<cr>

Do not select any entries generated for the Device Class, Device Name, or Entry Type specified.

The acceptable Device and Entry keywords are listed under the /INCLUDE qualifier.

/FULL

ANA/ERR/INCLUDE=(DISKS)/FULL ERRLOG.OLD;5<CR>

Generate a full ASCII report for the entries specified.

This is the default report format and normally does not need to be specified as part of the ANALYZE/ERROR_LOG command string.

See Examples: 1 through 15

/NOFULL

ANA/ERR/STATISTICS/NOFULL ERRLOG.OLD;5<CR>

Do not generate a full ASCII report for the entries specified.

This Qualifier is normally used when you only want a special ASCII report such as a Summary or Statistical report. If you don't specify NOFULL, a full translation of the selected entries will precede the Summary or Statistical Report.

/INCLUDE

ANA/ERR/INC=(MACHINE_CHECKS,BUGCHECKS)<cr>

Select only those entries generated for the Device Class, Device Name, or Entry Type specified.

The acceptable Device and Entry keywords are listed below.

Device Class Keywords

- BUSES - All Bus related Entries
- DISKS - All Disk Related Entries
- REALTIME - All Realtime Related Entries
- SYNC COMMUNICATIONS - All Synchronious Line Entries
- TAPES - All Tape related Entries

Device Physical Name Constructs

- DB - An entire group of devices
- DB,DR,XF - A list of device groups
- DBA1 - A specific device/unit number
- DBA1,HSC1\$DUA1,DYA0 - A list of devices

Entry Types

- ATTENTIONS - device attention entries
- BUGCHECKS - bugcheck entries
- CONTROL_ENTRIES - Control Entries
- CPU_ENTRIES - CPU Related Entries
- DEVICE_ERRORS - Device Error Entries
- MACHINE_CHECKS - Machine Check Entries
- MEMORY - Memory Error Entries
- TIMEOUTS - Device Timeout Entries
- UNKNOWN_ENTRIES - All Entries that had either an unknown entry type or an unknown device type/class.
- UNSOLICITED_MSCP - Unsolicited MSCP Entries
- VOLUME_CHANGES - Volume Mount and Dismount Entries

/LOG

ANA/ERR/LOG ERRLOG.OLD;5<cr>

Send a message to the SYS\$OUTPUT stating the number of entries that were selected and rejected for each input file.

Refer to the /REJECT qualifier for an explanation of rejected entries. See Example: 16

/OUTPUT

ANA/ERR/OUT=ERROR_LOG.LST ERRLOG.OLD;5<cr>

Do not print the ASCII Report. Instead save the report in the file specified. If no file is specified write the report into xxxx.LST (where xxxx is the name of the input file).

/REGISTER_DUMP

ANA/ERR/INCLUDE=(CPU)/REG ERRLOG.OLD;5<CR>

Do not use the specified (Brief/Full) format for translating Memory, Device Error, and Device Timeout entries. Instead select only the register information from those entries and translate that information into hexadecimal longword (cryptic) format. Use the specified format for translating all other types of selected entries.

This qualifier requires that the INCLUDE qualifier be part of the command string. Also,

regardless of whether or not they were specified as by INCLUDE Qualifier, all Memory, Device Error, Device Timeout entries will be selected and translated in cryptic format.

See Example: 17

/REJECT

ANA/ERR/INCLUDE=(MTA0)/REJ=ERRORS.BIN
ERRLOG.OLD;5<CR>

Put all rejected entries in the file specified. Do not translate the entries, write them in binary format. If no file is specified write the entries into xxxx.REJ (where xxxx is the name of the input file).

Rejected entries consist of all entries that were not specifically selected in the command string. That is, those entries that were outside the time window specified by either the /SINCE, /BEFORE arguments; those entries that were not within the range specified by the /ENTRY(START: ,END:) arguments; those entries that did not match the /INCLUDE arguments; and those entries that were specifically rejected by the /EXCLUDE arguments.

/SID_REGISTER

ANA/ERR/SID=%X0405F09E ERRLOG.OLD;5<CR>

Select only those entries that were reported by the CPU associated with the System ID specified.

/SINCE

ANA/ERR/SIN=16-AUG-85-10:35 ERRLOG.OLD;5<cr>

ANA/ERR/SIN=-3--:12:30 ERRLOG.OLD;5<cr>

Select only those entries that occurred on or after the date and time specified.

You can specify an absolute time (beginning August 16, 1985 at 10:30), a delta time (beginning 2 days, 11 hours, and 30 minutes ago), or a combination of absolute and delta times. For further details on specifying times refer to Section 2.5 in the VAX/VMS DCL Dictionary.

/STATISTICS

ANA/ERR/NOFULL/STAT ERRLOG.OLD;5<cr>

Generate and append a statistical report to the end of the ASCII report that states CPU Time used and the number of page faults, buffered I/O, and direct I/O, that occurred during the execution of the ANALYZE/ERROR_LOG command.

See Example: 18

/SUMMARY

ANA/ERR/NOFULL/SUM=(DEV, MEM) ERRLOG.OLD;5<cr>

Generate a summary report for each of the report types specified by the keyword and append the report(s) to the end of the ASCII report. If no keywords are supplied, generate a full set of summary reports.

THE VMS SYSTEM EVENT FILE

The following is a list of the Summary Keywords and the type of report they will generate.

<u>Keyword</u>	<u>Meaning</u>
DEVICE	Include the Device Rollup section in the report.
ENTRY	Include the Summary of Entries Logged section in the report.
HISTOGRAM	Include the Processed Entries Hour of Day Histogram in the report.
MEMORY	Include the Summary of Memory Errors section in the report.
VOLUME	Include the Volume Label section in the report.

See Examples: 19 through 22

THE VMS SYSTEM EVENT FILE

EXAMPLES

The following examples represent sample reports produced by the Error Record Formatter (ERF). These reports have been included so that you will have some idea of the type of information that can be extracted from System Event files using either ANALYZE/ERROR_LOG

The following is a list of the examples and the corresponding Entry Types:

- Example 1: Machine Check (Entry Type 002)
- Example 2: Soft ECC Error (Entry Type 006)
- Example 3: 11/790 SBIA Error (Entry Type 013)
- Example 4: 11/780 Environmental Monitor (Entry Type 015)
- Example 5: 11/790 Processor Halt (Entry Type 016)

- Example 6: 11/790 Console Reboot (Entry Type 017)
- Example 7: Cold Start (Entry Type 032)
- Example 8: Crash Re-start (Entry Type 037)
- Example 9: System Bugcheck (Entry Type 040)
- Example 10: Device Timeout (Entry Type 096)

- Example 11: Asynchronous Device Attention (Entry Type 098)
- Example 12: Unknown Entry (Entry Type 273)
- Example 13: ANALYZE/ERROR_LOG/LOG Report Format
- Example 14: ANALYZE/ERROR_LOG/REGISTER DUMP Report Format
- Example 15: ANALYZE/ERROR_LOG/STATISTICS Report Format

- Example 16: ANALYZE/ERROR_LOG/SUMMARIZE=(DEVICE) Report Format
- Example 17: ANALYZE/ERROR_LOG/SUMMARIZE=(VOLUME) Report Format
- Example 18: ANALYZE/ERROR_LOG/SUMMARIZE=(ENTRY) Report Format
- Example 19: ANALYZE/ERROR_LOG/SUMMARIZE=(HISTOGRAM) Report Format

Example 1: Machine Check (Entry Type 002)

V A X / V M S

SYSTEM ERROR REPORT

COMPILED 6-SEP-1985 16:46

PAGE 1.

***** ENTRY
 ERROR SEQUENCE 43.

1. *****
 LOGGED ON SID 0405F270

MACHINE CHECK 2-JUL-1985 17:34:44.00
 KA86 REV# 5. SERIAL# 624. MFG PLANT 15.

EHMSTS 41001803

VMS ERROR CODE = IBOX
 MICRO TRAP VECTOR = 18 (X)
 IBOX SP CORR
 EHM ENTERED

EVMQSAV 0008073D

VIRTUAL ADDRESS FOR EBOX PORT
 - REQUESTS

EBCS 00002000

IBOX ERR

EDPSR 00000000

CSLINT 00606E1F

C BUS ADDRESS = 1F (X)
 C BUS DATA = 6E (X)
 INTERRUPT PRIORITY REQUEST = 0.
 I/O ADAPTER = 3.

IBESR 00806000

UOP SEL = IBOX REGISTER SELECT
 UTPR <2:0> = FORK(IB PORT, IBOX ERR)
 ENABLE ETRAP
 IAMUX PARITY ERROR

EBXWD1 00000051

TOP OF "SP STACK"
 - CONTENT IS ONE OF THE LAST
 - LONGWORDS WRITTEN TO MBOX

EBXWD2 00A00040

TOP OF "SP STACK" MINUS ONE
 - CONTENT IS ONE OF THE LAST
 - LONGWORDS WRITTEN TO MBOX

VASAV 00011B04

VIRTUAL ADDRESS FOR OP FETCH
 - PORT REQUEST ADDRESS
 - CALCULATION FOR OPERAND
 - PRE-FETCH AND RESULT DELIVERY

VIBASAV 0008074E

VIRTUAL ADDRESS OF NEXT IBUF
 - PORT REQUEST TO FILL IBUFFER

ESASAV 0008073E

PC OF INSTRUCTION DURING EBOX
 - EXECUTION AND RESULT STORAGE

ISASAV 00080742

PC OF INSTRUCTION WHICH VA
 - CALCULATION UNIT IS DOING ADDRESS
 - CALCULATION OR OPERAND PRE-FETCH
 - OR IS PASSING OPERAND DATA

THE VMS SYSTEM EVENT FILE

CPC 00080742
MSTAT1 84004000
MSTAT2 00000F00
MDECC 00060400
MERG 00000100
CSHCTL 00001003
MEAR 0000007C
MEDR 0000001F
FBXERR FFFFFFFF
CSES FFFFFFFF
ERROR PC 00080742
ERROR PSL 03C00028
IOA ES 00000000

PC OF INSTRUCTION IN
- DECODE UNIT

BLOCK HIT
ABUS ADAPTER = 0.
WORD COUNT = 0.
CYCLE TYPE = READ REGISTER
DEST CP = EBOX

DIAGNOSTIC STATUS FROM SBIA
- RD COM/MSK <3:0> = F (X)
- RD DAT L/S <1:0> = 0 (X)
PAMM DATA = ARRAY #0.,SLOT #1.

(* DATA NOT VALID *)

MEMORY MANAGEMENT ENABLE

CACHE 0 ENABLE
CACHE 1 ENABLE

PHYSICAL ADDRESS IN PA LATCH
AT TIME OF ERROR = 0000007C

DATA WORD USED DURING ERROR

(* DATA NOT VALID *)

(* DATA NOT VALID *)

N-BIT
INTEGER OVERFLOW TRAP ENABLE
INTERRUPT PRIORITY LEVEL = 00.
PREVIOUS MODE = USER
CURRENT MODE = USER

(* DATA NOT VALID *)

Example 2: Soft ECC Error (Entry Type 006)

V A X / V M S SYSTEM ERROR REPORT COMPILED 1-OCT-1985 08:57
 PAGE 1.

***** ENTRY 1. *****
 ERROR SEQUENCE 209. LOGGED ON SID 04FFFFFF

CORRECTED MEMORY ERROR 10-SEP-1985 17:15:19.03
 KA86 REV# 255. SERIAL# 4095. MFG PLANT 15.

HIGH CRD ERROR RATE - CRD LOGGING DISABLED

TOTAL CORRECTED DATA ERRORS LOGGED FOR THIS ENTRY 9.

CORRECTED ERROR 1.

MDECC 00261400

SYNDROME = CORRECTED DATA BIT #1.
 DATA SINGLE BIT ERROR

MEAR 012AFC00

PHYSICAL ADDRESS IN PA LATCH
 AT TIME OF ERROR = 012AFC00

MSTAT1 64004002

ANY REFILL
 BLOCK HIT
 ABUS ADAPTER = 0.
 WORD COUNT = 0.
 CYCLE TYPE = CP REFILL
 DEST CP = OP FETCH

MSTAT2 00044F00

DIAGNOSTIC STATUS FROM SBIA
 - RD COM/MSK <3:0> = F (X)
 - RD DAT L/S <1:0> = 0 (X)
 - ABUS BAD DATA CODE
 PAMM DATA = ARRAY #4., SLOT #5.

CORRECTED ERROR 2.

MDECC 00261400

SYNDROME = CORRECTED DATA BIT #1.
 DATA SINGLE BIT ERROR

MEAR 012AFC00

PHYSICAL ADDRESS IN PA LATCH
 AT TIME OF ERROR = 012AFC00

MSTAT1 64006006

ANY REFILL
 C0 TAG MISS
 BLOCK HIT
 ABUS ADAPTER = 0.
 WORD COUNT = 0.
 CYCLE TYPE = CP REFILL
 DEST CP = OP FETCH

THE VMS SYSTEM EVENT FILE

MSTAT2 00040F00

DIAGNOSTIC STATUS FROM SBIA
RD COM/MSK <3:0> = F (X)
RD DAT L/S <1:0> = 0 (X)
PAMM DATA = ARRAY #4.,SLOT #5.

CORRECTED ERROR 3.

MDECC 00261400

SYNDROME = CORRECTED DATA BIT #1.
DATA SINGLE BIT ERROR

MEAR 01297400

PHYSICAL ADDRESS IN PA LATCH
AT TIME OF ERROR = 01297400

MSTAT1 64006002

ANY REFILL
CO TAG MISS
BLOCK HIT
ABUS ADAPTER = 0.
WORD COUNT = 0.
CYCLE TYPE = CP REFILL
DEST CP = OP FETCH

MSTAT2 00044F00

DIAGNOSTIC STATUS FROM SBIA
RD COM/MSK <3:0> = F (X)
RD DAT L/S <1:0> = 0 (X)
ABUS BAD DATA CODE
PAMM DATA = ARRAY #4.,SLOT #5.

CORRECTED ERROR 4.

MDECC 00261400

SYNDROME = CORRECTED DATA BIT #1.
DATA SINGLE BIT ERROR

MEAR 01297400

PHYSICAL ADDRESS IN PA LATCH
AT TIME OF ERROR = 01297400

MSTAT1 64006002

ANY REFILL
CO TAG MISS
BLOCK HIT
ABUS ADAPTER = 0.
WORD COUNT = 0.
CYCLE TYPE = CP REFILL
DEST CP = OP FETCH

MSTAT2 00040F00

DIAGNOSTIC STATUS FROM SBIA
RD COM/MSK <3:0> = F (X)
RD DAT L/S <1:0> = 0 (X)
PAMM DATA = ARRAY #4.,SLOT #5.

CORRECTED ERROR 5.

MDECC 00261400

SYNDROME = CORRECTED DATA BIT #1.
DATA SINGLE BIT ERROR

MEAR 012A2C00

PHYSICAL ADDRESS IN PA LATCH
AT TIME OF ERROR = 012A2C00

MSTAT1 64004002

ANY REFILL
BLOCK HIT
ABUS ADAPTER = 0.
WORD COUNT = 0.
CYCLE TYPE = CP REFILL
DEST CP = OP FETCH

MSTAT2 00044F00

DIAGNOSTIC STATUS FROM SBIA
- RD COM/MSK <3:0> = F (X)
- RD DAT L/S <1:0> = 0 (X)
- ABUS BAD DATA CODE
- PAMM DATA = ARRAY #4.,SLOT #5.

CORRECTED ERROR 6.

MDECC 00261400

SYNDROME = CORRECTED DATA BIT #1.
DATA SINGLE BIT ERROR

MEAR 012A2C00

PHYSICAL ADDRESS IN PA LATCH
AT TIME OF ERROR = 012A2C00

MSTAT1 64006006

ANY REFILL
CO TAG MISS
BLOCK HIT
ABUS ADAPTER = 0.
WORD COUNT = 0.
CYCLE TYPE = CP REFILL
DEST CP = OP FETCH

MSTAT2 00040F00

DIAGNOSTIC STATUS FROM SBIA
- RD COM/MSK <3:0> = F (X)
- RD DAT L/S <1:0> = 0 (X)
- PAMM DATA = ARRAY #4.,SLOT #5.

CORRECTED ERROR 7.

MDECC 00261400

SYNDROME = CORRECTED DATA BIT #1.
DATA SINGLE BIT ERROR

THE VMS SYSTEM EVENT FILE

MEAR 01245C00

PHYSICAL ADDRESS IN PA LATCH
AT TIME OF ERROR = 01245C00

MSTAT1 64006006

ANY REFILL
CO TAG MISS
BLOCK HIT
ABUS ADAPTER = 0.
WORD COUNT = 0.
CYCLE TYPE = CP REFILL
DEST CP = OP FETCH

MSTAT2 00044F00

DIAGNOSTIC STATUS FROM SBIA
- RD COM/MSK <3:0> = F (X)
- RD DAT L/S <1:0> = 0 (X)
- ABUS BAD DATA CODE
FAMM DATA = ARRAY #4.,SLOT #5.

CORRECTED ERROR 8.

MDECC 00261400

SYNDROME = CORRECTED DATA BIT #1.
DATA SINGLE BIT ERROR

MEAR 01245C00

PHYSICAL ADDRESS IN PA LATCH
AT TIME OF ERROR = 01245C00

MSTAT1 64006006

ANY REFILL
CO TAG MISS
BLOCK HIT
ABUS ADAPTER = 0.
WORD COUNT = 0.
CYCLE TYPE = CP REFILL
DEST CP = OP FETCH

MSTAT2 00040F00

DIAGNOSTIC STATUS FROM SBIA
- RD COM/MSK <3:0> = F (X)
- RD DAT L/S <1:0> = 0 (X)
FAMM DATA = ARRAY #4.,SLOT #5.

CORRECTED ERROR 9.

MDECC 00261400

SYNDROME = CORRECTED DATA BIT #1.
DATA SINGLE BIT ERROR

MEAR 01221400

PHYSICAL ADDRESS IN PA LATCH
AT TIME OF ERROR = 01221400

MSTAT1 64006006

ANY REFILL
CO TAG MISS
BLOCK HIT
ABUS ADAPTER = 0.
WORD COUNT = 0.
CYCLE TYPE = CP REFILL
DEST CP = OP FETCH

MSTAT2 00044F00

DIAGNOSTIC STATUS FROM SBIA
- RD COM/MSK <3:0> = F (X)
- RD DAT L/S <1:0> = 0 (X)
- ABUS BAD DATA CODE
PAMM DATA = ARRAY #4., SLOT #5.

THE VMS SYSTEM EVENT FILE

Example 3: 11/790 SBIA Error (Entry Type 013)

V A X / V M S

SYSTEM ERROR REPORT

COMPILED 6-SEP-1985 12

PAGE 1.

***** ENTRY
ERROR SEQUENCE 66.

1. *****
LOGGED ON SID 0405F270

SBIA ERROR 2-JUL-1985 19:17:12.92
KA86 REV# 5. SERIAL# 624. MFG PLANT 15.

ERROR PC 80008B1F
ERROR PSL 00000000

INTERRUPT PRIORITY LEVEL = 00.
PREVIOUS MODE = KERNEL
CURRENT MODE = KERNEL

IOA ADDRESS 80029200
DMAI CMD/ADDRS 403C747E

(* DATA NOT VALID *)

DMAI ID 0000000E

(* DATA NOT VALID *)

DMAA CMD/ADDRS 18001800

(* DATA NOT VALID *)

DMAA ID 00000010

(* DATA NOT VALID *)

DMAB CMD/ADDRS 103C747F

(* DATA NOT VALID *)

DMAB ID 0000000E

(* DATA NOT VALID *)

DMAC CMD/ADDRS B03E09FC

(* DATA NOT VALID *)

DMAC ID 0000000E

(* DATA NOT VALID *)

IOA DC 00000000

IOA ES 1C000000

IOA CS EE000000

CPU TR SELECT = 2.
ENABLE SBI CYCLES IN
ENABLE SBI CYCLES OUT
MASTER INTERRUPT ENABLE

IOA CF 01000010

SOFTWARE REQUIRED SBI REV = 0.
SBI
16M OF MEMORY ADDRESSABLE (ABUS)

SBIA FS 040F0000

FAULT SILO LOCK
SBI FAULT
FAULT INTERRUPT ENABLE
FAULT LATCH
TRANSMITTER DURING FAULT

SBIA SC 00000000

COUNT FIELD = 0.
COMPARE TAG = 0.
COMPARE CMD/MSK = 0.

SBIA MT 00000000

SBIA ER 00000000

SBIA TA 0802000E

(* DATA NOT VALID *)

SBI SILO LOCKED, DETAILED SUMMARY

00000000

1C000000

VALID READ DATA
ID = 0.

00000002

TR 1. ACTIVE

00000000

00000000

00000000

00000000

00000000

00000000

00000000

00000000

00000000

00000000

00000000

00000000

00000000

ADAPTER TR# 3.

"DW" CSR 00000028

ADAPTER IS UBA 0.

ADAPTER TR# 14.

CNFR 20180038

ADAPTER IS "CI"
READ DATA TIMEOUT
COMMAND TRANSMIT TIMEOUT
UNEXPECTED READ DATA FAULT

THE VMS SYSTEM EVENT FILE

Example 4: 11/780 Environmental Monitor (Entry Type 015)

V A X / V M S SYSTEM ERROR REPORT COMPILED 9-SEP-1985 08:
PAGE 1.

***** ENTRY 1. *****
ERROR SEQUENCE 9413. LOGGED ON SID 0405F09E

EMM EXCEPTION 9-JUL-1985 14:37:41.01
 KA86 REV# 5. SERIAL# 158. MFG PLANT 15.

STATUS CHANGE IN T1 TEMPERATURE, THE TEMPERATURE IS NOW IN YELLOW ZONE

***** ENTRY 2. *****
ERROR SEQUENCE 9414. LOGGED ON SID 0405F09E

EMM EXCEPTION 9-JUL-1985 14:37:44.43
 KA86 REV# 5. SERIAL# 158. MFG PLANT 15.

STATUS CHANGE IN T1 TEMPERATURE, THE TEMPERATURE IS NOW NORMAL

Example 5: 11/790 Processor Halt (Entry Type 016)

V A X / V M S

SYSTEM ERROR REPORT

COMPILED 9-SEP-1985 08:52
PAGE 1.

***** ENTRY
ERROR SEQUENCE 1053.

1. *****
LOGGED ON SID 0405F270

KAF SNAPSHOT 12-JUL-1985 09:48:27.50
KA86 REV# 5. SERIAL# 624. MFG PLANT 15.

SYS\$SYSROOT:[SYSERR]ERRSNAP.LOG;25 12-JUL-1985 09:48:22.53

***** ENTRY
ERROR SEQUENCE 1058.

2. *****
LOGGED ON SID 0405F270

KAF SNAPSHOT 12-JUL-1985 09:48:38.06
KA86 REV# 5. SERIAL# 624. MFG PLANT 15.

SYS\$SYSROOT:[SYSERR]ERRSNAP.LOG;26 12-JUL-1985 09:48:33.68

***** ENTRY
ERROR SEQUENCE 1116.

3. *****
LOGGED ON SID 0405F270

KAF SNAPSHOT 12-JUL-1985 15:47:01.59
KA86 REV# 5. SERIAL# 624. MFG PLANT 15.

SYS\$SYSROOT:[SYSERR]ERRSNAP.LOG;27 12-JUL-1985 15:46:55.83

THE VMS SYSTEM EVENT FILE

Example 6: 11/790 Console Reboot (Entry Type 017)

V A X / V M S SYSTEM ERROR REPORT COMPILED 6-SEP-1985 12.03
PAGE 1.

***** ENTRY 1. *****
ERROR SEQUENCE 82. LOGGED ON SID 04FFFFFF

CONSOLE REBOOT SUCCESS 4-FEB-1985 16:30:46.62
KA86 REV# 255. SERIAL# 4095. MFG PLANT 15.

Example 7: Cold Start (Entry Type 032)

V A X / V M S SYSTEM ERROR REPORT COMPILED 9-SEP-1985 09:00
PAGE 1.

***** ENTRY 1. *****
ERROR SEQUENCE 0. LOGGED ON SID 0405F24F

SYSTEM START-UP 10-JUL-1985 15:56:51.62
KA86 REV# 5. SERIAL# 591. MFG PLANT 15.

TIME OF DAY CLOCK 72306E69

Example 8: Crash Re-start (Entry Type 037)

V A X / V M S

SYSTEM ERROR REPORT

COMPILED 9-SEP-1985 09:08

PAGE 1.

***** ENTRY
ERROR SEQUENCE 6906.

1. *****
LOGGED ON SID 0405F09E

FATAL BUGCHECK 24-JUN-1985 21:15:03.51
KA86 REV# 5. SERIAL# 158. MFG PLANT 15.

OPERATOR, Operator requested system shutdown

***** ENTRY
ERROR SEQUENCE 8075.

2. *****
LOGGED ON SID 0405F09E

FATAL BUGCHECK 1-JUL-1985 12:34:20.33
KA86 REV# 5. SERIAL# 158. MFG PLANT 15.

MACHINECHK, Machine check while in kernel mode

PROCESS NAME .A473373:.....
PROCESS ID 00070122
ERROR PC 80245D62
ERROR PSL 045F0008

N-BIT
INTERRUPT PRIORITY LEVEL = 31.
PREVIOUS MODE = EXECUTIVE
CURRENT MODE = KERNEL
INTERRUPT STACK

STACK POINTERS

KSP 7FFE7E00 ESP 7FFE9D80 SSP 7FFED04E USP 7FF6D91C ISP 806B0F50

GENERAL REGISTERS

R0 00000000 R1 00001F73 R2 000000AA R3 7FFBA207 R4 7FFBA207
R5 7FFBA21C R6 7FFBA668 R7 7FFB9D40 R8 7FFBA223 R9 00000006
R10 7FFBA205 R11 7FFBA2CD AP 00000003 FP 7FFE9DE4 SP 806B0F94

SYSTEM REGISTERS

POBR 80A5C200
POLR 000002DB
P1BR 8027F200
P1LR 001FFB5B
P0 PTE BASE (VIRT ADDR)
TOTAL P0 PAGES
P1 PTE BASE (VIRT ADDR)
TOTAL NON-EXISTENT P1 PAGES

THE VMS SYSTEM EVENT FILE

SBR 00FC3400
SLR 0000F300
PCBB 00423878
SCBB 00FBF600
ASTLVL 00000004
SISR 00000000
ICCS 800000C1

ICR FFFFDA62
TODR 6D7B5185

SYSTEM PTE BASE (PHY ADDR)
TOTAL PAGES 'SYSTEM' VIRT MEM
PCB BASE (PHY ADDR)
SCB BASE (PHY ADDR)
NO AST'S PENDING
INTERRUPT REQUEST ACTIVE = 0.

RUN
INTERRUPT ENABLE
INTERRUPT
ERROR

INTERVAL COUNT REGISTER

Example 9: System Bugcheck (Entry Type 040)

V A X / V M S

SYSTEM ERROR REPORT

COMPILED 9-SEP-1985 09:11
PAGE 1.***** ENTRY
ERROR SEQUENCE 0.1. *****
LOGGED ON SID 0405F09ENON-FATAL BUGCHECK 4-JAN-1978 09:54:51.52
KA86 REV# 5. SERIAL# 158. MFG PLANT 15.

UNXINTEXC, Unexpected interrupt or exception

PROCESS NAME	.NULL.....
PROCESS ID	00010000
ERROR PC	80004680
ERROR PSL	04170000

INTERRUPT PRIORITY LEVEL = 23.
PREVIOUS MODE = KERNEL
CURRENT MODE = KERNEL
INTERRUPT STACK

STACK POINTERS

KSP 00000100 ESP 00000100 SSP 00000100 USP 00000100 ISP 806B0FAC

GENERAL REGISTERS

R0	00006E2A	R1	00006E29	R2	00000000	R3	801BEE1D	R4	00000149
R5	801BEE11	R6	801BEDD8	R7	805A86C0	R8	805A8A80	R9	00000000
R10	00000000	R11	800036B0	AP	FFFFFFFF	FP	A0000000	SP	806B0FF0

THE VMS SYSTEM EVENT FILE

Example 10: Device Timeout (Entry Type 096)

V A X / V M S SYSTEM ERROR REPORT COMPILED 9-SEP-1985 09
PAGE 1.

***** ENTRY 1. *****
ERROR SEQUENCE 334. LOGGED ON SID 04FFFFFF

"UNKNOWN DEVICE" ENTRY 25-JAN-1985 20:06:38.09
KA86 REV# 255. SERIAL# 4095. MFG PLANT 15.

ERROR LOG RECORD

ERF\$L_SID 04FFFFFF
ERL\$W_ENTRY 0060
EXE\$GQ_SYSTIME 93C156A0
 008D7A56
ERL\$GL_SEQUENCE 014E
UCB\$B_ERTCNT 00
UCB\$B_ERTMAX 00
IRP\$Q_IOSB 0000022C
 00000000
UCB\$W_STS 0150
UCB\$B_DEVCLASS 20
UCB\$B_DEVTYPE 00
IRP\$L_PID 000100F7
IRP\$W_BOFF 0000
IRP\$W_BCNT 0000
UCB\$L_MEDIA 800029C0
UCB\$W_UNIT 0000
UCB\$W_ERRCNT 0001
UCB\$L_OPCNT 00001B22
ORB\$L_OWNER 00000000
UCB\$L_DEVCHAR 0C402000
UCB\$B_SLAVE 00
IRP\$W_FUNC 0020

SYSTEM ID REGISTER
ERROR ENTRY TYPE
64 BIT TIME WHEN ERROR LOGGED
UNIQUE ERROR SEQUENCE = 334.
REMAINING RETRIES = 0.
MAXIMUM RETRIES = 0.
FINAL IOSB
DEVICE STATUS
DEVICE CLASS = 32.
DEVICE TYPE = 0.
REQUESTING PROCESS ID
TRANSFER BYTE OFFSET = 0.
TRANSFER BYTE COUNT = 0.
DEVICE DEPENDANT PHYSICAL ADDRESS
PHYSICAL UNIT NUMBER = 0.
UNIT ERROR COUNT = 1.
UNIT OPERATION COUNT = 6946.
OWNER UIC = [000,000]
DEVICE CHARACTERISTICS
DEVICE SLAVE CONTROLLER = 0.
QIO FUNCTION CODE

DDB\$T_NAME 3031300A
 24325035
 00415358
 00000000

/.0105P2\$XSA...../

LONGWORD 1. 00000009
LONGWORD 2. 00004091
LONGWORD 3. 00000000
LONGWORD 4. 00000001
LONGWORD 5. 00000100
LONGWORD 6. 00000000
LONGWORD 7. 00000005
LONGWORD 8. 00000C18
LONGWORD 9. 0000401F
LONGWORD 10. 0000002F

THE VMS SYSTEM EVENT FILE

Example 11: Asynchronous Device Attention (Entry Type 098)

V A X / V M S SYSTEM ERROR REPORT COMPILED 9-SEP-1985 09:22
PAGE 1.

***** ENTRY 1. *****
ERROR SEQUENCE 37. LOGGED ON SID 0405F270

DEVICE ATTENTION 24-JUN-1985 09:10:59.99
KA86 REV# 5. SERIAL# 624. MFG PLANT 15.

CI SUB-SYSTEM, _F\$PAA0: - PORT ERROR BIT(S) SET

PORT WILL BE RESTARTED, 50. OF 50. RETRIES REMAINING

CNFGR 00100038

ADAPTER IS "CI"
COMMAND TRANSMIT TIMEOUT

PMCSR 0000004C

MAINTENANCE INTERRUPT ENABLE
MAINTENANCE INTERRUPT FLAG
PROGRAMMABLE STARTING ADDRESS

PSR 00000001

RESPONSE QUEUE AVAILABLE

PFAR 80F89DBC

PESR 00000000

PPR 03F80007

UCB\$B_ERTCNT 32

50. RETRIES REMAINING

UCB\$B_ERTMAX 32

50. RETRIES ALLOWABLE

UCB\$L_CHAR 0C450000

SHARABLE
AVAILABLE
ERROR LOGGING
CAPABLE OF INPUT
CAPABLE OF OUTPUT

UCB\$W_STS 0810

ONLINE
SOFTWARE VALID

UCB\$W_ERRCNT 0001

1. ERRORS THIS UNIT

Example 12: Unknown Entry (Entry Type 273)

V A X / V M S

SYSTEM ERROR REPORT

COMPILED 6-SEP-1985 13:44
PAGE 1.

***** ENTRY
ERROR SEQUENCE 83.

1. *****
LOGGED ON SID 04FFFFFF

"UNKNOWN ENTRY" 4-FEB-1985 16:32:11.75
KA86 REV# 255. SERIAL# 4095. MFG PLANT 15.

ERROR LOG RECORD

ERF\$L_SID 04FFFFFF
ERL\$W_ENTRY 0111
EXE\$GQ_SYSTIME 46F32860
ERL\$GL_SEQUENCE 008D8214
LONGWORD 1. 0000005A

SYSTEM ID REGISTER

ERROR ENTRY TYPE

64 BIT TIME WHEN ERROR LOGGED

UNIQUE ERROR SEQUENCE = 83.

/Z.../

THE VMS SYSTEM EVENT FILE

Example 13: The following printout is the product of the /LOG qualifier. Refer to the /REJECT qualifier for an explanation of rejected entries.

%ERF-I-INPUT, SYSSYSTEM:ERRLOG.SYS, 5 selected, 12 rejected

Example 14: The following printout is the product of the /REGISTER_DUMP qualifier. The cryptic format (shown below) can be used to identify control and status bits common to multiple entries.

V A X / V M S SYSTEM ERROR REPORT COMPILED 11-SEP-1985 11:33
PAGE 1.

CSR	CR	SR	DCR	FMER	FUBAR
00000028	0000007C	00000001	08000028	00000000	0000F86D
00000028	0000007C	00000001	08000028	00000000	0000F86D
00000028	0000007C	00000001	08000028	00000000	0000F86D
00000028	0000007C	00000001	08000028	00000000	0000F86D
00000028	0000007C	00000001	08000028	00000000	0000F86D

Example 15: The following printout is the product of the /STATISTICS qualifier.

V A X / V M S SYSTEM ERROR REPORT COMPILED 11-SEP-1985 09:13
PAGE 1.

PROGRAM RUNTIME STATISTICS

TIMES IN SECONDS	PAGE	DIRECT	BUFFERED
CPU ELAPSED	FAULTS	I/O	I/O
1.3	150	17	7

Example 16: The following printout is the product of the /SUMMARIZE qualifier. Specifically this is a sample of the Device Summary Report.

V A X / V M S

SYSTEM ERROR REPORT

COMPILED 13-SEP-1985 09:42

DEVICE ROLLUP LOGGED BY SID 0405F270

PAGE 1.

DEVICE	ERROR BITS SET		QIO TIMEOUT		ERRORS THIS SESSION	QIOS THIS SESSION
	[HARD]	[SOFT]	[HARD]	[SOFT]		
_HSC003\$DUA0:	0.	3.	0.	0.	0.	0.
_HSC003\$DUA1:	0.	7.	0.	0.	0.	0.
_HSC003\$DUA2:	0.	1.	0.	0.	0.	0.
_HSC003\$DUA4:	0.	4.	0.	0.	0.	0.
_HSC003\$DUA5:	0.	22.	0.	0.	31.	23152.
_HSC002\$DUA1:	0.	8.	0.	0.	4.	10321.
_HSC002\$DUA2:	0.	2.	0.	0.	0.	0.
_HSC002\$DUA3:	0.	1.	0.	0.	0.	0.
_HSC002\$DUA4:	0.	1.	0.	0.	0.	0.
_HSC002\$DUA5:	0.	2.	0.	0.	1.	2563.
_HSC002\$DUA8:	0.	7.	0.	0.	0.	0.
_HSC002\$DUA9:	0.	11.	0.	0.	0.	0.
_HSC002\$DUA10:	0.	3.	0.	0.	0.	0.
_HSC002\$DUA11:	0.	2.	0.	0.	0.	0.
_HSC002\$DUA12:	0.	5.	0.	0.	0.	0.
_HSC002\$DUA13:	0.	7.	0.	0.	0.	0.
_F\$PAA0:	8.	6.	0.	0.	1.	0.
_F\$LCA0:	4.	0.	0.	0.	1.	0.

THE VMS SYSTEM EVENT FILE

Example 17: The following printout is the product of the /SUMMARIZE qualifier. Specifically this is a sample of the Volume Summary Report.

V A X / V M S SYSTEM ERROR REPORT COMPILED 13-SEP-1985 09:42
PAGE 2.

VOLUME LABEL(S) LOGGED BY SID 0405F270

	QIO(S)	ERROR(S)	MOUNT(S)
LABEL --			
_CSA1:	273.	0.	19.
LABEL -- Exchange			
_CSA1:	28.	0.	2.
LABEL -- SCRATCH			
_DUA6:	17547.	0.	1.
LABEL -- VAX console			
_CSA1:	96.	0.	24.

THE VMS SYSTEM EVENT FILE

Example 19: The following printout is the product of the /SUMMARIZE qualifier. Specifically this is a sample of the Histogram Summary Report.

V A X / V M S

SYSTEM ERROR REPORT

COMPILED 13-SEP-1985 09:42

PAGE 4.

PROCESSED ENTRIES HOUR-OF-DAY HISTOGRAM LOGGED BY SID 0405F270

00:00	9.	*****
01:00	34.	*****
02:00	23.	*****
03:00	51.	*****
04:00	46.	*****
05:00	4.	****
06:00	10.	*****
07:00	32.	*****
08:00	34.	*****
09:00	123.	*****
10:00	36.	*****
11:00	28.	*****
12:00	55.	*****
13:00	54.	*****
14:00	65.	*****
15:00	63.	*****
16:00	71.	*****
17:00	60.	*****
18:00	41.	*****
19:00	110.	*****
20:00	98.	*****
21:00	23.	*****
22:00	67.	*****
23:00	6.	*****

