

VMS Error Log Utility Manual

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The Error Log Utility selectively reports the contents of an error log file.

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Preface

Intended Audience

The Error Log Utility (ERROR LOG) is intended for use as a system management and maintenance tool to determine the source, frequency, and type of recurrent system and device errors.

Document Structure

This document consists of the following four sections:

- Description—Provides a full description of the Error Log Utility.
- Usage Summary—Outlines the following ERROR LOG information:
 - Invoking the utility
 - Exiting from the utility
 - Directing output
 - Restrictions or privileges required
- Qualifiers—Describes ERROR LOG qualifiers, including format, parameters, and examples.
- Examples—Provides additional ERROR LOG examples.

Associated Documents

The following manuals offer additional information:

- *Guide to Using VMS Command Procedures*
- *VMS DCL Dictionary*
- *Guide to Maintaining a VMS System*
- *VMS System Messages and Recovery Procedures Reference Manual*

Conventions

Convention	Meaning
<code>RET</code>	In examples, a key name (usually abbreviated) shown within a box indicates that you press a key on the keyboard; in text, a key name is not enclosed in a box. In this example, the key is the RETURN key. (Note that the RETURN key is not usually shown in syntax statements or in all examples; however, assume that you must press the RETURN key after entering a command or responding to a prompt.)
<code>CTRL/C</code>	A key combination, shown in uppercase with a slash separating two key names, indicates that you hold down the first key while you press the second key. For example, the key combination CTRL/C indicates that you hold down the key labeled CTRL while you press the key labeled C. In examples, a key combination is enclosed in a box.
<code>\$ SHOW TIME</code> <code>05-JUN-1988 11:55:22</code>	In examples, system output (what the system displays) is shown in black. User input (what you enter) is shown in red.
<code>\$ TYPE MYFILE.DAT</code> . . .	In examples, a vertical series of periods, or ellipsis, means either that not all the data that the system would display in response to a command is shown or that not all the data a user would enter is shown.
<code>input-file, . . .</code>	In examples, a horizontal ellipsis indicates that additional parameters, values, or other information can be entered, that preceding items can be repeated one or more times, or that optional arguments in a statement have been omitted.
<code>[logical-name]</code>	Brackets indicate that the enclosed item is optional. (Brackets are not, however, optional in the syntax of a directory name in a file specification or in the syntax of a substring specification in an assignment statement.)
quotation marks apostrophes	The term quotation marks is used to refer to double quotation marks ("). The term apostrophe (') is used to refer to a single quotation mark.

New and Changed Features

This section summarizes the main technical changes in the Error Log Utility (ERROR LOG) since Version 4.0.

The Examples section contains the following new examples of error log reports:

- Summary reports generated with the /SUMMARY qualifier using the DEVICE, ENTRY, HISTOGRAM, MEMORY, and VOLUME keywords
- A brief report generated with the /BRIEF qualifier



ERROR LOG Description

The Error Log Utility (ERROR LOG) is a system management tool that selectively reports the contents of one or more error log files.

ERROR LOG supports most VMS-supported hardware, such as disks, tapes, CPUs, and memories, but not all communications devices (for example, the DEQNA). Some synchronous communications devices are supported.

The VMS system automatically writes messages to the latest version of an error log file named SYS\$ERRORLOG:ERRLOG.SYS as the following events occur:

- Errors—Device errors, device timeouts, machine checks, bus errors, memory errors (hard or soft error correcting code (ECC) errors), asynchronous write errors, undefined interrupts, and bugchecks
- Volume changes—Volume mounts and dismounts
- System events—Cold start-ups, warm start-ups, system failure (crash) start-ups, messages from the Send Message to Error Logger (\$SENDERR) system service, and time stamps

ERROR LOG processes error log entries by selection to produce the following six forms of optional output:

- Full report of selected entries, which is the default
- Brief report of selected entries
- Summary report of selected entries
- Register dump report of selected device entries
- Binary copy of selected entries
- Binary copy of rejected entries

These forms of output can be directed to a terminal for display or to a disk or magnetic tape file with the /OUTPUT qualifier. By default, the output is directed to the SYS\$OUTPUT device. The report formats can be changed by specifying /FULL, /BRIEF, /SUMMARY, /REGISTER_DUMP, /REJECTED, or /BINARY.

Error log entries are processed by selection for the interval specified by the /SINCE, /BEFORE, or /ENTRY qualifiers. Use of the selection qualifiers /INCLUDE and /EXCLUDE form a filter that is used to determine which error log entries are selected or rejected.

ERROR LOG reports are 72 columns wide, so they can be displayed at the terminal. These reports are primarily intended for use by DIGITAL Field Service personnel to identify hardware problems. System managers may find error log reports useful in identifying recurrent system failures that require outside attention.

ERROR LOG issues error messages for inconsistent error log entries. The *VMS System Messages and Recovery Procedures Reference Manual* lists these messages and provides explanations and suggested user actions.

ERROR LOG Description

By default, when an unknown (to ERROR LOG) device, CPU, or error log entry is encountered by ANALYZE/ERROR_LOG, the utility produces the entry in hexadecimal longword format. (See the Unknown Entries Example in the Examples section). Exclude these entries from the report by specifying /EXCLUDE=UNKNOWN_ENTRIES in the command line.

See the *Guide to Maintaining a VMS System* for additional details about using error logs.

The Examples section shows the format of a typical error log report.

ERROR LOG Usage Summary

The Error Log Utility (ERROR LOG) selectively reports the contents of an error log file.

FORMAT **ANALYZE/ERROR_LOG** *[/qualifier(s)] [file-spec[,...]]*

PARAMETERS */qualifier(s)*

The function to be performed by the ANALYZE/ERROR_LOG command.

file-spec[,...]

Specifies one or more files that contain binary error information to be interpreted for the error log report. You can include wildcard characters in the file specification. If you omit the file specification, the default file is SYS\$ERRORLOG:ERRLOG.SYS (see the *Guide to Maintaining a VMS System* for information on maintaining this file).

See the *VMS DCL Concepts Manual* for details on file specifications.

usage summary

To invoke ERROR LOG, enter the following DCL command:

```
ANALYZE/ERROR_LOG [/qualifier(s)] [file-spec][,...]
```

ERROR LOG does not prompt you. To exit from ERROR LOG, press CTRL/C. You also exit the utility when end-of-file (EOF) is detected. To direct output, use the /OUTPUT, /BINARY, and /REJECTED qualifiers with the ANALYZE/ERROR_LOG command.

You must have SYSPRV privilege to run ERROR LOG. However, only read access is required to access the file ERRORLOG.SYS. (It is not necessary to rename the file ERRORLOG.SYS to ERRORLOG.OLD before using ERROR LOG.) Do not use the /BINARY qualifier with the /FULL, /BRIEF, /OUTPUT, /REGISTER_DUMP, or /SUMMARY qualifiers.

ERROR LOG

ERROR LOG Qualifiers

ERROR LOG QUALIFIERS

The qualifiers for the `ANALYZE/ERROR_LOG` command are described in this section.

/BEFORE

Specifies that only those entries dated earlier than the stated date and time are to be selected for the error report.

FORMAT **/BEFORE** [=date-time]

PARAMETERS *date-time*
Limits the error report to those entries dated earlier than the specified time.

DESCRIPTION You can specify an absolute time, a delta time, or a combination of absolute and delta times. See the *VMS DCL Concepts Manual* for details on specifying times.

If you omit the **/BEFORE** qualifier or specify **/BEFORE** without a date or time, all entries are processed.

EXAMPLE

§ ANALYZE/ERROR_LOG/BEFORE=31-DEC-1988:10:00 ERRLOG.OLD;5

In this example, the error log report generated for ERRLOG.OLD;5 contains entries that were logged before 10:00 A.M. on December 31, 1988.

ERROR LOG

/BINARY

/BINARY

Used to control whether the binary error log records are converted to ASCII text or copied to the specified output file.

FORMAT **/BINARY** [=file-spec]
 /NOBINARY

PARAMETERS *file-spec*
 Specifies the output file selected to contain image copies of the input records.

DESCRIPTION The **/BINARY** qualifier creates a binary file that contains copies of the original binary error log entry if the command line also specifies an interval (**/SINCE**, **/BEFORE**, or **/ENTRY** qualifier) or a filter (**/INCLUDE** or **/EXCLUDE** qualifier). If no interval or filter is specified, all error log entries are copied.

If you specify **/BINARY=file-spec**, the selected output file contains image copies of the binary input records (the records are not translated to ASCII). If you omit the device or directory specification, the current device and the default directory are used. If you omit the file name, the file name of the input file is used. If you omit the file type, the default file type is **DAT**.

Do not use **/BINARY** with the **/FULL**, **/BRIEF**, **/OUTPUT**, **/REGISTER_DUMP**, or **/SUMMARY** qualifiers. These qualifiers generate an ASCII report; **/BINARY** generates a binary file.

EXAMPLE

```
$ ANALYZE/ERROR_LOG/INCLUDE=DBA1/BINARY=DBA1_ERR.DAT ERRLOG.OLD;5
```

In this example, the output file **DBA1_ERR.DAT** contains image copies of the entries that apply to **DBA1**.

/BRIEF

Generates a brief report.

FORMAT **/BRIEF**

DESCRIPTION Do not use /BRIEF with the /BINARY qualifier.
The Examples section shows the format of a typical brief error log report.

EXAMPLE

\$ ANALYZE/ERROR_LOG/BRIEF ERRLOG.OLD;97

In this example, the error log report generated from ERRLOG.OLD;97 contains minimal information.

ERROR LOG

/ENTRY

/ENTRY

Generates an error log report that includes the specified entry range or starts at the specified entry number.

FORMAT **/ENTRY** *[(START:decimal-value[,END:decimal-value])]*

PARAMETERS *(START:decimal-value[,END:decimal-value])*
The range of entries to be included in the error log report.

DESCRIPTION If you specify **/ENTRY** without the entry range or omit the qualifier, the entry range defaults to START:1,END:end-of-file.

EXAMPLE

```
$ ANALYZE/ERROR_LOG/ENTRY=(START:1,END:18) ERRLOG.SYS
```

In this example, the entry range for the error log report generated from file ERRLOG.SYS is limited to entry numbers 1 through 18.

/EXCLUDE

Excludes errors generated by the specified device and error log entry type from the error log report.

FORMAT **/EXCLUDE** *=(device-or-entry-type[,...])*

PARAMETERS *device-or-entry-type[,...]*
The device and entry type to be excluded from the error log report.

DESCRIPTION You can specify one or more devices by device class, device name, or one or more keywords that identify entry types.

Device Class Keywords

BUSES
DISKS
LINE_PRINTER
REALTIME
SYNC_COMMUNICATIONS
TAPES
WORKSTATION

Examples of Device Name Constructs

DB	Group of devices
DBA1	Specific device/unit number
(DBA1,HSC1\$DUA1,DYA0)	List of devices
(DB,DR,XF)	List of device groups

Entry Type Keywords

ATTENTIONS	Exclude device attention entries from the output report.
BUGCHECKS	Exclude all types of bugcheck entries from the report.

ERROR LOG

/EXCLUDE

CONTROL_ENTRIES	Exclude control entries from the report. Control entries include the following entry types: <ul style="list-style-type: none">• System power-fail restarts• Time stamps• System startups• \$SNDERR messages (system service to send messages to error log)• Operator messages• Network messages• ERRLOG.SYS created
CPU_ENTRIES	Exclude CPU-related entries from the report. CPU entries include the following entry types: <ul style="list-style-type: none">• SBI alerts/faults• Undefined interrupts• MBA/UBA adapter errors• Asynchronous write errors• UBA errors
DEVICE_ERRORS	Exclude device error entries from the report.
ENVIRONMENTAL_ENTRIES	Exclude environmental entries from the report.
MACHINE_CHECKS	Exclude machine check entries from the report.
MEMORY	Exclude memory errors from the report.
SNAPSHOT_ENTRIES	Exclude snapshot entries from the report.
TIMEOUTS	Exclude device timeout entries from the report.
UNKNOWN_ENTRIES	Exclude any entry that had either an unknown entry type or an unknown device type/class.
UNSOLICITED_MSCP	Exclude unsolicited MSCP entries from the output report.
VOLUME_CHANGES	Exclude volume mount and dismount entries from the report.

Unless you specify the UNKNOWN_ENTRIES keyword to explicitly exclude from a report any entries from unsupported (unknown) devices, any unknown device is reported.

Any known information for the entry is translated; the remaining information is output in hexadecimal longwords.

If you specify a device class keyword or a device name construct with both the /INCLUDE and /EXCLUDE qualifiers, the /INCLUDE qualifier takes precedence.

The BUSES keyword also excludes error log entries for the BI bus. The DEVICE_ERRORS keyword also excludes entries for the BI adapter.

EXAMPLES

1 \$ ANALYZE/ERROR_LOG/EXCLUDE=MTA0

In this example, the error log entries for the device MTA0 are excluded from the error log report for the file ERRLOG.SYS.

2 \$ ANALYZE/ERROR_LOG/EXCLUDE=(MTA0,DRA5) ERRLOG.OLD

In this example, the devices MTA0 and DRA5 are excluded from the error log report for the file ERRLOG.OLD.

3 \$ ANALYZE/ERROR_LOG/EXCLUDE=(DISKS,BUGCHECKS)

In this example, all disk devices and all bugcheck entries are excluded from the error log report for the file ERRLOG.SYS.

4 \$ ANALYZE/ERROR_LOG/EXCLUDE=TAPES/INCLUDE=MTA0

In this example, the device MTA0 is included in the error log report for the file ERRLOG.SYS. All other magnetic tape devices are excluded from the report.

5 \$ ANALYZE/ERROR_LOG/EXCLUDE=(DISK,VOLUME_CHANGES)

In this example, entries for disk volume information are excluded from the error log report for the file ERRLOG.SYS.

6 \$ ANALYZE/ERROR_LOG/EXCLUDE=(DISK,VOLUME_CHANGES,DEVICE_ERROR)

In this example, entries for volume and device error information on disks are excluded from the error log report for the file ERRLOG.SYS.

7 \$ ANALYZE/ERROR_LOG/EXCLUDE=(DISK,VOLUME_CHANGES,DEVICE_ERROR,BUGCHECK)

In this example, entries for volume and device error information on disks, and bugcheck errors are excluded from the error log report for the file ERRLOG.SYS.

ERROR LOG

/FULL

/FULL

Generates a full report, which provides all available information for an error log entry. This is the default report format.

FORMAT /**[NO]FULL**

DESCRIPTION Do not use /FULL with the /BINARY qualifier.

EXAMPLES

1 \$ ANALYZE/ERROR_LOG/FULL ERRLOG.OLD;72

The command in this example produces a full report.

2 \$ ANALYZE/ERROR_LOG ERRLOG.OLD;72

The command in this example produces a full report. The default report type is /FULL; it is not necessary to specify it in the command line.

/INCLUDE

Includes errors generated by the specified device and error log entry type in the error log report.

FORMAT */INCLUDE=(device-or-entry-type[,...])*

PARAMETERS *device-or-entry-type[,...]*
The device and entry type to be included in the error log report.

DESCRIPTION You can specify one or more devices by device class, device name, or one or more keywords that identify entry types.

Device Class Keywords

BUSES
DISKS
LINE_PRINTER
REALTIME
SYNC_COMMUNICATIONS
TAPES
WORKSTATION

Examples of Device Name Constructs

DB	Group of devices
DBA1	Specific device/unit number
(DBA1,HSC1\$DUA1,DYA0)	List of devices
(DB,DR,XF)	List of device groups

Entry Type Keywords

ATTENTIONS	Include device attention entries in the output report.
BUGCHECKS	Include all types of bugcheck errors in the report.

ERROR LOG

/INCLUDE

CONTROL_ENTRIES	Include control entries in the report. Control entries include the following entry types: <ul style="list-style-type: none">• System power-fail restarts• Time stamps• System startups• \$SNDErr messages (system service to send messages to error log)• Operator messages• Network messages• ERRLOG.SYS created
CPU_ENTRIES	Include CPU-related entries in the report. CPU entries include the following entry types: <ul style="list-style-type: none">• SBI alerts/faults• Undefined interrupts• MBA/UBA adapter errors• Asynchronous write errors• UBA errors
DEVICE_ERRORS	Include device errors in the report.
ENVIRONMENTAL_ENTRIES	Include environmental entries in the report.
MACHINE_CHECKS	Include machine check errors in the report.
SNAPSHOT_ENTRIES	Include snapshot entries in the report.
MEMORY	Include memory errors in the report.
TIMEOUTS	Include device timeout errors in the report.
UNKNOWN_ENTRIES	Include any entry that had either an unknown entry type or an unknown device type/class.
UNSOLICITED_MSCP	Include unsolicited MSCP entries in the output report.
VOLUME_CHANGES	Include volume mount and dismount entries in the report.

Use the UNKNOWN_ENTRIES keyword to obtain a report that contains the contents of the device registers logged by unsupported devices.

Any known information for the entry is translated; the remaining information is output in hexadecimal longwords.

If you specify a device class keyword or a device name construct with both the /INCLUDE and /EXCLUDE qualifiers, the /INCLUDE qualifier takes precedence.

The BUSES keyword also includes error log entries for the BI bus. The DEVICE_ERRORS keyword also includes entries for the BI adapter.

EXAMPLES

1 \$ ANALYZE/ERROR_LOG/INCLUDE=MTAO

In this example, the report consists of error log entries for the device MTA0, which are in the default error log file ERRLOG.SYS.

2 \$ ANALYZE/ERROR_LOG/INCLUDE=MTAO/EXCLUDE=TAPES

In this example, the device MTA0 is included in the error log report for the file ERRLOG.SYS. All other magnetic tape devices are excluded from the report.

3 \$ ANALYZE/ERROR_LOG/INCLUDE=(MTAO, VOL)

In this example, the report consists of error log entries and volume mounts and dismounts for the device MTA0, which are in the default error log file ERRLOG.SYS.

4 \$ ANALYZE/ERROR_LOG/INCLUDE=(DISK, VOLUME_CHANGES)

In this example, the report consists of error log entries for disk volume information, which are in the default error log file ERRLOG.SYS.

5 \$ ANALYZE/ERROR_LOG/INCLUDE=(DISK, VOLUME_CHANGES, DEVICE_ERROR)

In this example, the report consists of error log entries for volume and device error information on disks, which are in the default error log file ERRLOG.SYS.

6 \$ ANALYZE/ERROR_LOG/INCLUDE=(DISK, VOLUME_CHANGES, DEVICE_ERROR, BUGCHECK)

In this example, the report consists of error log entries for volume and device error information on disks, and bugcheck errors. These entries are in the default error log file ERRLOG.SYS.

ERROR LOG

/LOG

/LOG

Controls whether informational messages that specify the number of entries selected and rejected for each input file are sent to SYS\$OUTPUT. By default, these messages are not displayed.

FORMAT **/[NO]LOG**

EXAMPLE

\$ ANALYZE/ERROR_LOG/LOG ERRLOG.OLD;5

In this example, informational messages generated about ERRLOG.OLD;5 are sent to SYS\$OUTPUT.

/OUTPUT

Specifies the output file for the error log report.

FORMAT **/OUTPUT** [=file-spec]

PARAMETERS **file-spec**

The output file selected for the error log report. See the *VMS DCL Concepts Manual* for details on specifying files.

DESCRIPTION

If you omit the /OUTPUT qualifier, output is directed to SYS\$OUTPUT. If you specify /OUTPUT=file-spec, the selected output file contains the error log report. If you omit the device or directory specification, the current device and default directory are used. If you omit the file name, the file name of the input file is used. If you omit the file type, the default file type is .LIS.

Do not use /OUTPUT with the /BINARY qualifier.

EXAMPLE

```
$ ANALYZE/ERROR_LOG/OUTPUT=ERROR_LOG.LIS ERRLOG.OLD;72
```

In this example, the output file ERROR_LOG.LIS contains entries generated from ERRLOG.OLD;72.

ERROR LOG

/REGISTER_DUMP

/REGISTER_DUMP

Used in conjunction with the /INCLUDE qualifier to generate, in a hexadecimal longword format, a report that consists of device register information.

FORMAT /REGISTER_DUMP

DESCRIPTION Use the /REGISTER_DUMP qualifier to get a report that lists the hexadecimal contents of the device registers for the device specified by the /INCLUDE qualifier. The /INCLUDE qualifier must be used with the /REGISTER_DUMP qualifier.

/REGISTER_DUMP reports register contents for memory, device error, and device timeout entries. There is no translation of any of the device register information.

Do not use /REGISTER_DUMP with the /BINARY qualifier.

EXAMPLE

```
$ ANALYZE/ERROR_LOG/INCLUDE=DB/REGISTER_DUMP ERRLOG.OLD;72
```

In this example, the output is in the format of a REGISTER_DUMP report containing entries that apply only to the DB device.

/REJECTED

Allows you to specify the name of a file that will contain binary records for rejected entries.

FORMAT **/REJECTED** [=file-spec]

PARAMETERS **file-spec**
Specifies the name of the file that is to contain the rejected entries.

DESCRIPTION The **/REJECTED** qualifier creates a binary file that contains copies of the original binary error log entry. If the error log entry is rejected because the command line also specifies an interval (**/SINCE**, **/BEFORE**, or **/ENTRY** qualifier) or a filter (**/INCLUDE** or **/EXCLUDE** qualifier), the entry is written to the specified file.

Rejected entries are those entries that are not translated because they fall into one of the following categories:

- All entries specified with the **/EXCLUDE** qualifier
- All entries not specified with the **/INCLUDE** qualifier
- Any entry that does not occur within the period specified by the **/SINCE** and **/BEFORE** qualifiers
- Any entry that is not in the range of entries specified by the **/ENTRY** qualifier

If you specify **/REJECTED=file-spec**, the output file contains image copies of the rejected records. If you omit the device or directory specification, the current device and default directory are used. If you omit the file name, the file name of the input file is used. If you omit the file type, the default file type is **.REJ**.

EXAMPLE

\$ ANALYZE/ERROR_LOG/INCLUDE=MTA0/REJECTED=REAL_ERRS.DAT ERRLOG.OLD;5

In this example, the output file **REAL_ERRS.DAT** contains image copies of all entries from **ERRLOG.OLD;5**, with the exception of those entries that apply to the **MTA0** device.

ERROR LOG

/SID_REGISTER

/SID_REGISTER

Generates a report consisting of error log entries that occurred on the specified CPU.

FORMAT **/SID_REGISTER** [=%X*hexadecimal-value*]

PARAMETERS **%X*hexadecimal-value***
Specifies the value obtained from the system ID register. Use the \$GETSYI system service to obtain this value, which is unique to each system. The *VMS System Services Reference Manual* describes the \$GETSYI system service.

EXAMPLE

```
$ ANALYZE/ERROR_LOG/SID_REGISTER=%X02006148 ERRLOG.OLD;72
```

In this example, the output consists of only those entries that were logged for the system with the system ID of 02006148 (hexadecimal).

/SINCE

Specifies that only those entries dated later than the stated date and time are to be selected for the report.

FORMAT **/SINCE** [=date-time]

PARAMETERS *date-time*
Limits the error report to those entries dated later than the specified time.

DESCRIPTION Only absolute date and time specifications are valid. See the *VMS DCL Concepts Manual* for details on specifying times.

If you omit the /SINCE qualifier, all entries are processed. If you specify /SINCE without a date and time, the default is TODAY.

EXAMPLE

\$ ANALYZE/ERROR_LOG/SINCE=31-DEC-1988:15:00 ERRLOG.OLD;56

In this example, the error log report generated from ERRLOG.OLD;56 contains entries that have been logged since 15:00 on December 31, 1988.

ERROR LOG

/STATISTICS

/STATISTICS

Generates run-time statistical information.

FORMAT /STATISTICS

DESCRIPTION Use the /STATISTICS qualifier to generate a report that consists of the page faults, buffered I/O, direct I/O, and CPU time used in the execution of the ANALYZE/ERROR_LOG command.

EXAMPLE

`$ ANALYZE/ERROR_LOG/STATISTICS ERRLOG.OLD;4`

In this example, the output generated by this command consists of a full report of all entries in ERRLOG.OLD;4 and the run-time statistics for the execution of the command.

/SUMMARY

Generates an error log report that consists of a statistical summary.

The Examples section shows the format of several error log summary reports.

FORMAT */SUMMARY* [=summary-type[...]]
 /NOSUMMARY

QUALIFIER *summary-type*
PARAMETER The keyword for the selected type of summary.

PARAMETERS *Keywords*

DEVICE	Include the device summary 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.

DESCRIPTION Select the type of summary by specifying one or more keywords.

Note: If you specify */SUMMARY* without a summary type, the report contains all of the summary types listed above. If you want only a summary report, specify both the */NOFULL* and the */SUMMARY* qualifiers in the command line.

Do not attempt to correlate the error counts reported by the DCL command *SHOW ERROR* and the */SUMMARY* qualifier. A discrepancy in these figures could be due to several system events and would be difficult to track.

If the *DEVICE* keyword is specified, device entries are correlated with device mount information in an attempt to identify the volume that was mounted at the time the entry was logged. This correlation should help determine whether errors can be attributed generically to the device or specifically to a given volume. However, no correlation can be made under the following conditions:

- The device is not file-structured.
- Volume information is not available. Either of the following conditions can result in volume information not being available:
 - The device entry is contained in an error log file created after the mount information was logged (SYS\$ERRORLOG:ERRLOG.SYS was renamed).

ERROR LOG

/SUMMARY

- Volume shadowing is enabled. (Mount information pertains to the virtual device, while device entry information pertains to the physical device.)

In these instances, device entries are charged against a null volume name.

UCB ERROR COUNT and UCB OPERATION COUNT fields reflect the UCB information according to the time of the most recent entry for the given volume.

Do not use the /BINARY qualifier with /SUMMARY.

EXAMPLES

1 \$ ANALYZE/ERROR_LOG/SUMMARY ERRLOG.OLD;5

The output generated by the command in this example includes a full report and a summary report of all entries in ERRLOG.OLD;5.

2 \$ ANALYZE/ERROR_LOG/NOFULL/SUMMARY ERRLOG.OLD;5

The output generated by the command in this example consists of a summary report of all entries in ERRLOG.OLD;5.

3 \$ ANALYZE/ERROR_LOG/SUMMARY=(ENTRY,DEVICE)

The output generated by the command in this example includes the Entry and Device sections of the summary report from the default input file ERRLOG.SYS.

4 \$ ANALYZE/ERROR_LOG/INCLUDE=DBA4/NOFULL/SUMMARY ERRLOG.OLD;5

The output generated by the command in this example includes the summary report. The report contains the entries that apply to the DBA4 device: device error, device timeout, and device attention.

ERROR LOG EXAMPLES

Sample Error Log Report

An error log report entry contains two sections: identification and device-dependent data. The identification section consists of the first four lines and is generated for all reports. The device-dependent data section, which follows the identification section, contains information on the selected error log entries.

The first line of the identification section gives the error entry number. This number can be used to refer to a particular error log entry in an error log file. The second line contains the error sequence number and the system identification value. The error sequence number is a value assigned by the operating system to an error log entry to help determine if error log entries are being lost. This sequence number value is reset to zero only when the system is rebooted. The third and fourth lines of this section specify the type of error log entry being reported, the date and time the entry was made, the processor type and revision level, and the system serial number.

The first line of the device-dependent data section identifies the device or subsystem on which the error occurred. The remainder of this section consists of hardware information, which shows the contents of the device registers, and software information, which shows the contents of the I/O database at the time of the error.

The *Guide to Maintaining a VMS System* contains additional information on error log reports, including descriptions of error log entries. These descriptions specify the action recommended for specific entries.

The following output report is an example of the report generated by device errors, device attention, and device timeouts from a disk on the system.

```
V A X / V M S          SYSTEM ERROR REPORT          COMPILED 6-MAR-88 14:39
                                     PAGE 1.

***** ENTRY          5. *****
ERROR SEQUENCE 42.          LOGGED ON SID 01380101

DEVICE ERROR, 5-MAR-88 14:42:16.93
                   KA780 REV# 7. SERIAL# 257.

MASSBUS SUB-SYSTEM, UNIT _DBB1:
  RH780 CSR          00000020          ADAPTER IS MBA
  RH780 CR           00000004          INTERRUPT ENABLE
  RH780 SR           00003080          "MASSBUS" EXCEPTION
                                     DATA TRANSFER ABORTED
                                     DATA TRANSFER COMPLETED
  RH780 VAR          0000003C          60. BYTE, PAGE OFFSET
                                     MAPPING REGISTER #0. SELECTED
  RH780 BCR          FE00FE18          "SBI" BYTE COUNT, 488.
                                     "MASSBUS" BYTE COUNT, 512.
```

ERROR LOG

ERROR LOG Examples

RH780 MPR #0.	800034F1	VALID TRANSFER PAGE, 6776.5. K
RPCS	00000830	WRITE DATA DRIVE AVAILABLE
RPDS	000059C0	VOLUME VALID DRIVE READY DRIVE PRESENT WRITE PROTECTED MEDIUM ON-LINE COMPOSITE ERROR
RPER1	00000800	WRITE LOCK ERROR
RPMR	00000100	
RPAS	00000000	
RPDA	00000105	SECTOR = 5. TRACK = 1.
RPDT	00002012	DRIVE TYPE RPO6 MOVING HEAD
RPLA	00000110	SECOND QUARTER SECTOR COUNTER = 4.
RPER2	00000000	
RPOF	00009800	ECC INHIBIT 16-BIT FORMAT SIGN CHANGE
RPDC	00000001	DESIRED CYLINDER = 1.
RPCC	00000001	CURRENT CYLINDER = 1.
V A X / V M S	SYSTEM ERROR REPORT	COMPILED 6-MAR-88 14:39 PAGE 2.
RPSN	00000247	
RPER3	00000000	
RPEC1	00000000	
RPEC2	00000000	
UCB\$B_ERTCNT	08	8. RETRIES REMAINING
UCB\$B_ERTMAX	08	8. RETRIES ALLOWABLE
UCB\$L_OWNUIC	00000000	OWNER UIC [000,000]
UCB\$L_CHAR	1CC54008	DIRECTORY STRUCTURED FILE ORIENTED SHARABLE AVAILABLE ERROR LOGGING ALLOCATED CAPABLE OF INPUT CAPABLE OF OUTPUT RANDOM ACCESS
UCB\$W_STS	0910	ONLINE BUSY SOFTWARE VALID
UCB\$L_OPCNT	0000000E	

ERROR LOG

ERROR LOG Examples

UCB\$W_ERRCNT	0001	14. QIO'S THIS UNIT
UCB\$L_MEDIA	00010104	1. ERRORS THIS UNIT
		FUNCTION START ADDRESS,
		- CYLINDER #1.,
		- TRACK #1.,
		- SECTOR #4.
IRP\$W_FUNC	000B	WRITE PHYSICAL BLOCK
IRP\$W_BCNT	0200	TRANSFER SIZE 512. BYTE(S)
IRP\$W_BOFF	001C	28. BYTE PAGE OFFSET
IRP\$L_PID	0003003D	REQUESTOR "PID"
IRP\$Q_IOSB	0000025C	
	00000000	IOSB, 0. BYTE(S) TRANSFERRED

Time Stamp, Volume Mount, and Volume Dismount Entries Examples

Following are entry examples of a system time stamp, volume mount, and volume dismount. The time stamp entry contains only an identification section, which is logged by the operating system at 10 minute intervals. If no other error log entries are made during the 10 minute period, the previous time stamp is overwritten with the current time stamp.

The mount volume entry contains an identification section followed by a device-dependent data section. The device-dependent data section shows the name of the device the volume is mounted on, the volume label (if the volume has a label), and the I/O operations and error counts for the device.

The dismount volume entry contains, in addition to the data provided in the volume mount entry, the I/O operations and error counts for the device on which the volume was mounted.

```

***** ENTRY          93. *****
ERROR SEQUENCE 421.          LOGGED ON SID 01380101

TIME STAMP, 4-MAR-88 11:10:08.79
      KA780 REV# 7. SERIAL# 7.
***** ENTRY          94. *****
ERROR SEQUENCE 422.          LOGGED ON SID 01380101

MOUNT VOLUME, 4-MAR-88 11:14:12.51
      KA780 REV# 7. SERIAL# 7.

UNIT _DMAO:, VOLUME LABEL "TEST"

656. QIO OPERATIONS THIS UNIT, 1. ERRORS THIS UNIT
***** ENTRY          95. *****
ERROR SEQUENCE 423.          LOGGED ON SID 01380101

DISMOUNT VOLUME, 4-MAR-88 11:14:41.30
      KA780 REV# 7. SERIAL# 7.

UNIT _DMAO:, VOLUME LABEL "TEST"

697. QIO OPERATIONS THIS UNIT, 1. ERRORS THIS UNIT
41. QIO OPERATIONS THIS VOLUME, 0. ERRORS THIS VOLUME

```

ERROR LOG

ERROR LOG Examples

Machine Check Entries Examples

Following are examples of machine check error reports. Each report consists of three sections: the identification section, the program counter and summary code section, and an error-dependent section.

The program counter and summary code section of the report displays the contents of the program counter, the processor status longword, and the summary code. The contents of the processor status longword and the summary code are described in the text on the right side of the report.

The error-dependent section consists of CPU-dependent information that was logged as a result of the machine check.

```
***** ENTRY          6. *****
ERROR SEQUENCE 3.                LOGGED ON SID 03003700
```

```
MACHINE CHECK, 6-MAR-1988 10:11:34.70
                KA730 REV# 0. MIC# 55.
```

```
EXCEPTION PC   80038DC0
ERROR PSL      01C00000
```

```
INTERRUPT PRIORITY LEVEL = 00.
PREVIOUS MODE = USER
CURRENT MODE = EXECUTIVE
```

```
SUMMARY CODE   00000007
1ST PARAMETER  00166200
```

```
UNCORRECTABLE ECC ERROR
PAGE #2865. IN ERROR
```

```
***** ENTRY          60. *****
ERROR SEQUENCE 4872.             LOGGED ON SID 02006148
```

```
MACHINE CHECK, 6-MAR-1988 03:50:08.28
                KA750 REV# 72. MIC# 97.
```

```
EXCEPTION PC   80006173
ERROR PSL      00C80009
```

```
C-BIT
N-BIT
INTERRUPT PRIORITY LEVEL = 08.
PREVIOUS MODE = USER
CURRENT MODE = KERNEL
```

```
SUMMARY CODE   00000002
VA LAST REF    800A079E
PC AT ERROR    80006178
MDR            8009F38C
SMR            00000008
```

```
TRANSLATION BUFFER OR BUS ERROR
```

```
RLTO          00000000
TBER          00000007
```

```
CPU MODE = KERNEL
VIRTUAL
READ
```

```
CAER          00000000
BER           00000000
MCESR         00000004
```

```
TB GO DATA ERROR
TB G1 DATA ERROR
TB GO TAG ERROR
```

```
***** ENTRY          84. *****
ERROR SEQUENCE 4949.             LOGGED ON SID 01388525
```

ERROR LOG

ERROR LOG Examples

MACHINE CHECK, 6-MAR-1988 15:09:11.31
 KA780 REV# 7. SERIAL# 1317.

EXCEPTION PC	00004890	
ERROR PSL	03C00000	
		INTERRUPT PRIORITY LEVEL = 00. PREVIOUS MODE = USER CURRENT MODE = USER
SUMMARY CODE	00000000	
		CP READ TIMEOUT - OR ERROR CONFIRMATION FAULT
CES	00010084	
		SUPERVISOR AST PENDING ALU C31 NESTED ERROR
MICRO PC	00000200	
VA/VIBA	7FF735D4	
D REGISTER	FFFFC284	
TBERO	0000DC81	
		ENABLE MEMORY MANAGEMENT TB HIT GROUP 1 MICRO CODE "MCT" FIELD = 07 MICRO CODE "ADS" MICRO CODE "FS"
TBER1	00000040	
		LAST TB WRITE PULSE TO GROUP 1
SBITA	E00B83F5	
		TIMEOUT CONSOLE ADDR = 002E0FD4 PROTECTION CHECKED REFERENCE TIMEOUT REFERENCE IN USER MODE
CACHE PE REG	00004000	
		CP ERROR
SBIER	00001802	
		SBI NOT BUSY WAITING FOR READ DATA TIMEOUT CPU TIMEOUT

***** ENTRY 82. *****
 ERROR SEQUENCE 1077. LOGGED ON SID 04FFFFFF

MACHINE CHECK 30-MAR-1988 20:55:17.41
 KA86 REV# 255. SERIAL# 4095. MFG PLANT 7.

EHMSTS	40000802	
		VMS ERROR CODE = EBOX MICRO TRAP VECTOR = 08 (X) EHM ENTERED
EVMQSAV	00000004	
		VIRTUAL ADDRESS FOR EBOX PORT _ REQUESTS
EBCS	00000800	
		ECS PARITY ERROR
EDPSR	00000000	

ERROR LOG

ERROR LOG Examples

CSLINT	04183D1F	C BUS ADDRESS = 1F (X) C BUS DATA = 3D (X) INTERRUPT PRIORITY REQUEST = 8. INTERNAL SOURCE I/O ADAPTER = 0. INTERVAL TIMER
IBESR	00004000	UOP SEL = IBOX REGISTER SELECT UTPR <2:0> = EBOX PORT ENABLE ETRAP
EBXWD1	00000004	TOP OF "SP STACK" _ CONTENT IS ONE OF THE LAST _ LONGWORDS WRITTEN TO MBOX
EBXWD2	7FF593D0	TOP OF "SP STACK" MINUS ONE _ CONTENT IS ONE OF THE LAST _ LONGWORDS WRITTEN TO MBOX
VASAV	7FF593F8	VIRTUAL ADDRESS FOR OP FETCH _ PORT REQUEST ADDRESS _ CALCULATION FOR OPERAND _ PRE-FETCH AND RESULT DELIVERY
VIBASAV	0000E7FF	VIRTUAL ADDRESS OF NEXT IBUF _ PORT REQUEST TO FILL IBUFFER
ESASAV	0000E7F2	PC OF INSTRUCTION DURING EBOX _ EXECUTION AND RESULT STORAGE
ISASAV	0000E7F2	PC OF INSTRUCTION WHICH VA _ CALCULATION UNIT IS DOING ADDRESS _ CALCULATION OR OPERAND PRE-FETCH _ OR IS PASSING OPERAND DATA
CPC	0000E7F4	PC OF INSTRUCTION IN _ DECODE UNIT
MSTAT1	84006004	CO TAG MISS BLOCK HIT ABUS ADAPTER = 0. WORD COUNT = 0. CYCLE TYPE = READ REGISTER DEST CP = EBOX
MSTAT2	00004F00	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 #0., SLOT #1.
MDECC	00066200	(* DATA NOT VALID *)
MERG	04000100	MEMORY MANAGEMENT ENABLE
CSHCTL	00000003	CACHE 0 ENABLE CACHE 1 ENABLE
MEAR	0000007C	PHYSICAL ADDRESS IN PA LATCH AT TIME OF ERROR = 0000007C

ERROR LOG

ERROR LOG Examples

```

MEDR          0000001F          DATA WORD USED DURING ERROR
FBXERR        FFFFFFFF          (* DATA NOT VALID *)
CSES          1BD73E01          CS CODE = EBOX CONTROL STORE PARITY ERROR
                                CS SYNDROME = 3E (X)
                                CS ADDRESS = 1BD7 (X)
ERROR PC      0000E7F2
ERROR PSL     03C00004          Z-BIT
                                INTERRUPT PRIORITY LEVEL = 00.
                                PREVIOUS MODE = USER
                                CURRENT MODE = USER
IOA ES        00000000          (* DATA NOT VALID *)

```

AN/ER/INC=MACH ERR:ERRLOG.SYS_31MAR1988/ENT=S=82/OUT=DP.

Memory Error Entries Example

Memory error log entries consist of two types: fatal and nonfatal. A nonfatal memory error indicates that a single bit has failed within a memory location, and that the ECC (error code correctable) was able to compensate for the error and correct the data. A fatal error indicates that multiple bits were erroneous, and that the ECC could not correct the data.

Both the fatal and nonfatal memory entries are similar in their format. The memory error log reports can be divided into two logical areas of information. The first section of a memory error log report is the identification area. The second section contains memory controller-specific information. This data represents the information contained within the memory controller registers at the time of the memory error. Bit-to-text translation of the registers is performed and then listed on the right side of the report.

```

***** ENTRY          7. *****
ERROR SEQUENCE 4.          LOGGED ON SID 03003700
MEMORY ERROR, 6-MAR-1988 10:11:34.70
                        KA730 REV# 0. MIC# 55.
CSRO          00166200          ERROR SYNDROME = 7F
                                CORRECTED ERROR, BIT #31.
                                ARRAY #1. IN ERROR
CSR1          18000000          MEMORY MAPPING ENABLE
                                ENABLE "CRD" REPORTING
CSR2          8100000F          MEMORY SIZE = 2048.K
                                64K RAMS PRESENT
***** ENTRY          91. *****
ERROR SEQUENCE 342.          LOGGED ON SID 0138207A
FATAL MEMORY ERROR, 4-MAR-88 08:16:45.20
                        KA780 REV# 7. SERIAL# 122.
CONTROLLER AT TR #5.

```

ERROR LOG

ERROR LOG Examples

PRTCFNG	00000040	ADAPTER IS MULTI-PORT MEMORY PORT NUMBER = 0.
PRTCR	00000003	MASTER INTERRUPT ENABLE PORT INTERFACE INTERRUPT ENABLE RAM COUNT 0.
PCSR	07870003	ERROR INTERRUPT ENABLE
IVDTCR	01870001	INVALIDATE CACHE DEVICE ID = 0. 8. ARRAY BOARD(S) PRESENT MEMORY BASE ADDRESS = 6144.K
AER	16A70005	ERROR SYNDROME = 05 RDS ERROR ARRAY #6. IN ERROR ARRAY BANK #1. IN ERROR ERROR LOG REQUEST
CSRO	0000C2C8	MEMORY CONTAINS VALID DATA PORT #2. POWERED DOWN PORT #3. POWERED DOWN ERROR INTERRUPT FROM PORT #1. PORT #2. OFFLINE PORT #3. OFFLINE
CSR1	0000380A	PORT #0. CONNECTED TO AN SBI PORT #1. CONNECTED TO AN SBI PORT #2. NOT PRESENT PORT #3. NOT PRESENT INVALIDATION MAP PRESENT PORT #0. INVALIDATION ACK RECEIVED PORT #1. INVALIDATION ACK RECEIVED
MAT	0000C000	

Nonfatal and User Bugchecks Entry Example

Following is an example of a fatal bugcheck. Nonfatal and user bugcheck reports have the same format. These reports consist of three sections: identification, bugcheck reason and process information, and system register information.

```
***** ENTRY 58. *****
ERROR SEQUENCE 1129. LOGGED ON SID 03003700
FATAL BUGCHECK, 21-FEB-1988 11:06:53.49
KA730 REV# 0. MIC# 55.
ACPMBFAIL, ACP failure to read mailbox
PROCESS NAME .....
PROCESS ID 00000000
ERROR PC 0000033C
ERROR PSL 00DF0008
N-BIT
INTERRUPT PRIORITY LEVEL = 31.
PREVIOUS MODE = USER
CURRENT MODE = KERNEL
STACK POINTERS
KSP 7FFE7D84 ESP 7FFE9E00 SSP 7FFED04E USP 7FF7F194 ISP 80140000
```

ERROR LOG

ERROR LOG Examples

GENERAL REGISTERS

```

RO 00000001 R1 00000000 R2 7FFDFD80 R3 80000F10 R4 00000001
R5 00000001 R6 7FFED78A R7 7FFED78A R8 7FFED052 R9 7FFED25A
R10 00000000 R11 7FFE3FC0 AP 00000000 FP 7FFE7DD0 SP 7FFE7DC8
  
```

SYSTEM REGISTERS

```

POBR          80199000          PO PTE BASE (VIRT ADDR)
POLR          00000003          TOTAL PO PAGES
P1BR          7F9A8A00          P1 PTE BASE (VIRT ADDR)
P1LR          001FFBE5          TOTAL NON-EXISTENT P1 PAGES
SBR           001FA600          SYSTEM PTE BASE (PHY ADDR)
SLR           00001680          TOTAL PAGES 'SYSTEM' VIRT MEM
PCBB          00024874          PCB BASE (PHY ADDR)
SCBB          001F8400          SCB BASE (PHY ADDR)
ASTLVL        00000002          SUPERVISOR MODE AST PENDING
SISR          00000000          INTERRUPT REQUEST ACTIVE = 0.
ICCS          800000C1          RUN
                                   INTERRUPT ENABLE
                                   INTERRUPT
                                   ERROR
ICR           FFFF89D          INTERVAL COUNT REGISTER
TODR          396FEB84
  
```

Unknown Entries Examples

Following are sample reports for error log entries of unknown type. Each report has an identification section and an error log record section. The error log record section contains two types of records: interpretable and noninterpretable. If ERROR LOG can interpret the fields of the record, the utility gives the name of the field, its contents, and interprets what the field is. If the utility cannot interpret the fields of a record, it gives the longword value of the field and its contents in hexadecimal format.

```

***** ENTRY          95. *****
ERROR SEQUENCE 2.          LOGGED ON SID 03003600
  
```

```

"UNKNOWN DEVICE" ENTRY,  4-MAR-88 10:12:12.44
                          KA730 REV# 0. MIC# 54.
  
```

ERROR LOG RECORD

```

ERF$L_SID      03003600          SYSTEM ID REGISTER
ERL$W_ENTRY    0062             ERROR ENTRY TYPE
  
```

ERROR LOG

ERROR LOG Examples

EXE\$GQ_SYSTIME	C9764980	64 BIT TIME WHEN ERROR LOGGED
	008C2F30	
ERL\$GL_SEQUENCE	0002	UNIQUE ERROR SEQUENCE = 2.
UCB\$W_STS	0110	DEVICE STATUS
UCB\$B_DEVCLASS	42	DEVICE CLASS = 66.
UCB\$B_DEVTYPE	42	DEVICE TYPE = 66.
UCB\$W_UNIT	0000	PHYSICAL UNIT NUMBER = 0.
UCB\$W_ERRCNT	0001	UNIT ERROR COUNT = 1.
UCB\$L_OPCNT	00000001	UNIT OPERATION COUNT = 1.
ORB\$L_OWNER	00010004	OWNER UIC = [001,004]
UCB\$L_DEVCHAR	0C440007	DEVICE CHARACTERISTICS
UCB\$B_SLAVE	00	DEVICE SLAVE CONTROLLER = 0.
DDB\$T_NAME	41515403	
	00000000	
	00000000	
	00000000	
LONGWORD 1.	00000008	/.TQA...../
LONGWORD 2.	00000007	
LONGWORD 3.	00000502	
LONGWORD 4.	04000000	
LONGWORD 5.	00010000	
LONGWORD 6.	00000000	
LONGWORD 7.	00000080	
LONGWORD 8.	00000000	
LONGWORD 9.	00000000	

***** ENTRY 161. *****
 ERROR SEQUENCE 213. LOGGED ON SID 070001FF
 "UNKNOWN ENTRY", 4-MAR-88 11:35:15.73
 UVAX1 REV# 255. MIC# 1.

ERROR LOG RECORD

ERF\$L_SID	070001FF	SYSTEM ID REGISTER
ERL\$W_ENTRY	0008	ERROR ENTRY TYPE
EXE\$GQ_SYSTIME	89953F20	64 BIT TIME WHEN ERROR LOGGED
	008C3E2A	
ERL\$GL_SEQUENCE	00D5	UNIQUE ERROR SEQUENCE = 213.
LONGWORD 1.	00000001	/. . . . /
LONGWORD 2.	00410001	/. . A. /

ERROR LOG

ERROR LOG Examples

Example of a Brief Report

Following is an example of a report generated with the /BRIEF qualifier.

```
V A X / V M S          SYSTEM ERROR REPORT          COMPILED 25-AUG-1988 09:42
                                     PAGE 1.

***** ENTRY 1. *****
ERROR SEQUENCE 11.          LOGGED ON:      SID 08000000
DATA/TIME 18-JUL-1988 22:53:41.57          SYS_TYPE 00000000

DEVICE ERROR KA630

RD32 SUB-SYSTEM, UNIT _RICHIE$DUA0:

DMA ADDRESS      000000

DSECT   CHEAD   DHEAD   CCYL   DCYL   SCNT
06      14      14      9C     9C     01

RTCNT   CSTAT   MODE    DSTAT  TERM   ISTAT
FO      08      CO      B2     BD     28

CMD
56
```

Summary Report Examples

Following are examples of summary reports generated with the /SUMMARY qualifier using the DEVICE, ENTRY, HISTOGRAM, MEMORY, and VOLUME keywords.

Sample Device Summary Report (/SUMMARY=DEVICE)

```
DEVICE SUMMARY LOGGED BY SID 0484F00B

          ERRORS          TIMEOUTS          UCB ERROR          UCB OPERATION
          [HARD] [SOFT]   [HARD] [SOFT]   COUNT              COUNT
_HSC001$DUA1:
""
          2.    0.    0.    0.    25.    1027.
"WORK_1A"
          3.    0.    0.    0.    3.     35.
"WOKR_1B"
          4.    0.    0.    0.    2.    243.
-----
TOTALS    9.    0.    0.    0.    2.    243.
```

Sample Entry Summary Report (/SUMMARY=ENTRY)

```
SUMMARY OF ALL ENTRIES LOGGED BY SID 0484F00B

MACHINE CHECK          9.
SBIA ERROR             10.
SYSTEM START-UP        7.
ERRLOG.SYS CREATED     3.
FATAL BUGCHECK         6.
TIME-STAMP             223.
VOLUME MOUNT           678.
VOLUME DISMOUNT        194.
DEVICE ATTENTION       19.
ERL$LOGSTATUS          7.
ERL$LOGMESSAGE         1254.
ERL$LOGMSCP            431.
```

ERROR LOG

ERROR LOG Examples

DATE OF EARLIEST ENTRY 1-AUG-1988 09:54:51.52
 DATE OF LATEST ENTRY 27-AUG-1988 12:11:29.26

Sample Histogram Summary Report (/SUMMARY=HISTOGRAM)

PROCESSED ENTRIES HOUR-OF-DAY HISTOGRAM LOGGED BY SID 0484F00B

```

00:00  449. *****
01:00  47.  *****
02:00  35.  *****
03:00  19.  *****
04:00  33.  *****
05:00  25.  *****
06:00  51.  *****
07:00  110. *****
08:00  77.  *****
09:00  111. *****
10:00  124. *****
11:00  113. *****
12:00  197. *****
13:00  119. *****
14:00  34.  *****
15:00  52.  *****
16:00  70.  *****
17:00  195. *****
18:00  171. *****
19:00  108. *****
20:00  169. *****
21:00  139. *****
22:00  39.  *****
23:00  354. *****
  
```

Sample Memory Summary Report (/SUMMARY=MEMORY)

The format of memory summary reports varies slightly across the range of CPU/memory subsystem configurations.

SUMMARY OF MEMORY ERRORS LOGGED BY SID 0484F00B

ARRAY#	BIT#	WORD COUNT	CORRECTED ERRORS	UNCORRECTED ERRORS
02.	12.	00.	173.	
02.	DBL BIT	00.		2.
04.	04.	00.	3.	

Sample Volume Summary Report (/SUMMARY=VOLUME)

VOLUME LABEL(S) LOGGED BY SID 0484F00B

VOLUME LABEL(S)	QIO(S)	ERROR(S)	MOUNT(S)
"WORK_1A"			
_HSC001\$DUA1:	51.	3.	1.
_HSC001\$DUA2:	65.	0.	2.
TOTALS	----- 116.	----- 3.	----- 3.

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Reader's Comments

VMS Error Log Utility
Manual
AA-LA37A-TE

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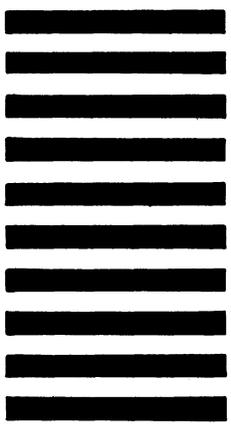


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