DECevent Release Notes for OpenVMS

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The *DECevent Release Notes for OpenVMS* provide general release information and restrictions for DECevent.

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Preface

The *DECevent Release Notes for OpenVMS* provide general information about DECevent as well as differences between DECevent and past fault management tools. Also provided are restrictions for the current release of DECevent and known problems with the current release of DECevent.

Intended Audience

The *DECevent Release Notes for OpenVMS* are intended for use by system managers and service personnel who use DECevent software.

Documentation Conventions

The following conventions are used in this manual:

boldface type	Boldface type indicates the first instance of terms being defined in text.
italic type	Italic type indicates emphasis and complete manual titles.

1
General Release Information

This section provides information pertaining to the general use of the DECevent event management tool.

1.1 IPMT Entries for DECevent

If MCS Service Engineers need to submit IPMT problems and solutions against DECevent, they should use the corporate IPMT server and use the product name DECEVENT when entering DECevent IPMT issues and problems.

1.2 Starting Prerequisite Processes and Images

You must start all prerequisite processes and images, such as Motif, before executing the DECevent startup command file, DECEVENT$STARTUP.COM in SYS$STARTUP:SYSTARTUP_VMS.COM. Failure to do so causes the decw$transport_common logical to not be defined when DECevent starts.

1.3 Starting the DECevent Graphical User Interface

DECevent now allows you to translate and analyze event logs with a graphical user interface or GUI. You invoke the GUI with the following command:

```
$DIAGNOSE/INTERFACE=DECW
```

Refer to Chapter 4 for known restrictions for the GUI.

Refer to *The DECevent Graphical User Interface User's Guide*, AA–QE26A–TE, for information about how to use the GUI.

1.4 Re-Installing DECevent

When a new version of DECevent is installed, and a previous version has existed on a system, the file FMG_LOCAL_PARAM_LIBRARY.KNL must be deleted from the login directory SYS$LOGIN: of each user who ran the previous version of DECevent.

1.5 Supported Devices

Appendix A of these notes contains a list of all devices supported and recognized by DECevent's bit-to-text translation.

Appendix B contains a list of all devices supported and recognized by the analysis and notification options of DECevent.

2

Comparing DECevent and Previous Digital Fault Management Tools

This section describes known differences between past fault management tools and DECevent.

2.1 Selection Criteria

Selection criteria for the /INCLUDE and /EXCLUDE qualifiers differs between former fault management tools and DECevent. The following lists valid selection keywords for DECevent.

```
/INCLUDE=(keyword=[val] [,...])

/EXCLUDE=(keyword=[val] [,...])

keywords:

ATTENTIONS     BUGCHECKS        BUSES         CACHE
CONFIGURATIONS CONTROL_ENTRIES  CPUS          DEVICE_ERRORS
DEVICE_NAME    DEVICE_NODE      DEVICE_NUMBER DISKS
ENVIRONMENTAL_ENTRIES           HOSTS
INFORMATIONALS IOS or IO_SUBSYSTEMS           MCHKS or MACHINE_CHECKS
MEMORY         NODES            OS or OPERATING_SYSTEMS
PWR or POWER   SEQUENCE_NUMBERS SWI or SOFTWARE_INFORMATIONALS
SYNC_COMMUNICATIONS             TAPES         TIMEOUTS
UNKNOWN_ENTRIES                 UNSOLICITED_MSCP
VMS_ENTRIES    VOLUME_CHANGES

EXAMPLE:
/INCLUDE=(DISK=RZ56,DISK=RA)

/EXCLUDE=(TAPE=TA,CPU)
```

You can also use keywords without values, as shown in the following example:

```
/INCLUDE=(disk, tape)
```

2.2 Thresholding

Thresholding is the process by which DECevent automatic analysis determines whether a device has logged a sufficient number of events to warrant analysis and/or notification.

DECevent performs thresholding by classifying events based on time of occurrence and relative severity, then comparing them to stored numbers called thresholds.

Comparing DECevent and Previous Digital Fault Management Tools
2.2 Thresholding

DECevent implements thresholding in a different manner from previous fault management tools. This implementation is discussed in the following sections, which explain event classes, event severity, event counting, and the comparison process.

2.2.1 Event Classes

DECevent allows the specification of thresholds within two categories called classes. These classes are DSE and CUSTOMER.

The DSE class contains thresholds that are preset by Digital. When a DSE threshold is crossed, analysis is initiated for the device that logged the events. If analysis generates a theory code, notification is also performed. DSE thresholds may only be modified by Digital Services personnel.

The CUSTOMER class contains thresholds that are not preset by Digital. When a CUSTOMER threshold is crossed, notification is initiated, for the device that logged the events, through the monitor mailing list and the customer external command procedures. Analysis is not initiated. CUSTOMER thresholds may be set to any value by the system manager.

2.2.2 Event Severity

Within each class, thresholds are further specified according to the relative severity of the event. Severity is classified as shown in the following table:

Severity Level	Description
HARD	Non-recoverable errors.
SOFT	Errors from which the device successfully recovered.
MEDIA	Events related to media such as disk media.
INFO	Events logged to record information such as timestamps and volume mounts/dismounts.

2.2.3 Event Counting

The thresholding process requires that counts be maintained for events that are logged on each device. Event counts are classified by severity.

When an event is logged for a device, DECevent stores the event in the analysis state database, then recalculates the event counts for the device. If a threshold is crossed, events less than seven days old are used in automatic analysis. DECevent removes events older than seven days to prevent their use in automatic analysis. Events less than 24 hours old are counted for thresholding.

2.2.4 Comparison of Event Counts with Thresholds

Once the event counts have been recalculated, DECevent compares them with the thresholds in the following manner:

- If an error of any severity level exceeds the DSE threshold for that severity level, then DECevent initiates analysis. If analysis generates a theory code, DECevent initiates notification.
- If an error of any severity level exceeds the CUSTOMER threshold for that severity level, then DECevent initiates notification.

2.3 Autocopy

Previous fault management tools provided an autocopy feature that detected failing disk drives and initiated shadow copying to preserve data. This feature is not implemented in the current version of DECevent.

2.4 Cluster-Wide Support

Previous fault management tools supported a cluster environment. This feature is not implemented in the current version of DECevent. However, DECevent may be run separately on any or all nodes of a cluster.

2.5 Mixed Architecture Cluster Support

DECevent is not supported in mixed architecture cluster environments.

2.6 Volume Labels

The Error Report Formatter (ERF) maintained a list of devices and their volume labels as it encountered volume mount and dismount entries. When an entry for a tape or disk device was encountered, the matching volume labels were output in the report. This feature is not implemented in the current version of DECevent.

2.7 DECevent Translation of Multiple Input Files

When requested to translate entries from multiple input files, DECevent does not delineate which entries are from which input file. Entries are numbered as if they were all translated from the same input file.

3
Known Restrictions

This section describes known restrictions with this release of DECevent.

3.1 File Specification Restriction

The current version of DECevent does not support file specifications that start with a node address. For example:

```
GARCIA::disk1:[]lesh.sys
```

3.2 Wildcard Restriction

When a user attempts a translation using a wildcard in the file specification and the number or size of the filename exceeds the internal file buffer array, an error message indicating that the internal files array buffer has been exceeded is displayed.

3.3 DIRECTORY CANONICAL Command Restriction

The DIRECTORY CANONICAL command does not function in the current release of DECevent.

3.4 SHOW THRESHOLD Command Restriction

The SHOW THRESHOLD COMMAND truncates the second theory number when multiple theories are called out.

3.5 Manual Analysis

Manual analysis can only be run from one account at a time on a given system. Running manual analysis from multiple accounts, or running it simultaneously from the same account, may cause incorrect results to be reported.

3.6 Local Settings File

When a new version of DECevent is installed after a previous version has existed on a system, the file SYS$LOGIN:FMG_LOCAL_PARAM_LIBRARY.KNL must be deleted from the login directory of each user who ran the previous version of DECevent.

3.7 Page File Quota Restriction

DECevent may fail with an access violation if the page file quota is exceeded. The process terminates and you are returned to the system prompt if this happens. You may then re-issue the last failing command.

3.8 JTquota Restriction

The JTquota shown with the SHOW FIELD command when using AUTHORIZE must be increased to 8192 for DECevent software to function correctly. At the UAF> prompt following the SHOW FIELD command, change the JTquota by entering MODIFY FIELD/JTQUOTA=8192.

3.9 /LOG Qualifier Restriction

The /LOG qualifier controls the display of informational messages telling the user how many event entries were selected and rejected. When using the /LOG qualifier, and no output is specified, the informational messages may be embedded within the report.

3.10 /FSTERR Report Type Restriction

In the current DECevent release, the **/FSTERR** report type produces an output for RA70, RA72, RA73 and RA9x series devices only.

3.11 SET THRESHOLD/NAME Restriction

The **SET THRESHOLD/NAME** command only works for devices that have previously logged an event while the DECevent startup command was active.

3.12 Evidence Support

This release of DECevent does not currently provide evidence information in the analysis/notification reports.

3.13 /BEFORE and /SINCE Parameter Restrictions

A selection with the starting date (/BEFORE) greater than the ending date (/SINCE) is ignored. No error message is generated.

3.14 SHOW THRESHOLD Restriction

The **SHOW THRESHOLD** command displays the event counts, for devices that have logged errors, as 1. This occurs even when the devices have exceeded thresholds as high as 12, and notification has been performed. DECevent is handling the events properly and performing notification at the appropriate times, but is not displaying the correct counts.

3.15 RF74 Algorithm Incorrect

The RF74 LBN to physical cylinder, head, and sector conversion is incorrect. The RF74 is a "banded drive" and contains a variable number of sectors per track, depending on the band. The algorithm uses this information as if it were a fixed sector disk. RF74 analysis may be affected by this.

3.16 Distribution List Name Restrictions

When using the **ADD USER** command, the following words cannot be user names:

CUSTOMER
FSE
MONITOR
SICL

3.17 TA9x Translation Problem

Extended Sense Data packets from TA9x class devices cause DECevent to halt without producing a complete report. The specific cause is not yet known.

3.18 RF31T Support

RF31T events are translated as RF31 events even though RF31 events have a different format. RF31T is unsupported for analysis.

3.19 HSD10 Support

Bit-to-text support for the HSD10 was accomplished by using the HSD10 written error specification only. Actual HSD10 event logs were not available at the time. Please contact your Digital Multivendor Customer Services engineer if any inconsistencies are observed during the translation of HSD10 event logs.

3.20 Automatic Analysis Restriction

When performing automatic analysis, DECevent reads the system event mailbox, but does not check the system event log for entries that may have been made since the last system crash.

3.21 Command Restrictions with Automatic Analysis

Commands that modify analysis and notification knowledge files require prior shutdown of automatic analysis.

Before using any of the commands listed in this section, DECevent automatic analysis must be stopped by entering:

```
$ DIAGNOSE SHUTDOWN node-name
```

After the **DIAGNOSE SHUTDOWN** command has been entered, DECevent automatic analysis may be restarted by executing the command procedure **SYS$STARTUP:DECEVENT$STARTUP.COM**.

The following commands require prior shutdown of automatic analysis:

ADD EXTERNAL
ADD USER
FLUSH
IGNORE
RECOGNIZE
REMOVE REPAIRED
REMOVE SYSTEM_INFO
REMOVE USER
REPAIR
SET PHONE_NUMBER
SET SICL
SET SYSTEM_INFO
SET THRESHOLD

3.22 Set SICL Restriction

Use the DIA$MGR:DECEVENT$SICL_ENABLE.COM to enable SICL.

3.23 Missing Information from the Output of the SHOW SUMMARY Command

The output of the DECevent SHOW SUMMARY command does not specify whether a field service or a customer threshold was crossed.

4

Known Restrictions for the Graphical User Interface

This section describes known restrictions with this release of the DECevent graphical user interface (GUI).

4.1 Graphical User Interface User Guide for OpenVMS

The figures and examples shown in *The DECevent Graphical User Interface User's Guide* show Digital UNIX results. You must substitute OpenVMS commands and syntax where necessary when using the GUI on OpenVMS systems.

4.2 GUI Startup Command

Use the following command to start the Graphical User Interface for DECevent on OpenVMS systems:

```
$ DIAGNOSE/INTERFACE=DECWINDOWS
```

4.3 Canceling GUI Displays

Currently, there is no cancel option implemented within the GUI to stop displays of large translations. If you wish to halt the display during long translations, from another window or terminal, issue the following command at the command line:

```
$ STOP/ID=<pid>
```

Where <pid> is your process id number.

4.4 Text Entries

All text field entries must be terminated with a <RETURN> .

4.5 Accessing KNL Directories

The GUI must be able to find and access the knowledge library (KNL) directories. If you are using the C Shell, use the following command to access and find the KNL directories:

```
setenv DIA_LIBRARY /usr/sbin/DIA
```

If you are using the Bourne Shell, use the following commands:

```
>DIA_LIBRARY=/usr/sbin/DIA
>export DIA_LIBRARY
```

4.6 Brief Report Type Restriction

When the brief report type is selected within the GUI, the resulting translation shows a full report.

4.7 Multiple Input File Restriction

You cannot perform translation or analysis on multiple input files. Only one input file can be translated or analysis performed upon at a time.

4.8 sys info Text Length Restriction

The text length fields in the sys info icon box are limited to 40 characters.

A

Supported Devices for Bit-To-Text Translation

This section contains lists of products and devices DECevent bit-to-text translation supports.

Note

For any device not in this list, as much translation will be performed as possible. All remaining information in the event will be dumped in hex.

A.1 Fully Supported Devices for Bit-To-Text Translation

The following devices have full bit-to-text translation support.

CPUs

AlphaServer 1000 Family
AlphaServer 2000 Family
AlphaServer 2100 Family
AlphaServer 8200
AlphaServer 8400
AlphaStation 200 Family
AlphaStation 400 Family
DEC 2000 Model 300 - Partial support
DEC 3000 Model 300 - Partial support
DEC 3000 Model 400
DEC 3000 Model 500
DEC 3000 Model 700
DEC 3000 Model 900
DEC 4000 Family
DEC 7000 Family
DEC 10000 Family

SCSI Solid State Disks

The entire EZnn family is supported.

SCSI RAID Controllers

HSZ10
HSZ15

SCSI Port Drivers

N53C710
N53C94

Supported Devices for Bit-To-Text Translation
A.1 Fully Supported Devices for Bit-To-Text Translation

SCSI CDROMs

The entire RRDnn family is supported.

SCSI Magneto-Optical Disks

The RWnn and RWZnn families are supported.

SCSI Floppy Disks

RX26

SCSI Hard Disks

The RZnn family is supported.

SCSI Tapes

The TK50Z, TKZnn family, TSZnn family, TZnnn family, and TZKnn family are supported.

HSC Devices

The following HSC devices are fully supported by DECevent. Their names will be displayed as controlling devices for appropriate disk and tape errors, but their own out-of-band errors are not yet supported by DECevent. The out-of-band events will be dumped in hex.

HSC40
HSC50
HSC60
HSC65
HSC70
HSC90
HSC95

Other Adapters

CIMNA
DSYT1
KFMSA
KFMSB
SHAC
PAxxx
PNxxx

HS Array Controllers

HSJ30
HSJ40
HSD05
HSD10
HSD30
HSD40
HSZ40

Internal Device Controllers

CIMNA
CIXCD-AC
DEFTA
DEFZA

Other Support

DDR
DSR
Host Based RAID 0 and 5

I/O Adapters

DEMFA
DEMNA
KDM70
KZMSA

MSCP DSA Disks

RA60
RA70
RA71
RA72
RA73
RA80
RA81
RA82
RA90
RA92

MSCP DSSI Disks

RF30
RF31
RF31F
RF35
RF74
RF70
RF71
RF72
RF73

MSCP DSA Tapes

TA78
TA81
TA90E
TA79
TA90
TA91

MSCP DSSI Tapes

TF30
TF70
TF85
TF857

A.2 Partial Device Support

The following devices will be recognized if an error log entry is found in the event file. The device name will be displayed in the report with as much generic information as possibly translated from bit to text. Any remaining information will be displayed in hex.

Generic Devices

- Generic DU (for example, MSCP disks not yet known by OpenVMS)
- Generic TU (for example, MSCP tapes not yet known by OpenVMS)
- NI SCA events
- OpenVMS Volume Shadow events (Phase II)

CPUs

DEC 2000 Model 200
DEC 2000 Model 300
DEC 3000 Model 300

Supported Devices for Bit-To-Text Translation
A.2 Partial Device Support

MSCP Controllers

KCM44
KDA50-Q
KDB50
KFBTA
KZMSA for DSSI
KRQ50
RQDX1
RQDX3
RQDX4
UDA50
UDA50-A
RQDX1
RQDX3
RQDX4
UDA50
UDA05-A

MSCP DSA Solid State Disks

ESE20
ESE52
ESE56
ESE58

MSCP DSSI Disks

RF36
RFH31
RFH35
RFH36
RFH72
RFH73
RFH74

MSCP DSSI Solid State Disks

EF51
EF52
EF53
EF54
EF58

MSCP DSA Optical Disks

RV20
RV60

MSCP DSA Tapes

TA85/TA857
TA86/TA867
TAD34
TAD44
TAD85
TAD86
TAD87

MSCP DSSI Tapes

TF86
TF867

Other TMSCP Tapes/Controllers

TBK70
TK50
TK50-DEBNT
TK70
TQK50
TUK50

Other Adapters

DE422-SA
DEFAA
DEFTA
DEFZA
DEFEA
DWTVA

B

Supported Devices for Analysis

This section contains a list of products and devices that the analysis and notification options of DECevent support.

B.1 Fully Supported Devices for Analysis

The following devices have full analysis and notification support.

CPUs

- DEC 4000
- DEC 7000
- AlphaServer 2000 5/250 and 5/300
- AlphaServer 2100 5/520 and 5/300
- AlphaServer 2100-RM 5/250 and 5/300

MSCP DSA Disks

- RA72
- RA73
- RA90
- RA92

There are 15 different areas of analysis that can be done on RAxx devices. Analysis support for RAxx devices is implemented for the following areas:

1. RA90/92 Special Analysis
2. SDI Communication Errors Analysis
3. Non-media Drive Detected Errors Analysis
4. Media Drive Detected Errors Analysis
5. Head Matrix Analysis
6. Bad Surface Analysis
7. Servo Failures Analysis
8. Head Slap Test Analysis
9. Random Read Path Analysis
10. Bad Head Analysis
11. Radial Scratch Analysis
12. Circumferential Scratch Analysis

13. Bad Spot Analysis
14. Possible Media Errors Analysis
15. Forced Error Analysis

I/O Adapters

- KDM70

B.2 Devices with Partial Analysis Support by DECevent

The following devices will have partial analysis support. For these devices, if a problem involves LED codes, DECevent will report "No Theory Found".

MSCP DSA Disks

- RA60
- RA70
- RA71
- RA80
- RA81
- RA82