Compaq DECset for OpenVMS

Compaq Module Management System for OpenVMS Version 3.4 Release Notes

August 2000

These release notes for the Compaq Module Management System for OpenVMS Version 3.4 software contain important general information, new and changed features, current restrictions, and documentation notes.

Operating System and Version: Compaq OpenVMS VAX Operating System, Versions 6.2, 7.1, 7.2
Compaq OpenVMS Alpha Operating System, Versions 6.2, 7.1, 7.2-1
Compaq DECwindows Motif for OpenVMS, Versions 1.2-4, 1.2-5

Software Version: Compaq DECset for OpenVMS, Version 12.4

Compaq Module Management System for OpenVMS, Version 3.4

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Houston, Texas

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Preface

These release notes characterize the Version 3.4 release of the *Compaq Module Management System for OpenVMS (MMS)* software. These notes contain information that either supplements or supersedes the information in the Compaq DECset for OpenVMS documentation set.

Intended Audience

These release notes are intended for users and system managers who need information about MMS on either of the Compaq OpenVMS Operating System platforms (VAX or Alpha).

Document Structure

These release notes are organized as follows.

- Chapter 1 contains general information about this release.
- Chapter 2 contains a description of the new features.
- Chapter 3 describes all problems resolved by the current release.
- Chapter 4 describes all known problems in the current release.
- Chapter 5 describes all restrictions.
- Chapter 6 describes how to report problems.

Sending Compaq Your Comments

We welcome your comments on these release notes or on any other pieces of documentation. See Chapter 6 for details on how to contact Compaq with your comments.

Conventions

The following conventions are used in these notes.

Convention	Description
$	A dollar sign ($) represents the OpenVMS DCL system prompt.
Ctrl/*x*	The key combination Ctrl/*x* indicates that you must hold down the key labeled Ctrl while you press another key, for example, Ctrl/Y or Ctrl/Z or a pointing device button.
boldface text	Boldface text represents the introduction of a new term.
`monospace boldface text`	Boldface monospace text represents user input in interactive examples.
italic text	Italic text represents book titles, parameters, arguments, and information that can vary in system messages (for example, Internal error *number*).
UPPERCASE	Uppercase indicates the name of a command, routine, the name of a file, the name of a file protection code, or the abbreviation of a system privilege.
lowercase	Lowercase in examples indicates that you are to substitute a word or value of your choice.

1
General Information

The information in these release notes pertain to the Compaq Module Management System for OpenVMS (MMS), Version 3.4 software. Compaq suggests that you upgrade your environment incrementally with each new release, but there is no technical requirement to do so. It is recommended that you review the release notes for each version because they capture important release-oriented information and advise you of changes between versions.

1.1 Introduction

MMS Version 3.4 is a minor release.

1.2 Associated Documents

The following documents contain information related to MMS. Note however, that for the Compaq DECset for OpenVMS Version 12.4 release, only the software product descriptions, installation guide, and component product release notes have been updated.

The document associated with MMS is:

- *Guide to DIGITAL Module Management System for OpenVMS Systems*

Also applicable are the general DECset documents:

- *Compaq DECset for OpenVMS Installation Guide*
- *Compaq DECset for OpenVMS VAX Software Product Description*
- *Compaq DECset for OpenVMS Alpha Software Product Description*
- *Guide to Detailed Program Design for OpenVMS Systems*
- *Using DECset for OpenVMS Systems*

In addition to the base MMS documentation, the DECset engineering team has also provided the *Compaq DECset for OpenVMS Cookbook for an Integrated Product Development Environment*. This document comprises a series of technical articles that describe how each of the component applications can be used in different programming environments. This document is available in PostScript (.PS), HTML (.HTML), and ASCII text (.TXT) formats from the following location:

```
SYS$SYSROOT:[SYSHLP.EXAMPLES.DECSET]DECSET_COOKBOOK.*
```

1.3 Associated Products

The Compaq DECset Clients for CMS and MMS software provides access from a desktop personal computer (PC) to the Compaq Code Management System for OpenVMS (CMS) libraries and MMS features residing on OpenVMS Alpha and OpenVMS VAX Systems. Note that the Compaq DECset Clients for CMS and MMS software is packaged and distributed separately from the Compaq DECset for OpenVMS, CMS and MMS products.

DECset Clients for CMS and MMS can be used from a personal computer running Microsoft Windows 95, Windows 98, Windows NT, or Windows 2000. Connection to a CMS library from the PC is possible once the server software (provided with the client) and the CMS for OpenVMS software are installed at the server site.

The main DECset Client windows offer menu access to most of the CMS and MMS functions. DECset Client commands can also be performed by clicking the command buttons on the toolbar. In addition, DECset Client supports drag-and-drop functionality for manipulating data within the DECset Client window. For configuration management, a set of files is stored in a CMS library on the OpenVMS system. These files can be fetched, reserved, and replaced in either the PC environment using the CMS Client or the local OpenVMS environment using CMS. As a result, a common configuration can be maintained regardless of the operating environment.

Additional information on DECset Clients for CMS and MMS can be found in the Compaq OpenVMS web pages:

http://www.openvms.digital.com/commercial/decset/clients_index.html

1.4 Installation Requirements

OpenVMS Alpha systems

For a new installation of MMS the following is required:

Global Pages	1900
Global Sections	8
Disk Blocks	7500

OpenVMS VAX systems

For a new installation of MMS the following is required:

Global Pages	700
Global Sections	10
Disk Blocks	4500

2
New Features

The following enhancements were added to MMS for Version 3.4:

- The following qualifiers have been added to the MMS Generator:
  - /SWITCHES - specifies compiler and linker command line qualifiers to be included in the generated files.
  - /BUILTIN_RULES_APPLY - specifies that MMS built-in compilation actions should be used.
- The addition of further predefined functions that enable text processing, word list operations, and file specification manipulation to be performed in MMS description files.
- The 64K limit on the length of a macro expanded line has been removed.
- A new directive has been added in MMS description files, .ACTION_ STATUS, that enables MMS to deal correctly with action lines that do not return standard VMS status values.
- The addition of new reserved macros MMSDESCRIPTION_FILE, MMSARCH_NAME, MMSALPHA and MMSVAX.

Descriptions of these enhancements can be found in the following sections.

2.1 MMS Generator Qualifier - /SWITCHES

The following command line qualifier, for use with the MMS Description file generator, has been added:

```
/SWITCHES=([COMPILE="/sw1[/sw2...]"][,LINK="/sw3[/sw4...]"]
```

The specified compilation and link qualifiers will be included in all the compilation and link commands in the generated description file. These qualifiers provide the same functionality as provided by the `Additional Compiler Switches` and the `Additional Linker Switches` buttons and text fields in the DECwindows interface. Note that the SCA library options in the DECwindows

interface to the MMS generator have been removed; these have never been supported.

2.2 MMS Generator Qualifier - /BUILTIN_RULES_APPLY

The following command line qualifier, for use with the MMS Description file generator, has been added:

/[NO]BUILTIN_RULES_APPLY

When selected, the description file generated will only contain the dependency lines for compilations. No action lines will be included, so MMS will use the built-in rules when processing this description file. The action lines for the link command are not affected by this qualifier (i.e. they are always generated). The compile switches option (see Section 2.1) is not allowed when this option is specified. The default value of the qualifier is /NOBUILTIN_RULES_APPLY. A new toggle button has been added to the main screen of the DECwindows file generator dialog.

2.3 Additional Predefined Functions

The predefined functions described in the following sections can be used in description files to:

- perform text processing operations
- operate on file specifications
- determine the origin of macros.

Note that predefined functions can only be used if extended syntax has been enabled (use /EXTENDED_SYNTAX qualifier when invoking MMS or, in DECwindows MMS, check the Extended Syntax check box in the Build Definitions/Directives Options dialog box).

2.3.1 Function Parameters

Where a parameter to a function is considered to be a list of words, a word is defined as any sequence of characters, not containing white-space characters, that is terminated by a white-space character or a right parenthesis. White-space characters are space and tab. Functions that generate word lists will produce lists that are white-space compressed (i.e. no leading or trailing spaces and a single space character between each word in the list).

2.3.2 The Functions

The following sections describe the operation of all the predefined functions supported by MMS; for completeness, descriptions of the existing functions FINDSTRING, SUBST and WILDCARD are also included.

2.3.2.1 Text operations

The following functions perform text processing operations.

2.3.2.1.1 ADDPREFIX

$(ADDPREFIX *prefix*,*text*)

This function prepends *prefix* to the start of each word in *text*.

2.3.2.1.2 ADDSUFFIX

$(ADDSUFFIX *suffix*,*text*)

This function appends *suffix* to the end of each word in *text*.

2.3.2.1.3 FILTER

$(FILTER *pattern...*,*text*)

This function filters text. Any word in *text* that does not match any *pattern* word is removed; *pattern* words may contain the wildcard characters `*` and `%`.

2.3.2.1.4 FILTER-OUT

$(FILTER-OUT *pattern...*,*text*)

This function filters text. Any word in *text* that matches any *pattern* word is removed; *pattern* words may contain the wildcard characters `*` and `%`.

2.3.2.1.5 FINDSTRING

$(FINDSTRING *find*,*text*)

This function performs a string search. If *find* occurs in *text*, the value is *find*; otherwise, the value is empty.

2.3.2.1.6 FIRSTWORD

$(FIRSTWORD *text*)

This function returns the first word in *text*.

2.3.2.1.7 FOREACH

$(FOREACH *macro*,*list*,*text*)

This function repeatedly expands text. For each word in *list*, *text* is repeated with the value of *macro* defined as the word from *list*.

2.3.2.1.8 JOIN

$(JOIN *list*,*text*)

This function concatenates word by word. Each word in *text* is appended to the corresponding word in *list* to form a word in the result. When the number of words in *list* and *text* are not the same, the remaining words from the longer are simply appended to the result.

2.3.2.1.9 PATSUBST

$(PATSUBST *pattern...*,*to*,*text*)

This function performs pattern substitution. Each word in *text* that matches any *pattern* word is replaced by *to*. *pattern* words may contain the wildcard characters `*` and `%`. If *to* also contains wildcard characters, they will be replaced by the text that matched the wildcard characters in *pattern*.

2.3.2.1.10 SORT

$(SORT *text*)

This function sorts text. Words in *text* are sorted into lexical order; duplicated words are removed.

2.3.2.1.11 STRIP

$(STRIP *text*)

This function performs white-space compression. Leading and trailing white-space is removed from *text* and each internal sequence of white-space characters is replaced by a single space.

2.3.2.1.12 SUBST

$(SUBST *from*,*to*,*text*)

This function performs string substitution. Each occurrence of *from* in *text* is replaced by *to*.

2.3.2.1.13 WORD

$(WORD *n*,*text*)

This function returns the n'th word from *text*. *n* should be in the range 1 to the number of words in the list; when *n* is not in this range, the result is empty.

2.3.2.1.14 WORDS

$(WORDS *text*)

This function returns the number of words in *text*.

2.3.2.2 File operations

The following functions operate on file specifications; each has a single parameter which is a list of words where each word is considered to be a file specification.

2.3.2.2.1 BASENAME

$(BASENAME (*text*)

For each file specification in *text*, this function returns that part of the file specification that is not the type or version.

2.3.2.2.2 DIR

$(DIR *text*)

For each file specification in *text*, this function returns that part of the file specification that is not the name, type or version.

2.3.2.2.3 FILETYPE

$(FILETYPE *text*)

For each file specification in *text*, this function returns the type part of the file specification.

2.3.2.2.4 FILEVERSION

$(FILEVERSION *text*)

For each file specification in *text*, this function returns the version part of the file specification.

2.3.2.2.5 NOTDIR

$(NOTDIR *text*)

For each file specification in *text*, this function returns the name and type part of the file specification.

2.3.2.2.6 WILDCARD

$(WILDCARD *text*)

This function searches for files. The result is the name and type part of all existing files that match any of the file specifications in *text*. The file specifications may contain the wildcard characters * and %.

2.3.2.3 Miscellaneous operations

2.3.2.3.1 ORIGIN

$(ORIGIN *macro*)

This function returns the origin of *macro* as follows:

FILE	defined in a description file
COMMAND LINE	defined on the command line
SPECIAL	a special macro
DEFAULT	a default macro
CLI SYMBOL	a CLI symbol
TEMPORARY	defined by function FOREACH
UNDEFINED	*macro* is not defined

2.4 64K Line Length Limit

The limitation that the macro expanded length of a line is no more then 64K has been removed.

2.5 User Defined Severity

A mechanism has been provided that enables MMS to deal with action lines that do not return standard OpenVMS status values. The new action line prefix, ?name, indicates those action lines for which the severity must be determined according to the rules defined by the new ACTION_STATUS directive.

The ACTION_STATUS directive defines how the equivalent VMS severity can be determined from a foreign status value.

The ACTION_STATUS directive has the following form (use the line continuation character - if the directive uses more than one line):

```
.ACTION_STATUS name [ .MASK m  ]
                    [ .SUCCESS { s1,s2,... | OTHERS } ]
                    [ .INFORMATION { i1,i2,...  | OTHERS } ]
                    [ .WARNING { w1,w2,...  | OTHERS } ]
                    [ .ERROR { e1,e2,... | OTHERS } ]
                    [ .FATAL { f1,f2,... | OTHERS } ]
```

where,

- Name is any sequence of characters not starting with a punctuation character and terminated by comma, space or tab (punctuation characters are ! : ; , #).
- *m*,*s*,*i*,*w*,*e* and *f* are decimal, octal or hex numbers (octal numbers are 0... and hex numbers are %x... or 0x...) representing status values to be associated with the corresponding severity.
- Space, tab or comma can be used as the separators in a list of numbers.
- OTHERS associates all otherwise unspecified status values with the corresponding severity; OTHERS can only be specified for one severity.
- If OTHERS is not specified, all unspecified status values will default to the least severe of any undefined severity (or ERROR if all severity values are defined).
- The directive is effective over the entire file.
- It is an error to specify two ACTION_STATUS directives with the same name.

MMS will then interpret the status returned from an action line prefixed by ?name as follows:

- If mask is specified, extract value from the action line status using the mask value; the extracted value is shifted right to match the first bit in the mask.
- If mask is not specified, extracted value is the action line status.
- Determine the severity associated with the extracted value.

MMS will then continue, treating this severity as if it were a standard OpenVMS $SEVERITY.

2.6 Reserved Macros

The following reserved macros have been added for this release:

- MMSDESCRIPTION_FILE - expands to the full file specification of the original description file being processed (Note: it will not expand to any description file included using the .INCLUDE directive).
- MMSARCH_NAME - expands to the architecture name of the processor on which MMS is running, i.e. Alpha or VAX (Note: in earlier releases, the special macro MMS$ARCH_NAME performed this function; for compatibility with these versions, MMS$ARCH_NAME can be used as an alternative reserved macro).
- MMSALPHA - expands to `Alpha` if MMS is running on an Alpha; otherwise the value is empty. Use this macro with .IFDEF to define description file lines that are for Alpha only.
- MMSVAX - expands to `VAX` if MMS is running on a VAX; otherwise the value is empty. Use this macro with .IFDEF to define description file lines that are for VAX only.

3
Problems Fixed

The following bugs were fixed and restrictions removed in MMS Version 3.4:

- ID:48 - Linker information defined in a context is ignored.

  The Environment Manager (via the `MMS Options` menu in the `Settings` pull down menu) allows the specification of `Linker Object Libraries` and `Linker Options`. However, these settings were not picked up by MMS when generating the description file or building programs. This problem has been corrected.

- ID:67 - Parser error was reported when a description file contained a blank line following a .IFDEF or a .ENDIF directive. This problem has been corrected.

- ID:87 - Built-in rules for MACRO with SCA were wrong on Alpha. This problem has been corrected.

- ID:102 - The `File Generator Sources`, `Additional Link Libraries` and `Options Files` window is too large to fit on small display screens. Alternative window size definitions are available; refer to the file MMS$DW_ DEFAULTS.DAT.

- ID:107 - Action line prefixes do not work with the 'kind feature. This problem has been corrected.

- ID:108 - Description file lines ending in `$$` were not handled correctly. This problem has been fixed.

- ID:110 - Incorrect behavior with dependencies on files with null names. This problem has been corrected.

- ID:111 - Byte count quota could be exceeded when using MMS in DECwindows mode. This problem has been corrected.

- ID:113 - When description file generation was invoked in DECwindows mode and then stopped using the `Stop Generate` button, any temporary files created were not deleted. This problem has been corrected.

- ID:114 - When used in command line mode, the description file generator could hang if invoked with a command line longer than 255 characters. This problem has been corrected.
- ID:115 - When used in DECwindows mode, the description file generator would ignore all parameters/qualifiers when too many were specified. This problem has been corrected.
- ID:116 - When used in DECwindows mode, the description file generator would crash if the text associated with any option was too long (around 250 characters). This problem has been corrected.
- ID:117 - When the /EXTENDED_SYNTAX qualifier was used, MMS would crash if a space (or tab) occurred between the `$(` and the name when referencing a macro. This problem has been corrected.
- ID:118 - When the /EXTENDED_SYNTAX qualifier was used, special macros (i.e. `$*`,`$@`, etc.) that were used in the definition of other macros were incorrectly expanded at the time of the macro definition (special macros should not be expanded until their use in an action line). This problem has been corrected.
- ID:119 - When the /EXTENDED_SYNTAX qualifier was used, incorrect usage of macros and functions could result with MMS terminating with a fatal error; no reason for termination would be given. This problem has been corrected.
- ID:120 - MMS could terminate with the error, %STR-F-STRTOOLON, ..., or loop indefinitely when a macro definition that originated from the command line or a CLI symbol contained a reference (directly or indirectly) to itself. This problem has been corrected.
- ID:121 - When used in DECwindows mode, the `Changed Source...` selector in the MMS Options/Input/Output pulldown menu box only allowed a single file to be selected; it should have been possible to select any number of files. This problem has been corrected.
- ID:122 - When used in DECwindows mode, qualifier values from the context set up by the Environment Manager could be used rather than those defined by toggle buttons and/or text fields in a window. This problem has been corrected.
- ID:123 - Several text fields in the Options/Input/Output and the Options /Definition/Directives pull-down menus were not editable when initial values for these fields were obtained from either the command line or the current context. This problem has been corrected.

- The restriction on the use of CMS library search lists with the MMS DECwindows interface has been removed.

4
Known Problems

The following problems are known to exist in MMS Version 3.4:

- ID:42 - Installation: Compaq Forms Management System for OpenVMS (FMS) related linker warnings when DECwindows is not installed.

  Installing MMS on systems without DECwindows, but with FMS, may cause linker warnings to occur. The Link-time Warnings are generated at installation time due to undefined FMS symbols, the warnings include:

  ```
  fdv$$plidispatch sys$common:[syslib]starlet.olb
  fdv$$plitrm sys$common:[syslib]starlet.olb
  ```

  The warnings can safely be ignored.

5
Restrictions

The following restrictions apply to MMS Version 3.4:

- More than one description file, separated by commas or plus signs, will not work with the DECwindows interface. Only the first description file listed will be displayed in the description file area. Only the first description file will be used in the MMS command.
- Restriction on size of search list MMS will propagate to the subprocess.

  The problem is not really within MMS, but rather in DCL, which has an undocumented restriction on the size of a process logical name search list that can be successfully copied to a subprocess. Use of the SPAWN command would show the message:

  ```
  %DCL-W-SYMTOOLNG, symbol is too long to copy to subprocess
  ```

  The problem can be worked around by using several smaller logical name search lists, or by putting the logical names in a job-wide logical name table, which is *shared with* (not copied to) the subprocess.
- Changing fonts may cause buttons to disappear in the `Sources`, `Additional Link Libraries`, and `Options Files` dialog boxes.
- The following restrictions apply to MMS for support of the Compaq Forms Management System for OpenVMS (FMS) libraries.
  - Support in MMS for FMS libraries will be determined during the installation of MMS. If FMS is installed on the system when MMS is being installed, MMS will contain support for FMS. If FMS is not installed on the system when MMS is being installed, MMS will not contain support for FMS.
  - If FMS is installed on a system after MMS has been installed without FMS support, then MMS will have to be reinstalled in order to contain FMS support.

- If FMS is removed from a system, MMS will have to be reinstalled in order to remove FMS support. MMS will access violate if there is an attempt to use FMS libraries.
- If a new version of STARLET.OLB is installed on a system, MMS will have to be reinstalled so it reflects any changes in the new version of STARLET.OLB. MMS may access violate if FMS has not been installed with the new version of STARLET.OLB.
- MMS with FMS support may crash with an access violation if the FMS shareable images are not installed as known images. If MMS fails to run correctly when FMS is installed on the system, ensure that the FMS shareable images are installed as known images; this is achieved by executing the commands:

  ```
  $install add/open/share SYS$LIBRARY:FDVSHR
  $install add/open/share SYS$MESSAGE:FDVMSG
  ```

  Both of the shareable images must be installed in order for FMS to function properly.

6
Reporting Problems and Suggestions

Depending on the nature of the request or problem, customers can call Compaq provided their software contract and warranty entitles them to telephone support.

Review the SPD and Warranty Addendum for an explanation of warranty.

If a problem is encountered during the warranty period, customers can report the problem using DSNlink. In the United States, customers can call the Compaq Customer Services Center at 1-800-354-9000.

In addition, Compaq provides access to Web Information and Support (WIS), an Internet-based electronic services application that allows customers to submit electronic service requests, access databases, download patch kits, transfer files from Compaq, and connect to global notes conferences via the World Wide Web.

Dial-In Access (DIA) users can access WIS by:

1. Opening http://www1.support.compaq.com/wis.
2. Choosing a country code.
3. Entering DIA Access ID and password.

WIS and DIA use the same underlying account and directory on the Compaq Customer Services Center host system.

Customers can register for DIA and receive a WIS account by contacting their Compaq Customer Services Center or local Compaq representative.

This method can also be used to make requests for additional features or modifications to existing features.

When submitting a request, please include the following information:

- The version of MMS and type of OpenVMS operating system.
- Problem Summary.

- Stack dumps or error logs (if applicable).
- Files in machine-readable media: magnetic tape (preferred), floppy diskette, or tape cassette.