

Changes and Enhancements

Overview

This section describes the features of SAS software under OpenVMS for Version 7 and 8 of the SAS System. These features have been implemented or enhanced since Release 6.12 for Alpha and the 6.09 Enhanced Release for VAX. For information about changes and enhancements to base SAS software, see the base SAS documentation. For information about changes and enhancements to other SAS products, see the documentation for those products.

Variable and Member Names

Variable and member names of up to 32 characters are supported. Mixed case is the default for names. Variable names are displayed as they were defined on output, but they are recognized regardless of their input case because normalized compares are done when you search for a variable name in a data set.

National Language Support

National Language Support (NLS) is provided by the Fixed-width Character Model.

Reading from and Writing to OpenVMS Commands

Under OpenVMS, you can now use the FILENAME statement to assign filerefs to a pipe. Pipes enable your SAS application to receive input from any OpenVMS command that writes to SYSS\$OUTPUT and to write input to any OpenVMS command that reads from SYSS\$INPUT.

SAS Language Elements

This section lists the language elements of SAS software that are new, are changed or enhanced, or are no longer supported in Version 7 and Version 8 under OpenVMS.

Data Set Options

The following SAS data set options have been added:

ALQMULT=

specifies the number of pages that are preallocated to a file. For details, see “ALQMULT=” on page 250.

CACHENUM=

specifies the number of I/O data caches that are used per SAS file. For details, see “CACHENUM=” on page 253.

DEQMULT=

specifies the number of pages to extend a SAS file. For details, see “DEQMULT=” on page 257.

WRKCACHE=

specifies the site of the I/O data cache that is allocated for a file in the WORK data library. For details, see “WRKCACHE=” on page 261.

The following SAS data set options have been changed or enhanced:

ALQ=

specifies how many disk blocks to allocate initially to a new SAS data set. The default has changed to allocate enough blocks for 10 data set pages. For details, see “ALQ=” on page 249.

DEQ=

tells OpenVMS how many disk blocks to add when it automatically extends a SAS data set during a write operation. The default has changed to allocate enough blocks for 5 data set pages. For details, see “DEQ=” on page 256.

FILECLOSE=

specifies the default CLOSE disposition for a SAS data set on tape. REREAD has been added as a valid value for the *disposition* argument. For details, see “FILECLOSE=” on page 257.

The following SAS data set options are no longer supported:

FILEFMT=

HOSTFMT=

RAH=

Formats

The following SAS format has been enhanced:

\$HEX w .

converts character values to hexadecimal values. The width range has increased. For details, see “\$HEX w .” on page 265.

Functions

The following SAS functions have been added:

DINFO

returns information about a directory. For details, see “DINFO” on page 280.

DOPEN

opens a directory and returns a directory identifier value. For details, see “DOPEN” on page 281.

DOPTNAME

returns directory-attribute information. For details, see “DOPTNAME” on page 282.

DOPTNUM

returns the number of information items that are available for a directory. For details, see “DOPTNUM” on page 282.

FDELETE

deletes an external file or an empty directory. For details, see “FDELETE” on page 284.

FEXIST

verifies the existence of an external file associated with a fileref and returns a value. For details, see “FEXIST” on page 284.

FILEEXIST

verifies the existence of an external file by its physical name and returns a value. For details, see “FILEEXIST” on page 285.

FILENAME

assigns or deassigns a fileref for an external file, directory, or output device and returns a value. The FILENAME function has been enhanced for Version 8 to recognize PIPE as a valid device type. In addition, for Version 8, you can now specify a file version number. For details, see “FILENAME” on page 286, “Device-Type Keywords” on page 360, and “Reading from and Writing to OpenVMS Commands (Pipes)” on page 179.

FILEREF

verifies that a fileref has been assigned for the current SAS session and returns a value. For details, see “FILEREF” on page 290.

FINFO

returns the value of a file-information item. For details, see “FINFO” on page 292.

FOPEN

opens an external file and returns a file-identifier value. For details, see “FOPEN” on page 292.

FOPTNAME

returns the name of an item of information about a file. For details, see “FOPTNAME” on page 293.

FOPTNUM

returns the number of information items that are available for a file. For details, see “FOPTNUM” on page 294.

LIBNAME

assigns or deassigns a libref for a SAS data library and returns a value. For details, see “LIBNAME” on page 302.

LIBREF

verifies that a libref has been assigned and returns a value. For details, see “LIBREF” on page 303.

MOPEN

opens a file by directory ID and by member name and returns either the file identifier or a zero (0). For details, see “MOPEN” on page 303.

PATHNAME

returns the physical name of a SAS data library or of an external file or returns a blank. For details, see “PATHNAME” on page 304.

SYSGET

returns the value of a specified operating-environment variable. For details, see “SYSGET” on page 310.

SYSTASK

executes, lists, or kills asynchronous tasks. For details, see “SYSTASK” on page 380

WAITFOR

suspends execution of the current SAS session until the specified tasks finish executing. For details, see “WAITFOR” on page 384

Informats

The following SAS informat has been enhanced:

\$HEX_w.

converts hexadecimal data to character data. The width range has increased. For details, see “\$HEX_w.” on page 323.

Procedures

The following SAS procedure has been changed:

PMENU

defines pull-down menu facilities for windows that were created with SAS software. OpenVMS does not support the ACCELERATE= and MNEMONIC= options in the ITEM statement or the ATTR= and COLOR= options in the TEXT statements. For details, see “PMENU” on page 346.

The following SAS procedure is no longer supported:

FSDEVICE

Statements

The following SAS statements have been changed or enhanced:

ATTRIB

associates a format, informat, label, length, or any combination of these items with one or more variables. The minimum length that you can specify has changed. For details, see “ATTRIB” on page 354.

FILE

specifies the current output file for PUT statements. GSFCC=, KEY=, and KEYVALUE= were added as valid values for the *host-option-list* argument.

BLKSIZE= is no longer supported as a value for the *host-option-list* argument. For Version 8, a new valid device type, PIPE, has been added. For details, see “FILE” on page 355, “Device-Type Keywords” on page 360, and “Reading from and Writing to OpenVMS Commands (Pipes)” on page 179

FILENAME

associates a SAS fileref with an external file. GSFCC= is added as a valid value for the *host-option-list* argument. BLKSIZE= | BLK= is no longer supported as a value for the *host-option-list* argument. For Version 8, a new valid device type, PIPE, has been added. In addition, for Version 8, you can specify a file version to write to. For details, see “FILENAME” on page 357, “Device-Type Keywords” on page 360, and “Reading from and Writing to OpenVMS Commands (Pipes)” on page 179.

INFILE

specifies an external file to read with an INPUT statement. For Version 8, a new valid device type, PIPE, has been added. For details, see “INFILE” on page 375, “Device-Type Keywords” on page 360, and “Reading from and Writing to OpenVMS Commands (Pipes)” on page 179.

LENGTH

specifies how many bytes the SAS System uses to store a variable’s values. The range of values for *length* has changed. For details, see “LENGTH” on page 377.

LIBNAME

associates a libref with a SAS data library and lists file attributes for a SAS data library. ALQMULT=, CACHENUM=, and DEQMULT= were added as valid values for the *host/engine-options* argument. For details, see “LIBNAME” on page 378.

System Options

The following SAS system options have been added:

ALQMULT=

specifies the number of pages that are preallocated to a file. For details, see “ALQMULT=” on page 396.

APPLETLOC=

specifies the location of Java applets. For details, see “APPLETLOC=” on page 398.

CACHENUM=

specifies the number of caches that are used per SAS file. For details, see “CACHENUM=” on page 401.

CACHESIZ=

specifies the size of cache that is used for each open SAS file. For details, see “CACHESIZ=” on page 402.

DEQMULT=

specifies the number of pages to extend a file. For details, see “DEQMULT=” on page 408.

GISMAPS=

specifies the name of the SAS data library that contains U.S. Census Tract maps that are supplied by SAS/GIS software. For details, see “GISMAPS=” on page 415.

HELPLOC

specifies the location of the text and index files for the facility that is used to view the SAS online Help. For details, see “HELPLOC” on page 416.

INGOPTS=

specifies options to pass to the CA-OpenIngres database management system. For details, see *SAS/ACCESS Software for Relational Databases: Reference*, (CA-OpenIngres Chapter).

MEMSIZE=

specifies the limit on the total amount of memory to be used by the SAS System. For details, see “MEMSIZE=” on page 422.

MSG=

specifies the library that contains SAS error messages. The MSG= system option replaces the SASMSG= system option. For details, see “MSG=” on page 422.

MSYMTABMAX=

specifies the maximum amount of memory that is available to the macro variable symbol table(s). For details, see “MSYMTABMAX=” on page 424.

MVARSIZE=

specifies the maximum size for in-memory macro variable values. For details, see “MVARSIZE=” on page 425.

STIMEFMT

specifies the format to use for displaying the time on STIMER output. For details, see “STIMEFMT” on page 441.

SYSPRINT=

specifies the destination for printed output. For details, see “SYSPRINT” on page 445.

TERMIO=

specifies whether terminal I/O is blocking or non-blocking. For details, see “TERMIO=” on page 447.

XCMD

specifies whether the X command is valid in the current SAS session. For details, see “XCMD” on page 452.

XCMDWIN

specifies whether to put X command output in a separate DECTERM window. For details, see “XCMDWIN” on page 452.

XLOG

specifies whether to display the output from the X command in the SAS log file. For details, see “XLOG” on page 454.

The following SAS system options have been changed or enhanced:

AUTOEXEC=

specifies the autoexec file that is used when the SAS System is initialized. The syntax has changed. For details, see “AUTOEXEC=” on page 399.

CONFIG=

specifies the name of the configuration file that is used when initializing the values of SAS system options. The syntax has changed. For details, see “CONFIG=” on page 404.

EXPANDLNM

specifies to expand concealed logical names. The behavior of this system option has changed. For details, see “EXPANDLNM” on page 411.

HELPLOC=

specifies the location of online help files. In Version 8, this option’s value is cumulative. For details, see “HELPLOC” on page 416.

INITSTMT=

specifies a SAS statement that is to be executed after any statements in the autoexec file and before any statements from the SYSIN file. The syntax is specific to the OpenVMS operating environment. For details, see “INITSTMT=” on page 417.

MAPS=

gives the SAS library that holds the SAS/GRAPH map data sets. The default has changed. For details, see “MAPS=” on page 421.

SEQENGINE=

specifies the default access method for SAS sequential data libraries. The valid values for *engine-name* have changed. For details, see “SEQENGINE=” on page 436.

WRKCACHE=

specifies the size of cache to use for WORK library files. The default has changed. For details, see “WRKCACHE=” on page 451.

XRESOURCES

accepts more command line options for Version 8. For details, see “X Command Line Options” on page 19.

The following SAS system options are no longer supported or no longer have details that are specific to OpenVMS:

CATCACHE=	no details that are specific to OpenVMS
FORMDLM=	no longer supported
FSDEVICE=	no longer supported
FSLANG	no longer supported
FSMAPS	no longer supported
MOTIF	no longer supported
NOTES	no details that are specific to OpenVMS
REMOTE=	now an alias for the CONNECTREMOTE= system option
SASMSG=	replaced by the MSG= system option
SITEINFO=	no longer supported
SOURCE2	no details that are specific to OpenVMS
VECTOR	no longer supported
WORKINIT	no details that are specific to OpenVMS
WORKTERM	no details that are specific to OpenVMS
XREFRESH=	no longer supported
XWAIT	no longer supported

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