

Changes and Enhancements

Introduction

Version 8 changes and enhancements are preceded by **V8**. All other changes and enhancements described were included in Version 7.

This section describes the features of SAS software under CMS that have been implemented or enhanced since the 6.09 Enhanced Release.

Sending Electronic Mail

V8 In SAS Version 8, the new EMAIL device type for the FILENAME statement, along with the new EMAILSYS= system option, allows you to send electronic mail from within SAS.

PIPES Device Type

The new PIPES device type option for the FILENAME statement implements CMS pipelines in SAS.

Long Names

Names of SAS data library members can now be up to 32 characters long.

Unaccessed SFS Directories

I/O can now be performed against SAS data libraries and external files that reside in unaccessed, shared file system directories.

Help Browser

SAS System Help for CMS is now displayed in an HTML browser that runs on the mainframe.

FTP Device Type for External I/O

External files in other operating environments can now be accessed in FILENAME statements by using the new options FTP, HTTP, and TELNET.

Expanded Aggregate File Types

In addition to CMS MACLIBs, an SFS directory or a CMS minidisk may now be accessed for addition or update as an aggregate file.

SAS Library Concatenation

SAS in the CMS environment supports the full base SAS implementation of concatenated library specifications.

SAS Language Elements

Data Set Options

The PROTECT= data set option (security for V5 data sets) is no longer supported. The READ= data set was removed because it no longer has any host specifics. READ= is fully documented in *SAS Language Reference: Dictionary*.

Functions and CALL Routines

The following call routines and functions are new:

CALL SLEEP

suspends execution of a SAS DATA step for a specified amount of time.

DINFO

returns information about a directory.

DOPEN

opens a directory and returns a directory identifier value.

DOPTNAME

returns directory attribute information.

DOPTNUM

returns the number of information items that are available for a directory.

FCLOSE

closes an external file, directory, or directory member.

FEXIST

verifies the existence of an external file associated with a fileref and returns a value.

FILENAME

assigns or deassigns a fileref for an external file.

FILEREF

verifies that a fileref has been assigned and returns a value.

FILEXIST

verifies the existence of an external file by its physical name and returns a value.

FINFO

returns the value of a file information item.

FOPEN

opens an external file and returns a file identifier value.

FOPTNAME

returns the name of an item of information about a file.

FOPTNUM

returns the number of information items that are available for a file.

LIBNAME

assigns or deassigns a libref for a SAS data library and returns a value.

MOPEN

opens a file by directory ID and member name and also returns either the file identifier or zero.

PATHNAME

returns the physical name of a SAS data library or an external file or else returns a blank.

SYSGET

returns the values of a specified host-environment variable or symbol.

Procedures

The following procedures are either new or improved:

PROC DBF

with a license for SAS/ACCESS for PC File Formats you can now convert a dBASE file to a SAS data set or a SAS data set to a dBASE file.

PROC ITEMS

enables you to create, modify, and delete itemstores, which are special file formats that are used to store information that relates to the SAS session. You can load user-defined Help into itemstores for display in the SAS Help browser.

PROC TAPELABEL

now produces output through the Output Delivery System. This procedure also has new DUMP=, BLOCKS, and RECORDS options for specifying dumps to tape.

Statements**FILE**

The FILE statement now supports the following new options:

LINESIZE=

works with the **LRECL=** option to specify the maximum number of columns in print files, nonprint files, and the SAS log.

PRINT | NOPRINT

specifies whether to include carriage-return characters in output files.

FILENAME

V8 In SAS Version 8, the **FILENAME** statement supports the **EMAIL** device type and new **EMAIL**-related options, which allow you to send electronic mail from within SAS.

The **FILENAME** statement now supports the following new options:

FTP

tells SAS to use the **FTP** communications protocol to access the specified external file.

HTTP

tells SAS to use the **HTTP** protocol to access the specified external file.

PIPES

is a device-type option that implements **CMS** pipelines in SAS.

TELNET

tells SAS to use the **TELNET** communications protocol to access the specified external file.

System Options

This section lists system options that have host-specific values or behavior. Many of the new system options are portable and have no host-specific values. Therefore, they are not documented in this section. See *SAS Language Reference: Dictionary* for details.

- The following system options are new:

ECHO=

specifies a message to be displayed at SAS invocation.

V8 EMAILSYS=

specifies a **CMS** pipeline stage used to send electronic mail from within SAS.

HELPLOC=

specifies the location of SAS Help text and index files.

MEMSIZE=

specifies the limit on the total amount of memory to be used by SAS.

MSG=

specifies the path to the **SASMSG** directory.

MSGCASE

specifies uppercase or lowercase message display.

OPLIST

controls whether to write the settings of SAS system options to the SAS log.

RTRACE=

enables collection of data on SAS file I/O.

RTRACELOC=

specifies the file to which **RTRACE** information is written.

SET=

defines an environment variable.

SORTCUTP=

specifies the number of bytes above which the host sort program should be used instead of the SAS sort program.

SORTEQOP

controls whether SAS passes the EQUALS option to the host sort program by default.

SORTNAME=

specifies the name of the host sort utility.

STIMEFMT=

specifies the format used to display time statistics.

XCMD

specifies whether the SAS X command is valid in this SAS session.

- The following system options are now obsolete:

- APPSEC=

- CODEPASS=

- CODEPCT=

- MEMFILL=

- MEMRPT

- ORAVER=

- STATS

- TCPSEC=

- VIOBUF=

- The MSGLEVEL= system option is now documented as a portable option in *SAS Language Reference: Dictionary* because it no longer has host-specific aspects.

Commands

The following commands are new:

DFLTACTION

simulates a mouse double-click

EXPLODE

lets you display and edit the full length of truncated text entry fields

▮ FILEMAC

saves the contents of the Program Editor window to a CMS MACLIB.

▮ FIND

In Version 8, locates text in help windows. This command is documented in the *SAS Language Reference: Dictionary*.

WIDGNEXT

moves the keyboard focus from one widget to the next widget

WIDGPREV

moves the keyboard focus from one widget to the previous widget

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