SAS v9.3 Standalone Formats Guide

Overview

The SAS Standalone Formats provide the functionality of the SAS System formats to C language programs. The SAS Standalone Formats are intended for use on machines where the SAS System is not installed. For example SAS Enterprise Miner generated C code will generally require access to the SAS Standalone Formats files at compile-time, link-time and runtime.

Supported Systems

In SAS® 9.3 the SAS Standalone Formats will be supported on 64-bit extended architectures including Intel (EM64T/Xeon64), AMD (AMD64/Opteron), SPARC, IBM POWER6, and PA-RISC.

Supported 64-bit operating systems include:

OS Code	Description
WX6	Windows Server 2003 x64 editions
WX6	Windows XP Professional x64
WX6	Windows Vista x64 editions
WX6	Windows Server 2008 x64 editions
LAX	Red Hat Enterprise Linux (RHEL5 for AMD64/EM64T) family
LAX	Novell (SUSE Linux Enterprise Server 10 for AMD64 & Intel EM64T)
SAX	Solaris 10 (Update 8) on x64
S64	Solaris 10 (Update 8) on SPARC
H6I	HP-UX 11iv3 (11.31 update 5) on Itanium
H64	HP-UX 11iv3 (11.31 update 5) on PA-RISC
R64	AIX 6.1 (TL4) on Power architectures

The 32-bit systems supported by the SAS Standalone Formats for SAS 9.3 are the following:

OS Code	Description
W32	Windows 7 (Home and Pro)
W32	Windows Server 2003 (Standard, Enterprise, and Data Center)
W32	Windows Server 2008 R2 (Standard, Enterprise, and Data Center)
W32	Windows XP Professional
W32	Microsoft Windows Vista Business
LNX	Red Hat and Novell's Linux 32-bit (SLES10 and RHEL5 Server)

Installable Components

The SAS Standalone Formats product contains a header file, jazz.h that will be needed to compile code that depends on the SAS Standalone Formats functionality, and a library of loadable runtime routines that implement most of the SAS System formats.

The SAS Standalone Formats files needed for compiling, linking and running C code that calls SAS System formats are named as follows:

jazxfbrs	the SAS Standalone Formats routines
jazz.h	the SAS Standalone Formats C language header file
jazxfbrs.lib	link library (Windows only)

On Windows jazxfbrs library will have the ".dll" file name extension.

Note: In earlier releases the SAS Standalone Formats were distributed in several separate libraries. These have been combined into just one, jazxfbrs.

Installation Instructions

Download the package for your target operating system and unpack it to a location or locations accessible from the system on which you plan to compile, link, and run any code that calls the SAS Standalone Formats routines.

Usage

A function/application written in the C language that calls the SAS Standalone format will need to include the header file, jazz.h. Then such a program can be linked to jazxfbrs so that at runtime the rest of the needed routines can be dynamically loaded as needed to support the SAS System formats. This requires the jazxfbrs library be present both when linking the function/application, and at runtime for dynamic loading.

The process used to access the formats routines from the SAS Standalone Formats library is called, dynamic loading. It is accomplished through calls to standard system routines. However, dynamic loading is an advanced topic in any C environment. The exact procedures, options and environment variables used in compiling, linking and running dynamically loaded code are different for every compiler, linker and operating system. For example, on Windows, shared libraries are loaded from the environment variable PATH. This environment variable must be set to contain the directory path for the SAS Standalone Formats shared library (jazxfbrs.dll). The value of this environment variable must be the fully qualified file name. On Solaris systems the SAS Standalone Formats are dynamically loaded from the shared library (jazxfbrs) via the environment variable LD_LIBRARY_PATH. HP/UX, uses a slightly different environment variable, SHLIB_PATH. A thorough understanding of your target systems procedures for compiling, linking and running with dynamically loaded code will be required to successfully exploit the SAS Standalone Formats.

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