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CFM-68K Runtime Enabler Extension: Stability Issue (3/97)

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TOPIC ----------

This article describes a stability issue with the CFM-68K Runtime Enabler and 680x0 processor based Macintosh computers. There is also a series of related questions and answers.

DISCUSSION ----------

Apple recommends customers disable the CFM-68K Runtime Enabler extension.

Apple Computer has discovered a bug in the CFM-68K Runtime Enabler extension that can affect the stability of Macintosh computers based on the 680x0 processor. This extension allows the use of certain applications on 680x0 computers, and is installed by an application installer only if the application requires the extension. Customers will know they have this extension installed if the file " CFM-68K Runtime Enabler" (note that the file name begins with a space) is located in their Extensions folder which resides inside their System folder.

In certain circumstances, the bug can cause applications which rely on the CFM-68K Runtime Enabler to not function properly, resulting in application instability and potential loss of data. The most obvious symptoms are what appear to be random system crashes and hangs. Macintosh and Mac OS-compatible computers based on the PowerPC processor are not affected by this bug.

Because of the potential quality impact of this bug, Apple is recommending that customers with computers based on the 680x0 processor disable the CFM-68K Runtime Enabler extension and not use programs which rely on this extension. See below for instructions on how to disable this extension. Apple is currently working to resolve this bug.

What is the CFM-68K Runtime Enabler?

The CFM-68K Runtime Enabler is an extension which makes it easier for developers of applications to design their programs to run on both 680x0 and PowerPC computers without having to write separate programs for both processor families.

On a more technical level, the Code Fragment Manager ("CFM") was originally introduced by Apple only for Macintosh and Mac OS-compatible computers based on the PowerPC processor. It allows applications to share their programming code through special files known as shared libraries. In addition to being able to share programming code, applications which are programmed to use shared libraries can reduce their memory requirements. In response to the success of the PowerPC version of CFM, Apple introduced a version of CFM for Macintosh computers based on the 680x0 processor. This version of CFM for 680x0-based Macintosh computers is the CFM-68K Runtime Enabler extension.

What applications are affected by this bug?

Only applications which have been explicitly programmed to use the CFM-68K Runtime Enabler can be affected by this bug. Apple Computer products which rely on CFM-68K Runtime Enabler are: OpenDoc, Cyberdog, LaserWriter (versions 8.4 and 8.4.1 only), and the Apple Media Tool. Only the 68K versions of these software packages are affected. This bug does not affect PowerPC versions of these products. There are currently few applications which rely on the CFM-68K Runtime Enabler and therefore Apple does not believe that this problem is very widespread.

You can identify applications which rely on the CFM-68K Runtime Enabler extension once the extension is disabled (see below for instructions on disabling the extension). When the CFM-68K Runtime Enabler is disabled, applications which rely on it will report the following error when you attempt to launch them:

"This application requires installation of the 'CFM-68K Runtime Enabler'."

Is this bug caused by these applications?

Not directly. The bug is caused by the use of CFM-68K Runtime Enabler in ways it was not designed to handle. Unfortunately, its limitations were not recognized by the applications.

What should I do if I have installed one of these affected products?

If you have installed OpenDoc or Cyberdog, you should not use these products until Apple releases a solution for this problem. If you have installed LaserWriter version 8.4 or 8.4.1, you should install LaserWriter version 8.3.4, which does not rely on the CFM-68K Runtime Enabler. If you do not have LaserWriter 8.3.4, you can download it from the Apple support site on the World Wide Web, which is located at:

http://www.info.apple.com/

If you are a member of the Apple Media Tool developer community, please visit the AMT web site at http://amt.apple.com/ for more information.

If you have a PowerPC-based Macintosh or Mac OS-compatible computer, your computer is not affected by this problem. Therefore, you can continue to use these products.

Should I contact third-party application developers about this problem?

No. Since a fix for this problem will be accomplished by modifying Apple's CFM-68K Runtime Enabler, third-party application developers will be unable to assist you with this problem.

How do I disable this extension?

There are two ways to disable this extension. One is to drag the extension out of the Extensions folder which resides in your System Folder. The other is to use the Extensions Manager control panel.

To disable the CFM-68K Runtime Enabler extension using the Extensions Manager control panel, perform the following steps:

1) Open the Apple menu item and select Control Panels.

2) Locate Extensions Manager and double click it to open it.

3) Locate " CFM-68K Runtime Enabler". Note that there is a space at the beginning of the name. You should find this extension near the top of the Extensions Manager window under the Extensions heading.

4) If there is a check mark next to CFM-68K Runtime Enabler, click on it so that there is no check mark.

5) Close the Extensions Manager window.

6) Restart your computer.

Is this bug caused by recent changes in the CFM68k Runtime Enabler?

No. This bug exists in all currently shipping versions of CFM-68K Runtime Enabler, but was found during recent testing.

Why has it taken Apple this long to identify this bug?

Only recently have applications begun to make use of the CFM-68K Runtime Enabler extension. The conditions which cause this bug have only been exposed by recent increased use of the extension by applications.

I have a PowerPC computer. Does this affect me?

No. The bug is only in the CFM-68K Runtime Enabler extension, which runs only on Macintosh computers based on the 680x0 processor. The Mac OS on PowerPC computers does have code fragment capabilities, but it is accomplished through different programming techniques not affected by this bug.

What is Apple doing to fix this bug?

Apple has assigned a team of engineers to develop a solution for the bug. At this time, there is not enough information to make any statements about delivery of a solution.

How can I get the technical details about this bug?

Apple has a Technote about this bug available on the World Wide Web at:

http://devworld.apple.com/dev/technotes/tn/tn1084.html

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