

ITS Technical Notes

Iowa State University Windows Enterprise Announcement

March 29, 2007 – Bug in OpenAFS for Windows

IT Services wants you to be aware of a serious bug in OpenAFS for Windows. This is not a recently introduced bug, but probably affects all versions of OpenAFS for Windows for the past few years (at least since 2005). It also affects the latest version of OpenAFS for Windows available (1.5.17).

This bug has been reported to the OpenAFS developers. However, considering the seriousness of the effects of the bug ITS feels everyone should investigate whether it is happening on their own Windows client systems.

To exhibit the bug both following conditions must be met:

1. OpenAFS "integrated logon" must be enabled. This means the AFS client "Advanced/Configure AFS Client" setting for "Obtain AFS tokens when logging into Windows" must be checked.
2. One or more scheduled tasks must be running on the system (any account).

The effect of the bug is that you get one temp file in WINDOWS\Temp with a name of the format "n.nnnnnnnn" (such as "0.50465928") for each time a scheduled task runs. The longer the system runs in this state the more temp files you have. One system exhibiting the bug had over 22,000 of these temp files (a Windows XP desktop running for a few years).

The end result on a system is that eventually the huge number WINDOWS\Temp files greatly slows down the system as it tries to create a new temp file for any other process. Even modern systems can become inexplicitly "slow". The only resolution is to manually clean up the temp files and prevent OpenAFS from polluting the temp folder again.

To recover system performance you need to remove all the WINDOWS\Temp files with the name "n.nnnnnnnn". In most cases you cannot simply delete them (or use normal Windows "Disk Cleanup" tools) since they are owned by "system" with no additional rights assigned. As a system administrator you need to first change the security attributes (so you can delete them) and then delete them. On most systems with lots of such files (1,000+) this has an instant "speedup" effect.

To circumvent the bug (after recovering) you need to disable "integrated logon" (uncheck "Obtain AFS tokens when logging into Windows" on the "Advanced/Configure AFS Client" setting). Doing this means you will have to manually obtain AFS tokens at login time unless you automate this process another way. For example, you could use the "Kerberos Login" Advanced Scout-kit (which gets Kerberos credentials at login time) combined with a "Start Menu/Programs/Startup" call to "aklog.exe" (to get AFS tokens).